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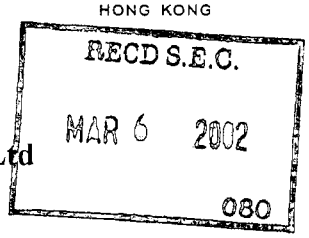
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3A CHATER ROAD
HONG KONG



March 5, 2002



Re: **Submission Pursuant to Rule 12g3-2(b) by Roche Holding Ltd**

Securities and Exchange Commission
450 Fifth Street, N.W.
Washington, D.C. 20549

SUPPL

Ladies and Gentlemen:

Enclosed please find copies of various presentation materials used by Roche Holding Ltd (File No. 82-3315) at analyst and investor conferences and now posted on Roche's website, "roche.com." A list of the presentations is attached for your reference. These presentations are being furnished to the Securities and Exchange Commission pursuant to Rule 12g3-2(b).

Please do not hesitate to call me if you have any questions.

Very truly yours,

Ulrika Ekman

Ulrika Ekman

Enclosures

PROCESSED
MAR 14 2002
THOMSON
FINANCIAL

82-3315

2/1/02	Oncology Media Briefing
1/30/02	Presentation on Nippon Roche
1/30/02	Presentation on new Chugai
1/30/02	Nippon Roche Booklet
1/31/02	Roche Continues to Strengthen Oncology Franchise
12/10/01	Roche and Chugai
12/01	Investor Presentation
11/21/01	Presentation to Investors by Dr. Franz Humer, Chairman and Chief Executive Officer
11/20/01	Roche at CSFB 2nd Annual European Large Cap Pharmaceutical Conference, London
10/17/01	Roche at Cheuvreux 2nd, "Vital Signs" Healthcare Conference, Lucerne
10/16/01	Investor Presentation (Q3 Sales)
9/07/01	Roche at Morgan Stanley Pan European Healthcare Conference, Munich
8/15/01	Half-Year Presentation to Investors
6/29/01	Roche at Bank Sarasin 1st Lifescience Conference, Basel
6/01	Investor Presentation
4/01	Roche Sale in Q1 2001
4/01	Roche and Genetech Pharmaceutical Development Pipeline
3/01	Annual Presentation to Investors
2/01	Sales of top 20 Pharma products 2000
12/19/00	English Translation of the Roche Notice in the Swiss Office Gazette of Commerce of 19.12.2000
10/24/00	R&D Day

Roche Holding Ltd

1 February 2002 - Oncology Media Briefing

As Posted on Roche.com

Furnished Under Rule 12g3-2(b)
Roche Holding 82-3315

Roche: A Powerhouse in Oncology

Media Briefing

31 January 2002

Roche

Welcome & Introduction

Charles Sabbah

Head of Pharma Strategic Marketing

Agenda

- **Roche and its expanding oncology franchise**
  - Charles Sabbah, Head of Pharma Strategic Marketing
- **Video: Roche oncology - the doctor and patient perspective**
- **Innovative products: the facts**
  - Michelle Rashford, Head of Medical Support
- **Our oncology pipeline**
  - Kapil Dhingra, Head of Oncology Development
- **Bringing together drugs and diagnostics**
  - Bärbel Porstmann, Head of Integrated Cancer Care Unit
- **Closing Remarks**
- **Questions & Answers**
- **Interviews**

Roche

Pharmaceuticals

The challenges and opportunities of oncology

- Unmet medical needs
- Strong business opportunities, never seen before

Roche has a rich and comprehensive oncology portfolio with blockbuster potential (MabThera/Rituxan ~ CHF 1.5 Bn)

What makes Roche unique?

Roche

Pharmaceuticals

- **Targeted treatment as well as supportive care**
- **Powerful R&D and business combination**
  - Roche / Genentech, ... Chugai
- **Solid, growing portfolio**
  - 3 oncology products in top ten sales (MabThera/Rituxan, Herceptin, Kytril)
  - 1 product over CHF 1.5 billion (MabThera/Rituxan)
  - long patent protection (MabThera/Rituxan 2013, Xeloda 2013, Herceptin 2015)
- **Integrated Approach: Pharmaceuticals and Diagnostics**
  - The right drug for the right patient

Roche Oncology: Recent success

Roche

Pharmaceuticals

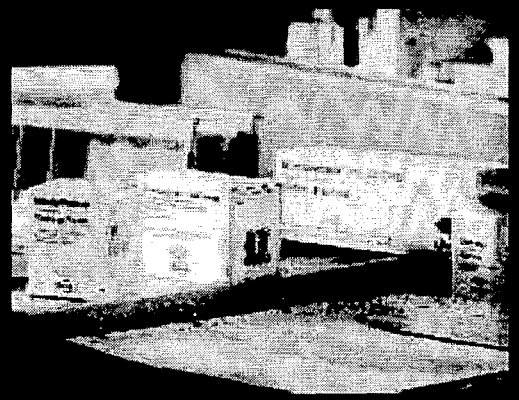
1997 MabThera/Rituxan, non-Hodgkin's Lymphoma

1998 Xeloda, colorectal cancer

1999 Herceptin, breast cancer

2000 Kytril, anti-nausea

2001 NeoRecormon, cancer-related anemia



Roche Oncology: Facts and Figures*

Roche

Pharmaceuticals

- Sales — ~ CHF 4 Bn
- 2001 growth — over 60%
- % share of total Roche Pharma sales — ~ 25%
- % share of total oncology market — ~ 12%
- Sales potential — CHF 6 - 8 Bn

* Roche and Genentech combined

Roche

Pharmaceuticals

Roche Oncology: Key products sales forecast

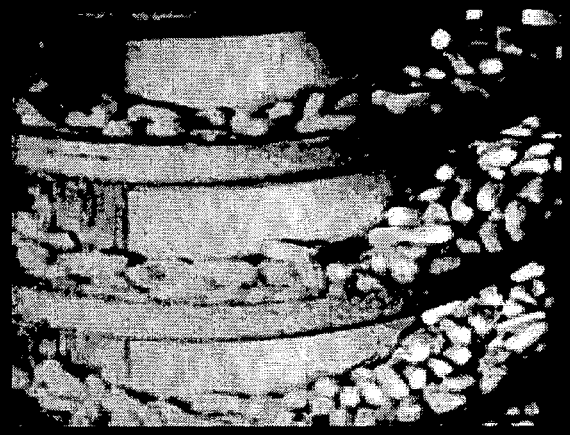
Products	Sales 2001 est. In CHF	2000-2001 growth est.
MabThera/Rituxan	> 1.5 Bn	90%
Herceptin	> 750 M	50%
Xeloda	~ 250 M	70%
Kytril	> 400 M	N.A.

Roche Oncology: established in three major therapeutic classes

Roche

Pharmaceuticals

- **Innovative biological products**
  - Herceptin
  - MabThera/Rituxan
- **Powerful 2nd generation targeted chemotherapy**
  - Xeloda (oral, tumor-activated)
- **Supportive care products**
  - NeoRecormon
  - Kytril
  - Neupogen
  - Bondronat



Roche Oncology: Bringing survival

Roche

Pharmaceuticals

Only pharma company with <u>three</u> oncology drugs with survival benefits:

- Herceptin → increases survival in breast cancer
- MabThera/Rituxan → increases survival in aggressive NHL
- Xeloda → increases survival in breast cancer (with Taxotere)



Roche

Pharmaceuticals

Roche Oncology: more to come...

- New uses for existing drugs (eg Xeloda, MabThera/Rituxan)
- New combination therapies explored (alone or in partnership)
- Innovative drugs in development
- Aggressive acquisition of new products

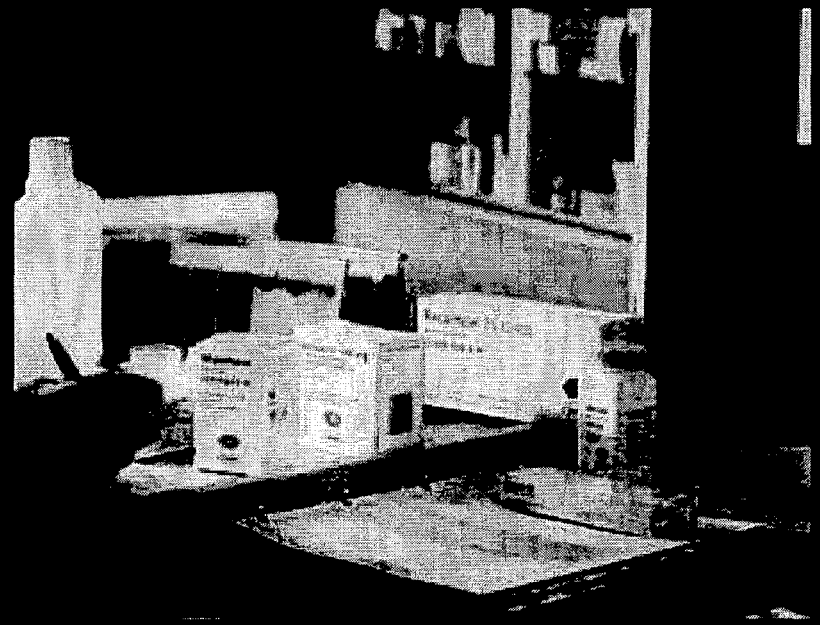


Roche

Pharmaceuticals

Innovative products: the facts

Michelle Rashford
Head of Medical Support



6 Million people die each year from cancer

Roche

Pharmaceuticals

≈ 1.2 Million	≈ 1.2 Million	≈ 1 Million	≈ 0.3 Million
Xeloda	Xeloda	Xeloda	MabThera/Rituxan
Herceptin			

Supportive Care

Kytril NeoRecormon Bondronat Neupogen

New European approvals imminent for key oncology products with survival benefit

Roche

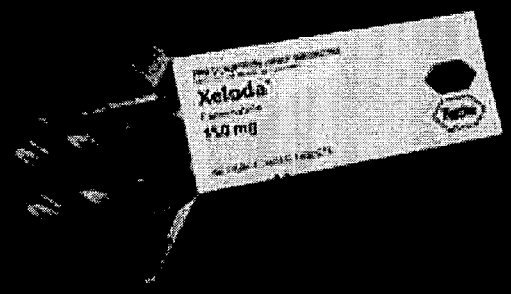
Pharmaceuticals

MabThera/Rituxan



Aggressive non-Hodgkin's lymphoma

Xeloda



Advanced breast cancer

Non Hodgkin's Lymphoma: key facts

Roche

Pharmaceuticals

- Blood cancer affecting 1.5 million people world-wide
- Incidence has grown by 80% since the early 1970s
- Third fastest growing cancer
  (melanoma and lung cancer fastest)
- Occurs mainly in adults
  - peak between 50 and 70 years of age
- 55% have aggressive lymphoma

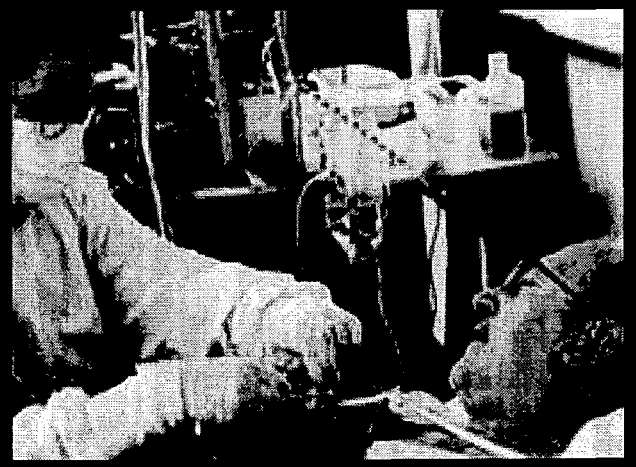


MabThera/Rituxan: key facts

Roche

Pharmaceuticals

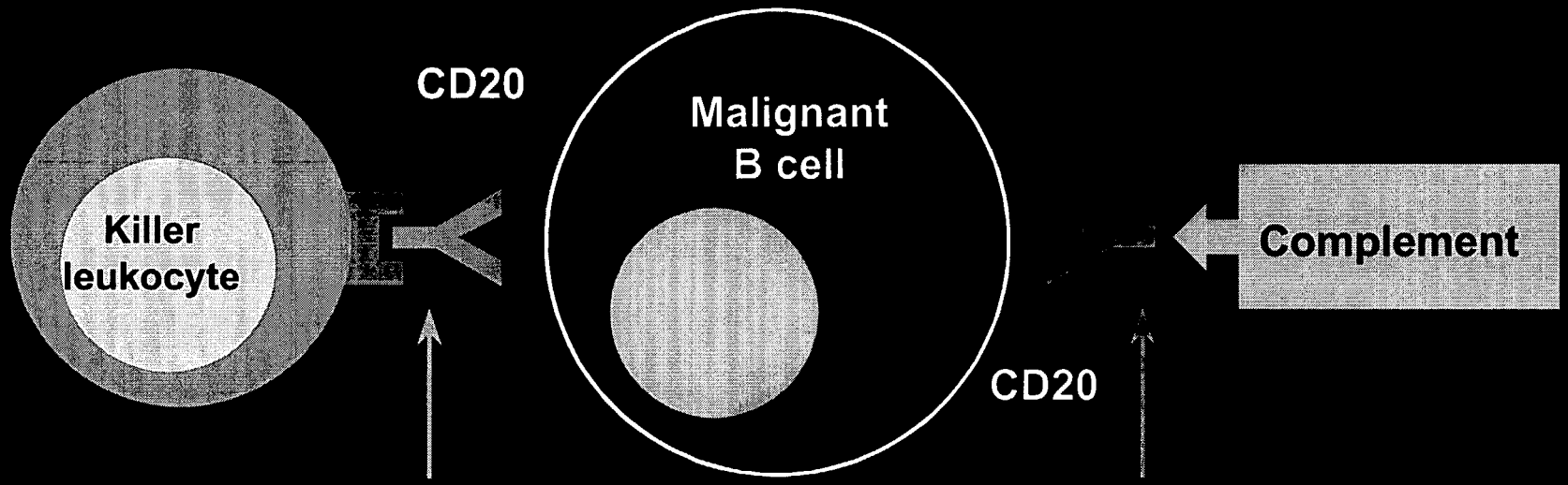
- Currently approved for:
  - indolent lymphoma: relapsed or resistant following chemotherapy
- New approval expected for:
  - aggressive lymphoma: in combination with chemotherapy
- First monoclonal antibody for the treatment of cancer
- Available in over 70 countries
- 150,000 - 200,000 treated world-wide



How does MabThera/Rituxan work?

Roche

Pharmaceuticals



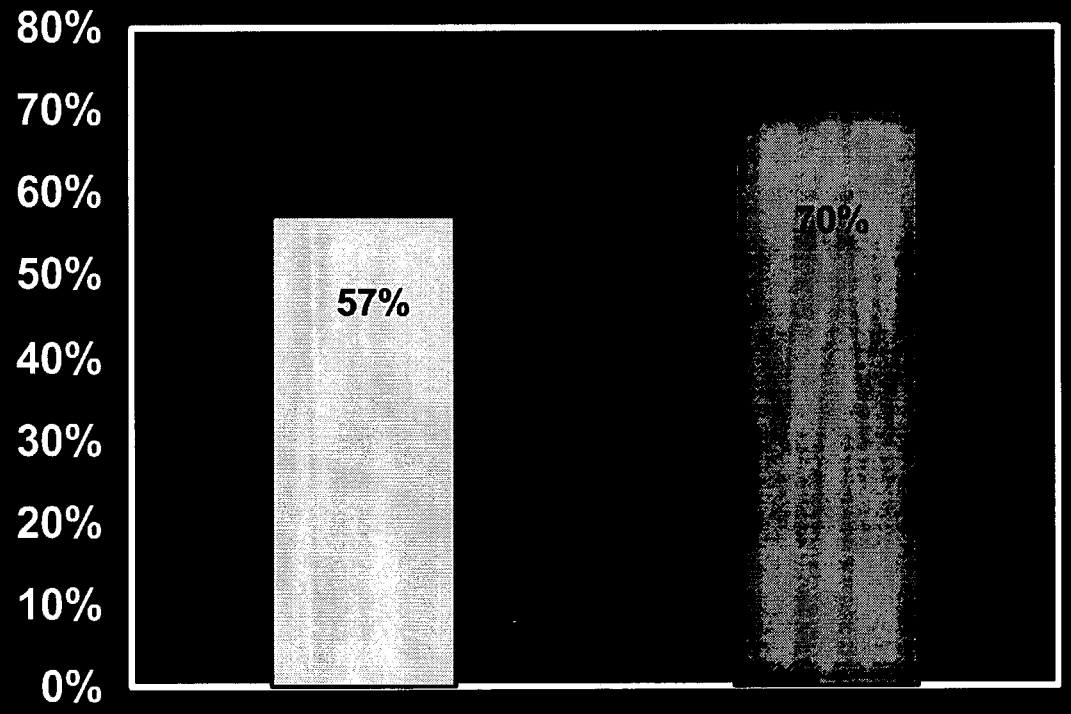
Adapted from: Male *et al.* 1996

MabThera/Rituxan:
13% more patients survive

Roche

Pharmaceuticals

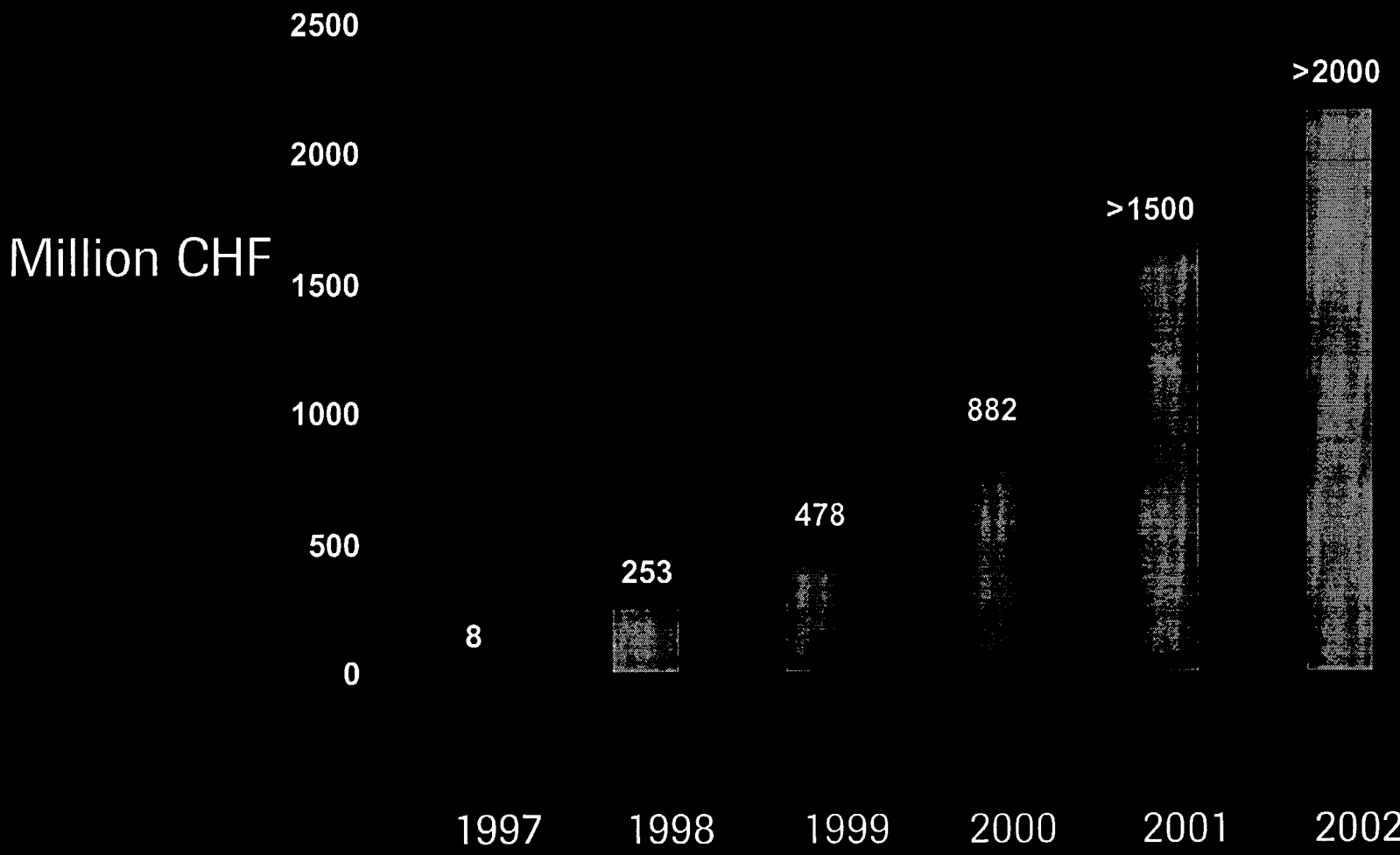
EU approval expected for MabThera in aggressive NHL



MabThera/Rituxan: expected sales in 2001 over CHF 1.5 billion

Roche

Pharmaceuticals



MabThera/Rituxan future development

Roche

Pharmaceuticals

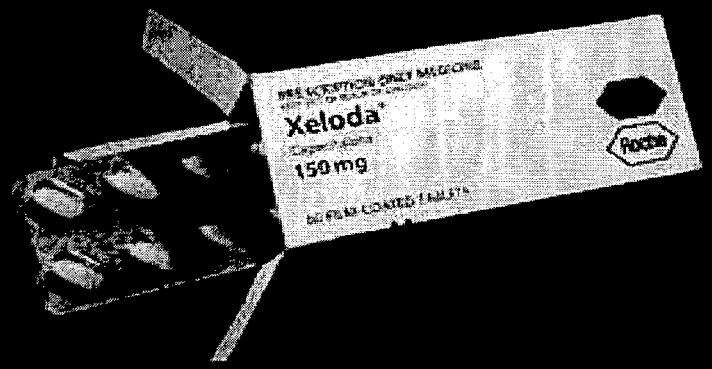
- Ongoing/future development:
  - First line combination with chemotherapy for indolent lymphoma
  - Exploratory studies in other blood cancers and diseases

MABTHERA® RITUXIMAB

Roche's "Smart Tablet" Xeloda
A targeted approach to chemotherapy

Roche

Pharmaceuticals



Roche

Pharmaceuticals

What is Xeloda?

Xeloda is...

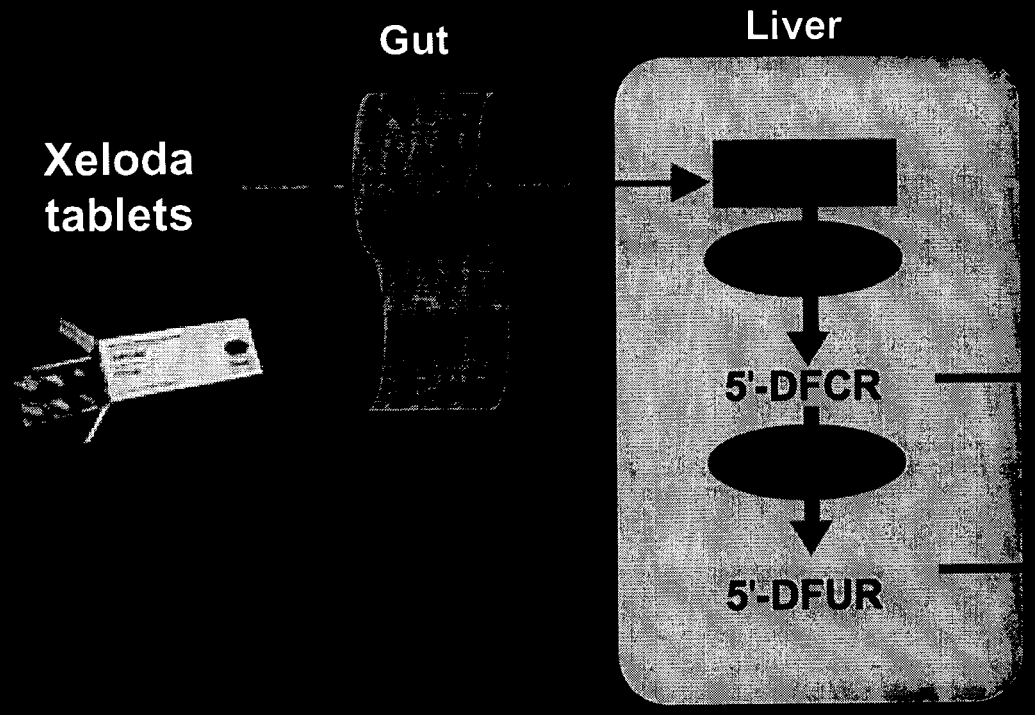
- A "smart" tumour-activated tablet indicated for colorectal and breast cancer
- Approved in more than 80 countries world-wide
- Big potential ≈ CHF 1.5 Bn

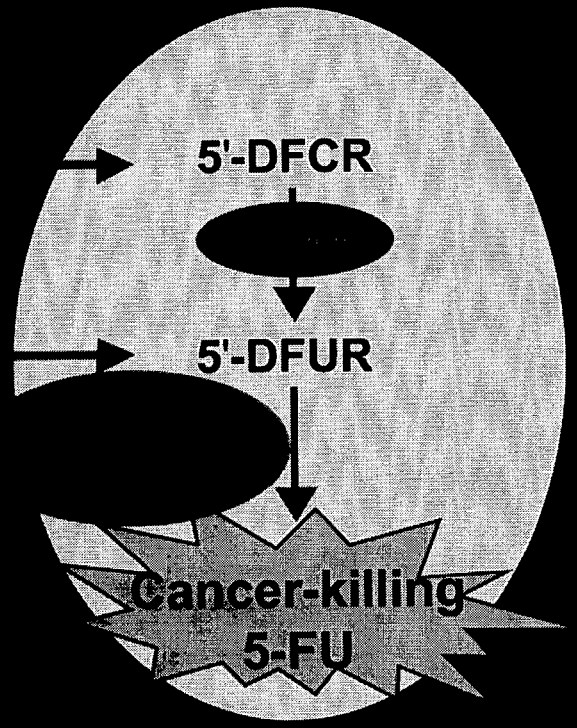
Xeloda® (capecitabine)

Unique, tumor-activated mechanism

Roche

Pharmaceuticals

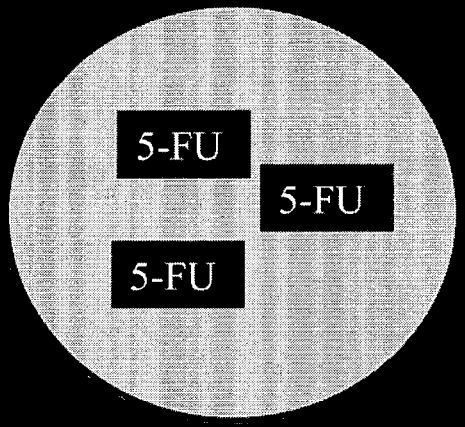




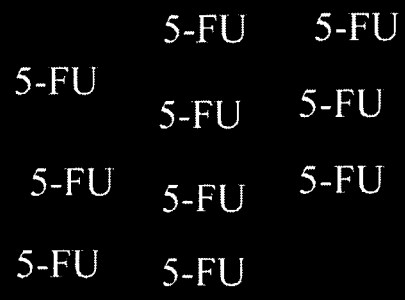
Oral Xeloda delivers more cancer-killing agent (5-FU) where it is needed … into the tumor

Roche

Pharmaceuticals



Healthy Cell



Cancer Cell

Schüller et al. Cancer Chemother Pharmacol 2000;45:291-7

Roche

Pharmaceuticals

Breast Cancer - key facts

- Breast cancer is the number one cause of cancer-related death in women
- 8 - 9% of women will develop breast cancer
- More than 250,000 new cases of breast cancer are diagnosed in Europe each year
- Approximately 50% of patients develop advanced breast cancer
- 150,000 new cases of advanced disease annually
- Life expectancy for women diagnosed with advanced breast cancer is 18 to 30 months

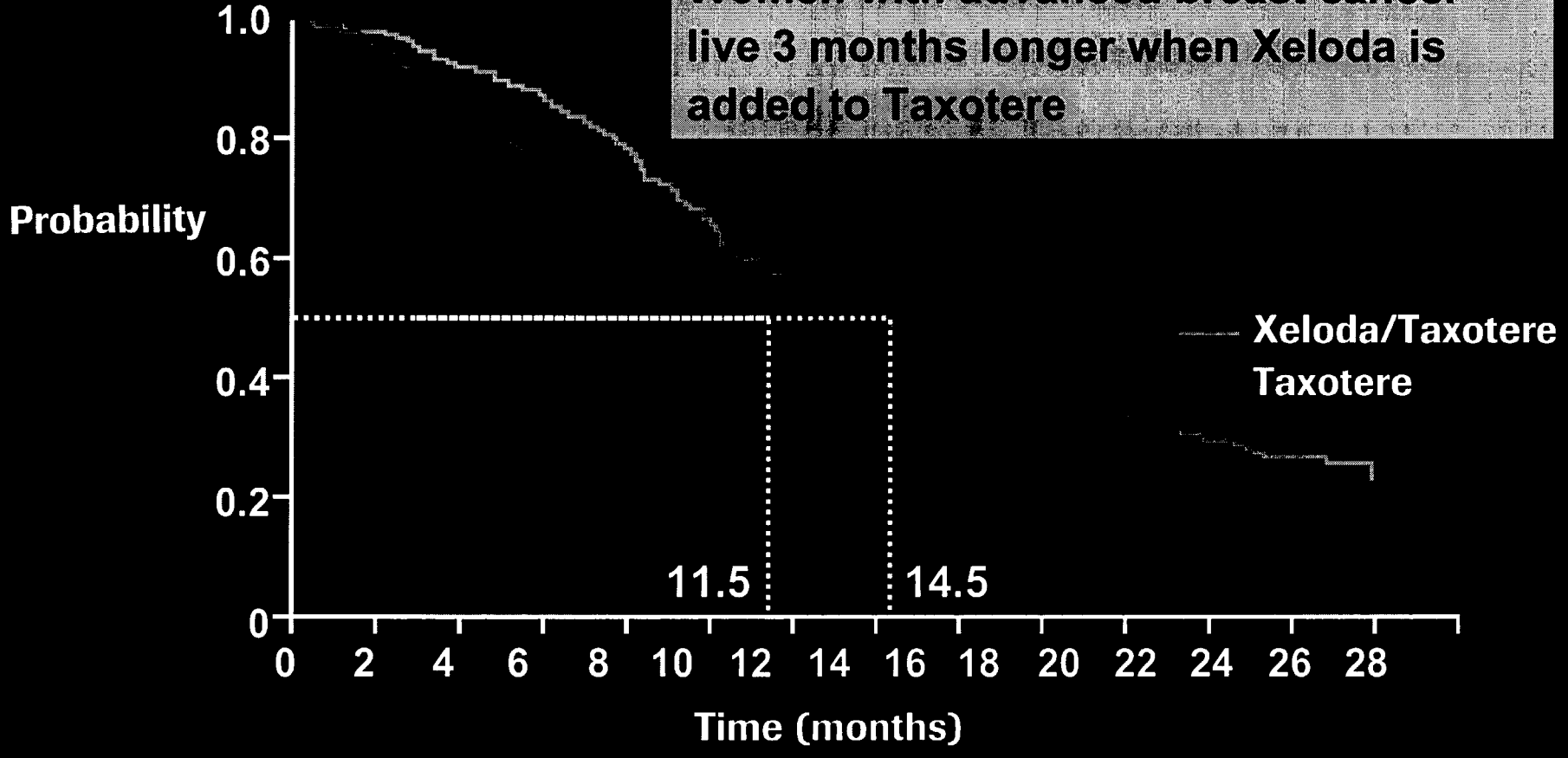
World Health Organisation, 2000

Survival benefit:
Women lived longer with Xeloda combination

Roche

Pharmaceuticals

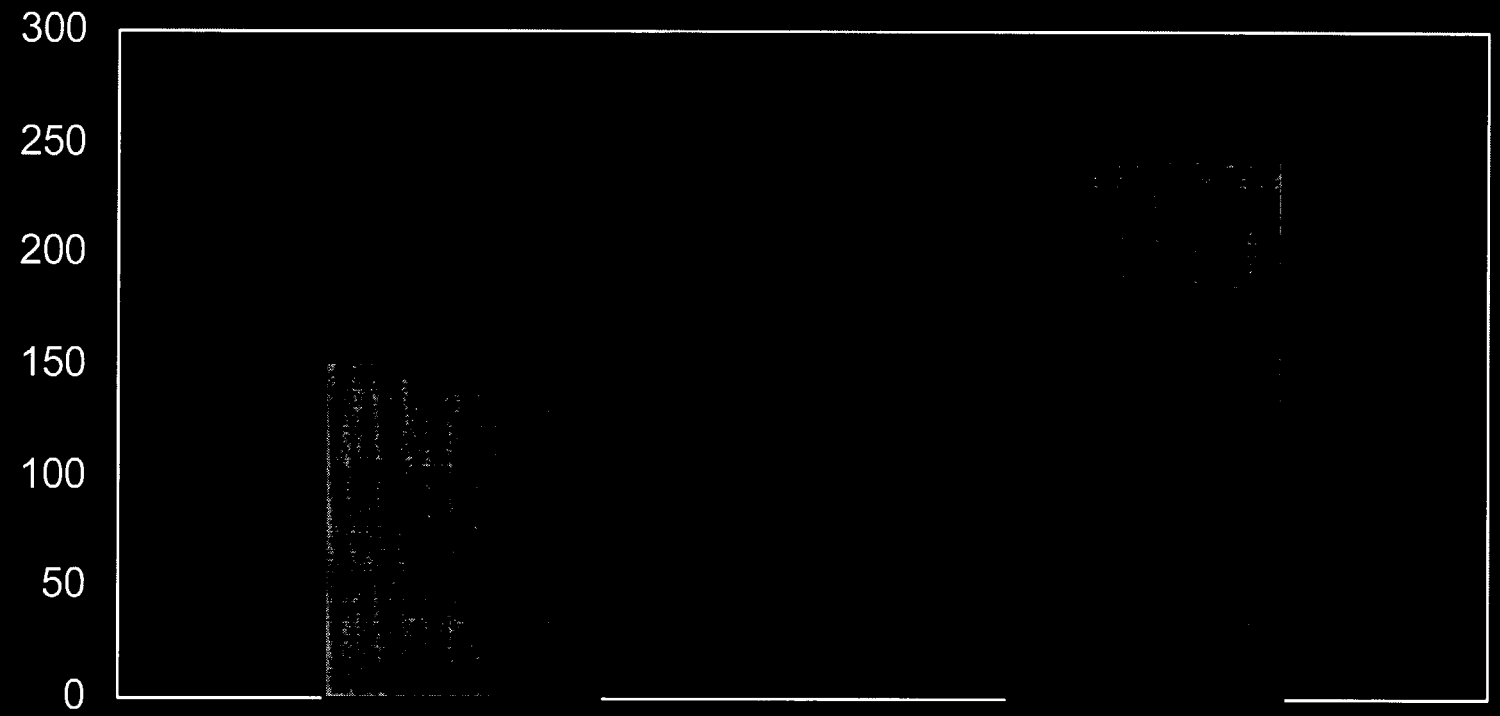
Women with advanced breast cancer live 3 months longer when Xeloda is added to Taxotere



Xeloda sales development

Roche

Pharmaceuticals



Xeloda: future development
Colorectal cancer

Roche

Pharmaceuticals

- Adjuvant (X-ACT) study
  - Almost 2000 patients
  - Surgery followed by at-home-chemotherapy
  - Early study results expected this year
- Other exploratory studies in combination with chemotherapy and radiotherapy

Xeloda® (capecitabine)

Roche

Pharmaceuticals

Xeloda: future development
Breast cancer

- Moving Xeloda earlier into the treatment of breast cancer
- Adjuvant studies in co-operation with independent study groups
  - Aim to prevent the cancer returning after surgery

Xeloda® (capecitabine)

Xeloda: maximizing the impact

Roche

Pharmaceuticals

Extensive clinical activities in many solid tumors:

- Stomach Cancer
- Esophageal Cancer
- Prostate Cancer
- Kidney Carcinoma
- Pancreatic Cancer
- Head and Neck Tumors
- Liver and Bile Duct Cancer
- Gynecological Cancer

Xeloda: blockbuster potential

Roche

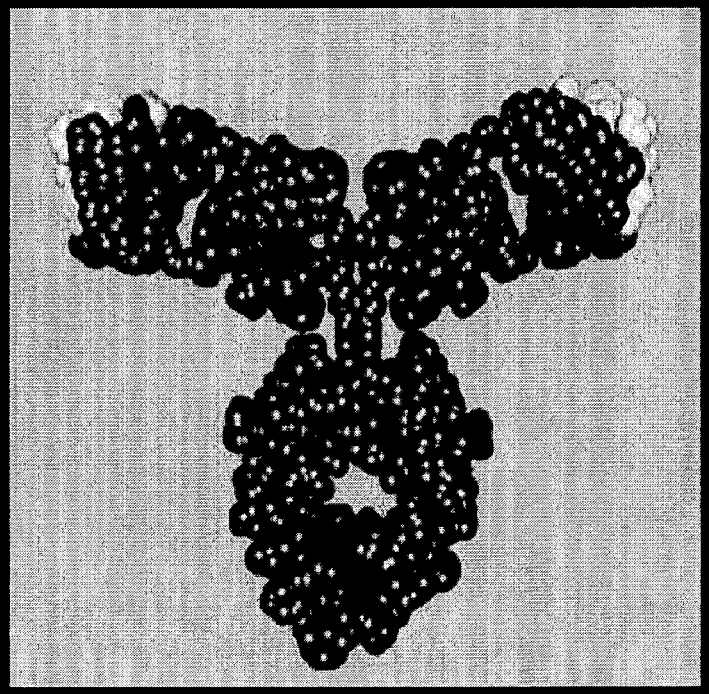
Pharmaceuticals

- Growth through
  - Survival benefit in breast cancer
  - Xeloda replacing non-targeted fluoropyrimidines (potential market of up to CHF 4 Bn)
  - Patient preference for oral cancer therapies
- Long patent life until 2013

Herceptin: cancer drug with survival benefit

Roche

Pharmaceuticals

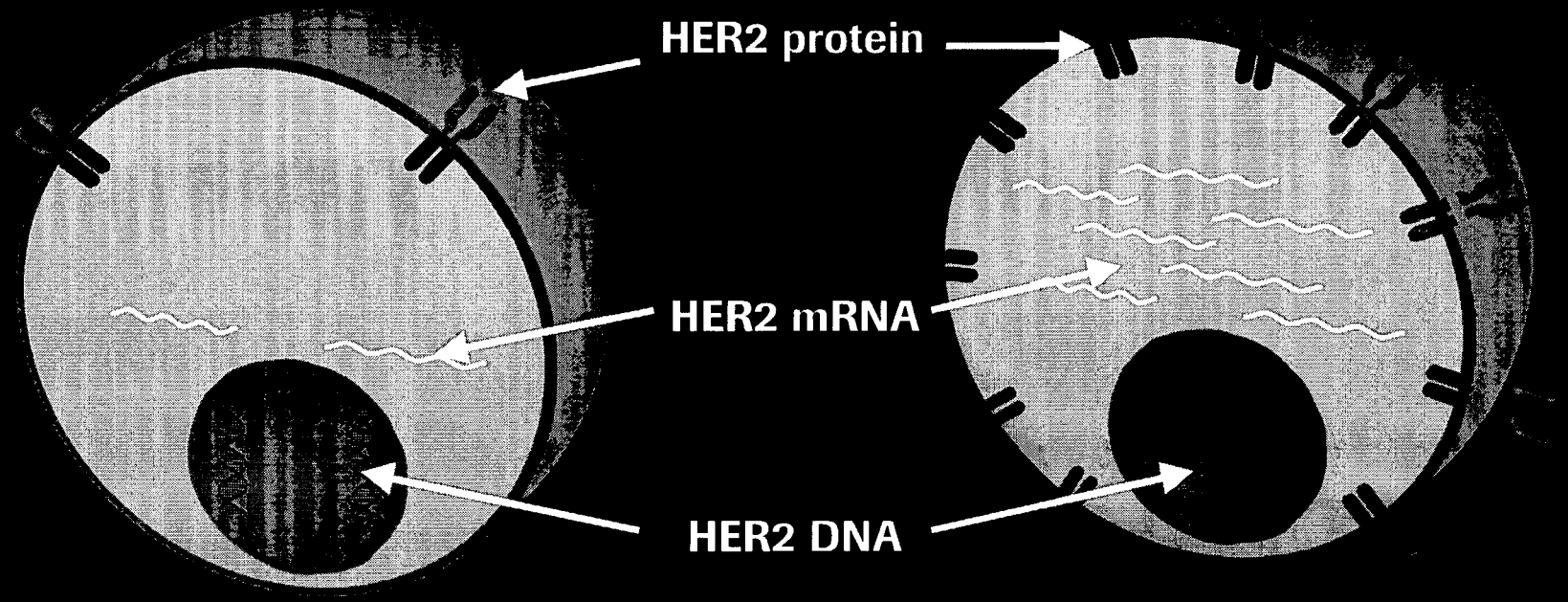


- Used to treat HER2 positive breast cancer
- Treatment with Herceptin can result in:
  - Increased survival rates by up to 45%
  - Improved and lasting responses
  - Maintained quality of life

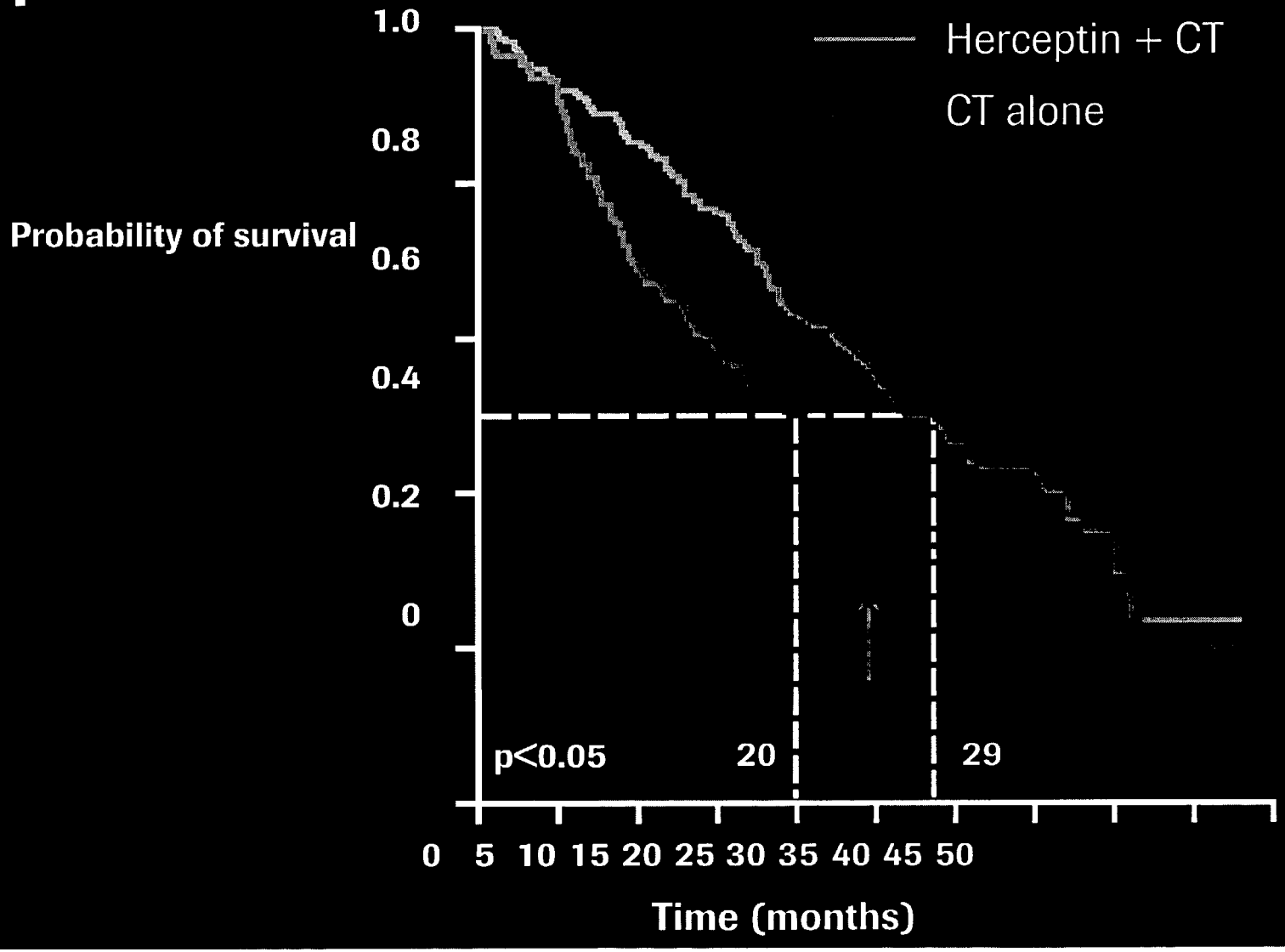
What is HER2?
Herceptin targeting the source of the problem

Roche

Pharmaceuticals



Herceptin improving survival in HER2 positive breast cancer



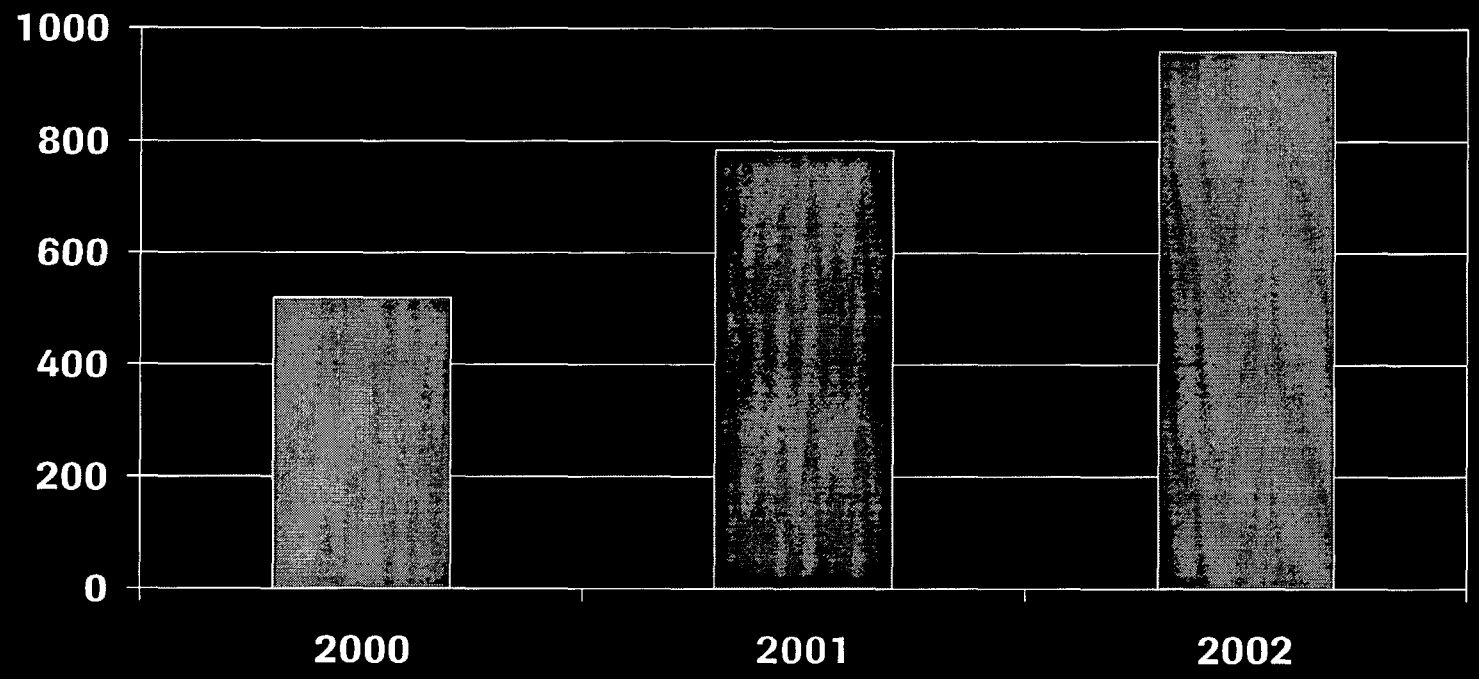
Roche

Pharmaceuticals

Herceptin: Sales development

Roche

Pharmaceuticals



Herceptin: further development

Roche

Pharmaceuticals

- Advanced breast cancer
  - combination with hormone therapy
  - combination with other chemotherapies
- Adjuvant breast cancer
  - Four International Co-operative Group Trials
  - Total planned enrollment > 10,000
  - Participating institutions > 2000

Bondronat

Roche

Pharmaceuticals

- Potent, third-generation bisphosphonate
- Both oral and intravenous formulation available
- Currently approved for treatment of hypercalcemia of malignancy
- Current status: Filing planned for prevention of complications of bone cancer following advanced breast cancer

BONDRONAT
(ibandronate)

Innovation and Impact

Roche

Pharmaceuticals

MabThera, Herceptin and Xeloda

- cancer patients are living longer

MabThera, Xeloda and Herceptin just part of our extensive oncology portfolio

- we have a number of products that better enable patients to tolerate their treatment

We are making a difference in the treatment of cancer

Roche

Pharmaceuticals

Roche oncology pipeline

Kapil Dhingra
Group Leader
Global Oncology Drug Development

Roche oncology portfolio

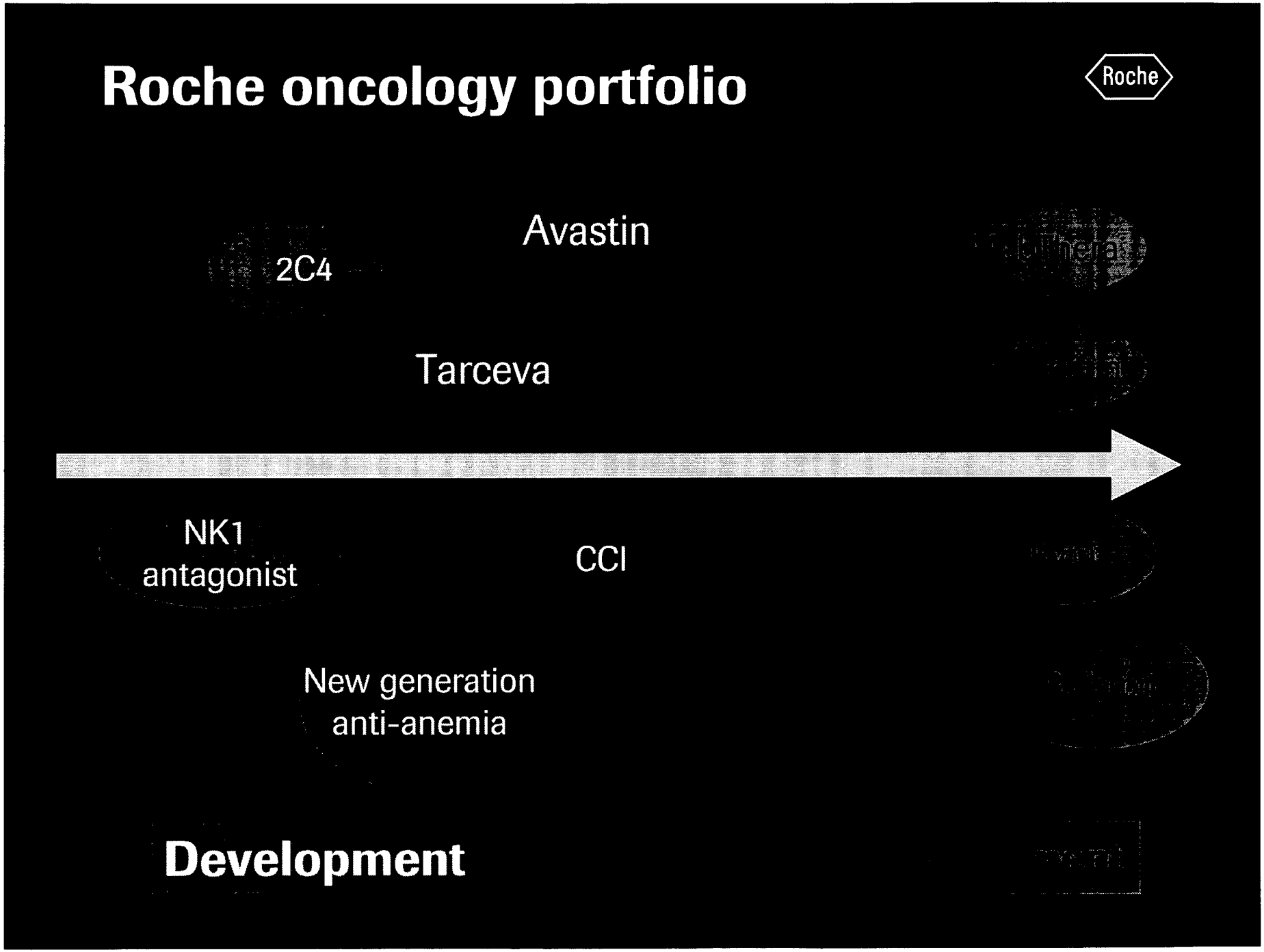
Roche

Pharmaceuticals

- Roche has the deepest and broadest portfolio of innovative oncology drugs in development in the world
- Roche has a long-term commitment for comprehensive development of its oncology portfolio



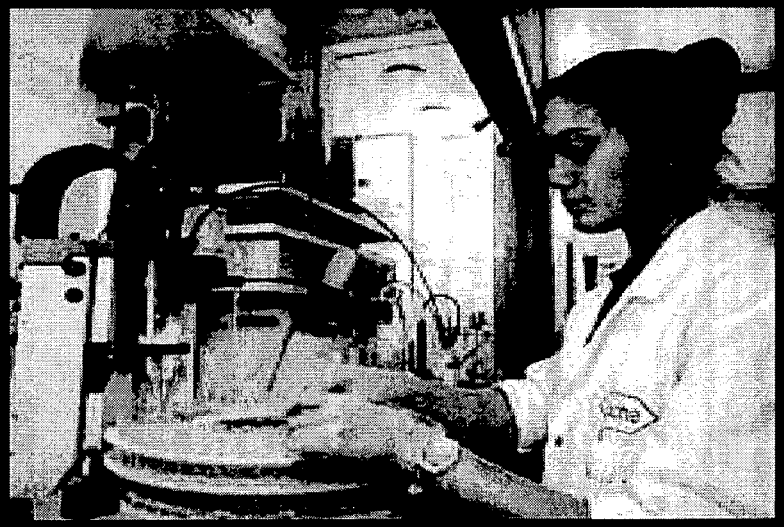
Roche oncology portfolio



Roche

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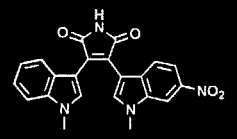
A new approach to chemotherapy

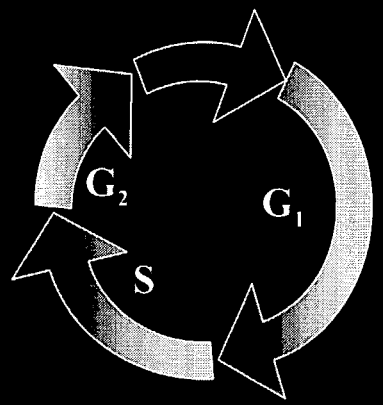


Novel cell cycle inhibitor (CCI)
Ro 31-7453

Roche

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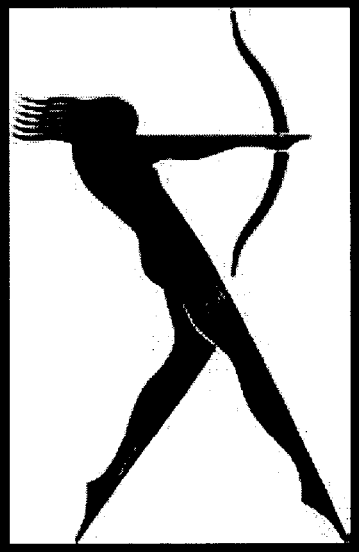
CCI causes cell cycle arrest in M-Phase, followed by cell death

- Broad anticancer activity in preclinical models
- Convenient oral dosing
- Encouraging early evidence of efficacy
- Current status: Phase II; advanced breast, lung and colorectal cancer

Roche

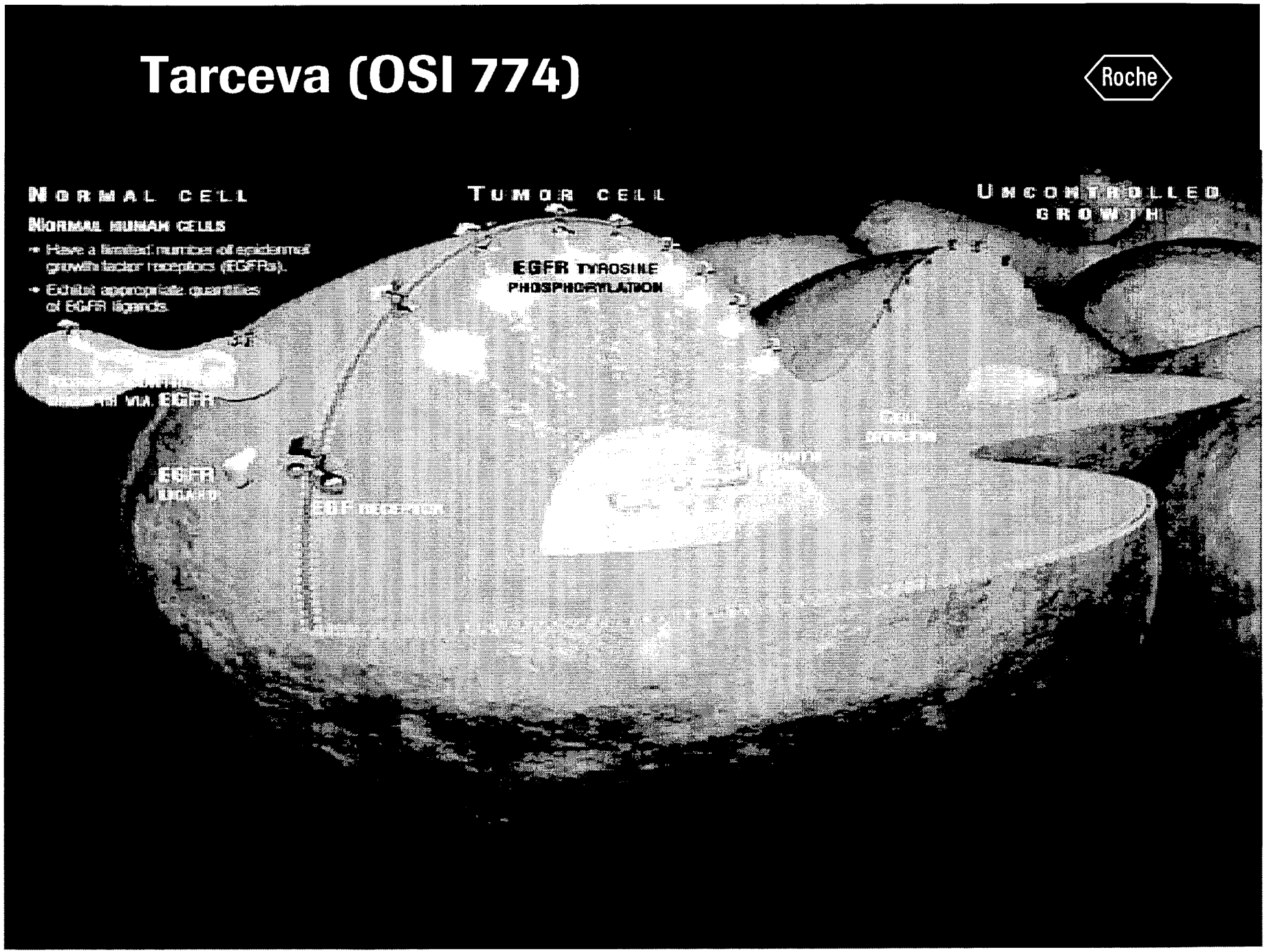
Pharmaceuticals

The new paradigm of anticancer therapeutics



Tarceva (OSI 774)

Roche



Roche

Pharmaceuticals

Tarceva

- Positive phase II data in lung cancer, head & neck cancer, ovarian cancer
- Phase III: lung and pancreas cancer trials ongoing
- Phase I/II studies in breast cancer

2C4

Roche

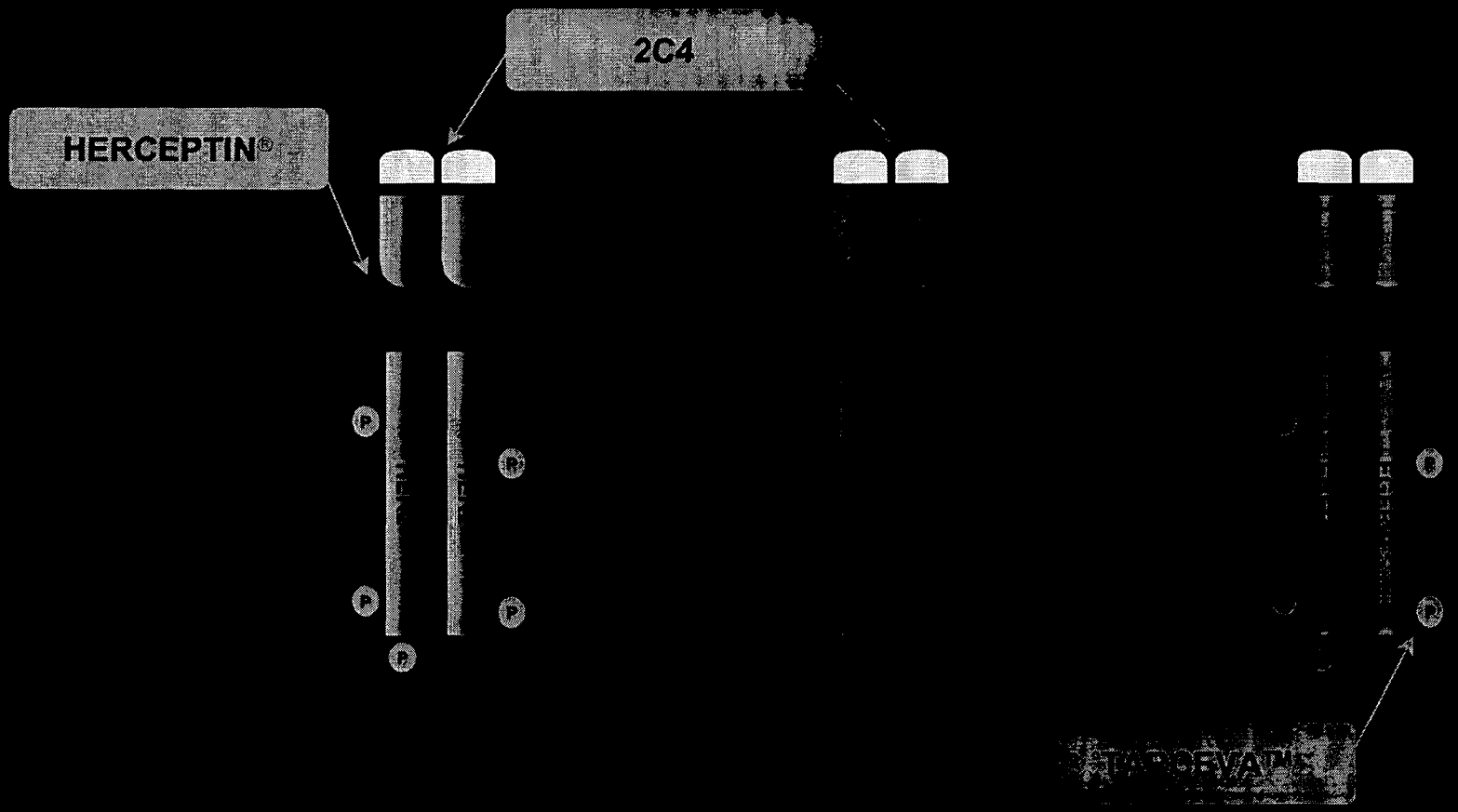
Pharmaceuticals

- Humanized antibody against HER2 (binds to a different part of HER2 than Herceptin)
- Interferes with signaling through HER2 and partners
- Preclinical activity in Herceptin-resistant models e.g. prostate cancer, lung cancer
- Current status: Phase I

HER family: Multiple opportunities of intervention

Roche

Pharmaceuticals



Roche

Pharmaceuticals

Avastin: Interrupting the blood supply

- Angiogenesis essential for growth of all tumors
- VEGF crucial for development of new blood vessels
- Avastin: a monoclonal antibody against VEGF
- Promising phase II results in colorectal cancer, breast cancer and lung cancer

Avastin:
Current status

Roche

Pharmaceuticals

- Avastin + chemotherapy combination trials ongoing

Current status:

- Phase III trial ongoing in colorectal cancer
- Phase III trial ongoing in breast cancer
- Phase II/III trial in lung cancer
- Roche has 'opt-in' rights

Roche

Pharmaceuticals

Innovative supportive care drugs

Supportive care pipeline

Roche

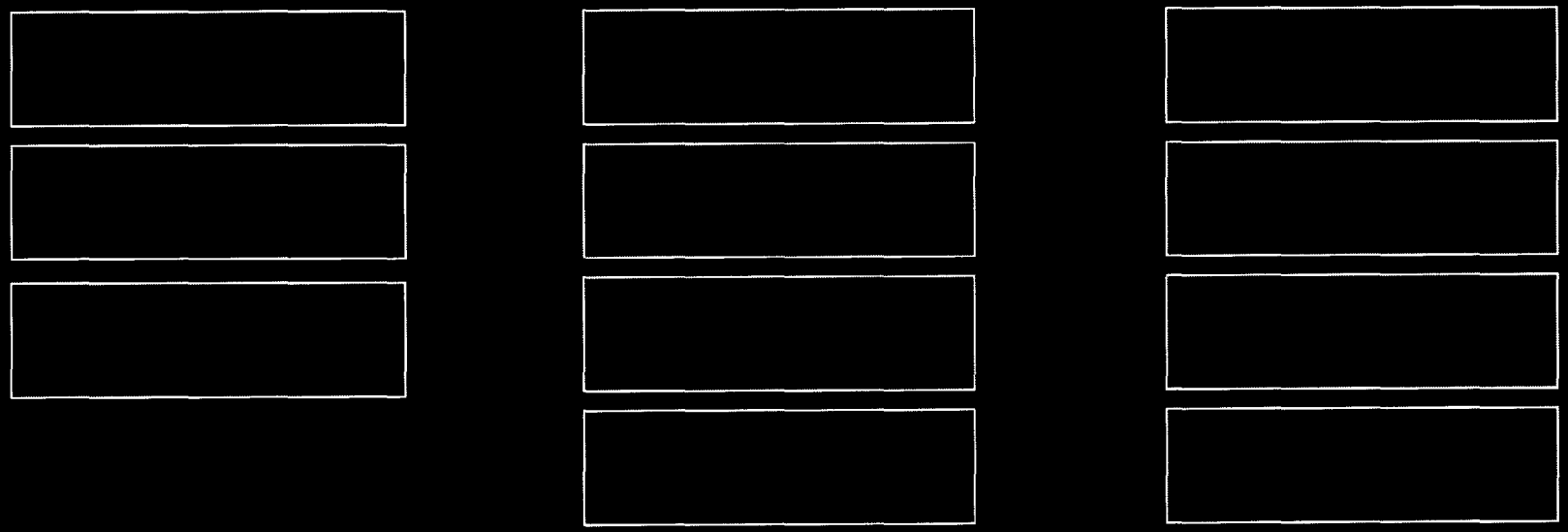
Pharmaceuticals

- New generation anti-anemia drug
  - Long half-life ⟶ decreased frequency of injections
  - Being developed to treat anemia in patients with cancer
  - Status: Phase I
- NK1 (Neurokinin 1) receptor antagonist (Ro 67-3189)
  - Chemotherapy-associated nausea/vomiting still a significant unmet medical need
  - Efficacious in multiple animal models of chemotherapy-induced vomiting
  - Status: Phase I planning

Filing dates

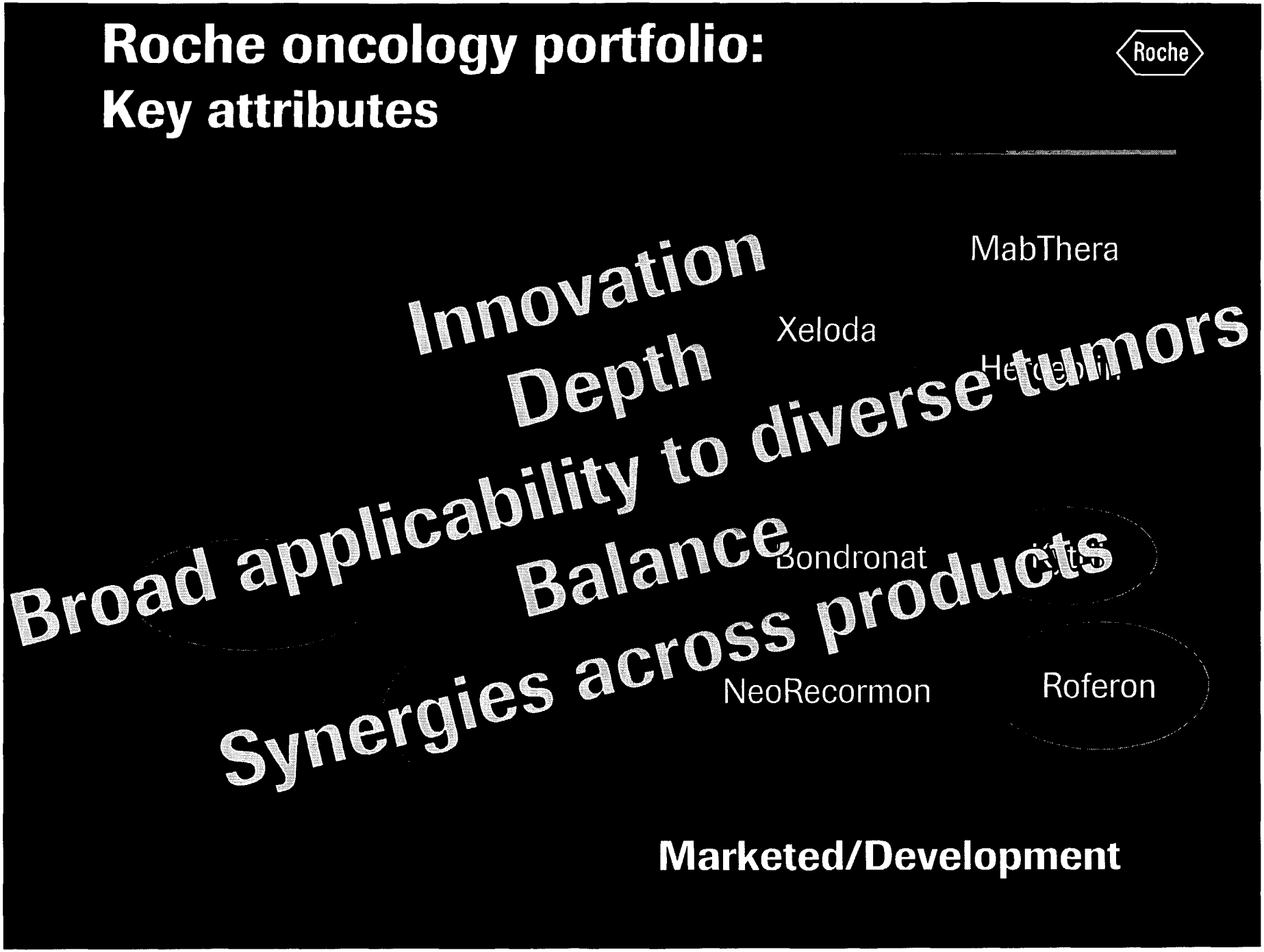
Roche

Pharmaceuticals



2001 2002-2004 > 2004

Roche oncology portfolio:
Key attributes



Roche

Diagnostics

Cancer diagnostics

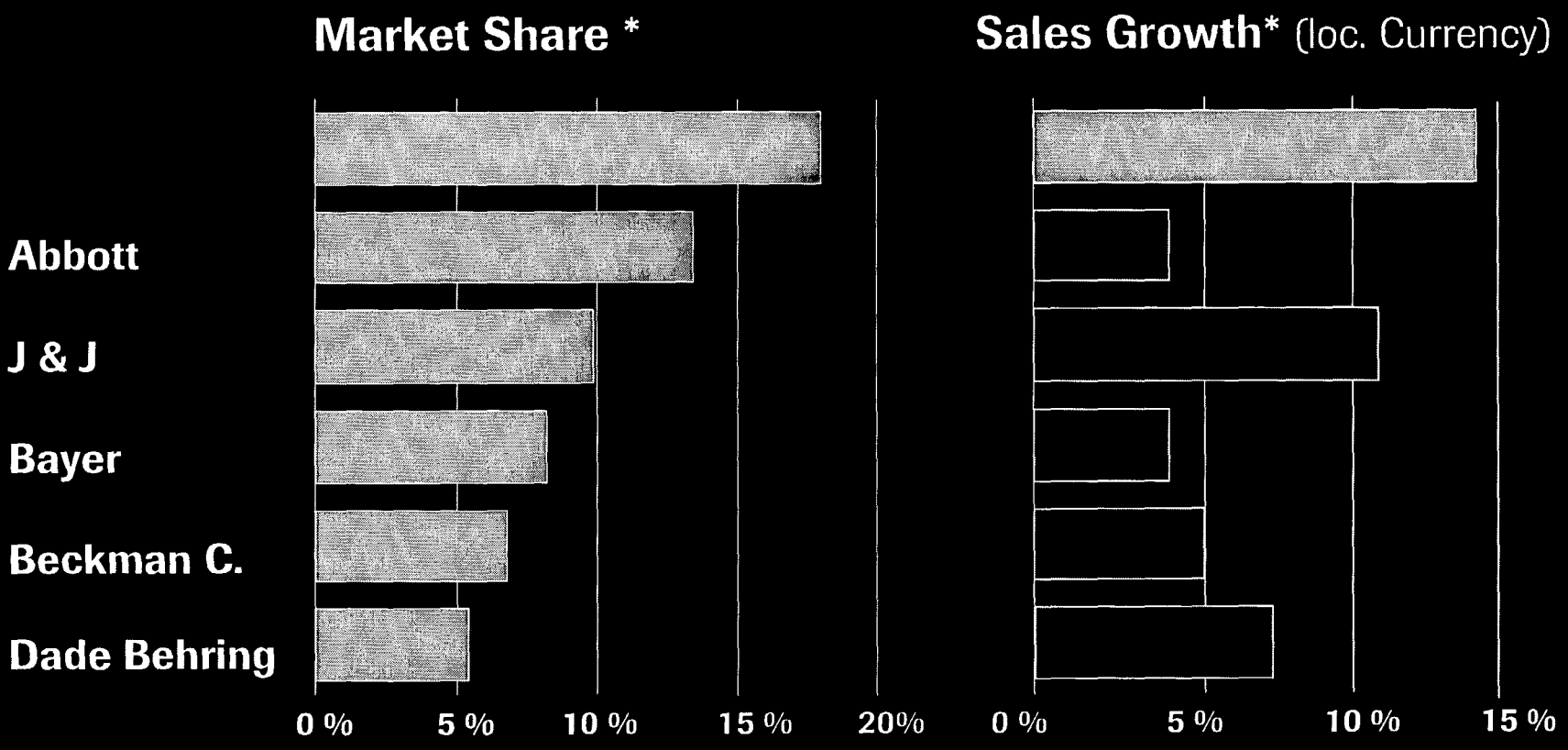
Bärbel Porstmann
Head of Integrated Cancer Care Unit

Roche diagnostics lead the market

Roche

Diagnostics

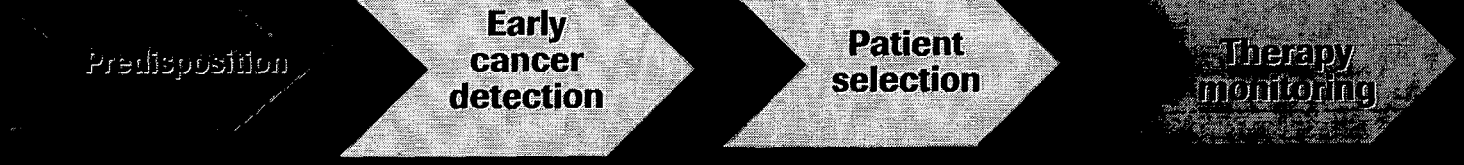
Total in-vitro Diagnostics market:
35 billion CHF in 2001E (+6 % in local currency)



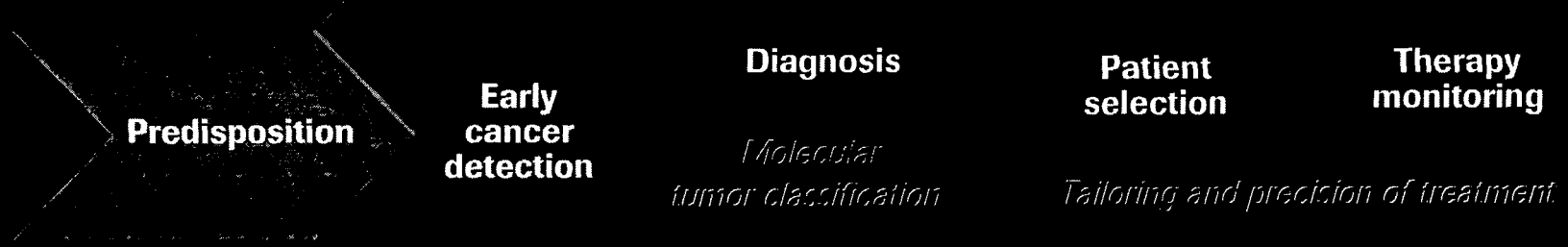
* Basis: Q3 2001 / excludes Applied Sciences

Source: Annual Reports, Boston Biomedical Consultants, Roche Analysis

From today ...



...to tomorrow



Roche

Diagnostics

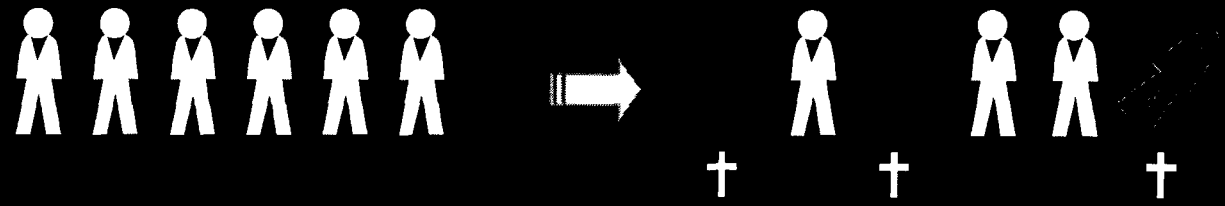
Roche vision: tailored approach to treatment

Roche

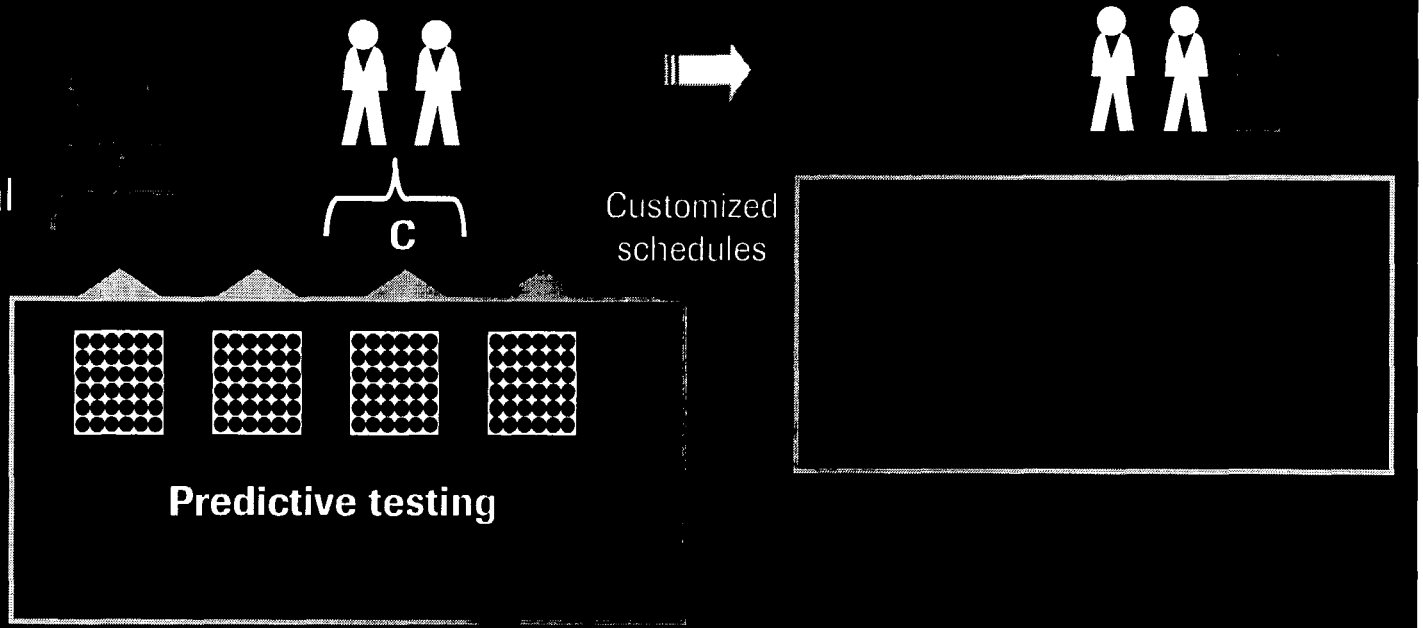
Diagnostics

'One schedule fits all patients'

'Trial and error'



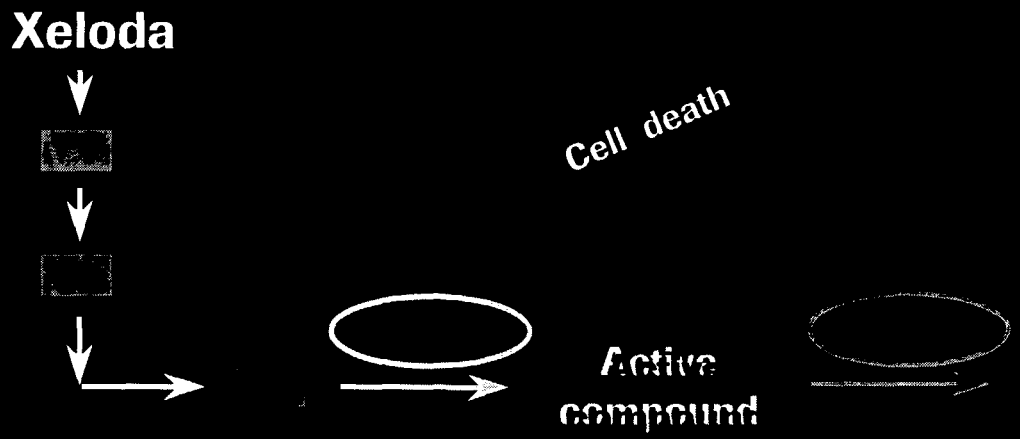
based on individual marker profiles



Patient selection for treatment with Xeloda

Roche

Diagnostics



Concept

Identification of non-responders

Goal: Higher chance of success

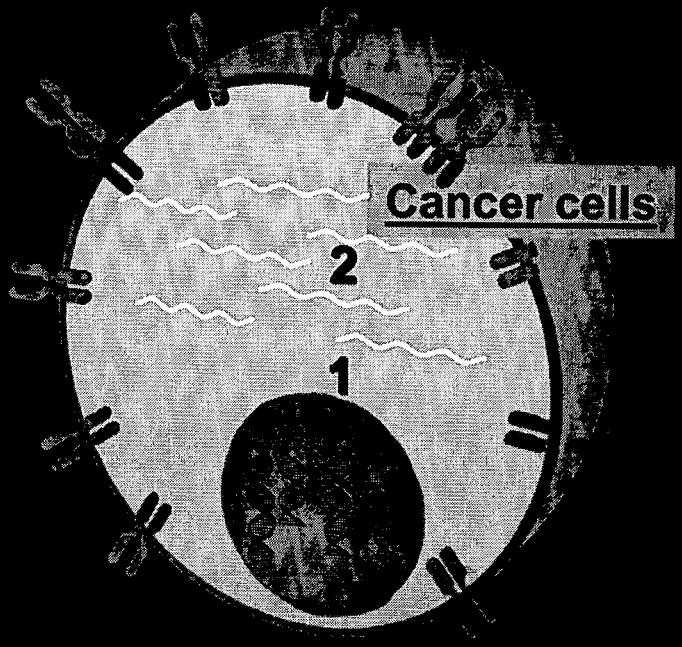
Current Status

Patient selection for Herceptin

Roche

Diagnostics

HER2 can be measured by various techniques :



= gene copy number

= m RNA transcription

= cell surface receptor protein

= released receptor in plasma

Tests from Roche Diagnostics:



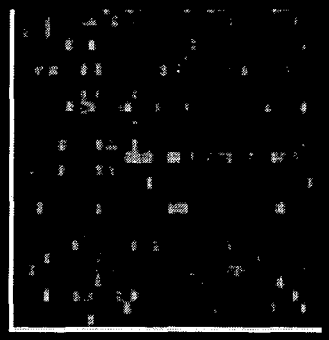
Ongoing validation of HER2 PCR in clinical Herceptin studies for diagnostic approval

New microarray routes to tailored cancer treatment

Roche

Diagnostics

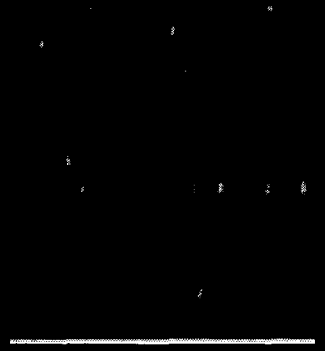
Tumor patient X

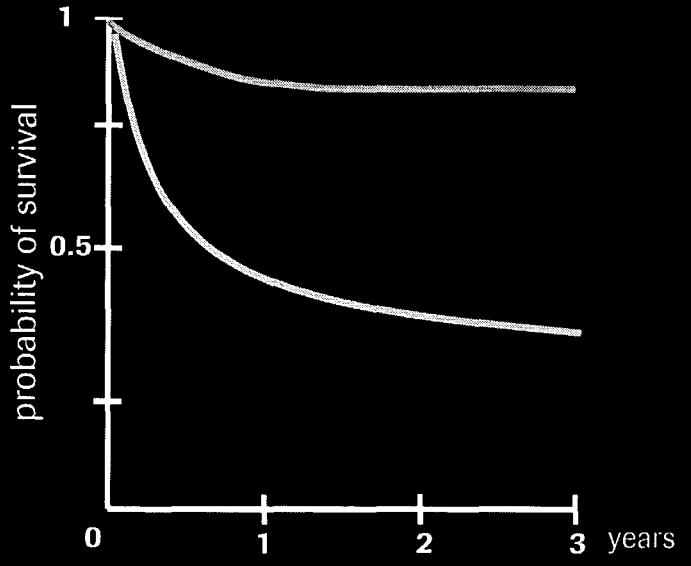


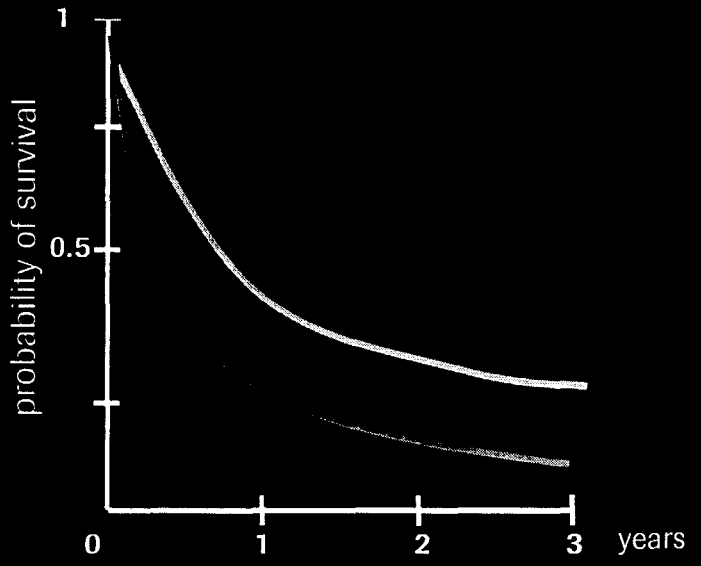
Analysis of critical genes

Pattern recognition

Tumor patient Y







Conclusions

Roche

Diagnostics

- **Largest in-vitro diagnostic company worldwide**
- **Broadest Marketing & Sales outlet**
- **Large experience in instrumentation**
- **Marker discovery programs in cancer**
- **Diagnostics will become essential in clinical drug development**
- **Concepts and tools for a new generation of treatment regimens:**

  - higher efficacy and safety in patient subsets
  - scientific basis for choice of clinical options
  - integrated solutions result in health economics benefit

Roche

Diagnostics

Roche: the powerhouse in oncology

Media Briefing

31 January 2002

Roche Holding Ltd

30 January 2002 - Presentation on Nippon Roche

As Posted on Roche.com

Furnished Under Rule 12g3-2(b)
Roche Holding 82-3315

Roche

Pharmaceuticals

Nippon Roche's Growth Potential

William M. Burns
Head of the Pharmaceuticals Division
F. Hoffmann – La Roche Ltd.

Disclaimer

Roche

Pharmaceuticals

This presentation contains certain forward-looking statements. These forward-looking statements may be identified by words such as "believes", "expects", "anticipates", "projects", "intends", "should", "seeks", "estimates", "future" or similar expressions or by discussion of strategy, goals, plans or intentions. Various factors may cause actual results to differ materially in the future from those reflected in forward-looking statements contained in this presentation among others: (1) pricing and product initiatives of competitors; (2) legislative and regulatory developments and economic conditions; (3) delay or inability in obtaining regulatory approvals or bringing products to market; (4) fluctuations in currency exchange rates and general financial market conditions; (5) uncertainties in the discovery, development or marketing of new products or new uses of existing products; (6) increased government pricing pressures; (7) interruptions in production; (8) loss of or inability to obtain adequate protection for intellectual property rights; (9) litigation; (10) loss of key executives or other employees; and (11) adverse publicity or news coverage.

The level of disclosure of information, financial or otherwise, such as that of this presentation on an individual company level represents an exception to the Roche Group policy. The Roche Group emphasizes that this does not represent any precedence for future financial disclosure nor financial disclosure of any other Roche Group company.

The information provided in this presentation is based on the assumption that Nippon Roche is a stand-alone company, i.e. this presentation does not assume nor account for any expected synergies that may arise in the announced transaction with Chugai Pharmaceuticals.

Today's Agenda

Roche

Pharmaceuticals

- Historical Financials
- Key Products Responsible for Near-Term Growth
  - Backbone Products
  - Current Growth Drivers
  - Next Product Launches
- Key Developments for the Future
- Global Pharmaceuticals Pipeline
- Nippon Roche's Outlook

Roche

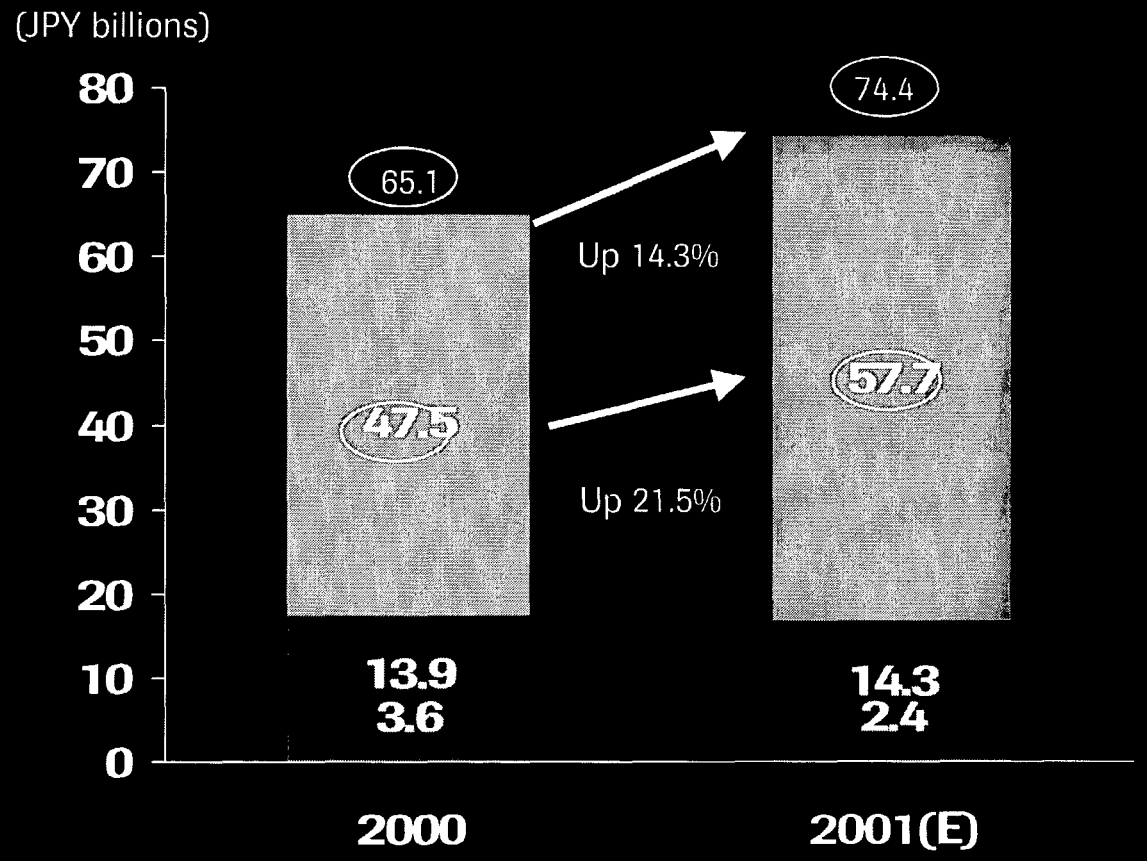
Pharmaceuticals

Historical Financials

Historical Net Sales

Roche

Pharmaceuticals



(1) Finished Products marketed and promoted by Nippon Roche
(2) Products sold to other pharmaceutical companies
(3) Includes Pharma Rx and Vitamins export sales to other Roche affiliates and OTC sales

Historical Sales of Key Products

Roche

Pharmaceuticals

Brand Name	Sales (JPY millions) FY1999	FY2000	YoY Chg.	FY2001E	YoY Chg.	1999-2001E CAGR
Furtulon	19,138	19,575	2.3 %	19,576	0.0 %	1.1 %
Kytril		308		9,430		
Rohypnol	3,782	4,115	8.8	4,236	2.9	5.8
Rocephin	3,637	4,048	11.3	4,063	0.4	5.7
Rocaltrol Oral	3,116	3,248	4.2	3,251	0.1	2.1
Madopar	1,450	1,550	6.9	1,599	3.2	5.0
Tigason	1,491	1,575	5.6	1,429	(9.3)	(2.1)
Rivotril	1,131	1,237	9.4	1,287	4.0	6.6
Tamiflu				6,283		
Herceptin				1,399		
Rituxan				2,023		
CellCept	43	657	1427.9	1,101	67.6	406.0
Draganon	12,558	8,404				

Summary Historical Profit and Loss Figures

Roche

Pharmaceuticals

	FY2000	FY2001E
Total Sales	65,071	74,397
YoY		*14.3%*
Gross Profit	39,301	43,614
YoY		*11.0%*
Operating Profit	9,630	10,790
YoY		*12.0%*

Roche

Pharmaceuticals

Key Products Responsible for Near-Term Growth

Key Products – Backbone Products

Roche

Pharmaceuticals

Furtulon

Furtulon

KYTRIL®
granisetron HCl
Tablets and Injection

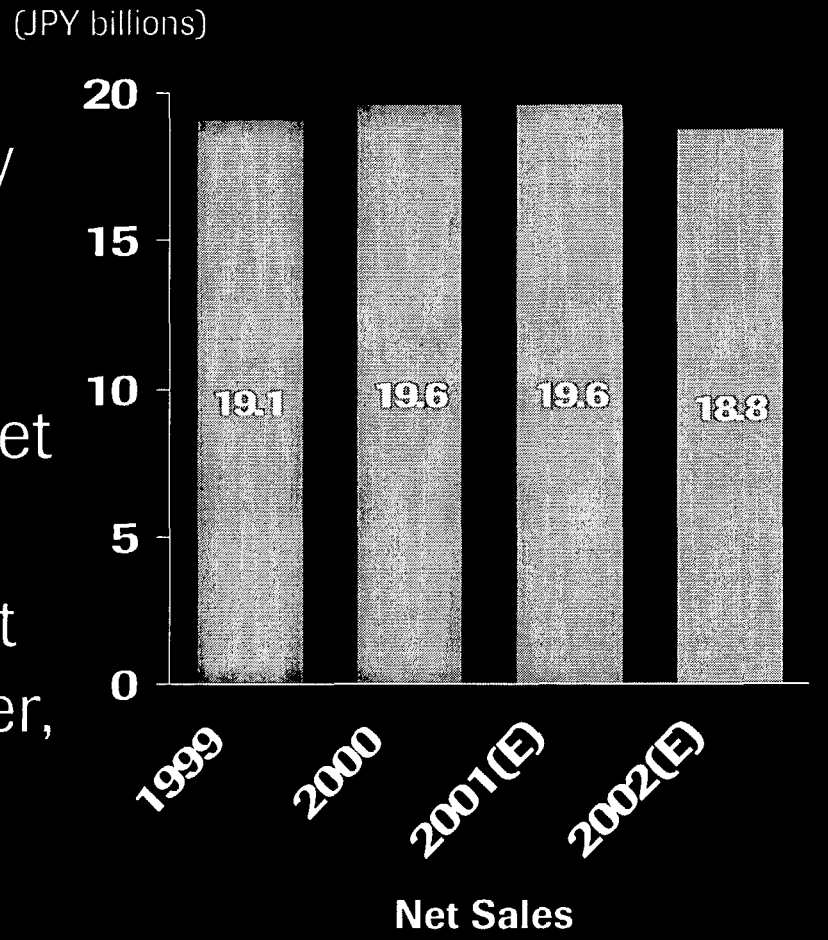
Kytril

Backbone Products

Roche

Pharmaceuticals

- Furtulon
  - 5-FU market declining by approximately 5%
  - Furtulon maintaining approximately 25% market share
  - Broad Indications (Breast Cancer, Colorectal Cancer, Gastric Cancer,etc.)
  - Continued Phase IV investments for the future



Net Sales

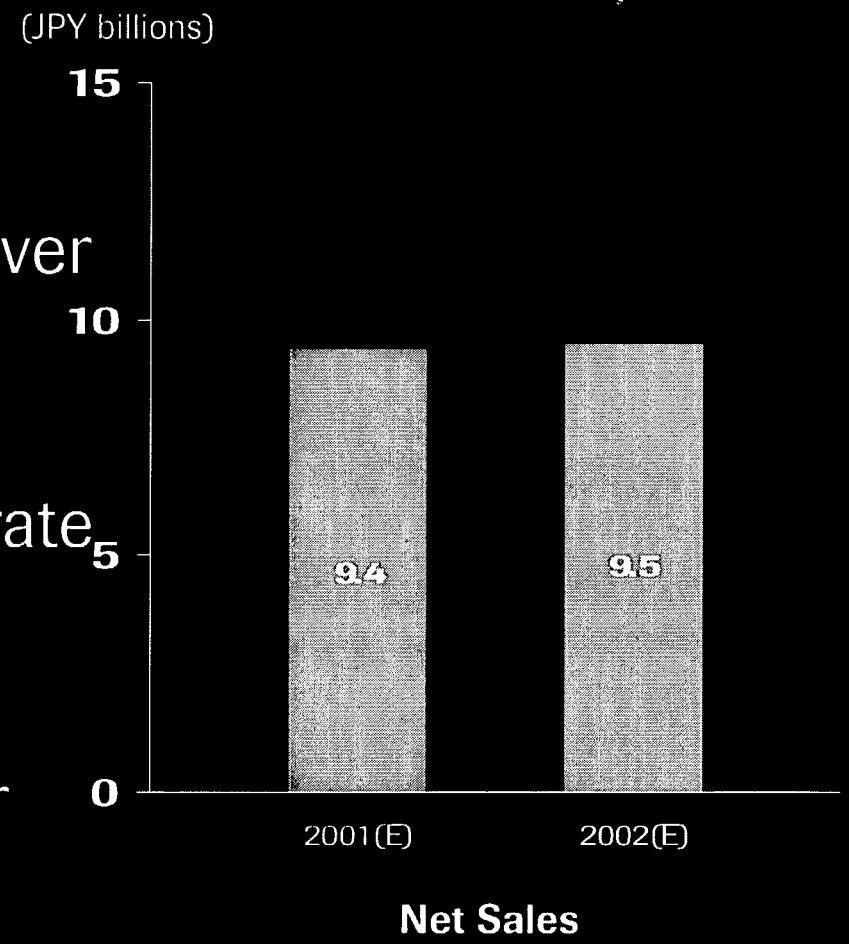
Backbone Products

Roche

Pharmaceuticals

- Kytril*
  - Maintaining leading position in the market (over 50% market share)
  - Continued Phase IV investments to demonstrate benefits in new cancer treatment regimens
  - Slight growth in sales for the near future

KYTRIL granisetron HCl tablets and injection



Net Sales

* Acquired from Smith-Kline Beecham

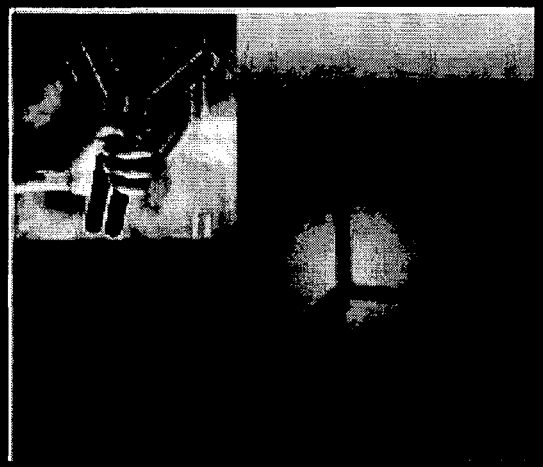
Key Products – Current Growth Drivers

Roche

Pharmaceuticals

Tamiflu™
oseltamivir phosphate

Tamiflu



Rituxan

Herceptin®
Trastuzumab
anti-HER2 monoclonal antibody

Herceptin

CellCept®
(mycophenolate mofetil)

CellCept

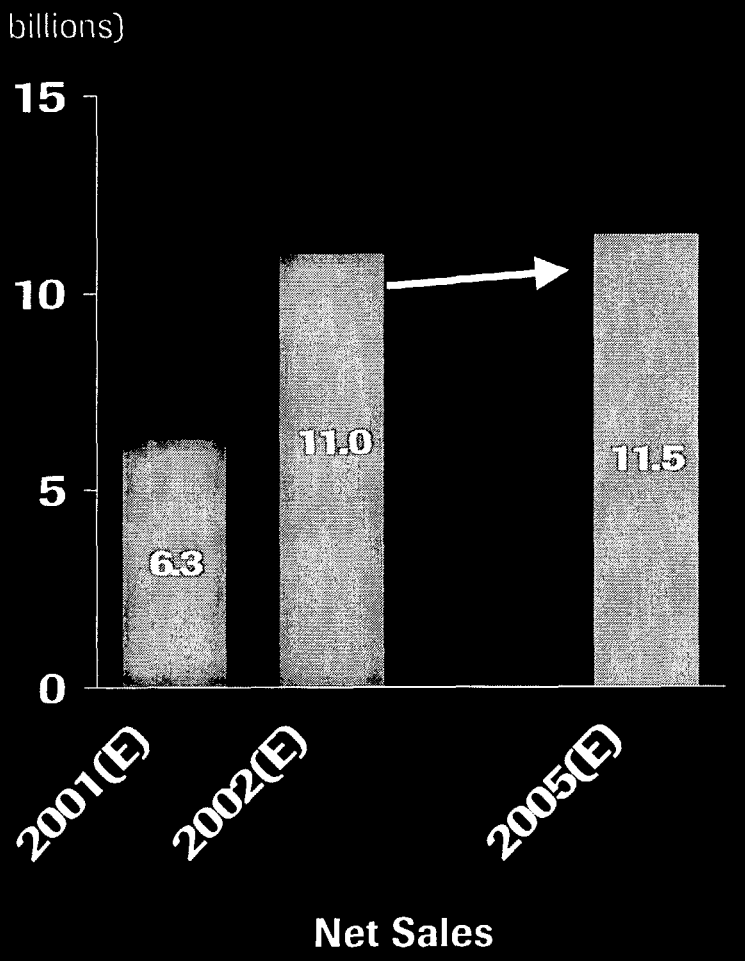
Current Growth Drivers

Roche

Pharmaceuticals

- Tamiflu
  - 75% market share vs Relenza after first season
  - Paediatrics launch in 2002
  - Flu incidence dependent

Tamiflu™
oseltamivir phosphate



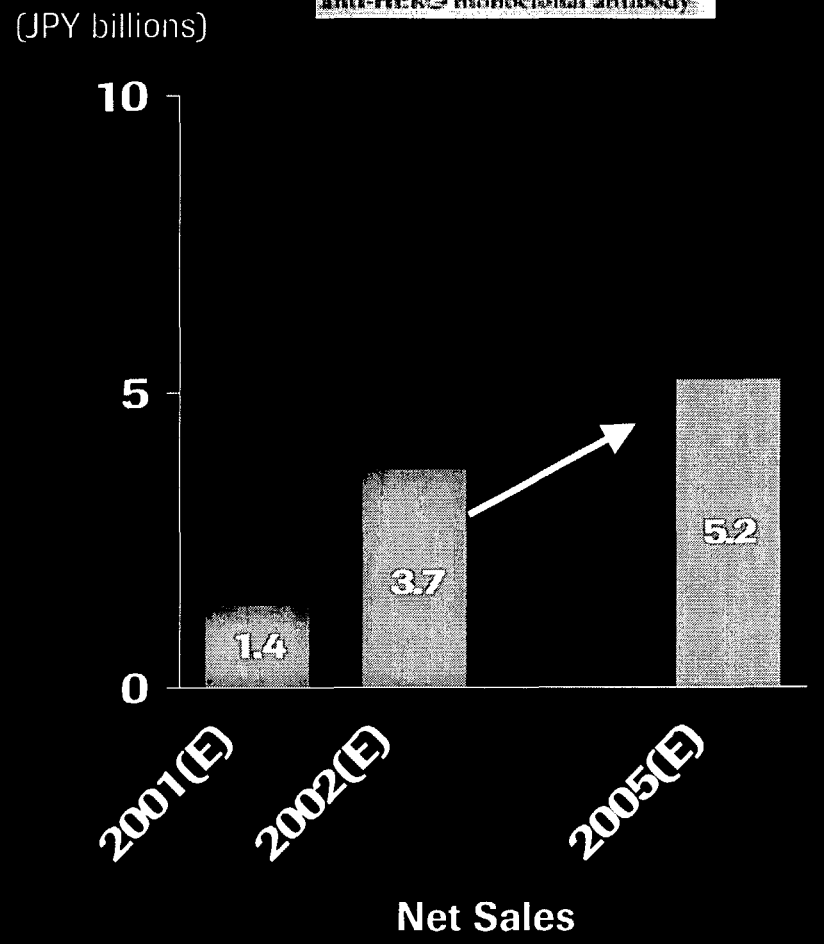
Current Growth Drivers

Roche

Pharmaceuticals

- Herceptin
  - Launched for Metastatic Breast Cancer (MBC) in June 2001
  - Rapid adoption in first 6 months launch
  - Establish Herceptin as highly effective and safe drug for HER2 (+) MBC
  - Expand market through increased HER2 testing

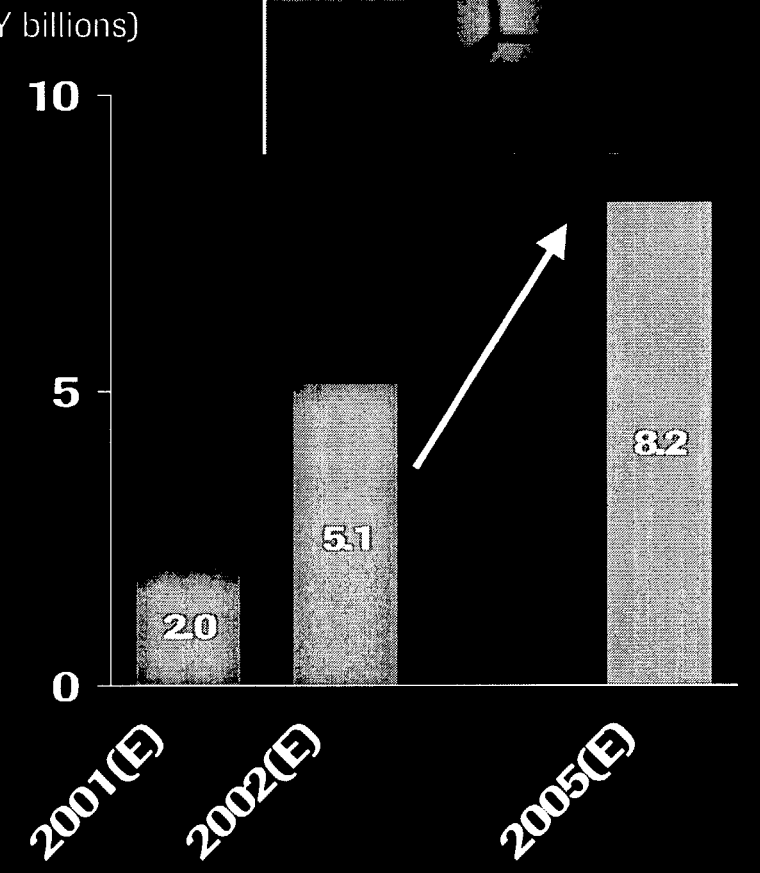
Herceptin®
Trastuzumab
anti-HER2 monoclonal antibody



Current Growth Drivers

- Rituxan
  - Launched for low grade Non-Hodgkin's Lymphoma (NHL) in September 2001
  - Rapid adoption in first 4 months after launch
  - Establish Rituxan as first line position for low grade NHL (Monotherapy and combination)
  - Intermediate / high grade





Roche

Pharmaceuticals

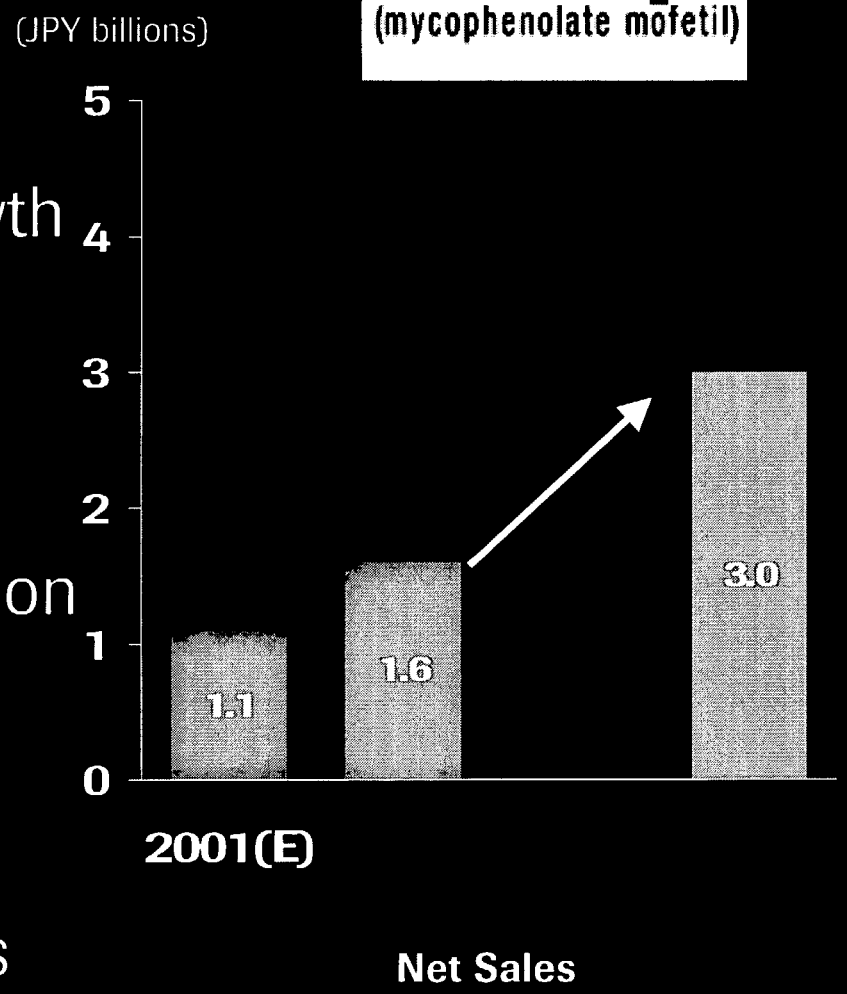
Current Growth Drivers

Roche

Pharmaceuticals

- CellCept
  - Approximately 70% growth over last year
  - Roche #2 in Transplant Market worldwide
  - Renal prevention indication launched in 2001
  - Establish low toxicity immuno-suppressive regimen with CellCept as cornerstone

CellCept (mycophenolate mofetil)



Key Products – Next Product Launches

Roche

Pharmaceuticals

Xeloda (capecitabine)
Response and Convenience

Xeloda

PEGASYS

Pegasys

Next Product Launches

Roche

Pharmaceuticals

- Xeloda (capecitabine)
  - Currently Marketed in over 90 countries
  - Expected launch in Japan in 2002 in Breast Cancer
  - Phase II in Japan for Colorectal Cancer & Gastric Cancer (Colorectal Cancer launched in US & EU)
  - Approval of Xeloda / docetaxel combination in first / second line therapy for metastatic breast cancer achieved in H2 2001 in USA, and expected in 2002 in Europe
  - 2005 Sales estimate in Japan of JPY 8.5 billion and further growth expected thereafter

Combination Data of Xeloda and Taxotere®

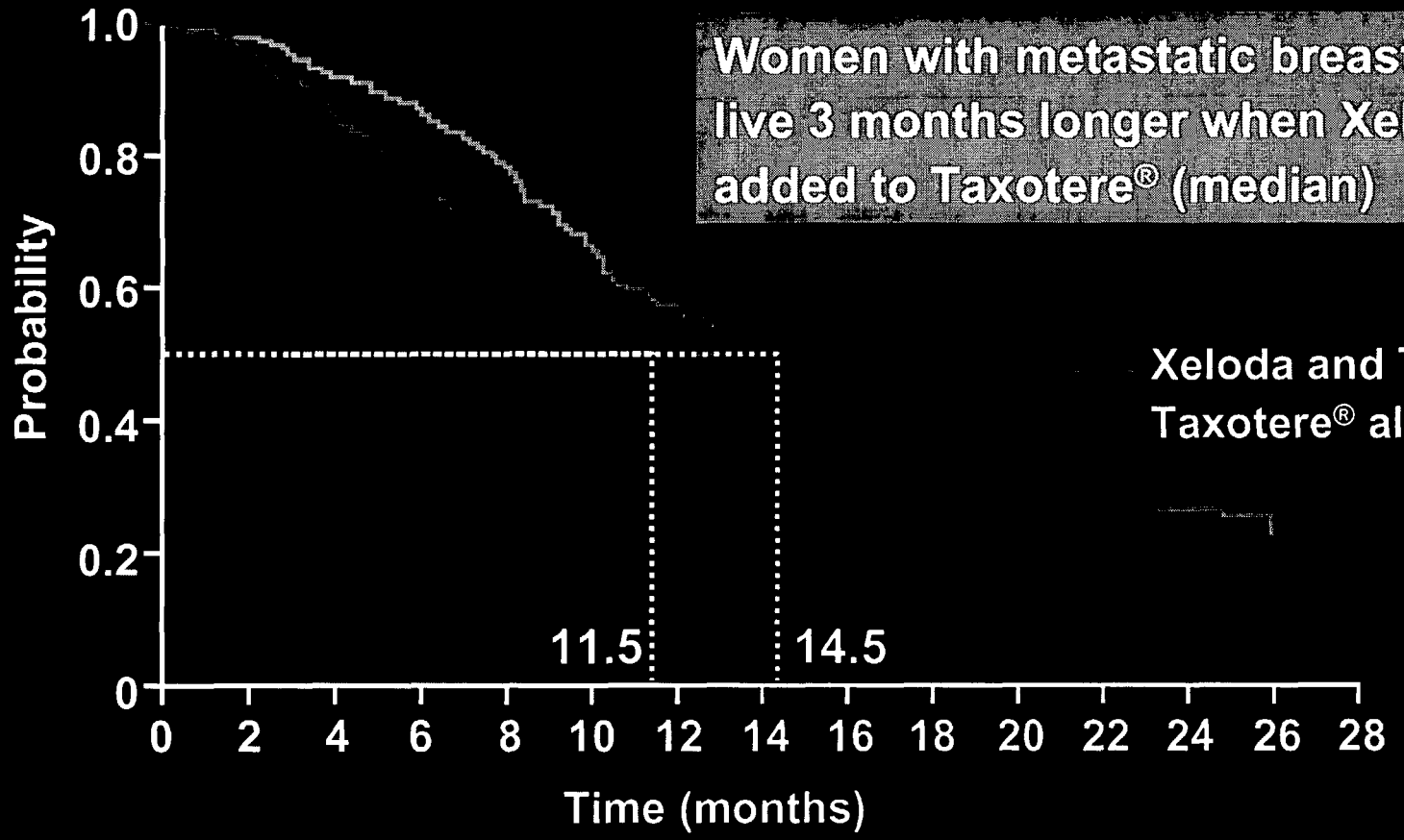
Women Lived Longer

Roche

Pharmaceuticals

Xeloda (capecitabine)

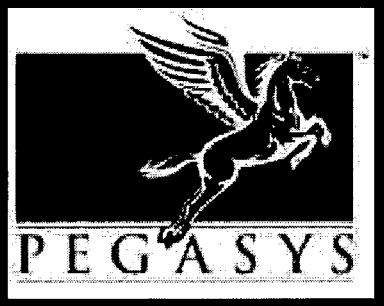
Women with metastatic breast cancer live 3 months longer when Xeloda is added to Taxotere® (median)



Next Product Launches

Roche

Pharmaceuticals



- Pegasys
  - US & EU approval expected in 2002
  - Japan NDA filing for monotherapy in 2002
  - Phase III trial in combination therapy to initiate in 2002
  - 2005 Sales estimate in Japan of JPY 7.6 billion and further growth expected thereafter

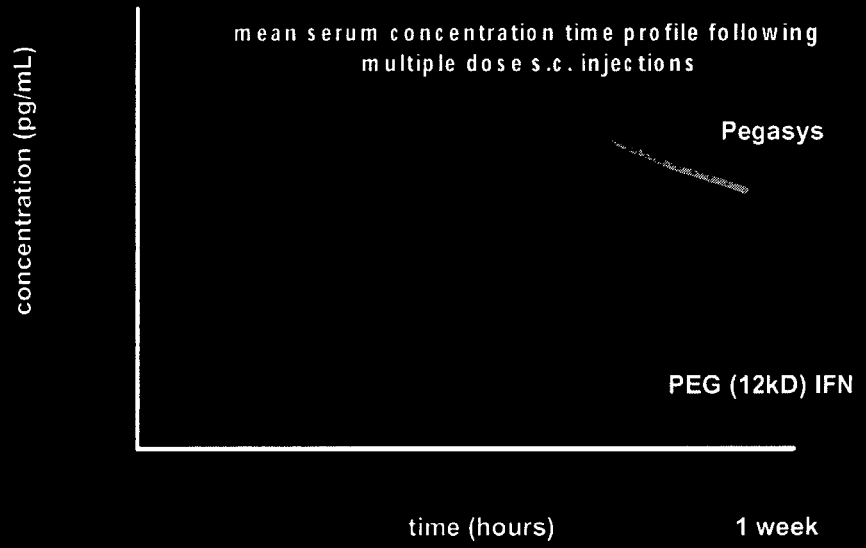
Superior kinetics suggest superior efficacy

Roche

Pharmaceuticals

PEGASYS



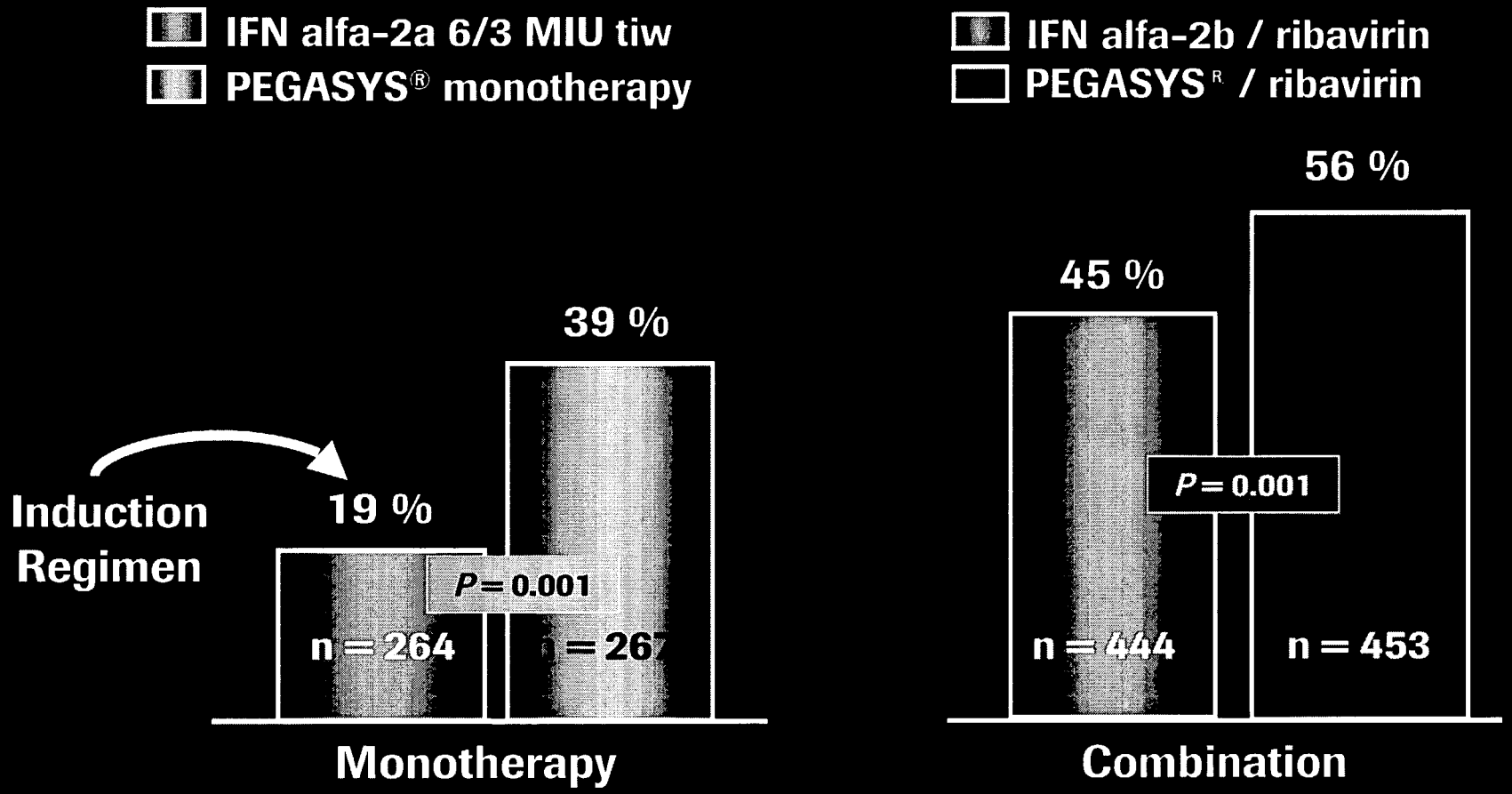


Unsurpassed efficacy in mono- and combination therapy

PEGASYS

Roche

Pharmaceuticals



Zeuzem S et al., *N Engl J Med.* 2000;343:1666-1672
Fried et al., DDW. 2001

Roche

Pharmaceuticals

Key Developments for the Future

Key Products – Developments for the Future

Roche

Pharmaceuticals



Xenical



Bonviva

Developments for the Future

Roche

Pharmaceuticals

- Xenical
  - World leading anti-obesity Rx medicine
  - Worldwide sales for 2000 = approximately USD 592 million
  - Phase II program underway

XENICAL® orlistat

- Bonviva
  - Global phase III treatment trial recently completed: promising results with both daily and intermittent oral regimens. Data to be presented in 2002
  - High potency of ibandronate and new data provides foundation for development of innovative oral and intravenous intermittent regimens
  - Phase II program to initiate

Bonviva

Roche

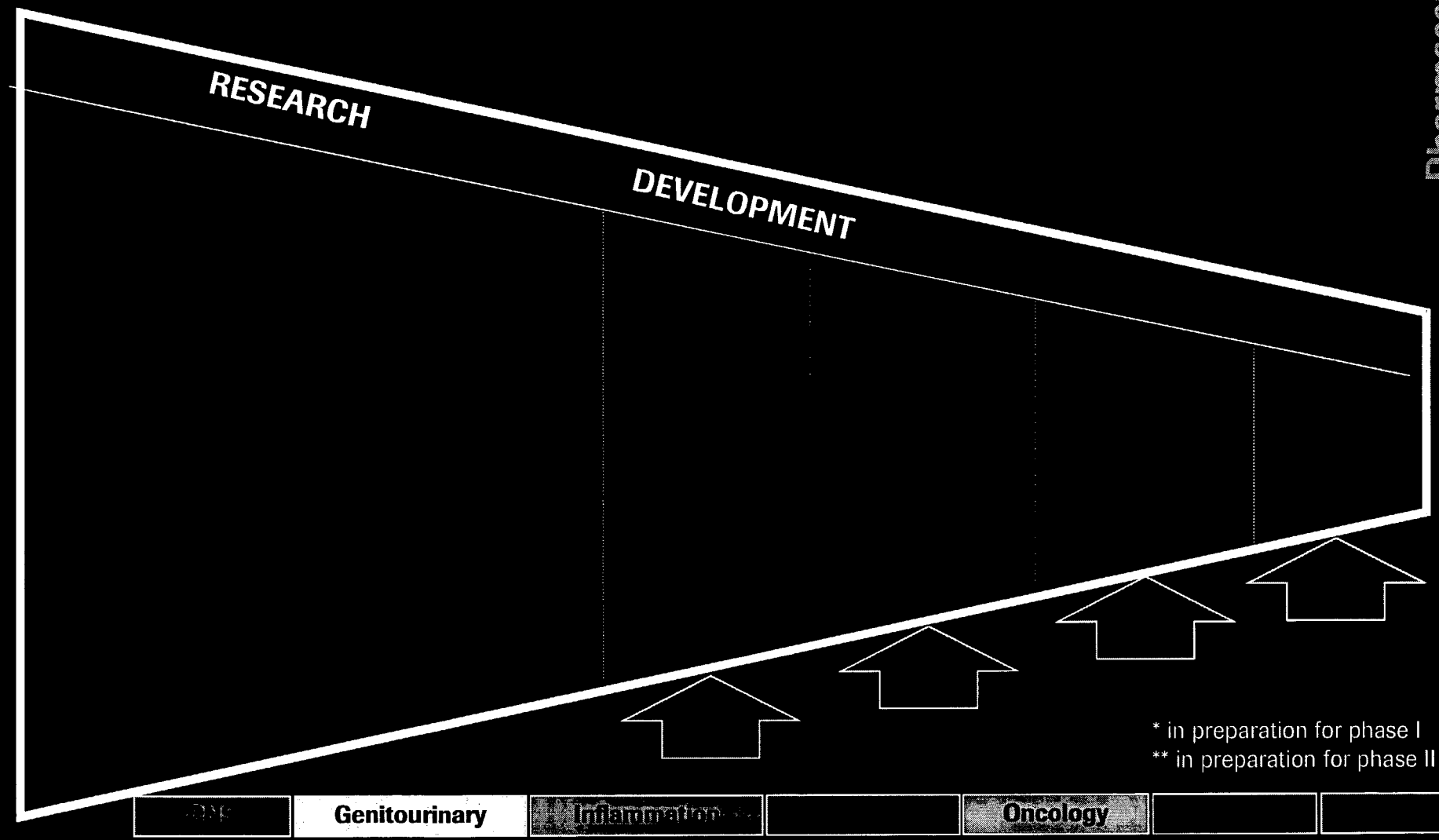
Pharmaceuticals

Global Pharmaceuticals Pipeline

Fueling the R&D pipeline at Roche

Roche

Pharmaceuticals



Roche managed pipeline status as of September 2001

Roche R&D pipeline
28 NME's in development at Roche

Roche

Pharmaceuticals

R944 HIV	R411 asthma	R440 (CCI) solid tumors	R420 (Pegasys) HCV
R1067 depression	R545 overactive bladder	R450 (alpha1 agonist) stress incontinence	R484 (Bonviva) osteoporosis
R1124 emesis	R594 rheumatoid arthritis	R483** (insulin sensitizer) type 2 diabetes	R698 (T-20) HIV
R1204 depression /anxiety	R667 emphysema	R673** (NK1) depression /anxiety	R1415 (Tarceva) oncology
R1487 rheumatoid arthritis	R701 overactive bladder	R744 (second generation EPO) anemia	
R1437 benign prostatic hyperplasia	R765 type 2 diabetes	R796* (α12δ1) pain	
R1458 type 2 diabetes	R1164* osteoporosis		
R1065 obesity	R1270 (levovirin) HCV		
R1435 thromboembolism	R1273* solid tumors		

collaborations

* in preparation for phase I
** in preparation for phase II

Pipeline status as of September 2001

Roche R&D pipeline

...plus 13 'opt-in' projects gives 41 NME's

Roche

pharmaceuticals

- R944 HIV
- R1067 depression
- R1124 emesis
- R1204 depression /anxiety
- R1487 rheumatoid arthritis
- R1437 benign prostatic hyperplasia
  benign prostatic hyperplasia
- R1458 type 2 diabetes
- R1065 obesity
- R1435 thromboembolism
- antifungal (B)

- R411 asthma
- R545 overactive bladder
- R594 rheumatoid arthritis
- R667 emphysema
- R701 overactive bladder
- R765 type 2 diabetes
- R1164* osteoporosis
- R1270 (levovirin) HCV
- R1273* solid tumors
- antibiotic (B)
- migraine (P)
- cardiovascular disease (S)
- macular degeneration (G)
- antitumor* (G)
- acute coronary syndrome* (G)

- R440 (CCI) solid tumors
- R450 (alpha1 agonist)
  stress incontinence
- R483** (insulin sensitizer)
  type 2 diabetes
- R673** (NK1)
  depression /anxiety
- R744** (second generation EPO)
- R1248 HIV
- cephalosporin (B)
- psoriasis (B)
- eczema (B)
- SCLC (N)
- Inflamm. bowel disease (G)

- R420 (Pegasys) HCV
- R484 (Bonviva) osteoporosis
- R698 (T-20) HIV
- R1415 (Tarceva) oncology
- Oncology (anti-VEGF) (G)

collaborations

opt-in opportunities

- Basilea (B)
- Genentech (G)
- Novus (N)
- Pozen (P)
- Speedel (S)

* in preparation for phase I

** in preparation for phase II

Pipeline status as of September 2001

Roche R&D pipeline

...plus 5 Genentech NMEs which Genentech will commercialise alone gives 46 NMEs

Roche

Pharmaceuticals

- R944 HIV
- R1067 depression
- R1124 emesis
- R1204 depression /anxiety
- R1487 rheumatoid arthritis
- R1437 benign prostatic hyperplasia
- R1458 type 2 diabetes
- R1065 obesity
- R1435 thromboembolism
- antifungal (B)

- R411 asthma
- R545 overactive bladder
- R594 rheumatoid arthritis
- R667 emphysema
- R701 overactive bladder
- R765 type 2 diabetes
- R1164* osteoporosis
- R1270 (levovirin) HCV
- R1273* solid tumors
- antibiotic (B)
- migraine (P)
- cardiovascular disease (S)
- macular degeneration (G)
- antitumor* (G)
- acute coronary syndrome* (G)

- R440 (CCR) solid tumors
- R450 (alpha 1 agonist) stress incontinence
- R483** (insulin sensitizer) type 2 diabetes
- R673** (NK1) depression /anxiety
- R744 (second generation EPO) anemia
- R724 (T-1249) HIV
- cephalosporin (B)
- psoriasis (B)
- eczema (B)
- SCLC (N)
- inflamm. bowel disease (G)
- E-26* (G)

- R420 (Pegasys) HCV
- R484 (Bonviva) osteoporosis
- R698 (T-20) HIV
- R1415 (Tarceva) oncology
- Oncology (anti-VEGF) (G)
- Xanelim (G)
- Xolair (G)
- Tracleer (G)
- Thrombopoietin (G)

collaborations

opt-in opportunities

- Basilea (B)
- Genentech (G)
- Novus (N)
- Pozen (P)
- Speedel (S)

Genentech (without Roche opt-in but Roche benefits financially)

* in preparation for phase I

** in preparation for phase II

Pipeline status as of September 2001

Roche R&D pipeline

46 NME's focused primarily in 7 therapy areas

Roche

Pharmaceuticals

R944 HIV

R1067 depression

R1124 emesis

R1204 depres

R1487 rheum

R1437 benign prosta

R1458 ty

R1065 obesity

R1435 thromboembolism

antifungal (B)

R411 asthma

R545 overactive bladder

R594 rheumatoid arthritis

R1270 (levovirin) HCV

R1273* solid tumors

antibiotic (B)

migraine (P)

cardiovascular disease (S)

macular degeneration (G)

antitumor* (G)

acute coronary syndrome* (G)

R440 (CCI) solid tumors

R450 (alpha 1 agonist) stress incontinence

cephalosporin (B)

psoriasis (B)

eczema (B)

SCLC (N)

inflamm. bowel disease (G)

E-26** (G)

R420 (Pegasys) HCV

R484 (Bonviva) osteoporosis

R698 (T-20) HIV

oncology

-VEGF) (G)

(G)

(G)

(G)

thrombopoietin (G)

A Few Snapshots of Early Phase Candidates

collaborations

opt-in opportunities

Basilea (B)

Genentech (G)

Novus (N)

Pozen (P)

Speedel (S)

Genentech (without Roche opt-in but Roche benefits financially)

* in preparation for phase I

** in preparation for phase II

Pipeline status as of September 2001

R667 in emphysema

Rebuilding lung tissue / improving lung function



- A selective retinoid agonist (RAR-γ)
- First compound able to regenerate lung tissue (in animal studies)
- Restores lung function in animal models
- Potential to reverse the disease process
- Selectivity avoids side effects associated with the retinoids

Roche

Pharmaceuticals

R411 in asthma

Novel selective integrin antagonist



Roche

Pharmaceuticals

- Selectively targets the underlying disease pathology
- Powerful inhibitor of inflammatory cell infiltration
- Side effect-free profile in animal studies
- Potentially superior safety to inhaled corticosteroids
- Better efficacy than the leukotrienes in animal studies
- Potential once-a-day monotherapy for asthma prophylaxis

R450 in stress urinary incontinence (SUI)

Potent non-surgical treatment

Roche

Pharmaceuticals



- Over 48 million patients in major markets
- No globally approved drug therapy with SUI indication
- High unmet need for a non-surgical treatment
- In preclinical tests, potent effects on bladder outlet muscle tone with minimal cardiovascular effects ("uroselectivity")

R483 in type 2 diabetes

Roche

Pharmaceuticals



- **The insulin sensitizer with dual effect**
  - -Significant increase in insulin sensitivity
  - -Significant inhibition of endogenous glucose production
- **Best in class insulin sensitizer**
  - -Target profile is for superior efficacy in glycemic control and/or improved tolerability compared with other insulin sensitizers

** in preparation for phase II

R483 in type 2 diabetes

Roche

Pharmaceuticals



- Pre-clinical highlights
  - The strongest activation of PPARg receptors compared to competitive compounds
  - The maximum improvement of insulin sensitivity and inhibition of glucose production in clamp studies (dual effect), compared to other insulin sensitizers
- Phase I study in diabetic patients highlights
  - Significant increase in insulin sensitivity
  - Significant improvement of post-prandial glucose (OGTT)
  - Dose-dependent decrease in fasting glucose

** In preparation for phase II

R673 in depression and anxiety

Roche

Pharmaceuticals



- R673 is expected to have improved tolerability compared to SSRI's and superior CNS bioavailability to identified competitor compounds
- Excellent brain penetration can be shown functionally in animals and man
- No drug/drug interactions or safety issues identified to date
- Compound well tolerated in man

** in preparation for phase II

Roche R&D pipeline

Just 5 of the 46 NME's under development

Roche

pharmaceuticals

- R944 HIV
- R1067 depression
- R1124 emesis
- R1204 depression /anxiety
- R1487 rheumatoid arthritis
- R1437 benign prostatic hyperplasia
- R1458 type 2 diabetes
- R1065 obesity
- R1435 thromboembolism
- antifungal (B)

- R545 overactive bladder
- R594 rheumatoid arthritis
- R701 overactive bladder
- R765 type 2 diabetes
- R1164* osteoporosis
- R1270 (levoyirin) HCV
- R1273* solid tumors
- antibiotic (B)
- migraine (P)
- cardiovascular disease (S)
- macular degeneration (G)
- antitumor* (G)
- acute coronary syndrome* (G)

- R440 (CCD solid tumors
- R744 (second generation EPO)
- R724 (T-1249) HIV
- cephalosporin (B)
- psoriasis (B)
- eczema (B)
- SCLC (N)
- inflamm. bowel disease (G)
- E2814 (G)

- R420 (Pegasys) HCV
- R484 (Bonviva) osteoporosis
- R698 (T-20) HIV
- R1415 (Tarceva) oncology
- Oncology (anti-VEGF) (G)
- Xanelim (G)
- Xolair (G)
- Tracleer (G)
- Thrombopoietin (G)

collaborations

opt-in opportunities

Basilea (B)
Genentech (G)
Novus (N)
Pozen (P)
Speedel (S)

Genentech (without Roche opt-in but Roche benefits financially)

* in preparation for phase I
** in preparation for phase II

Pipeline status as of September 2001

Roche R&D pipeline

Summary

Roche

Pharmaceuticals

- Substantial investments in process re-engineering and research technologies
- World class capability in research and development
- Research investments beginning to bear fruit
- A pipeline of quantity and quality

Roche

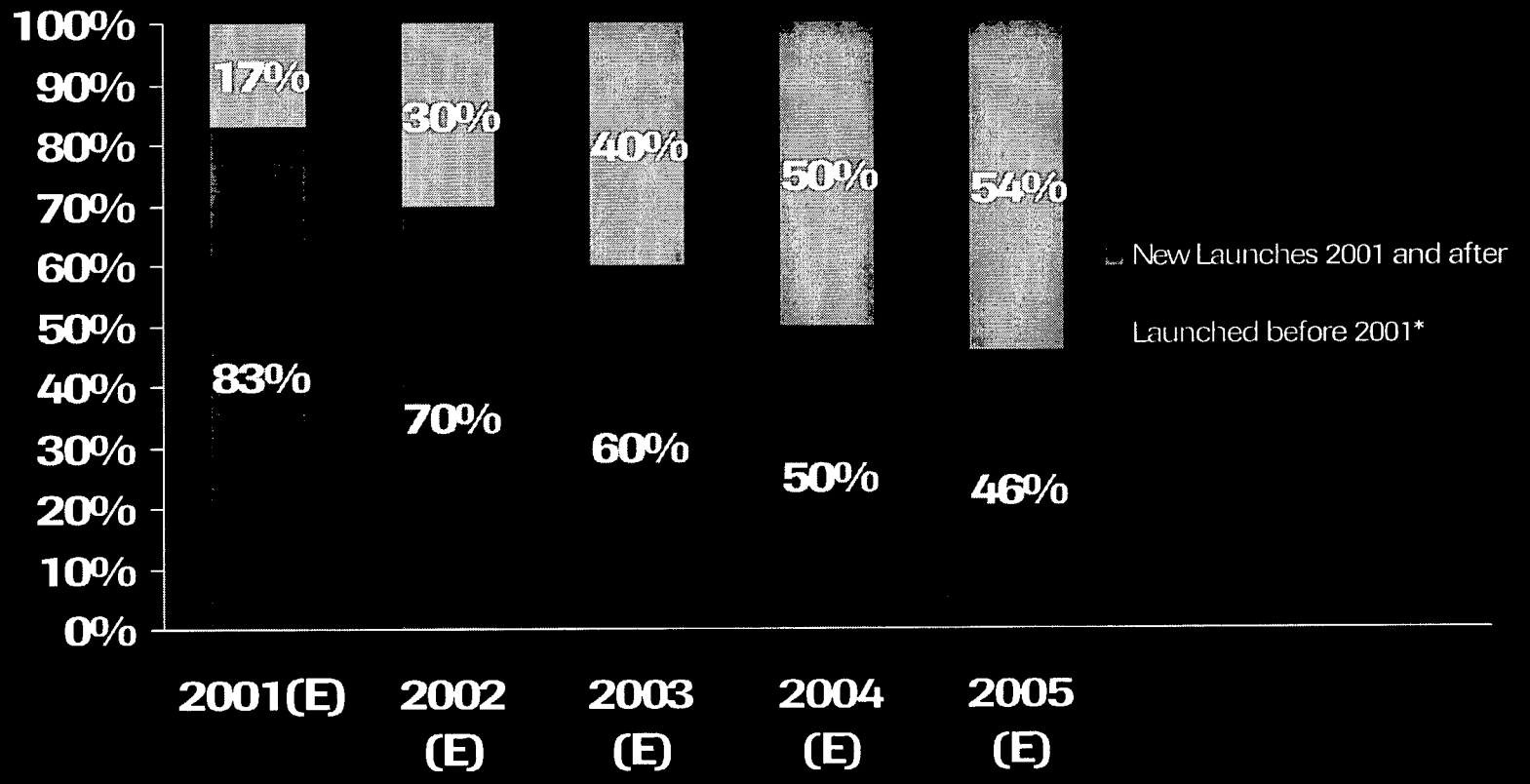
Pharmaceuticals

Nippon Roche's Outlook

Product mix in Rx Direct Net Sales by Launch Date

Roche

Pharmaceuticals



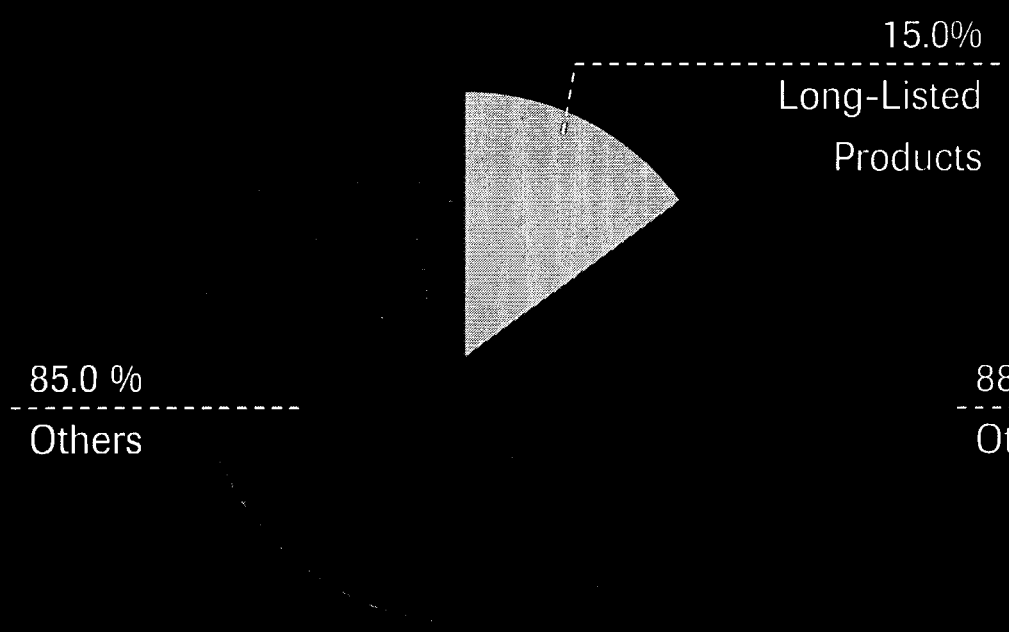
* Includes Kytril

Long-Listed Products*

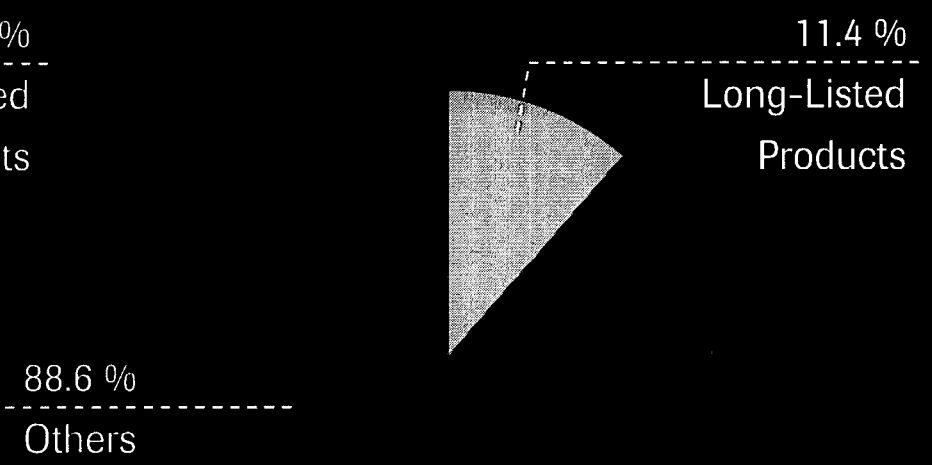
Roche

Pharmaceuticals

2001(E)



2002(E)



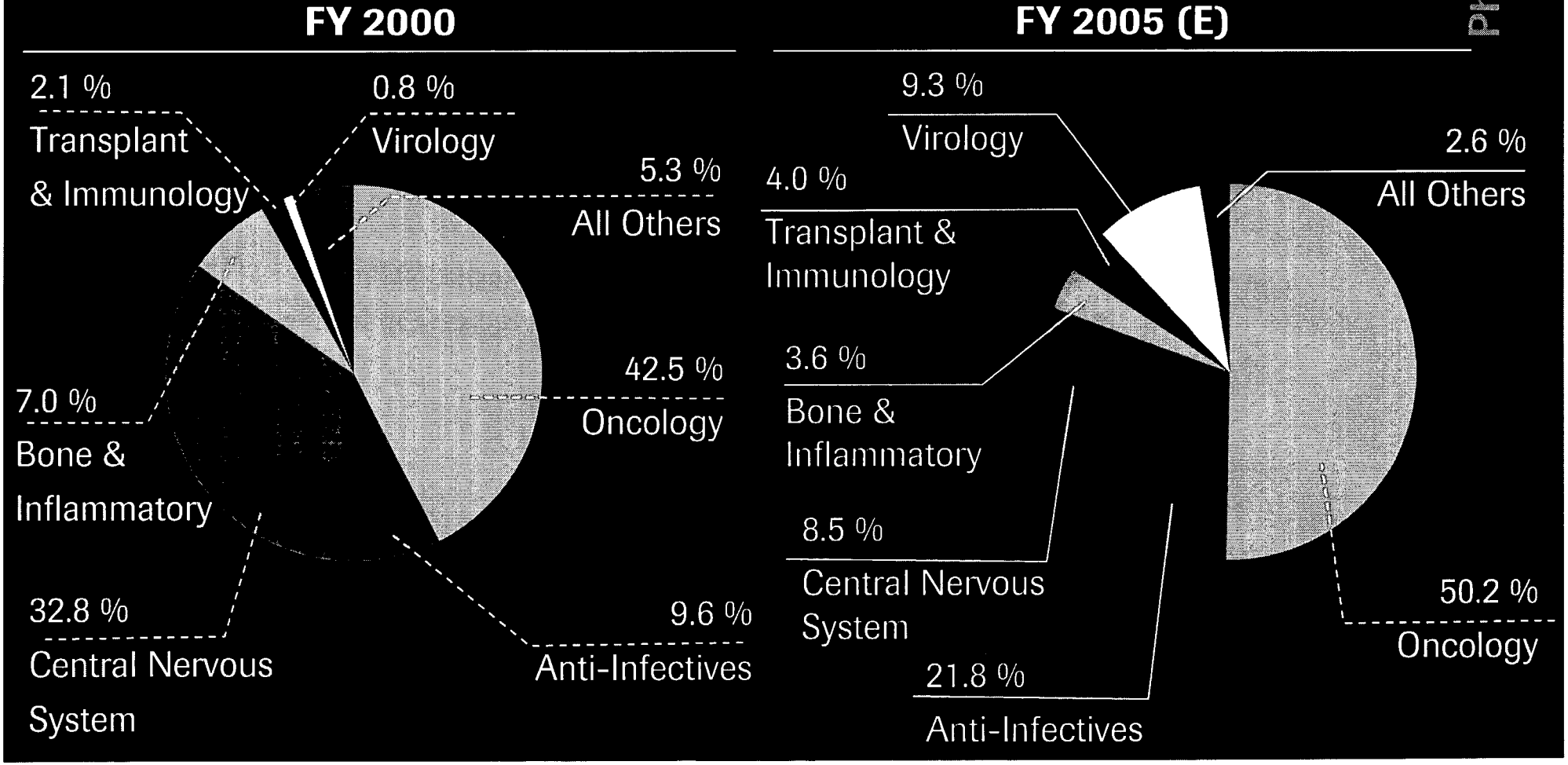
* Products Marketed by Nippon Roche

Breakdown of Rx Direct Net

Sales by Therapeutic Area

Roche

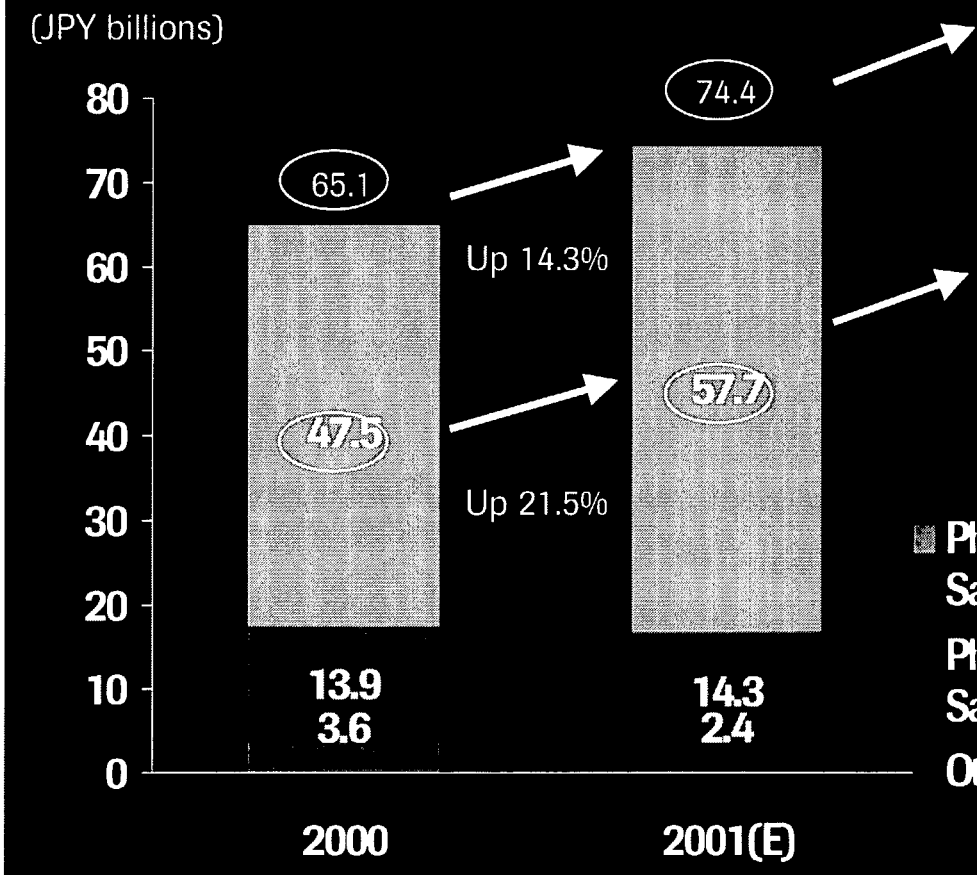
Pharmaceuticals



Sales and Profit Outlook

Roche

Pharmaceuticals



Total Sales

High single-digit CAGR 2000-2005

Rx Direct Sales

Double-digit CAGR 2000-2005

Operating Profit

Double-digit CAGR 2000-2005

- Pharma Rx Direct Sales (1)
- Pharma Rx Agent Sales (2)
- Others (3)

(1) Finished Products marketed and promoted by Nippon Roche
(2) Products sold to other pharmaceutical companies
(3) Includes Pharma Rx and Vitamins export sales to other Roche affiliates and OTC sales

Summary of Nippon Roche's Outlook

Roche

Pharmaceuticals

- Tamiflu, Rituxan, Herceptin, and CellCept to drive near-term top-line growth
- Additional new products such as Xeloda and Pegasys are expected to fuel further growth
- Receives continued benefits from Roche's rich global pipeline after 2005
- Double-digit operating profit growth (CAGR 2000-2005)

Pharmaceuticals

Roche Holding Ltd

30 January 2002 - Presentation on new Chugai

As Posted on Roche.com

Furnished Under Rule 12g3-2(b)
Roche Holding 82-3315

Chugai - Roche Alliance
Creating Shareholder Value

Osamu Nagayama
President & CEO, Chugai Pharmaceutical Co., Ltd.

January 30, 2002

CHUGAI PHARMACEUTICAL CO., LTD.

Forward Looking Statements

This presentation may include forward looking statements pertaining to the business and prospects of Chugai Pharmaceutical Co., Ltd. (the "Company"). These statements reflect the Company's current analysis of existing information and trends. Actual results may differ from expectations based on risks and uncertainties that may affect the Company's businesses.

CHUGAI

Today's key messages

- New Chugai will be positioned for superior growth both in the short-term and the long-term
- New Chugai will be a stronger and broader pharmaceutical franchise
- The transaction will be EPS accretive for Chugai shareholders by the second full year of the alliance (3/2005)

Chugai's key objectives in the alliance with Roche

- Enhance sustainable growth in Chugai's Rx business
  - Increase short-term growth through Nippon Roche products
  - Access Roche Group's R&D pipeline[1] for the Japanese market as a foundation for sustainable growth in the long-term

- Position Chugai as a leading integrated pharmaceutical company
  - Strengthen existing capabilities and engage in advanced life science research
  - Enrich pipeline with both Chugai and Nippon Roche products
  - Leverage manufacturing capabilities through collaboration with Roche
  - Create one of the strongest marketing forces in Japan

[1] Including Genentech products which Roche opts in

CHUGAI

New Chugai will be more broadly based with a deeper product portfolio in existing therapeutic area and additional therapeutic focus

Anti-Infectives/ Immunology
- *Tamiflu*
- *Rocephin*
- *CellCept*
- *Keiten*
- *Cefotax*

Liver
- *Monilac*
- *FS-69*
- *VAL*
- *Pegasys*
- *Copegus*

- Existing product
- *Product in development

Oncology
- ***Furtulon***
- **Neutrogin**
- ***Kytril***
- ***Herceptin***
- ***Rituxan***
- * **CHC12103**
- * **AHM/CAL/MRA**
- * ***Xeloda***
- ****Tarceva***

Hematological
- **Epogin**
- **Oxarol**
- * **PB-94**
- * ***Second Generation EPO***

Cardiovascular
- **Sigmart**
- **Rythmodan**
- **Preran**
- ***Bezalip***
- * **FS-69**
- * **BO-653**

Bone/arthro
- **Alfarol**
- ***Rocaltrol***
- **Suvenyl**
- * **CHS13340**
- * **ED-71**
- * **Raloxifene**
- * ***Bonviva***
- * **MRA**

Diabetes
- * ***Xenical***
- * ***R483***

CNS
- **Amoban**
- ***Rohypnol***
- ***Lexotan***
- ***Madopar***
- ***Rivotril***
- * ***NK-1***

Red: Chugai
Blue: Nippon Roche

CHUGAI

New Chugai will have the broadest oncology portfolio & pipeline in Japan

	New Chugai	*Taiho*	*Nippon Kayaku*	*Takeda*	*Kyowa Hakko*	*Kirin*	*Astra Zeneca*	*BMS*
Cytostatics	CHC12103 (pre)	TOP-53 (P1) TAS-105 (pre)	Randa Lastet Pinorubin Pepleo	□	Farmorubicin Adriacin Navelbine KW-2170 (P1)	KRN7000 (pre) KRN5500 (pre)	ZD9331 (P1)	Taxol Paraplatin Briplatin Vepesid
Antimetabolites	Furtulon Xeloda (Filed)	Futraful UFT TS-1			5-FU			
Hormones	Femara (Filed)	Miproxifen (Filed)	Fareston Odyne	Leuplin	Hysron		Zoladex Casodex Nolvadex Arimidex Fulvestrant (P2)	
G-CSF	Neutrogin				Neu-up	Gran		
Antiemetics	Kytril	Serotone						Serotone
Antibodies	Herceptin Rituxan AHM(P1) CAL(P1) MRA(P1)				KW-2871 (pre) KM8969 (pre)			
Others	Tarceva (pre)	SU-5416 (P1) SU6668 (P1)	Bestatin		Leunase KW-2401 (P1) GRN163 (pre)	Bsrufan (pre)	ZD1839□(P2) ZD9331□(P1)	BMS214662 (pre)

Source: Company estimate based on published data, Red: Product in development

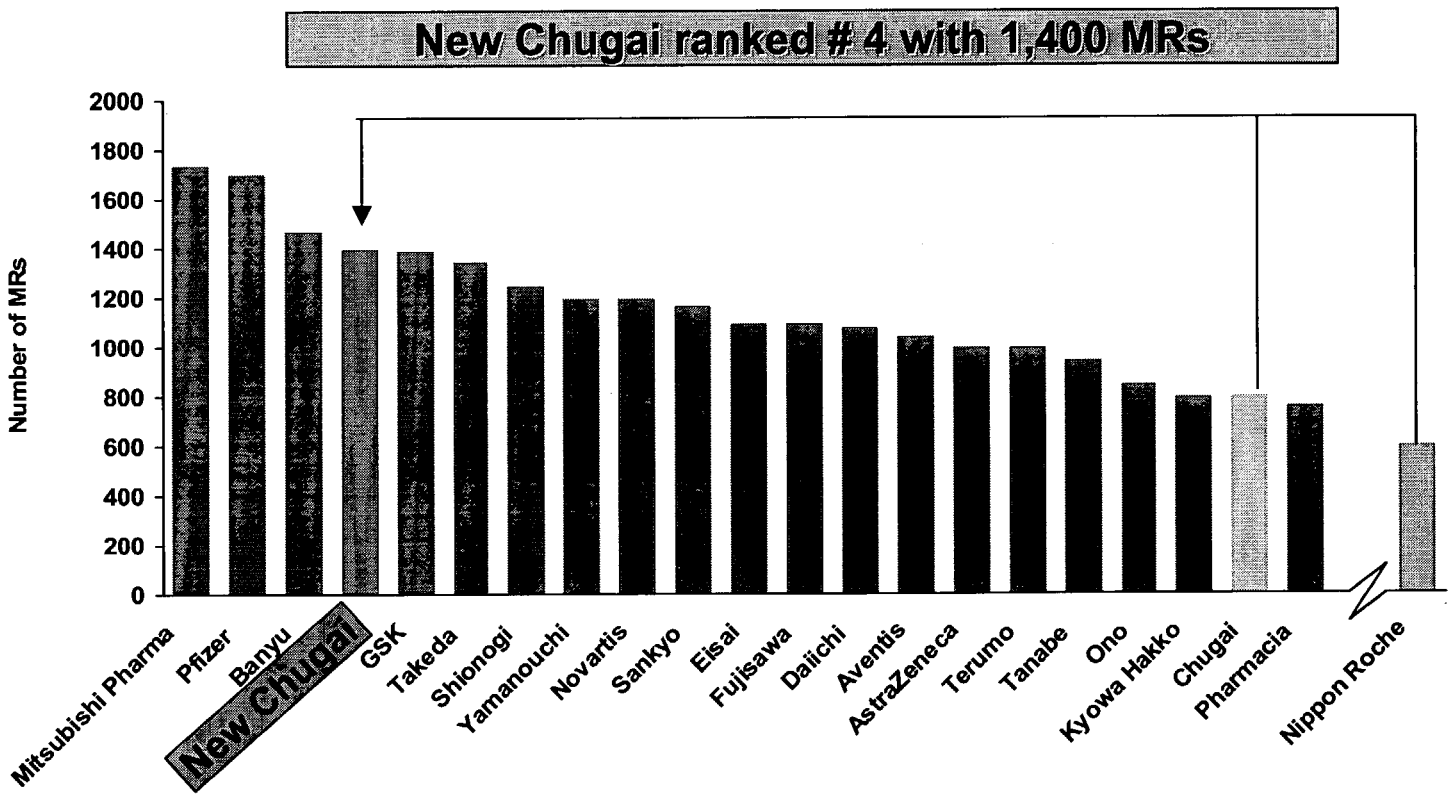
CHUGAI

In addition, New Chugai will have the most comprehensive product line in osteoporosis

	New Chugai	Teijin	Asahi Kasei	Takeda	Eizai	Yamanouchi	Banyu
Vitamin D	Alfarol Rocaltrol ED-71 (P2)	Onealfa					
Calcitonin			Elcitonin Elcitonin nasal (P2)			Salmotonin	
SERM	Raloxifene (P3)						
Bisphosphonate	Bonviva (P2)	Bonalon		Risedronate (app.)		Bisfonal (P3)	Fosamac
PTH	CHS13340 (P1)		PTH inj. (P3)				
Others				Osten	Glakey		

Source: Company estimate based on published data , Red: Product in development

Create the fourth largest marketing force in Japan



CHUGAI

Enriched pipeline for New Chugai

	Phase 1	Phase 2/Phase 3	Filed
Cancer	AHM (Multiple Myeloma) CAL □Hypercalcemia) *Tarceva (Lung cancer)*		Femara® (Breast cancer) *Xeloda® (Breast cancer)*
Renal / bone –related	CHS13340 (Osteoporosis) *Second Generation EPO (Anemia)*	MRA (RA) Raloxifene (Osteoporosis) ED-71 (Osteoporosis) *Bonviva® (Osteoporosis)*	
Cardiovascular		□□□□□BO-653 (Restenosis in post-PTCA)	□□□□□AVS (Subarachnoidal hemorrhage)
Others	VAL (Liver-regeneration) *Alpha 1 agonist □□ (Stress incontinence)* *NK-1 (Depression)*	GM-611 (GERD) *Pegasys® (HCV)* FS-69 (Enhancement of ultrasound images) *Xenical® (Obesity) Copegus® (HCV)*	PB-94 (Hyperphosphatemia)

Products in development excluding line extension and additional indications

Chugai's pipeline :NMEs in Japan and overseas

Nippon Roche's pipeline :NMEs in Japan

CHUGAI

Largest clinical development resources in Japan

	Number of clinical staff	Number of newly domestic developed medicines			
		P1	P2 / 3	Filed	Total
New Chugai	**279**	**8**	**10**	**4**	**22**
Japan Co. A	N.A.	2	5	0	7
Japan Co. B	130	5	6	2	13
Japan Co. C	140	2	9	2	13
Japan Co. D	210	4	3	1	8
Japan Co. E	180	2	7	0	9
Japan Co. F	150	4	7	1	12
Japan Co. G	110	3	3	2	8

Source: Based on the company's in-house data

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Leverage manufacturing capabilities through collaboration with the Roche Group

- Collaboration with the Roche Group in antibody manufacturing
  - Manufacturing skills
  - Manufacturing of clinical supplies
  - Commercial manufacturing
- Utilization of the Roche Group's global supply chain

CHUGAI

Strengthen existing capabilities and engage in advanced life science research

Strength of Chugai
- *–Biopharmaceuticals / Antibodies*
- *–Vitamin D derivatives*
- *–Transgenic technology*

Strength of Nippon Roche
- *–Cancer research*
- *–Medicinal chemistry*

Strength of New Chugai: chemical function (Medicinal chemical) in addition to the presence of biotechnology
- *–Improve creation of drug candidates*
- *–Develop vitamin D potential to cancer area*
- *–Enhance creation of antibodies in cancer area*
- *–Develop new chemistry such as peptide drugs*

CHUGAI

Possible research collaborations with the Roche Group

- New targets for therapeutic antibodies
- New drug targets through proteomics

CHUGAI

New Chugai's enhanced financial outlook

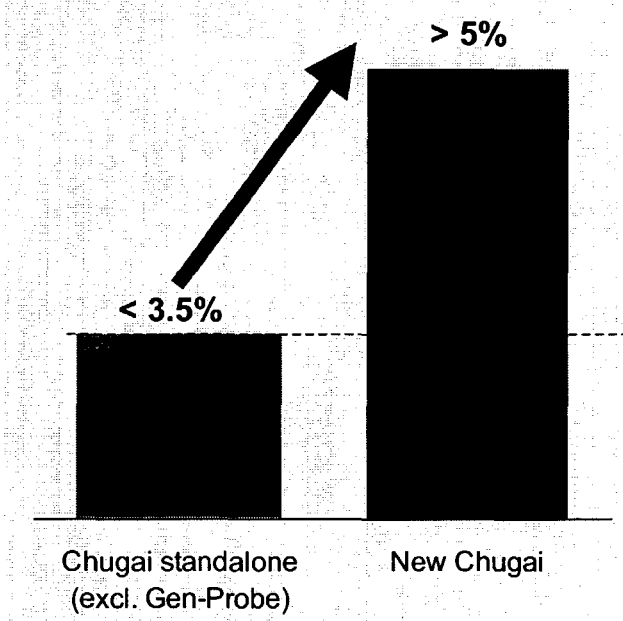
- Accelerated sales growth
- Enhanced profit growth
- Longer-term growth driver in place
- Reduced risk profile

Earnings accretive
by the second full year of the alliance (3/2005)

CHUGAI

Nippon Roche accelerates New Chugai's short-term growth[1]

Estimated sales growth rate[1]
CAGR %, 3/2001 - 3/2006



Growth drivers

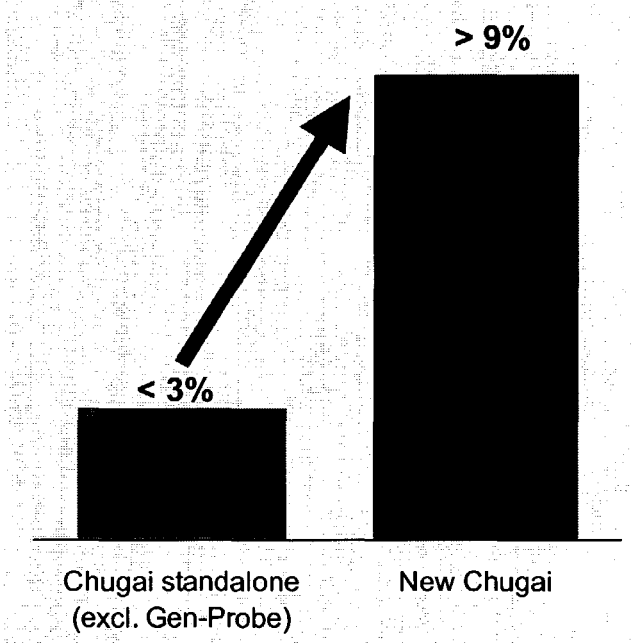
- Nippon Roche products
  - Tamiflu
  - Rituxan
  - Herceptin
  - CellCept
  - Pegasys
  - Xeloda
- Sales upside, derived from alliance
- Chugai products
  - Suvenyl
  - Oxarol
  - Raloxifene
  - Epogin-S
  - PB-94

[1] Excluding Gen-Probe

CHUGAI

Integrating operations will increase New Chugai's operating profit growth rate

Estimated operating profit growth rate
CAGR %, 3/2001 - 3/2006



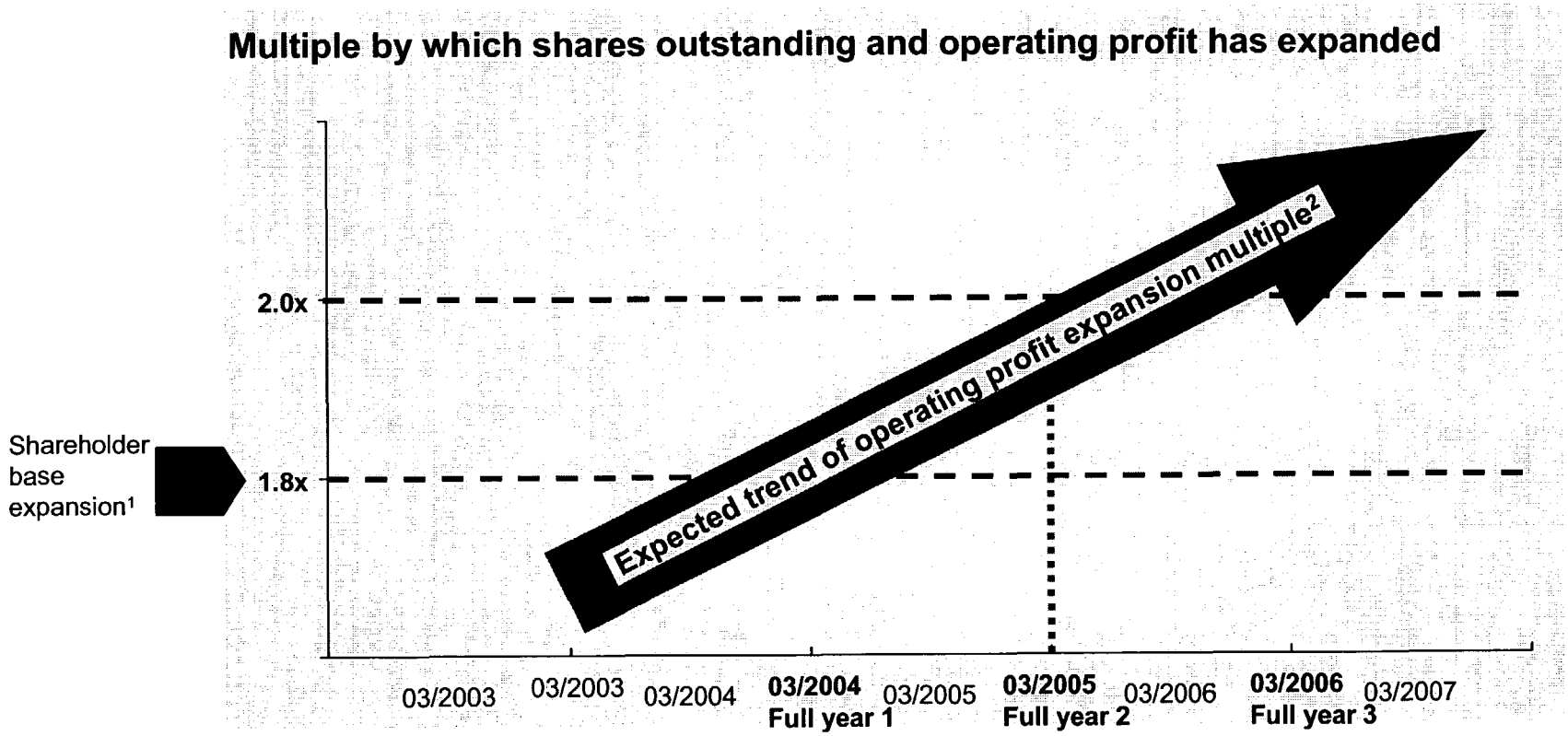
Profit growth increase

- Growing revenue base without having to expand the infrastructure
- Higher marginal profits from sales synergy
- Cost synergies expected through natural attrition and voluntary retirement
- Supply prices with respect to Roche originated products are set at arm's length basis

➡ Target 3/2006 operating margin of 20%

CHUGAI

New Chugai expects to make the transaction accretive for shareholders by the second full year of the alliance



[1] Assuming that the TOB is 100% successful. Total shares outstanding is assumed to increase from 307 million to approximately 554 million shares (554÷307 = 1.8x)

[2] Relative to the March 31, 2002 level which is estimated at 29 billion yen

CHUGAI

Long-term growth outlook is also secured by a rich combined pipeline portfolio

- Enriched long-term pipeline with both Chugai and Nippon Roche products
  - Pipeline product to be launched after 2006
    - Chugai
      - MRA
      - AHM
      - CAL
      - BO-653
    - Nippon Roche
      - Xenical
      - Bonviva
      - NK-1
      - Alpha-1 agonist
      - Second Generation EPO
      - Tarceva
- New Chugai's right of first refusal to Roche's research pipeline
  - Currently Roche has 46 new molecular entities under development
- Long-term synergies from alliance
  - Enhanced research capabilities
  - Accelerated development timeline
  - Stronger market platform in Japan

CHUGAI

Chugai's existing shareholders will benefit from a stronger Chugai pharmaceutical franchise as well as ownership in Gen-Probe

Chugai shareholders will have

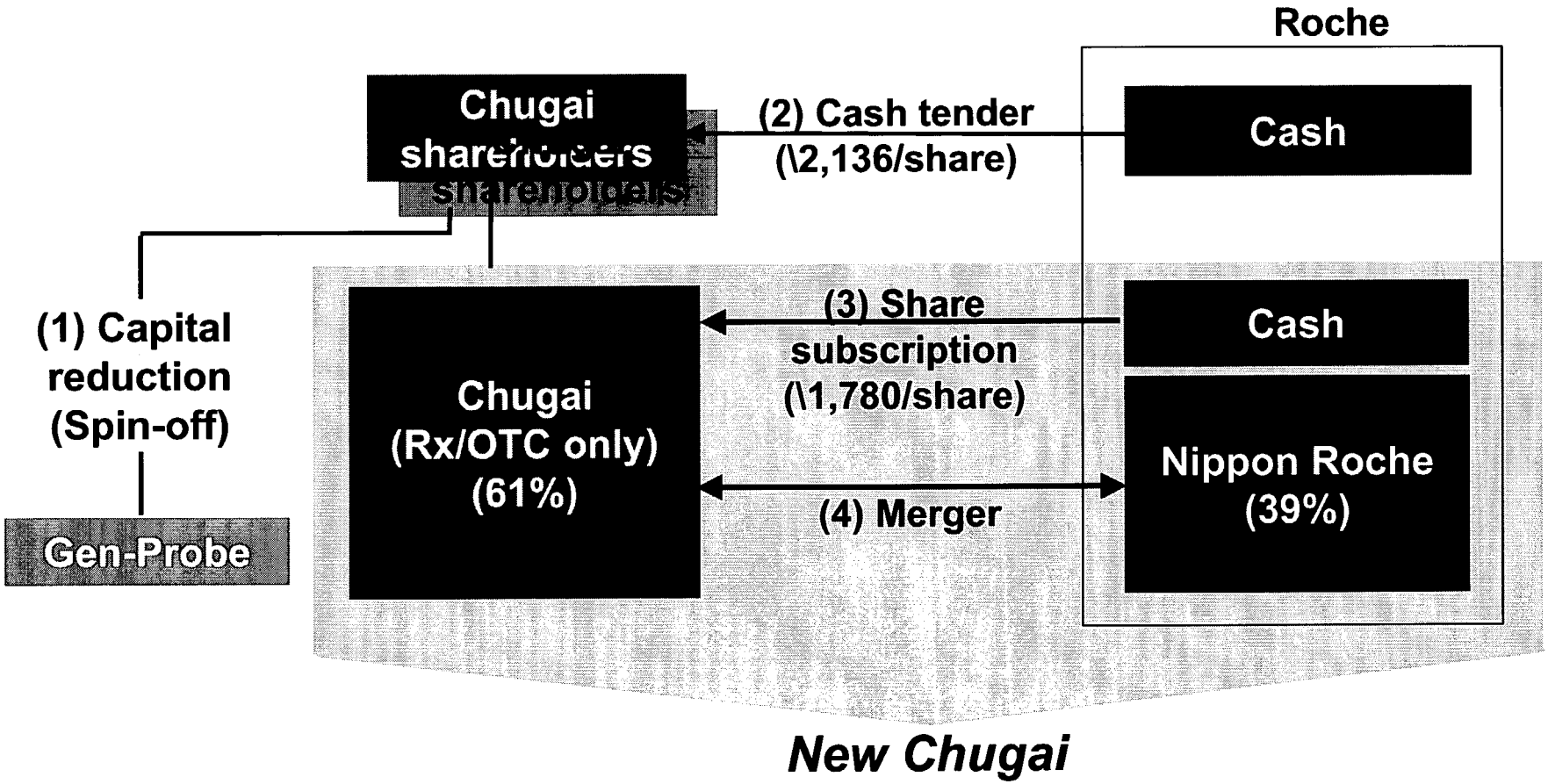
- Shares in a higher growth/ lower risk pharmaceutical franchise (49.9%)
- Direct ownership of a listed Gen-Probe share and 100% of its earnings
- Approximately 1/10 tender offer for Chugai shares[1] at 2,136 yen

[1] after the spin-off of Gen-Probe

CHUGAI

Appendix: Overview of the transaction structure

Transaction overview



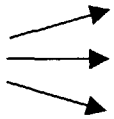
Overview of key steps of the alliance

- Shareholder approval at Chugai's AGM
- Spin-off of Gen-Probe
- Roche launches tender offer
- Chugai issues new shares to Roche by third party allotment
- Merger of Chugai and Nippon Roche

Events leading to Chugai's AGM

- **End of March** — **Record date for AGM**
  - Shareholders on the register as of March 31 have the right to vote in the AGM
- **By early June** — **Gen-Probe to file Form 10**
  - Chugai distributes to its shareholders (as of March 31) information on Gen-Probe
- **End of June** — **Chugai's AGM**
  - Chugai's shareholders as of the AGM record date vote for
    - Spin-off of Gen-Probe through capital reduction
    - Merger of Chugai and Nippon Roche
    - Issuance of Chugai shares to Roche at JPY 1,780 per share
    - Election of Directors, etc.

For the contemplated transaction to be completed, these items need to be approved



CHUGAI

Gen-Probe spin-off

- **End of July** **Record date for Gen-Probe spin-off**[1]
  - Chugai shareholders as of this date will receive Gen-Probe shares

- **Mid-August** **Effective date of spin-off/capital reduction**
  - Form 10 becomes effective
  - Listing for Gen-Probe on U.S. stock exchange will be approved
  - Gen-Probe shares will be distributed to Chugai shareholders and thereafter regular trading in Gen-Probe shares can take place[2]

- To achieve an orderly market in Gen-Probe shares at the time the spin-off becomes effective, financial advisors of Chugai and Gen-Probe will take steps to create an awareness of Gen-Probe shares through a program of investor relations activities, including roadshows and the publication of equity analysts research material, etc.

CHUGAI

[1] Note that the record date for the spin-off is not the same as the record date for the AGM
[2] In general, the Form 10 filings become effective within 60-75 days following the filing

Tender offer for Chugai shares by Roche

- **Beginning of August** — **Following the record date for Gen-Probe spin-off**
  - Roche to launch a tender offer for 10% of Chugai's outstanding shares (approximately 30 million shares) at 2,136 yen per share

- **Beginning of September** — **Expiration of tender offer**
  - Pro-rata allocation of Chugai's outstanding shares if more than 10% of Chugai's shares are tendered

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Allotment of shares to Roche by TPA and Merger

- **End of September** **Allotment of shares to Roche by third party allotment**
  - Chugai to issue new shares to Roche at JPY 1,780 per share
  - The size of issuance is subject to the outcome of the tender offer

- **4th quarter 2002** **Merger**
  - Chugai to merge with Nippon Roche

Roche will own a 50.1% interest in Chugai

CHUGAI

Roche Holding Ltd

30 January 2002 - Nippon Roche Booklet

As Posted on Roche.com

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Disclaimer

This booklet contains certain forward-looking statements. These forward-looking statements may be identified by words such as "believes", "expects", "anticipates", "projects", "intends", "should", "may", "seeks", "estimates", "future" or similar expressions or by discussion of strategy, goals, plans or intentions. Various factors may cause actual results to differ materially in the future from those reflected in forward-looking statements contained in this booklet among others:

(1) pricing and product initiatives of competitors;
(2) legislative and regulatory developments and economic conditions;
(3) delay or inability in obtaining regulatory approvals or bringing products to market;
(4) fluctuations in currency exchange rates and general financial market conditions;
(5) uncertainties in the discovery, development or marketing of new products or new uses of existing products;
(6) increased government pricing pressures;
(7) interruptions in production;
(8) loss of or inability to obtain adequate protection for intellectual property rights;
(9) litigation;
(10) loss of key executives or other employees; and
(11) adverse publicity or news coverage.

The level of disclosure of information, financial or otherwise, such as that of this booklet on an individual company level represents an exception to the Roche Group policy. The Roche Group emphasizes that this does not represent any precedence for future financial disclosure nor financial disclosure of any other Roche Group company.

The information provided in this booklet is based on the assumption that Nippon Roche is a stand-alone company, i.e. this booklet does not assume nor account for any expected synergies that may arise in the announced transaction with Chugai Pharmaceuticals.

All USD indications assume USD 1.00 = CHF 1.69, the average rate for 2001.

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I. Executive Summary

A. Company Summary

Nippon Roche K.K., as a member of the Roche Group, has been developing its expertise in the area of pharmaceuticals for nearly 70 years in Japan, the world's second largest pharmaceutical market. Nippon Roche is continually looking for new advances in healthcare focused on pharmaceutical development in order to help people live healthier, more fulfilling lives.

In the area of research and development, Nippon Roche is in a position to fully utilise the Roche Group's global R&D network to develop and introduce innovative pharmaceutical products selected from its extensive pharmaceutical pipeline.

Nippon Roche has an extensive range of established pharmaceutical products, such as Furtulon, a leading oral chemotherapeutic agent; Rocephin, the world's leading antibiotic; Rocaltrol, an active vitamin D3 analogue for osteoporosis; Rohypnol, a sleep inducer.

Together with a team of marketing experts and a young, active professional team of 600 MRs, Nippon Roche is in a position to fully capitalise on the potential that its innovative products possess; to deliver the products and necessary medical information to those who need them most.

In 2001, Nippon Roche started marketing activities on four innovative pharmaceutical products: Tamiflu, an innovative oral remedy for influenza; Kytril, an anti-nausea remedy for chemotherapy treatment; Herceptin and Rituxan, which are monoclonal antibodies used for selective treatment of certain types of cancer. Such products, and products expected to be launched in the near future, will contribute to make Nippon Roche one of the faster growing Japanese pharmaceutical companies in the years to come.

Nippon Roche has major growth drivers in late stage development such as Pegasys for chronic hepatitis C; Xeloda, a novel anti-cancer agent already highly evaluated in overseas markets; Xenical for obesity. Nippon Roche's portfolio of late stage pipeline products can be seen under section II.B. on page 20.

B. Corporate History

Roche's activities in Japan date back to the beginning of the 20th century when it introduced the medical representative (MR) system in this country. Roche has continually strengthened its activities ever since to become a fully functional pharmaceutical company. Nippon Roche's activities range from basic research (on behalf of the Roche Group) and development of drugs, to production, marketing, and sales, all of which has contributed to its continued introduction of innovative pharmaceutical products (selected from Roche Group's global pharmaceutical pipeline) in Japan.

Major Events in Nippon Roche Corporate History

Year	Event
1912	Roche introduces Medical Representative (MR) system to Japan
1932	Nippon Roche founded
1967	Kamakura Factory completed
1972	Research centre opened in Kamakura
1986	Introduces Rocaltrol, an osteoporosis drug
	Introduces Rocephin, an antibiotic
1987	Introduces Furtulon, an anticancer drug
1992	Roferon-A, alpha interferon becomes first treatment for HCV in Japan
1993	Introduces Cefyl Tablets, an oral antibiotic
	Introduces Bactramin injection, a carini pneumonia drug
1995	Introduces Vesanoid for APL (a type of leukaemia)
1996-2000	Introduces 4 new drugs for HIV/AIDS
1999	Introduces CellCept, for rejection reactions from organ transplants
2001	Commences promotion of Kytril, an anti-nausea drug acquired from SKB
	Introduces Tamiflu, an oral A-Type/B-Type influenza drug
	Receives regulatory approval for Rocaltrol injection for 2HPT
	Introduces Herceptin, a metastatic breast cancer drug
	Introduces Rituxan, a B-cell non-Hodgkin's lymphoma drug

C. Key Strengths

Nippon Roche's key strengths lie in the following factors:

— Fully integrated pharmaceutical company with 70 years of experience in the world's second largest pharmaceutical market

— Positioned to fully capitalise on the Roche Group's global R&D network and extensive pipeline. The Roche Group's R&D investment in pharmaceuticals totalled approximately CHF 3.2 billion (approximately USD 1.9 billion) in FY2000, which corresponds to more than 18% of its pharmaceutical sales

— Highly capable research and development team with strong product development capabilities and experience. Recent achievements include a record for the fastest product approval for Tamiflu, an oral A-Type/B-Type influenza drug. Tamiflu was approved only 32 months after phase I studies

— Leading existing and pipeline products in oncology. Nippon Roche's strong product line-up and on-going development projects include Furtulon, Kytril, Herceptin, Rituxan and Xeloda. These products enjoy a high reputation among oncology specialists in both the domestic and international markets, which allows for the exploitation of the potential these products possess in order to make Nippon Roche one of the leaders in this market segment in Japan

— Nationwide sales network of 13 branch and 39 liaison offices in major cities throughout Japan

— Young, active, professional team of marketing and sales specialists. 600 medical representatives (average age 32.9 years old) with a high rate of passing the MR qualification exams. (93.1%, total of first to seventh examinations)

— Lack of reliance on long-listed products, which account for only 15.0% of expected sales in 2001 and whose contribution to sales is expected to drop to 11.4% in 2002 against an industry average of 34% in the domestic market (source: MHLW). An evolving portfolio of new launches will be the key driver for Nippon Roche's growth

— High and sustained growth over the next five years due to the expected market penetration of newly launched Herceptin and Rituxan, as well as the expected launches of products in late stage development such as Xeloda and Pegasys

II. Summary of Operations

A. Nippon Roche's Corporate Strategy and Outlook

Key Objectives:

To achieve both the qualitative (to be recognised as a pharmaceutical company providing the best value to customers) and the quantitative (JPY 100 billion Rx direct sales at NHI price level in 2005) objectives based on Nippon Roche's view of the likely changes in the healthcare environment, Nippon Roche will focus on the following key strategies:

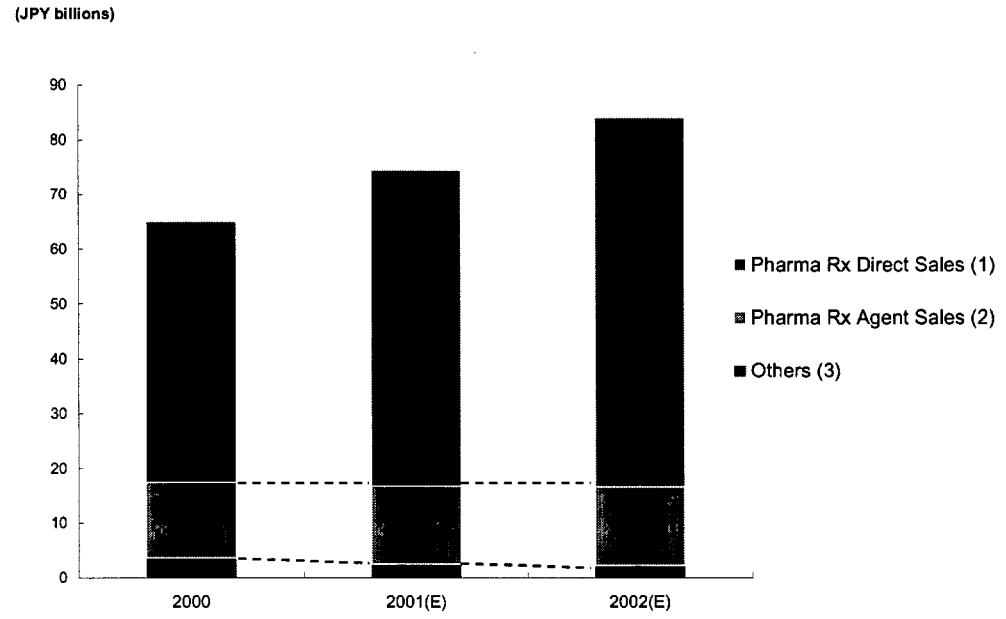
- Continuing to focus on oncology products to become a leader in the Japanese oncology market
- Launching promising pipeline products, including products already marketed overseas by the Roche Group, to maintain strong sales growth, and to further pursue low dependency on long-listed products
- Maximising the potential of each product, focusing on accurate customer targeting and value added promotion
- Expanding and disseminating an evidence based medicine and pharmacoeconomics approach in sales promotion
- Developing even more specialized medical representatives (MRs) for the future product line
- Securing a critical mass of MRs with increased productivity
- Achieving less time to market of new products by optimising the Roche Group's global resources as well as exploiting regulatory changes
- Focusing on product portfolio optimisation
- Investing in human capital and personnel systems to support company performance and the Roche brand

B. Summary of Major Existing and Pipeline Products

■ *Therapeutic Area*

Nippon Roche expects high top-line growth over the next several years, against a flat market in Japan. Through near-term growth drivers such as Herceptin and Rituxan, among other products, Nippon Roche aims to steadily increase sales to reach its financial objectives.

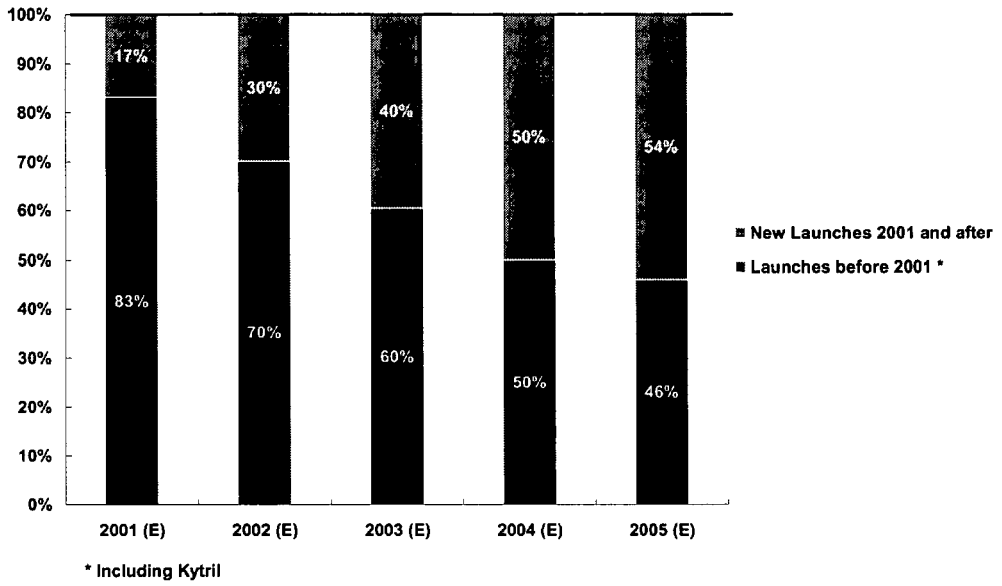
Historical and Projected Net Sales



(1) Finished Products marketed and promoted by Nippon Roche
(2) Products sold to other pharmaceutical companies
(3) Includes Pharma Rx and Vitamins export sales to other Roche affiliates and OTC sales

Due to the expected launches of numerous growth drivers over the next few years, Nippon Roche expects to maintain a good portfolio mix of new and established products. By 2005, new launches made in 2001 or after is expected to account for slightly more than half of direct pharmaceutical sales.

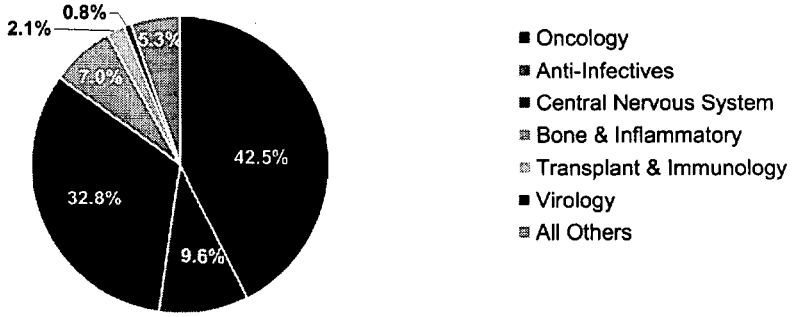
C. Product Mix in Rx Direct Net Sales by Launch Date



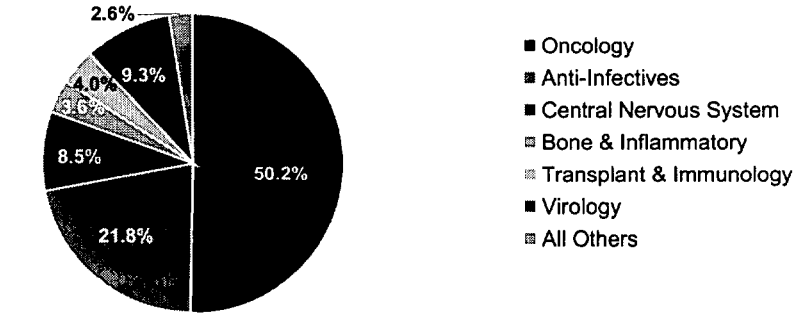
* Including Kytril

While Nippon Roche relied heavily on its flagship oncology products and its CNS products in fiscal year 2000, Nippon Roche expects the product mix in fiscal year 2005 to be more balanced. The rapid and sustained growth in anti-infectives and virology will more than compensate for the expected fall in CNS revenues, while oncology will remain at the core of Nippon Roche's product mix, accounting for approximately 50% of expected fiscal year 2005 revenues.

Breakdown of Fiscal Year 2000 Rx Direct Net Sales by Therapeutic Area



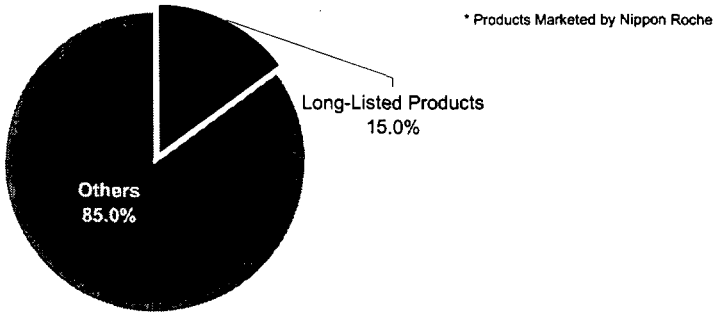
Breakdown of Fiscal Year 2005 (E) Rx Direct Net Sales by Therapeutic Area



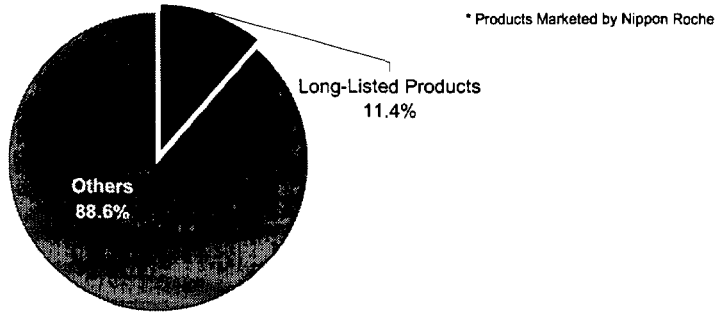
Long-Listed Products

Long-listed products as a percentage of total sales is expected to decrease from 15.0% in 2001 to 11.4% in 2002, thus leading to higher margins. Long-listed products are defined as products with generic entry, and in the case of Nippon Roche include products such as Rocaltrol (Oral), Rohypnol (Oral) and Bezalip. For Nippon Roche, long-listed products as a percentage of total sales is substantially lower than the industry average, which is thought to be approximately 34% (Source: MHLW).

Rx Direct Sales* % of Long-Listed Products (Choki-Shusai-Hin) in 2001 (E)



Rx Direct Sales* % of Long-Listed Products (Choki-Shusai-Hin) in 2002 (E)



■ *Established Products*

Nippon Roche's established products in Japan are summarised in the following table:

Established Products
(Sales in JPY millions, Net Price Level)

Brand Name	Generic Name	Sales FY 2001E	Indications
Furtulon	doxifluridine	19,576	Cancers of breast, colon and rectum, gastric, bladder and cervical uteri
Kytril	granisetron hcl	9,430	Cancer chemotherapy / radiotherapy induced emesis
Rohypnol	flunitrazepam	4,236	Insomnia, Pre-Anaesthetic Medication
Rocephin	ceftriaxone	4,063	Infections caused by CTRX-susceptible strains of several bacteria : Sepsis, Respiratory infections, Urinary infections, Meningitis, Otitis media, etc.
Rocaltrol Oral	calcitriol	3,251	Osteoporosis, Improvement of various symptoms (hypocalcemia, numbness, tetany, paresthesia, muscle ostalgia, bone lesions, etc.) associated with vitamin D dysbolism in chronic renal failure, hypoparathyroidism, rickets/osteomalacia
Madopar	levodopa + benserazide	1,599	Parkinson's disease and Parkinson's syndrome
Tigason	etretinate	1,429	Psoriasis group, Ichthyosis group, Palmoplantar keratosis, Darier's sign, pustulosis palmaris et plantaris, pityriasis rubra pilaris, erythrokeratosis, Tylosis linguae, oral villous tumor, oral lichen planus
Rivotril	clonazepam	1,287	Minor (motor) seizures (myoclonic seizure, astatic (akinetic) seizure, epilepsia nutans (infantile spasm seizure, BNS spasm, etc.), Psychomotor seizures, Autonomic seizures

1. Furtulon

Furtulon is an oral anticancer drug that was launched in 1987. Furtulon generates the active drug 5-FU (5-fluorouracil), a standard therapeutic agent for colorectal, breast and many other solid tumours, using the enzyme thymidine phosphorylase, which can be found at high concentrations in various tumours, without causing severe toxicity to normal tissue. The major side effect is diarrhoea, which is reversible. It is also associated with haematological disorders and alopecia but to a much lesser extent than other cytotoxic drugs (e.g. taxanes and anthracyclines). It has been well prescribed in Japan, Korea, and China for the treatment of breast, colorectal, gastric, bladder and cervical cancers. The mortality rate of the above cancers is projected to rise from 104,000 in 2000 to 126,000 in 2010. Furtulon sales in Japan peaked at JPY 21 billion in 1995 and have been maintained at similar levels (JPY 18-20 billion) until present.

2. Kytril

Kytril is an anti-emetic drug for patients who receive emetogenic anticancer drugs and stimuli, such as total body irradiation (TBI). Cytotoxic drugs such as cisplatin and anthracyclines often cause nausea and vomiting after administration. 60-79% of patients treated with cytotoxic drugs receive moderately to highly emetogenic regimens (230,000 patients in Japan), with 30% receiving highly emetogenic treatments (e.g. cisplatin), which are often prescribed for cancer treatment. Severe nausea and vomiting, which are side effects of patients receiving cancer chemotherapy, not only seriously affect patients' quality of life, but can also become intolerable to the extent that patients are unwilling to continue with potentially life-saving treatments.

Kytril provides 24-hour protection against nausea and vomiting after either bolus/intravenous drip administration of Kytril 40 mcg/kg, or a single administration of Kytril 2 mg tablet. Kytril in both intravenous and oral forms has been shown to be safe and well tolerated in clinical trials and during 10 years of clinical practice. The most common side effects - headache, asthenia, somnolence, diarrhoea and constipation - are generally reported as mild and transient.

In literature surveys, Kytril is said to be the most effective in preventing nausea and vomiting among the 5-HT_3 antagonists. It was launched by Smith-Kline Beecham in Japan in 1992 and was transferred to Nippon Roche in December 2000. Sales are projected to stay near current levels until the expiration of the patent in 2006.

3. Rohypnol

Rohypnol is a hypnotic, sleep-inducing agent belonging to the benzodiazepine family of compounds. Benzodiazepines are psychotropic drugs characterized by anxiety-relieving, sedative/sleep-inducing, anti-convulsant and muscle relaxant effects. They are accordingly indicated for the treatment of anxiety disorders, sleep disturbances and epileptic seizures.

Nippon Roche has been marketing Rohypnol as a treatment for sleep disorders since 1984. The sales trend of Rohypnol is still growing in spite of the recent new launches such as Doral® (1999) and Myslee® (2000), partly owing to the increase in the number of eligible patients on sleep inducers. Most of the major competitors introduced after Rohypnol have a very short T1/2 (half-life) of approximately 1-4 hours as their pharmacokinetic profile, whereas Rohypnol has a longer T1/2 (7 hours), making Rohypnol a distinctive medication for insomnia.

4. Rocephin

Rocephin is the only injectable cephalosporin available for the treatment of mild or intractable infections that can be administered either once or twice daily. The daily dose allows outpatient care, for the control of pneumonia and other diseases, acute otitis media and day surgery operation. Thus, it reduces the physical and economic burden on both the physician and the patient. Rocephin is recommended as an antibiotic for the treatment of Community Acquired Pneumonia and Meningitis in the treatment guidelines issued by the Japan Chemotherapy Association/Japan Association of Infectious Disease and the Japan Respiratory Society, respectively, because of its unique pharmacokinetics and antimicrobiology profile.

Rocephin is the only product in its class still growing in sales and gaining market share. As a line-extension, the Rocephin Kit (ready-to use device containing Rocephin and Saline) 1g device NDA was submitted in December 2001 in collaboration with Otsuka Pharmaceuticals as the co-developer and supplier of this novel device.

5. Rocaltrol

Rocaltrol, an active vitamin D3 analogue, increases bone mass and/or reduces the frequency of fractures in osteoporosis patients with minimal incidence of hypercalcemia and hypercalciuria. Because mal-absorption of calcium is a key characteristic of osteoporosis, increasing calcium absorption reduces the degree of negative calcium balance and the rate of bone loss. As such, Rocaltrol provides normalization of calcium absorption when given in doses of 0.25 μg twice daily.

The active vitamin D3 analogue market as well as the total osteoporosis market will see further growth because of the greying population, coupled with the fact that the estimated number of undiagnosed patients accounts for up to 80% of the total osteoporosis patients.

6. Madopar

Levodopa in combination with a dopa decarboxylase inhibitor is the most effective orally active treatment for the symptomatic control of Parkinson's disease. Most patients with Parkinson's disease will require and receive levodopa in combination with a dopa decarboxylase inhibitor within the first 3 years of diagnosis. Madopar contains 100 mg levodopa and 25 mg benserazide (the peripheral decarboxylase inhibitor) in a tablet.

The patient population of Parkinson's disease is approximately 150,000 in Japan and is increasing in line with the aging population. The market for Parkinson's disease has been growing during the last ten years, primarily due to the introduction of new dopamine receptor agonists (e.g. Permax®, Cabaser® etc.) and changing treatment strategies.

7. Tigason

Launched in 1985, the oral retinoid Tigason was immediately hailed as a therapeutic breakthrough in the oral treatment of psoriasis and other disorders of keratinization. However, strict safety management is required for any patient taking Tigason due to the teratogenisity and very long T1/2 (approximately 100 days). There is also a restriction on contraception for up to two years after termination of treatment. Tigason has permeated the market despite this restriction because of the clinical benefit for patients that cannot be substituted by any other medication.

The sales of Tigason fell by approximately 10% after the introduction of topical Vitamin D3 analogue (ointment & lotion), Dovonex®, Oxarol® and Bonalfa® as alternatives of the treatment for keratinization disorders. However, a further decline in sales is unlikely, as Tigason has established a strong position in the market as a valuable therapeutic option for severe psoriasis and keratinization disorders.

8. Rivotril

Rivotril belongs to the benzodiazepine family of compounds. In this case, due to its clinical characteristics, it is used as an anticonvulsant/anxiolytic. Nippon Roche has been marketing Rivotril as a treatment for epileptic seizures since 1981. The prevalence of epilepsy is estimated at 1% of the population. The main method of intervention of epilepsy is seizure control by medication.

Rivotril is prescribed as a second choice medication for several types of seizures such as myoclonic seizures and psychomotor seizures that do not respond to typical interventions. The sales trend has been stable in the last ten years and no significant change in this trend is assumed over the next five years.

■ *Newly Launched Products*

The introduction of Tamiflu in 2001 immediately made a significant contribution to Nippon Roche's top line. Three other recent launches, Herceptin, Rituxan (MabThera), and CellCept, are all expected to record sales in excess of JPY 1 billion in FY 2001. More importantly, sales volume of these newly launched products is expected to grow significantly in the next several years, and become the key growth drivers for the near term.

Newly Launched Products

(Sales in JPY millions)

Brand Name	Generic Name	Sales FY 2001E	Indications
Tamiflu	oseltamivir	6,283	Type A and type B influenza viral infections
Herceptin	trastuzumab	1,399	Metastatic breast cancer with HER2 overexpression
Rituxan (MabThera)	*rituximab*	2,023	*CD20 Positive Low Grade or Follicular Non* Hodgkin's' Lymphoma and Mantle Cell Lymphoma
CellCept	mycophenolate mofetil	1,101	Treatment of refractory rejection after kidney transplantation; prevention of rejection after kidney transplantation

1. Tamiflu

Approximately 10 percent of adults and 20 percent of children are infected with influenza in an average year. Tamiflu, belonging to a new class of medicines called neuraminidase inhibitors designed to specifically target the influenza virus, is a powerful new option in the fight against influenza.

Tamiflu blocks the action of the neuraminidase enzyme on the surface of influenza virus A and B. When neuraminidase is inhibited, the virus is not able to spread and infect other cells in the body. Tamiflu is given orally, as a convenient capsule (75 mg) and as a syrup formulation, enabling it to reach all key sites in the body where the virus multiplies. Treatment should begin within 2 days after onset of symptoms. The earlier oseltamivir is given, the quicker the patient recovers from influenza.

Tamiflu has been shown to be highly effective and has demonstrated a good safety profile. A recent clinical study has shown that treatment within the first 12 hours of influenza symptom onset reduced the total duration of illness by three days more than intervention at 48 hours. Other clinical studies in the treatment of influenza have shown Tamiflu reduces the severity of symptoms, by up to 40 percent. Tamiflu is also effective in the treatment of influenza in children. Tamiflu reduces secondary complications of

influenza, such as bronchitis and sinusitis, by 40 percent in previously healthy adults and associated antibiotic use.

Results from clinical studies in the treatment of influenza showed that Tamiflu is well tolerated, with a few patients reporting transient, mostly mild nausea or vomiting. During long-term use in prophylaxis studies these events were reported in similar incidence for Tamiflu compared to a placebo.

In Japan, Tamiflu has been available for the treatment of influenza in adults since 2001, and will also be available for children aged one year and above starting in 2002.

Tamiflu is co-promoted with Shionogi with a unique collaboration scheme of one-channel / one-brand / two-promotion, which enables an account coverage in excess of 50,000 with 1,600 MRs for intensive promotion in winter season, from November to March.

2. Herceptin

Herceptin is a new type of anticancer drug with a unique mechanism of action. It is a humanized-monoclonal antibody produced by a new technology, gene engineering, and specific to the oncogene product, human epidermal growth factor receptor 2 (HER2). It binds to HER2, which is expressed on the cell surface, and inhibits cell proliferation through interfering with the HER2 mediated signal toward cell growth and kills tumour cells through Herceptin-mediated antibody dependent cell mediated cytotoxicity. Herceptin is therefore likely to inhibit the growth of tumour cells that overexpress HER2 on the cell surface. Herceptin is indicated for the treatment of women with metastatic breast cancer (MBC) that overexpresses HER2. Herceptin in combination with chemotherapy as first-line treatment of women with HER2-overexpressed MBC significantly prolongs the median time to disease progression and survival compared with treatment with chemotherapy alone. Tumour response and duration of response are also increased for Herceptin in combination with chemotherapy versus chemotherapy alone. Herceptin does not cause myelosuppression (leucopoenia) or alopecia, which are often seen in treatment with many cytotoxic anticancer drugs. Infusion-related reactions such as fever/chill and respiratory failure are its major side effects. Herceptin also increases the cardiotoxicity of anthracycline anticancer drugs when given in combination.

Globally, approximately 20% of all patients with MBC overexpress HER2. Herceptin is given as a gold standard drug for such patients either independently or in combination with cytotoxic anticancer drugs. Without any direct competitor, worldwide sales of Herceptin in the first half 2001 reached CHF 360 million (USD 213 million) including Genentech sales in the US.

Herceptin also has a high potential as a drug for the treatment of other types of cancers that overexpress HER2, such as gastric cancer, and for post-operative chemotherapy as an adjuvant to surgery, a large market. Indication expansion for Herceptin in other types of cancer and in adjuvant therapy is one of the major life-cycle management strategies. In Japan, it was launched in June 2001. Herceptin is given intravenously at a loading dose of 4 mg/kg followed by a weekly maintenance dose of 2 mg/kg.

3. Rituxan

Rituxan (MabThera in the US), the first antibody approved for the treatment of cancer, provides a new treatment of B-cell non-Hodgkin's lymphoma (NHL). Rituxan is a genetically engineered chimeric mouse/human monoclonal antibody which binds specifically to the transmembrane antigen CD20, located on pre-B and mature B lymphocytes, and kills such cells by complement dependent cytotoxicity and antibody dependent cell mediated cytotoxicity. More than 95% of NHLs also express the antigen CD20 on the cell surface and are targets of Rituxan therapy. In clinical studies Rituxan proved to be efficacious in two types of NHL so far. One is low-grade or follicular NHL, and the other is intermediate and high (I/H) grade NHL.

Rituxan given as a single agent at a dose of 375 mg/m^2 as an intravenous infusion once weekly for 4 doses is safe and effective in the treatment of patients with relapsed or refractory low-grade or follicular B-cell NHL. The I/H grade NHL, if left untreated, spreads rapidly and quickly becomes fatal. These lymphomas respond to combination chemotherapy, with a variety of regimens producing complete responses in 40-80% of patients. About one-third of patients with I/H grade lymphomas are cured. Most relapses occur in the first two years after therapy. These NHLs also respond well to Rituxan as a single agent and in combination with the chemotherapy combination CHOP.

Rituxan is now well prescribed for the treatment of low grade NHL all over the world, with 2001 first half sales reaching CHF 740 million (USD 438 million) including the sales in the US by Genentech. Rituxan will be soon approved for the additional disease I/H grade NHL in the US and EU. In Japan, it was launched in September 2001, with plans for filing I/H grade NHL in 2002.

4. CellCept

CellCept is a highly efficacious immunosuppresant, indicated for the treatment and prevention of acute allograft rejection in adult patients receiving kidney transplants. It was first approved in the US in 1995 and marked Roche's entry into the field of transplant medication. Since then, CellCept has extended its use to transplants of other organs such as the liver and the lung.

In Japan, it was approved in September 1999. It is only after enforcement of the "Organ Transplantation Law" in October 1997, after vigorous debates on whether or not brain death should be considered as death of a person, and whether or not to permit transplantation of organ from brain-dead donors, that Japan entered the age of organ transplants. Before this, only transplantations of the cornea and the kidney from heart-dead donors had been performed in Japan.

CellCept possesses a novel mechanism of action. It works by inhibiting an enzyme known as IMPDH which is essential for the proliferation of lymphocytes. The results of large scale international clinical trials have shown that, compared with placebo or azathioprine, CellCept reduces the incidence of kidney rejections by around 50%. CellCept is available in the form of 250 mg capsules, and the optimal doses are likely to be 2 g or 3 g per day in two doses (as adjunctive therapy to cyclosporin and steroids).

■ *Late Stage Pipeline Products and Line Extensions*

Late stage pipeline products and line extensions in Japan are summarized in the following tables:

Late Stage Pipeline Products
(As of December 25, 2001)

Brand Name	Generic Name	Category (Target Indication)	Stage	Origin
Xeloda	Capecitabine	Anti-cancer agent (BC)	Post-NDA	In-house
Pegasys	PEG interferon alfa-2a	Pegylated Interferon (HCV)	Pre-NDA (mono) Prep. Phase III (combo)	In-house
Copegus	Ribavirin	HCV	Prep. Phase III	In-house
Xenical	Orlistat	Lipase inhibitor (Obesity)	Phase II	In-house
Bonviva	Monosodium ibandronate	Bone resorption inhibitor (Osteoporosis)	Prep. Phase II	In-house

Line Extensions
(As of December 25, 2001)

Brand Name	Generic Name	Category (Target Indication)	Stage	Origin
CellCept	Mycophenolate Mofetil	Immunosuppressant (Prevention for heart transplant rejection, etc.)	Post-NDA	In-house
Herceptin	Trastuzumab	Anti-cancer agent (Adjuvant Breast Cancer)	Prep. Phase III (*)	Genentech
Xeloda	Capecitabine	Anti-cancer agent (CRC and GC)	Phase II	In-house

Notes:
BC: Breast Cancer, CRC: Colorectal Cancer, GC: Gastric Cancer, HCV: Hepatitis C Virus
(*): as a part of a global Phase III program

1. Xeloda

Xeloda was designed to more selectively convert to the active drug 5-FU in tumour tissues than Furtulon, so that it can be safely given at higher doses for longer periods showing better efficacy. It was launched in its first market, the US, in 1998 for Taxol® and anthracycline refractory metastatic breast cancer within 7 and 4 years after its chemical synthesis and the start of phase I study, respectively, the shortest time for anticancer drug development in the US. Xeloda was additionally approved for first-line metastatic colorectal cancer (US and EU in 2001) and for second-line metastatic breast cancer in combination with Taxotere® of anthracycline-failure breast cancer (US in 2001 and EU projected in early 2002). Xeloda is currently marketed in over 90 countries for the treatment of breast and colorectal cancers, with the first half sales in 2001 reaching more than CHF 100 million (USD 59 million). Xeloda is being further assessed in combination with various types of anticancer drugs and in other types of cancers. Xeloda is expected

to become the leading oral fluoropyrimidine worldwide. In Japan, an NDA for the treatment of breast cancer was submitted in January 2001 and will be launched in 2002.

2. Pegasys

Pegasys takes the form of a 1ml solution with a 180µg dose supplied to 2 ml vial for the treatment of chronic hepatitis C. Pegasys is produced by the covalent attachment of recombinant interferon alfa-2a to a branched 40kDa polyethylene glycol (PEG), which shields interferon alfa-2a molecular from enzymatic degradation, reduces systematic clearance and enables weekly administration. The addition of PEG moiety results in rapid absorption and consistent and sustained seven days viral suppression showing better efficacy and better tolerability as well as weekly administration instead of three times a week in standard IFN such as Roferon A. Pegasys has been filed in the US and EU and is currently awaiting approval. The Pegasys NDA for Japan is expected to be submitted in 2002.

3. Copegus

Copegus (ribavirin) is a nucleoside analogue, which is known to be effective in hepatitis C when combined with interferon alfa. It was reported at the Digestive Disease Week (DDW) 2001 (Atlanta, GA, May 20-23, 2001) that a combination of Pegasys and Copegus yielded a significantly superior sustained virological response (56%) as compared to combination therapy with Intron-A and ribavirin (45%), which until now has been considered the international standard of care. The most common and troublesome side effects – depression and flu-like symptoms – were significantly less frequent with Pegasys and Copegus than with Intron A plus ribavirin. In particular, depression occurred in 21 percent of Pegasys and Copegus patients, versus 30 percent of patients using Intron A and ribavirin. Copegus, in combination with Pegasys, is about to start the pivotal phase III study in Japan based upon these results.

4. Xenical

Xenical (orlistat) is a lipase inhibitor for obesity management that acts by inhibiting the absorption of dietary fats. It exerts its therapeutic activity in the lumen of the stomach and small intestine by forming a covalent bond with the active serine residue site of gastric and pancreatic lipases. The inactivated enzymes are thus unavailable to hydrolyze dietary fat in the form of triglycerides into absorbable free fatty acids and monoglycerides. It is approved and marketed in more than 70 countries and generated estimated worldwide sales of CHF 1 billion (USD 592 million) in fiscal year 2000. The definition of obesity in Japan is BMI≥25 with at least one comorbidity (e.g. type 2

diabetes, hyperlipidemia, hypertension, cerebral infarction, coronary artery disease, fatty liver, sleep apnea, osteoarthritis, menstrual disorder). A phase II dose finding study in overweight and obese patients with hyperlipidemia is ongoing in Japan.

5. Bonviva

Bonviva is a highly potent bisphosphonate, which has been studied in clinical trials involving over 9,000 patients to date on a world wide basis. From the data generated there are already elements of a highly differentiated medicine, which will serve as a foundation for new drug applications. In order to bring a drug with innovative benefits to physicians and patients to market, a clinical development programme has been started outside Japan, with the aim of providing new innovative oral and intravenous intermittent dosage regimens. In Japan, a phase II study is about to begin.

■ ***Early Stage Pipeline Products***

There are four new molecular entities (NMEs) in phase I in Japan.

Tarceva (OSI774 / Erlotinib), a tyrosine kinase inhibitor, targets Non-Small Cell Lung Cancer (NSCLC) and potentially other solid tumours. Tarceva is now in phase III globally.

Second generation erythropoietin, which is in phase II globally, is targeted at anaemia in chronic renal failure and in malignant diseases (expected to exhibit superiority compared to available products in terms of reduced administration frequency, improved formulation, good local tolerability and therefore improved patient convenience and compliance).

Alpha 1 agonist for Stress Urinary Incontinence is another phase I project. It has shown significant effects on bladder outlet muscle tone with minimal cardiovascular effects. In overseas clinical trials, it has demonstrated a significant decrease in incontinent episodes versus placebo and was generally safe and well tolerated. Phase IIb studies have been initiated globally and results are expected in the second half of 2002.

An NK-1 inhibitor is targeted at depression and anxiety. This compound is expected to have improved tolerability compared to SSRI and superior CNS bioavailability than competitor compounds and is currently in preparation for phase II globally.

The key development strategy for Roche's NMEs in Japan is to maximise the use of overseas clinical data to reduce the time-to-market and the development costs while compiling a complete clinical data package for Japanese NDA.

Established Products
(Sales in JPY billions)

Brand (Product Name)	Furtulon	Kytril	Rohypnol	Rocephin
Generic Name	doxifluridine	granisetrone hydrochloride	flunitrazepam	ceftriaxone sodium (CTRX)
Product Presentation	Capsule 100mg, 200mg	Ampoule 1mg, 3mg, Tablet 1mg, 2mg, Sachet 0.4%	Tablet 1mg, 2mg, Ampoule 2mg	Vial 0.5g, 1g
Product Indication	Cancers of breast, colon and rectum, gastric, bladder and cervical uteri	Nausea/Vomiting caused by anti cancer agents such as cisplatin and by total body irradiation before haematologic stem cell transplants	Insomnia , Pre-anesthetic Medication	Infections caused by CTRX-susceptible strains of several bacteria: Sepsis, Respiratory infections, Urinary infections, Meningitis, Otitis media, etc.
Market Description	Oral fluoropyrimidine / Cytotoxic anticancer drug	$5HT_3$ receptor antagonist	Sleep inducing agent	Injectable Cephalosporin
Number of Patients	290,000 (yearly incidence)	Approx. 230,000 (# of patients given treatment)	N.A.	Not defined
Market Trend	Incidence has been increasing steadily	Modestly growing	Growing	Stable
Stage of Product Lifecycle	Mature	Mature	Mature	Mature
Launch Year	1987	1992	1984	1986
Sales - FY 1999	19.1	N.A.	3.8	3.6
- FY 2000	19.6	0.3	4.1	4.0
- FY 2001 (E)	19.6	9.4	4.2	4.1
Patent Expiration	Dec. 2002	Apr. 2006	Expired	Expired

Established Products
(Sales in JPY billions)

Established Products
(Sales in JPY billions)

Brand (Product Name)	Rocaltrol	Madopar	Tigason	Rivotril
Generic Name	calcitriol	levodopa / benserazide hydrochloride	etretinate	clonazepam
Product Presentation	Capsule 0.25mcg, 0.5mcg	Tablet 125mg (levodopa 100mg, benseraszide 25mg)	Capsule 10mg, 25mg	Tablet 0.5mg, 1mg, 2mg, Fine Granule 0.1%, 0.5%
Product Indication	OstOsteoporosis, Symptoms associated with vitamin D dysbolism: Chronic renal failure, Hypoparathyroidism, Rickets/osteomalacia	Parkinson's disease and Parkinson's syndrome	Psoriasis group; Ichthyosis Palmoplantar keratosis, Darier's sign, pustulosis palmaris et plantaris, pityriasis rubra pilaris, erythrokeratosis, Tylosis linguae, oral villous tumor, oral lichen planus	Minor (motor) seizures (myoclonic seizure, astatic (akinetic) seizure, epilepsia nutans (infantile spasm seizure, BNS spasm, etc.); Psychomotor seizures; Autonomic seizures
Market Description	Active Vitamin D3	Anti-Parkinson Drug	Oral Anti-Psoriasis Agent	Anti-Epileptics
Number of Patients	1.7 million treated; prevalence: 8 million	130,000 (# of patients consulting physicians)	50,000	320,000 (# of patients consulting physicians)
Market Trend	Growing	Growing modestly	Stable	Stable
Stage of Product Lifecycle	Mature	Mature	Mature	Mature
Launch Year	1986	1980	1985	1980
Sales - FY 1999	3.1	1.5	1.5	1.1
- FY 2000	3.2	1.6	1.6	1.2
- FY 2001 (E)	3.3	1.6	1.4	1.3
Patent Expiration	Expired	Expired	Expired	Expired

Newly Launched Products
(Sales in JPY billions)

Newly Launched Products
(Sales in JPY billions)

Brand (Product Name)	Tamiflu	Herceptin	Rituxan	CellCept
Generic Name	oseltamivir phosphate	JAN: trastuzumab (genetical recombinant); INN: trastuzumab	rituximab	mycophenolate mofetil
Product Presentation	Capsule 75mg	Vial 150mg	Vial 10ml, 50ml	Capsule 250mg
Product Indication	Type A and type B influenza viral infections	Metastatic breast cancer that overexpresses HER2	CD20 Positive Low Grade or Follicular Non Hodgkin's' (NHL); Lymphoma and Mantle Cell Lymphoma	Treatment of refractory rejection after kidney transplantation. Prevention of rejection after kidney transplantation
Market Description	Anti-influenza virals	Anticancer Monoclonal Antibody	Anticancer monoclonal antibody	Immunosuppressants
Number of Patients	6 million (# of patients presenting to physicians, average of 1992-2001)	20% of Metastatic Breast Cancer (yearly incidence: 7,000 - 9,000)	13,000 newly diagnosed patients (as NHL); 20,000 patients as prevalence	Kidney transplantation (incidence): 746 (in 2001)
Market Trend	Developing	Incidence has been increasing steadily	Incidence has been increasing steadily	Steadily increasing
Stage of Product Lifecycle	Introduction phase	Launched	Launched [1]	Launched
Launch Year	2001	2001	2001	1999 [2]
Sales - FY 1999	N.A.	N.A.	N.A.	0.0
- FY 2000	N.A.	N.A.	N.A.	0.7
- FY 2001 (E)	6.3	1.4	2.0	1.1
Patent Expiration	Feb. 2016	Feb. 2010	Sept. 2014	Dec. 2012

1 Additional indication (aggressive lymphoma) to be submitted in 2002 and approved in 2003

2 First launch in Dec. 1999 for the treatment of refractory rejection after kidney transplantation. Additional indication in Dec. 2000 for the prevention of rejection after kidney transplantation. NDA submission for another additional indications for heart, liver, lung transplantation and BMT was filed and approval is anticipated in late 2002.

Key Late Stage Pipeline Products

Key Pipeline Products
(Sales in JPY billions)

Brand (Product Name)	Xeloda	Pegasys
Generic Name	capecitabine	PEG-interferon Alfa-2a (Genetical Recombinant)
Product Presentation	Tablet 300mg	Liquid vial: 180 mcg / 1ml
Product Indication	Breast , colorectal and other cancers	*Chronic hepatitis C*
Market Description	Oral fluoropyrimidine/Cytotoxic anticancer drug	Interferons
Number of Patients	150,000 (yearly incidence of breast and colorectal cancer)	Number of IFN treated patients has been moved constantly (ca 20,000 / year) until 2001
Market Trend	Yearly incidence increasing	The introduction of new products including PEG-IFN will boost the IFN market
Stage of Product Lifecycle	Breast cancer (NDA Filed), colorectal and gastric (Phase II)	N.A.
Expected Launch Year	2002 (breast cancer), 2004 (colorectal cancer)	2003
Patent Expiration	Dec. 2013	May 2017

C. Recent R&D Activities

In spite of tremendous recent developments in medical science, mankind is still faced with challenges it has not been able to overcome such as viral infections and cancer. The Roche Group has been making full use of its global research network to provide the best possible pharmaceutical products to fight these maladies. The Roche Group's centres of excellence in Basel (Switzerland), Nutley (USA), Palo-Alto (USA), Pentzburg (Germany) and Kamakura (Japan), aiming for highly productive research and development activities, have been focusing on specific therapeutic areas based on the *"Focus for Growth"* strategy, which aims at concentrating R&D resources on specific therapeutic areas where maximum contributions for future growth can be expected.

The Kamakura Research Centre, for example, has demonstrated its drug creation capabilities with the Roche research and development organization through its development of highly cancer selective pharmaceuticals such as Furtulon and more recently, Xeloda (generic name: capecitabine), which has received very high reputation from the medical community since its introduction in the United States.

The development of pharmaceutical products cannot be completed in the research facilities alone. Clinical trials need to be performed with those patients who are actually suffering from the specific diseases. Roche is actively performing clinical trials in the therapeutic fields of oncology, viral infections, and metabolic diseases, diseases of the central nervous system, genito-urinary diseases, and cardiovascular diseases to bring innovative new solutions in the shortest possible time frame. As an example of the high capabilities of the Pharmaceutical Development team, in recent years Roche has achieved with its oral influenza remedy a new record in obtaining approval only 2 years and 8 months after phase I studies have commenced. Such a record can only be achieved with the combination of optimal utilisation of overseas clinical data with the most appropriately designed and carried out domestic clinical trials.

D. Sales and Marketing

As the first company to establish the MR□Medical Representative□ system in Japan, Nippon Roche has positioned its MRs as a professional group with specialized skills and knowledge reflecting the changes in medical environment as well as the medical needs of the society. In the fast evolving clinical forefront, MRs not only must have information on the proper usage of Nippon Roche's own products, but also aim to become an advisor on a wide array of topics concerning medicinal treatment, a system Nippon Roche christened "consulting promotion".

Nippon Roche has a nationwide sales network of 13 branch and 39 liaison offices in major cities throughout the country. Through aggressive efforts in increasing the number of quality MRs (26 recruits in 2000, 72 in 2001, and 62 expected in 2002), Nippon Roche currently possesses a young and active sales force of 600 medical representatives with an average age of 32.9. This professional team has a very high rate (93.1%, total of first to seventh examinations) of passing the MR qualification exams.

III. Personnel

A. Employees

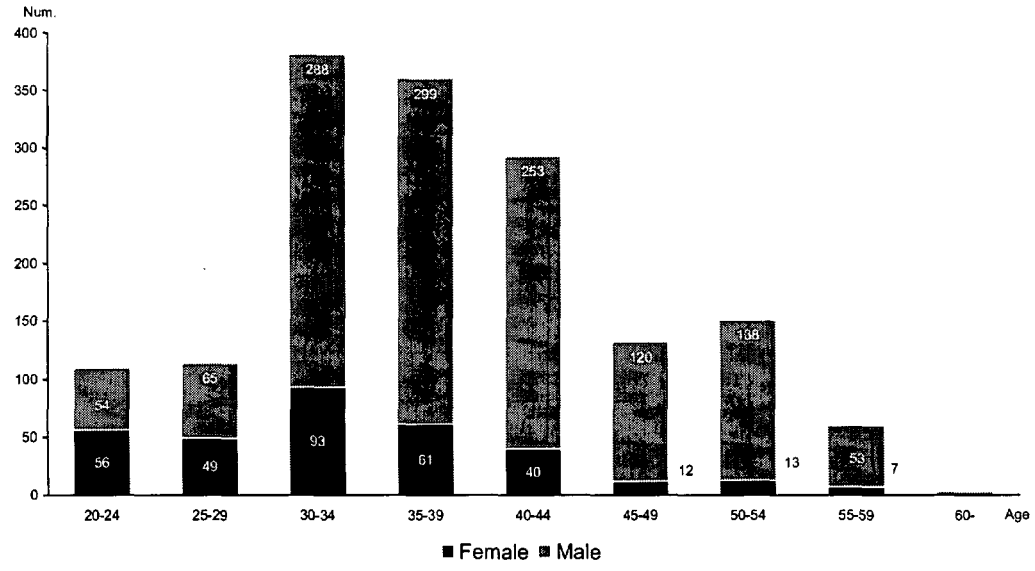
Employees by Function

As of Jan. 2002

Name of Function	Number
Pharmaceutical Sales Div.	788
Marketing Groups	57
Sales/Marketing Support Group	34
Pharmaceutical Development	171
PMS Group	40
Consumer Health Business Unit	5
Nippon Roche Research Centre	168
Technical Division including Kamakura Factory	183
Corporate functions	139
Seconded	19
Total	1,604

*Including: Director, Shokutaku

Age Distribution as of Jan. 2002



IV. Historical and Projected Financials

A. Profit and Loss Statement

(Japanese GAAP, JPY millions)

	Fiscal Year ending December 31,			
	1999	**2000**	**2001E**	**2002E**
Operating Income				
Pharma Rx Direct Sales [1]	49,781	47,548	57,655	67,425
Pharma Rx Agent Sales [2]	15,071	13,945	14,322	14,400
Others [3]	7,682	3,578	2,420	2,194
Total Sales	**72,534**	**65,071**	**74,397**	**84,019**
Total Cost of Goods	34,838	25,770	30,783	
Gross Profit	**37,696**	**39,301**	**43,614**	
Operating Expenses				
Research and Development [4]	5,639	4,901	4,194	
Marketing and Distribution [5]	18,450	18,322	21,901	
Other Operating Expenses [6]	5,168	6,448	6,729	
Total Operating Expenses	**29,257**	**29,671**	**32,824**	
Operating Profit	**8,439**	**9,630**	**10,790**	
Operating Profit Margin	*11.6%*	*14.8%*	*14.5%*	
Ordinary Profit	**3,698**	**8,451**	**11,447**	
Pre-tax Profit	**4,327**	**8,965**	**10,515**	
Taxes [7]	2,722	8,754	9,352	
Net Profit	**1,605**	**211**	**1,163**	

Notes

1 Finished Products marketed and promoted by Nippon Roche
2 Products sold to other pharmaceutical companies
3 Includes Pharma Rx and Vitamins export sales to other Roche affiliates and OTC sales. Due to disposal of Fukuroi manufacturing site in 1999, exports declined in 2000 and 2001
4 Nippon Roche Research activities are part of Roche Global Research and are fully reimbursed. Research and Development costs are shown after reimbursement
5 Marketing and Distribution expenses are related to Pharma Rx Direct Sales and OTC sales
6 Includes Royalties and Licence Fees to Roche Headquarters
7 Includes final settlement for the years 1992-1994 (in 2000) and final tax settlement for the years 1995-2000 (in 2001)

B. Sales by Product

(Sales in JPY millions)

Brand Name	Generic Name	Sales for FY ending December 31, 1999	2000	2001E	2002E	Indications
Furtulon	doxifluridine	19,138	19,575	19,576		Cancers of breast, colon and rectum, gastric, bladder and cervical uteri
Kytril	granisetron hcl		308	9,430		Cancer chemotherapy / radiotherapy induced emesis
Rohypnol	flunitrazepam	3,782	4,115	4,236		Insomnia, Pre-Anaesthetic Medication
Rocephin	ceftriaxone	3,637	4,048	4,063		Infections caused by CTRX-susceptible strains of several bacteria: Sepsis, Respiratory infections, Urinary infections, Meningitis, Otitis media, etc.
Rocaltrol Oral	calcitriol	3,116	3,248	3,251		Osteoporosis, Improvement of various symptoms (hypocalcemia, numbness, tetany, paresthesia, muscle ostalgia, bone lesions, etc.) associated with vitamin D dysbolism in chronic renal failure, hypoparathyroidism, rickets/osteomalacia
Madopar	levodopa + benserazide	1,450	1,550	1,599		Parkinson's disease and Parkinson's syndrome
Tigason	etretinate	1,491	1,575	1,429		Psoriasis group, Ichthyosis group, Palmoplantar keratosis, Darier's sign, pustulosis palmaris et plantaris, pityriasis rubra pilaris, erythrokeratosis, Tylosis linguae, oral villous tumor, oral lichen planus
Rivotril	clonazepam	1,131	1,237	1,287		Minor (motor) seizures (myoclonic seizure, astatic (akinetic) seizure, epilepsia nutans (infantile spasm seizure, BNS spasm, etc.), Psychomotor seizures, Autonomic seizures
Tamiflu	oseltamivir			6,283		Type A and type B influenza viral infections
Herceptin	trastuzumab			1,399		Metastatic breast cancer with HER2 overexpression
Rituxan (MabThera)	rituximab			2,023		CD20 Positive Low Grade or Follicular Non Hodgkin's' Lymphoma and Mantle Cell Lymphoma
CellCept	mycophenolate mofetil	43	657	1,101		Treatment of refractory rejection after kidney transplantation; prevention of rejection after kidney transplantation
Xeloda (launch 2002)	capecitabine					Breast, colorectal and other cancers
Draganon (delisted in 2001)	aniracetam	12,558	8,404			Emotional disturbances after cerebral infarction
Others		3,435	2,832	1,978		
Total Pharma Rx Direct Sales [1]		**49,781**	**47,548**	**57,655**	**67,425**	
Total Pharma Rx Agent Sales [2]		**15,071**	**13,945**	**14,322**	**14,400**	
Total Pharma Rx Sales		**64,852**	**61,493**	**71,977**	**81,825**	

Notes

1 Finished Products marketed and promoted by Nippon Roche

2 Products sold to other pharmaceutical companies

C. Balance Sheet

(Japanese GAAP, JPY millions)

	As of December 31,		
	1999	**2000**	**2001E**
Current Assets			
Cash	0	0	0
Notes & Accounts receivables - trade	32,138	28,459	36,035
Inventories	6,064	10,104	14,215
Other current assets	16,035	8,850	2,461
Total Current Assets	**54,237**	**47,413**	**52,711**
Fixed Assets			
Property Plant & Equipment	22,968	22,012	18,138
Intangible Assets	34	285	1,251
Investments and others	2,864	2,931	2,181
Total Fixed Assets	**25,865**	**25,228**	**21,570**
Total Assets	**80,103**	**72,640**	**74,281**
Current Liabilities			
Accounts payable - trade	5,349	11,993	11,412
Short-term borrowing	35,272	23,590	18,123
Other current liabilities	8,891	6,514	12,519
Total Current Liabilities	**49,512**	**42,096**	**42,054**
Non-current Liabilities			
Long-term debt	3,099	2,409	2,624
Other non-current liabilities	156	129	36
Accrued severance indemnities	3,194	3,653	4,050
Total Non-current Liabilities	**6,449**	**6,191**	**6,711**
Total Liabilities	**55,960**	**48,287**	**48,764**
Capital Stock	8,800	8,800	8,800
Legal Reserve	1,000	1,000	1,000
Retained Earnings	12,738	14,342	14,554
Net income current year	1,605	211	1,163
Total Stockholder's Equity	**24,142**	**24,353**	**25,517**
Total Liabilities and Stockholder's Equity	**80,103**	**72,640**	**74,281**

V. Supplemental Information

A. Audited Report FY 2000

Media Update

Basel, 31 January 2002

Roche Continues to Strengthen its Expanding Oncology Franchise

Roche Oncology offers a balanced portfolio of innovative treatment options, which span across the whole area of cancer care. The oncology franchise has become a major pillar of Roche's pharmaceuticals division, and has been identified as one of the key areas of future growth. Three of Roche's top 10 selling medicines were cancer-related treatments. The oncology franchise will contribute about 25 percent of total pharmaceutical sales in 2001 and the franchise is expected to grow substantially (over 60%).

New Indications for Products with Survival Benefit – MabThera/Rituxan and Xeloda
New approvals by the European Commission for two of Roche's leading oncology products are expected early this year. The European Commission is expected to approve:

- MabThera/Rituxan in combination with standard chemotherapy (CHOP) for the treatment of an aggressive form of cancer of the lymphatic system called non-Hodgkin's lymphoma (NHL)
- Xeloda monotherapy, for the treatment of metastatic (advanced) breast cancer after failure of intensive chemotherapy
- Xeloda in combination with Aventis' Taxotere (docetaxel), for the treatment of metastatic breast cancer, after failure of prior chemotherapy

MabThera/Rituxan was the first monoclonal antibody treatment designed to target and eliminate cancerous cells. It was launched in Europe for the treatment of patients with relapsed indolent NHL in June 1998, and is currently available to treat this form of NHL in over 70 countries around the world.

The approval for the aggressive indication will mean that even more patients will be eligible to receive MabThera/Rituxan. MabThera/Rituxan in combination with chemotherapy has been proven to increase the chance of a cure and prolong survival by 13 percent, compared with standard therapy alone.[1] From the pivotal study, it is estimated that after two years of follow-up, 70 percent

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of patients will be alive and well with the MabThera/Rituxan plus CHOP combination, compared to 57 percent after standard chemotherapy alone. Current medical opinion indicates that if patients survive past the two-year milestone their chance of a cure can be up to 80 percent.

Xeloda is a "smart tablet" with a unique mechanism of action. It is activated by an enzyme, found in higher levels in the tumor than in healthy tissue, this leads to more of the cancer-killing agent 5-FU being produced in cancer tissue, where it is needed. Taxotere further increases the levels of this enzyme in cancer cells, potentially leading to even more Xeloda being converted into cancer-killing 5-FU. Xeloda in combination with Taxotere is the first chemotherapy regimen to demonstrate significantly superior survival in women with metastatic breast cancer, compared to a standard treatment, Taxotere, alone.[2]

An international study involving more than 500 women showed that those treated with the Xeloda/Taxotere combination had a three-month survival advantage (median of 14.5 months versus 11.5 months) compared to those treated with Taxotere alone. In addition to the statistically superior survival advantage, women in the Xeloda/Taxotere group demonstrated superior improvements in both time to disease progression (median of 6.1 months versus 4.2 months) and tumour response rates (42 percent versus 30 percent).[2]

The Xeloda/Taxotere combination was recently registered in the U.S., Canada and imminently in the European Union. Xeloda monotherapy, with the expected EU approval, will be registered in over 70 countries. Xeloda is the only treatment approved in this difficult-to-treat patient group, who failed prior intensive chemotherapy.

In addition, Xeloda is marketed for the treatment of advanced colorectal cancer in most countries worldwide, including the United States and the European Union.

Both MabThera/Rituxan and Xeloda have been well received in the oncology community since launch, and have shown strong sales growth. The expected approvals of these new indications will allow even more patients throughout Europe to benefit from these innovative anti-cancer treatments.

Another product with survival benefit in cancer is Herceptin. Herceptin is a targeted treatment for a form of breast cancer called HER2-positive metastatic (advanced) breast cancer. It can provide a 25 percent overall survival benefit when added to standard chemotherapy, and as much as 45 percent in patients that are diagnosed as being strongly HER2-positive.[5] Approximately 20 percent of women with advanced breast cancer are diagnosed as having HER2-positive cancer.

Currently indicated for advanced breast cancer, a new trial (the HERA trial), will evaluate the

efficacy of Herceptin in early breast cancer. More than 20,000 women will be screened at over 600 trial centres world-wide, with an anticipated enrolment of some 3,000 women.

Roche's Commitment to Cancer Care

MabThera/Rituxan, Xeloda and Herceptin are only part of Roche's commitment to cancer care. Another innovative product in the portfolio is Furtulon, available in Japan, Korea and China for treating colon, breast and stomach cancer.

In addition to its commitment to developing innovative cancer treatments, Roche also specialises in supportive care through a range of drugs designed to tackle side-effects which are often associated with more traditional cancer treatments, such as chemotherapy:

- NeoRecormon (epoetin beta) has been approved to treat cancer-related anaemia in adult patients with different forms of blood cancer
- Kytril (granisetron) is indicated for the prevention and treatment of nausea and vomiting associated with chemotherapy and radiotherapy
- Bondronat (ibandronate) restores normal blood calcium levels in patients with severe tumour-related hypercalcemia
- Neupogen (filgrastim), which can help reduce neutropenia (low white blood cell count) and infection-related complications.

Leading the Way Through Integrated Healthcare Solutions

Roche's expertise in cancer care also extends to diagnostics. A world-leading diagnostics division supports its impressive portfolio of cancer-related products. By combining expert knowledge in these areas Roche is able to provide a more tailored approach to cancer care. It allows for early and improved recognition of patients who may benefit from Roche's therapies, more accurate identification of patients for the therapies offered, as well as, optimisation and control of therapy by monitoring treatment results.

For example, treatment with Herceptin is only appropriate for those women whose cancer cells test positive for the HER2 receptor. Approximately 1 in 5 women with advanced breast cancer will test positive for HER2-positive cancer. This concept allows for appropriate identification of patients suitable for the right treatment.

In cooperation with Roche Molecular Biochemicals, three specific biomarkers have been introduced for Xeloda. These biomarkers are currently being validated in clinical studies to document their value for patient stratification and identification. This breakthrough will allow more relevant patients to benefit from treatment with Xeloda.

Roche: the Future for Cancer Care

Future growth of the oncology franchise is ensured by our marketed products and a promising product pipeline. Roche strongly believes that it should invest in future research and development in the area of oncology, in order to continue to benefit from the progress it has made in the short-term, in the future. Roche's commitment to science ensures that it is at the forefront of the oncology market by developing innovative products that target a previously unmet need.

Tarceva is in the new class of anti-cancer drugs that target the underlying molecular changes involving oncogenes and tumor suppressor genes. These genes play critical roles in the conversion of normal cells into cancerous cells. Tarceva is an inhibitor of the Epidermal Growth Factor Receptor (EGFR) tyrosine kinase, and works by stopping signals being sent to the nucleus, preventing tumour growth. EGFR is present in many solid tumors and it is likely that Tarceva has potential as an anti-cancer agent in many different types of cancer. Phase II trials for Tarceva have already shown anti-tumour activity in patients with refractory squamous cell carcinoma of the head and neck, non-small cell lung (NSCLC) and ovarian cancers. Tarceva is currently involved in international Phase III trials for NSCLC, Phase Ib and II trials in metastatic breast cancer and Phase III pancreatic cancer.

Inhibition of the cell cycle is another promising avenue for the development of novel anti-cancer drugs. Roche is pursuing several different programmes aimed at inhibiting different phases of the cell cycle. One compound in phase II development belongs to a new class of oral compounds inducing cell cycle arrest in the M-phase and subsequently induces apoptosis (cell death). A novel platinum analogue is also in phase II trials for platinum resistant tumours.

Continued Growth in Oncology

As the majority of products have only been introduced within the last five years, the growth that has been seen to date is just the beginning. This means that there is no major short or medium-term patent expiry issues. Expansion of the portfolio in the last year owes partly to the fact that a major amount of in licensing took place in the oncology arena. Key milestones throughout 2002 and beyond, combined with a dedicated sales and marketing infrastructure, an eagerness to invest in the portfolio, global coverage of products and the increasing importance of biotech, will ensure continued success for the franchise.

Roche's strategy for the Oncology portfolio

Roche will continue to grow its oncology drugs in the coming years. T his will include expansion into new indications and pursuing our strategy to in-license promising new compounds for the treatment of cancer. The strong oncology portfolio makes Roche an interesting and attractive

partner for top Pharma as well as for small biotech companies. Through our continued investment in Research and Development in much needed innovative and targeted treatments for cancer, Roche is at the forefront of Oncology Therapies

Headquartered in Basel, Switzerland, Roche is one of the world's leading research-oriented healthcare groups in the fields of pharmaceuticals, diagnostics and vitamins. Roche's innovative products and services address the needs for the prevention, diagnosis and treatment of disease, thus enhancing people's well-being and quality of life.

References:

1. Abstract presented at the 43rd Annual meeting of the American Society of Hematology, 7-11 December 2001, Orlando, US: Rituximab plus CHOP (R-CHOP) in the Treatment of Elderly Patients with Diffuse Large B-Cell Lymphoma. An Update of the GELA Study.
2. Abstract presented at the European Cancer Conference, 21-25 October 2001, Lisbon, Portugal: Leonard, R et al. Survival Update of SO14999 A Large Phase III Trial of Capecitabine/Docetaxel Combination Therapy Vs Docetaxel Monotherapy in Patients with Locally Advanced (LABC) or Metastatic Breast Cancer (MBC).
3. World Health Report 2000, World Health Organization, www.who.int
4. Fisher et al, New Eng. J Med., April 1993, 328:1002-6
5. Slamon D et al. New Eng. J Med., 2001; 344:783-792

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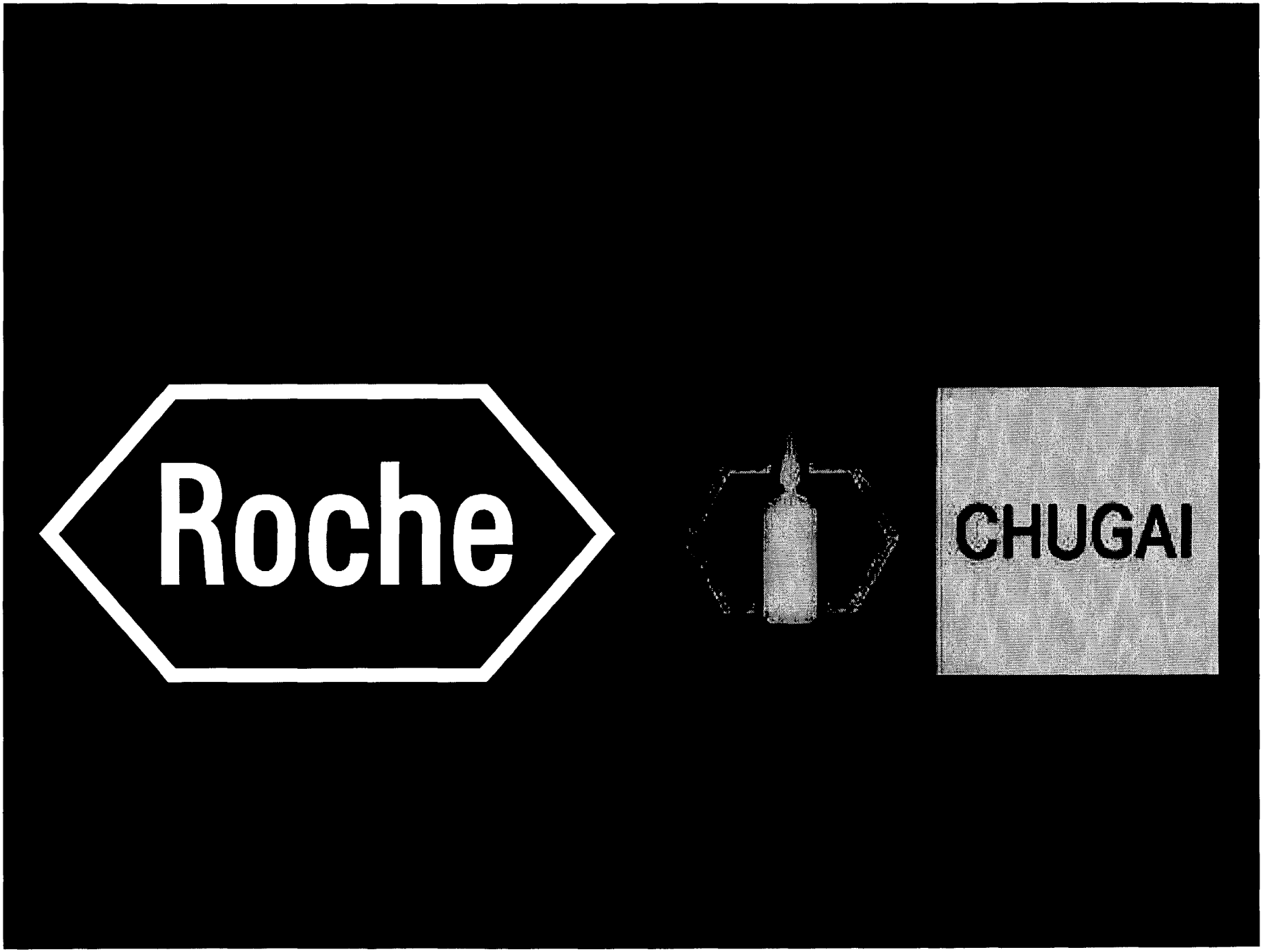
Roche Holding Ltd

10 December 2001 - Roche and Chugai

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This presentation contains certain forward-looking statements. These forward-looking statements may be identified by words such as "believes", "expects", "anticipates", "projects", "intends", "should", "seeks", "estimates", "future" or similar expressions or by discussion of strategy, goals, plans or intentions. Various factors may cause actual results to differ materially in the future from those reflected in forward-looking statements contained in this presentation among others: (1) pricing and product initiatives of competitors; (2) legislative and regulatory developments and economic conditions; (3) delay or inability in obtaining regulatory approvals or bringing products to market; (4) fluctuations in currency exchange rates and general financial market conditions; (5) uncertainties in the discovery, development or marketing of new products or new uses of existing products; (6) increased government pricing pressures; (7) interruptions in production; (8) loss of or inability to obtain adequate protection for intellectual property rights; (9) litigation; (10) loss of key executives or other employees; and (11) adverse publicity or news coverage.


Roche
CHUGAI

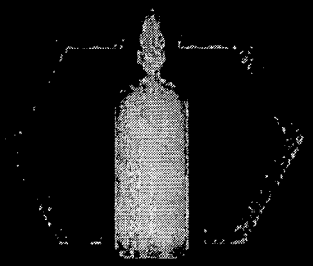
Agenda

The Transaction: its strategic rationale	Franz Humer Chairman and CEO, Roche
Transaction steps and financial impact	Erich Hunziker CFO, Roche
Summary	Franz Humer
Q & A	Franz Humer Erich Hunziker Hiro Shigeta Chairman, Nippon Roche Yuji Suzawa Vice Chairman, Chugai Barry Cohen Member of the Board of Directors, Chugai

Alliance between Roche and Chugai

Unique transaction for the Japanese pharmaceutical market

Roche



CHUGAI

Overview of transaction

Roche

Merger of Chugai and Nippon Roche

Before merger, Chugai to spin-off Gen-Probe

Roche to have 50.1 % ownership of the new company

Chugai to have first in-license rights to Roche products in Japan. Roche to have first rights to Chugai products outside Japan.

New company to retain the name Chugai

Osamu Nagayama to be Chairman, President and CEO of new company

Creation of new Japanese pharma powerhouse

Ranked number 5 in Japanese market by sales and number 4 by sales force size

Enhanced growth prospects and value for both companies

Chugai: an ideal partner for Roche



A research-based pharmaceutical company

Ranked number 10 by sales in Japanese pharmaceutical market*

Therapeutic focus in oncology, renal medicine, bone and cardiovascular diseases

Strong in biotechnology products (monoclonal antibodies)

Strong management team

Employs 5,000 people

R&D spend 20 % of net sales

* Source: IMS Health World Review Analyst 2000.

Chugai and Nippon Roche

Facts and figures

	Chugai	Nippon Roche
Market capitalisation	JPY 468 bn	n.a.
2000 revenues[a]	JPY 188 bn[b]	JPY 65 bn
Sales representatives in Japan	800	600
Key marketed products	Epogin Neutrogin Sigmart Alfarol	MabThera/Rituxan CellCept Tamiflu Herceptin
Key pipeline products	raloxifen MRA Femara	Pegasys Xeloda second generation EPO

(a) Fiscal year ended 31-Mar-2001 for Chugai and 31-Dec-2000 for Nippon Roche.
(b) Pharmaceutical sales only

What this transaction brings to Roche

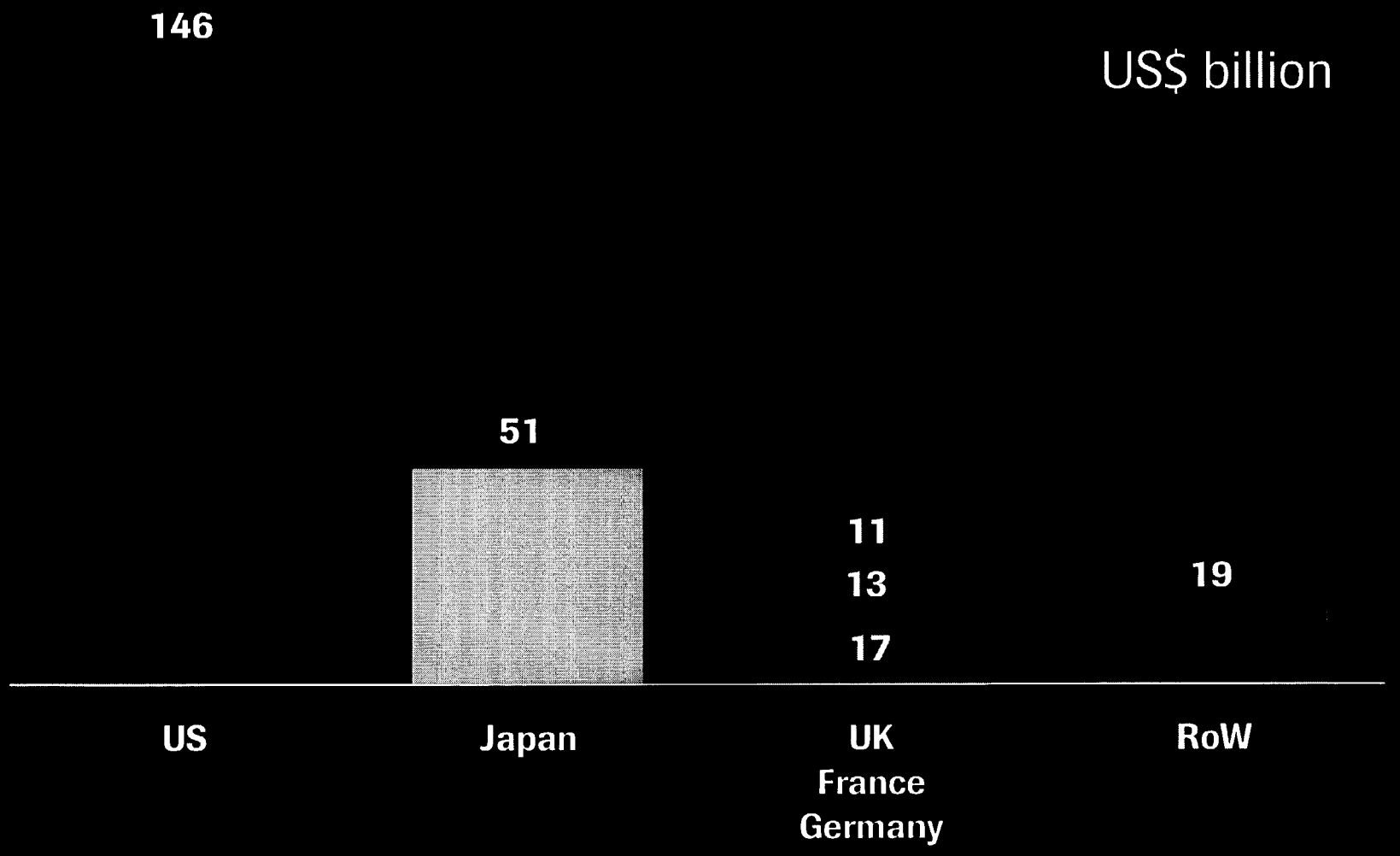
to the world's second largest pharmaceutical market: Japan

capability for recent and approaching major product launches

Chugai's management experience and long-standing local market presence

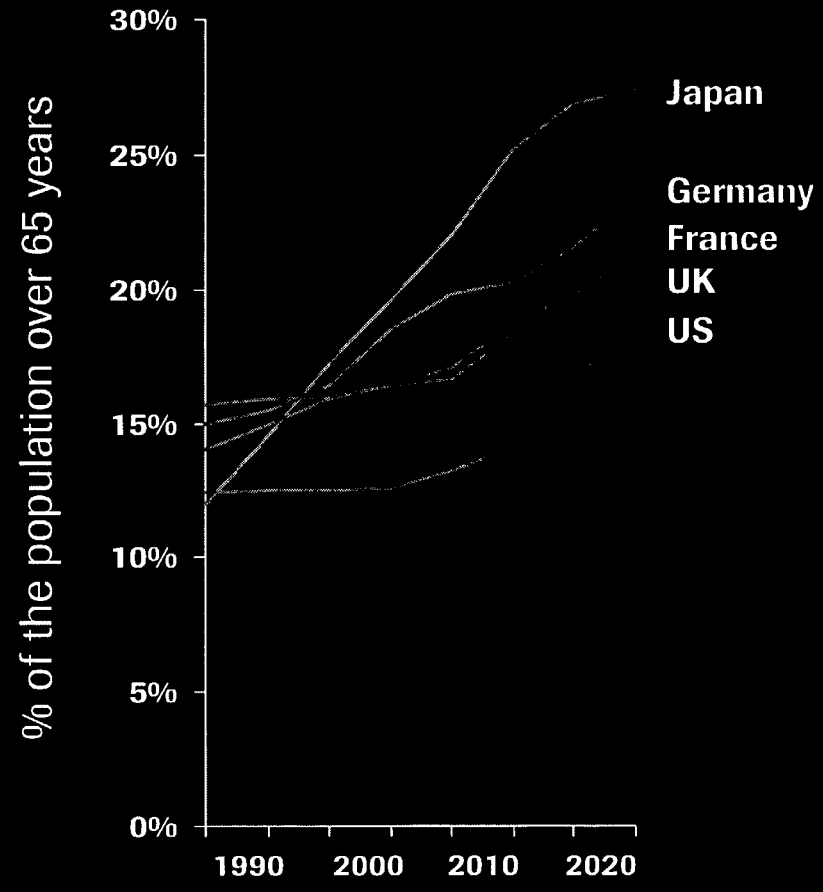
Makes Roche the in Japan

Japan: world's second largest pharmaceutical market



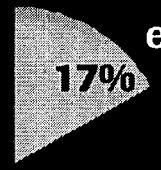
Source: IMS Health World Review Analyst 2000

Japan: one of the fastest ageing populations in the world



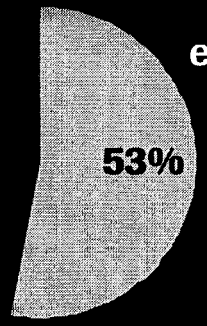
Japanese population 1999

126 million



Japanese Rx spending 2000

JPY 6.4 trillion

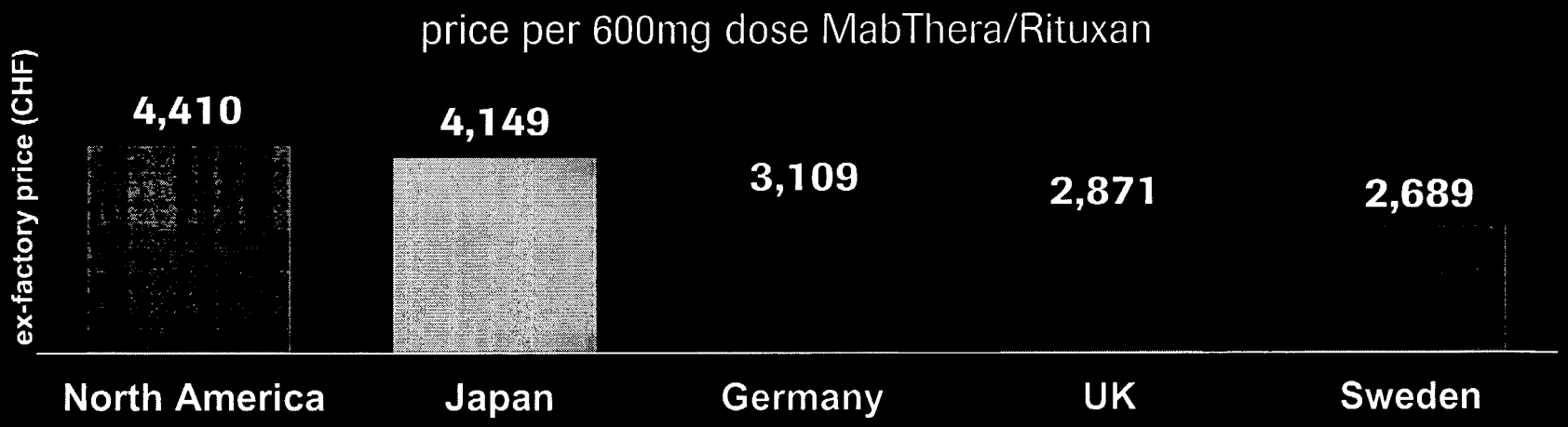


Source: UN; National Institute of Population and Social Security Research

Japan: improving regulatory environment

Roche

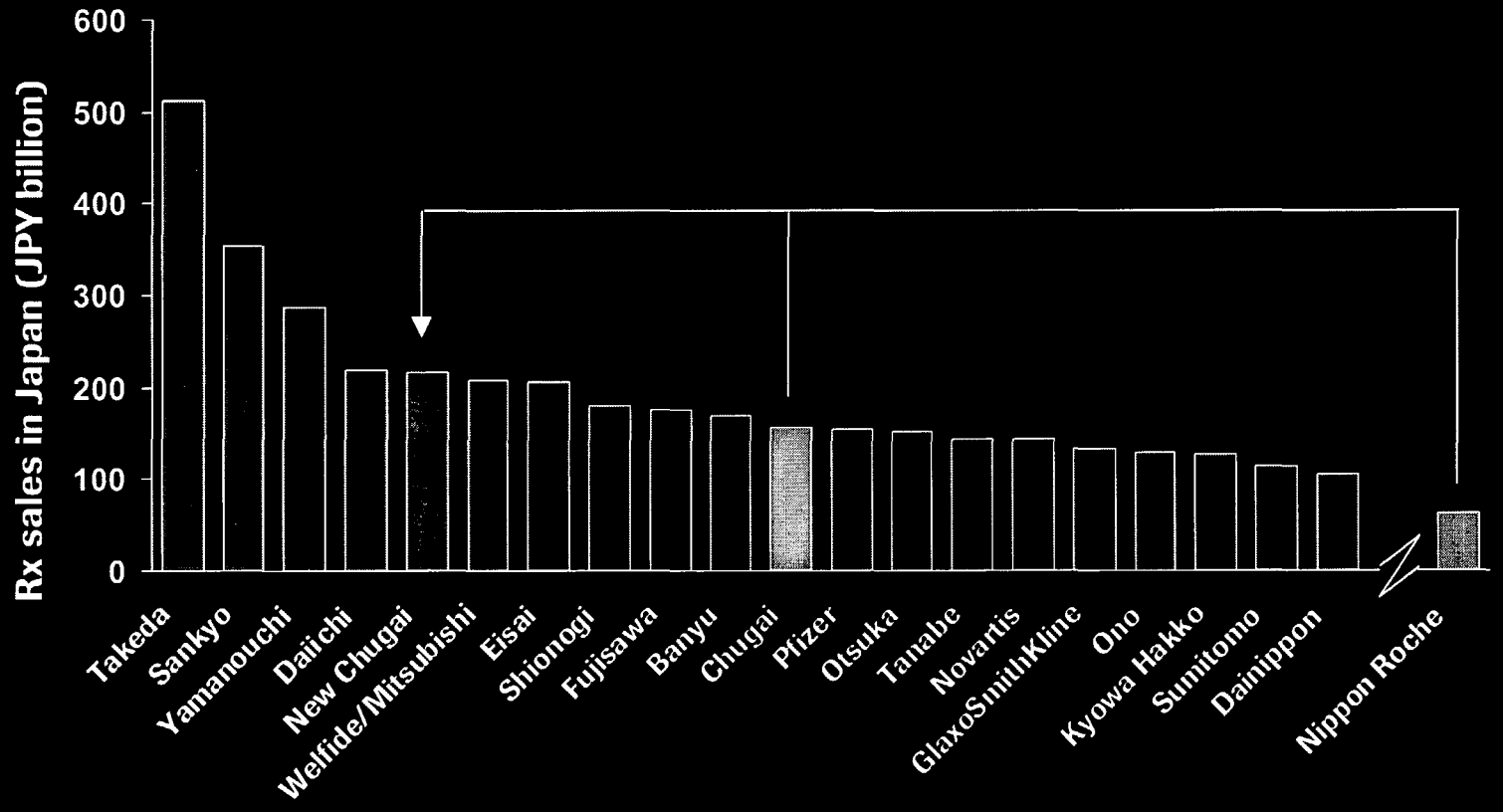
- Clinical trial harmonisation with rest of the world
- Drug approval process quickening
- Positive outlook for innovative product pricing premiums



Source: Roche

Impact on market share in Japan

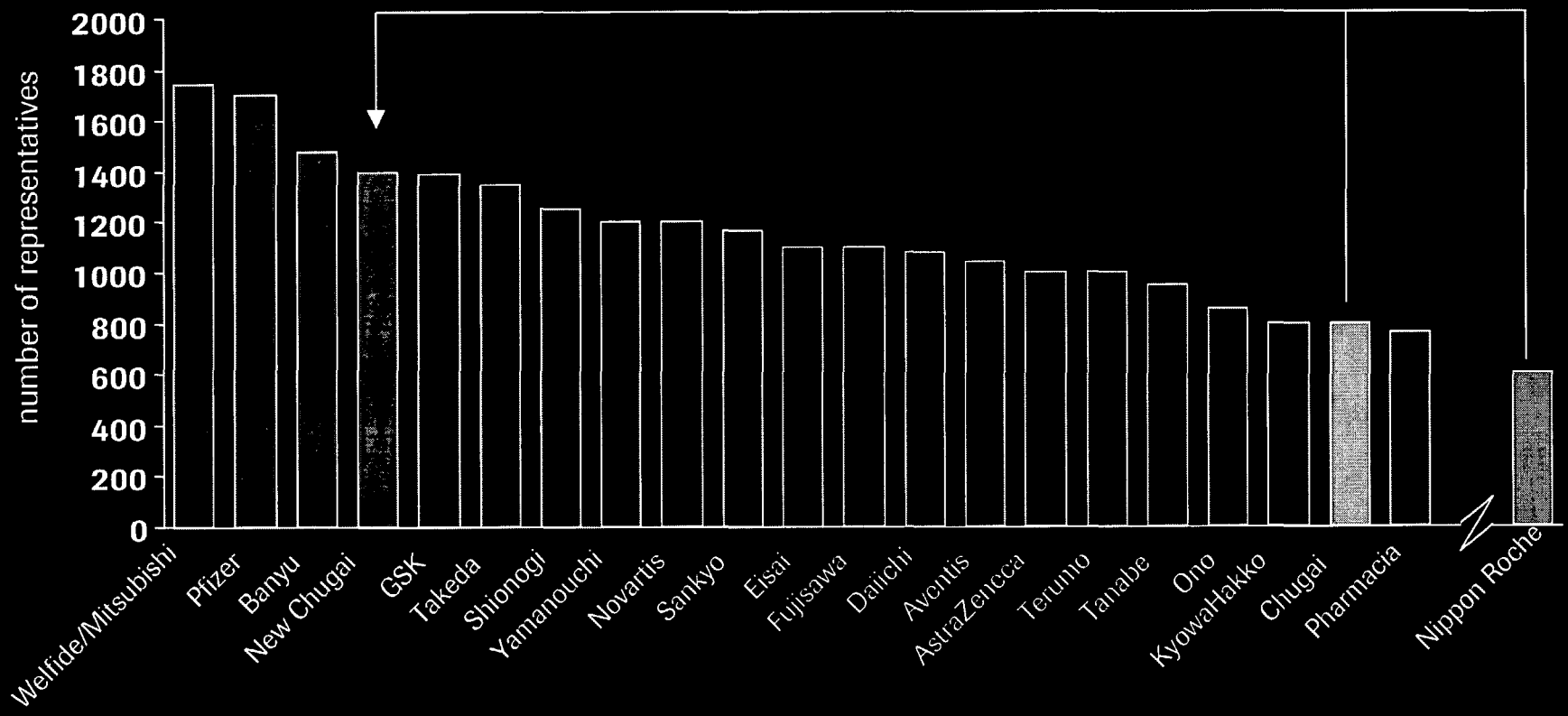
New Chugai will be number 5



Note: prescription pharmaceuticals market

Improved sales and marketing capability in Japan

New Chugai will have over 1,400 repesentatives and will be ranked number 4 by sales force size



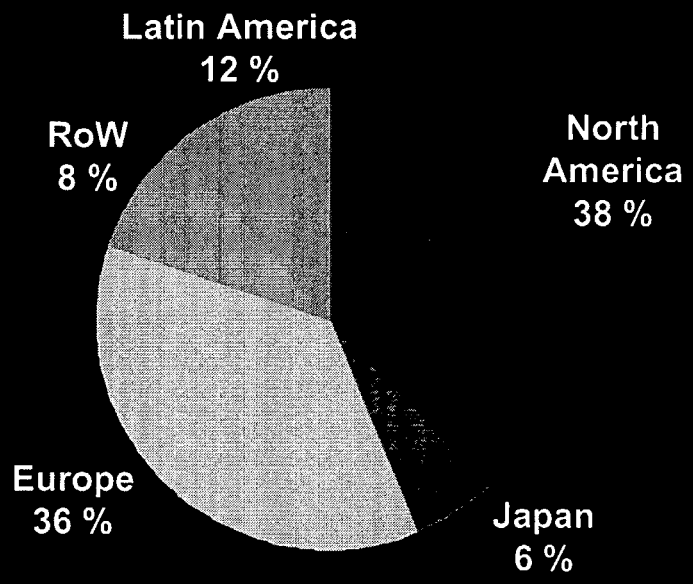
Note: prescription pharmaceuticals market

Improving Roche's geographic balance

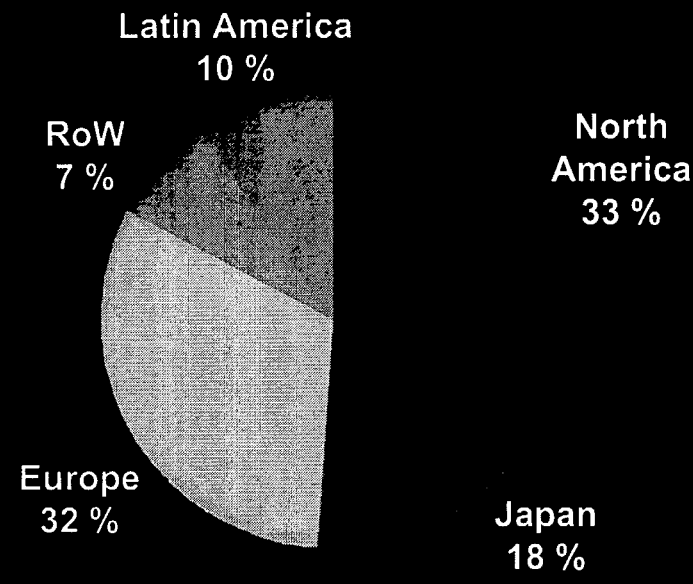
Roche Pharmaceuticals Division

Roche

Roche Pharmaceuticals Division pre-deal (2000A)



Roche Pharmaceuticals Division post-deal (2000 pro forma)

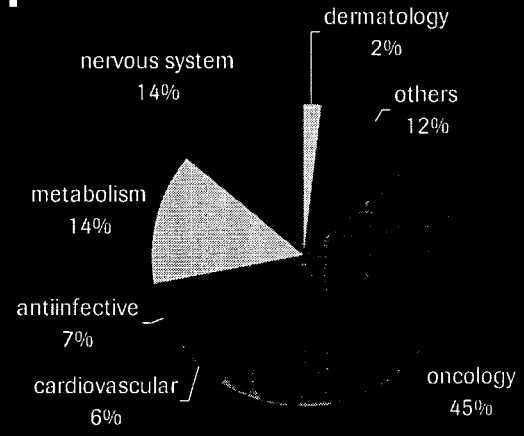


Source: Based on FY 2000 data for Roche and FY 2001 for Chugai, excluding Gen-Probe

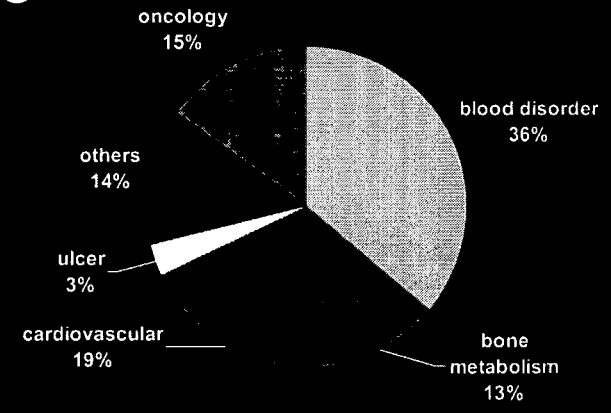
New Chugai

Strong product portfolio in fast growing segments

Nippon Roche sales JPY 62 bn* (ca. USD 0.5 bn)

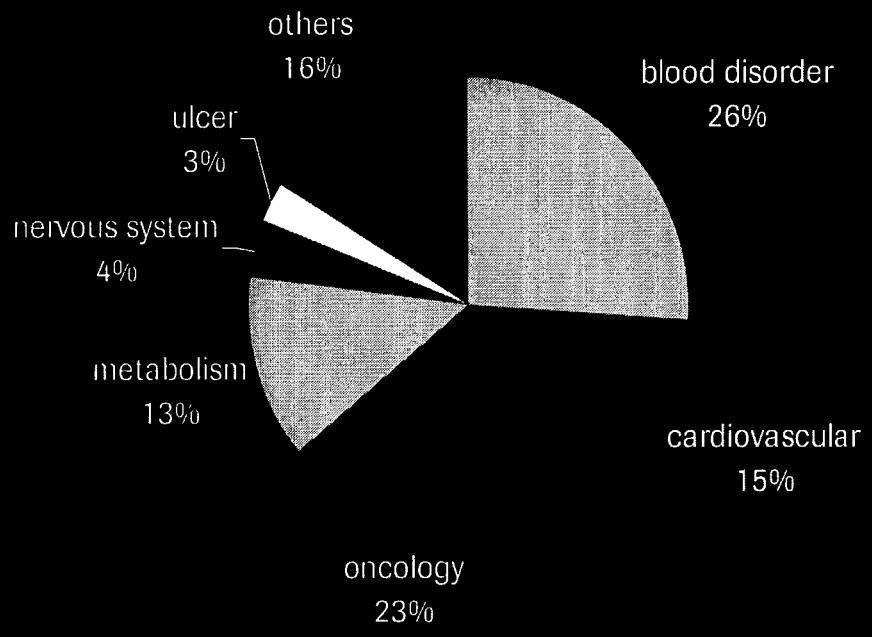


Chugai sales JPY 155 bn* (ca. USD 1.3 bn)



New Chugai

sales JPY 217 bn (ca. USD 1.8 bn)



* prescription medicines only

New Chugai

Top ten prescription medicines (pro forma 2000)

		sales (JPY billion)	% of total sales
2	Furtulon (R)	20.0	9 %
7	Kytril (R)	8.0	4 %
9	Euglucon (R)	4.2	2 %
10	Rohypnol (R)	4.1	2 %
		210.7	76 %

New Chugai's growth drivers

Recent and approaching launches in Japan

Roche

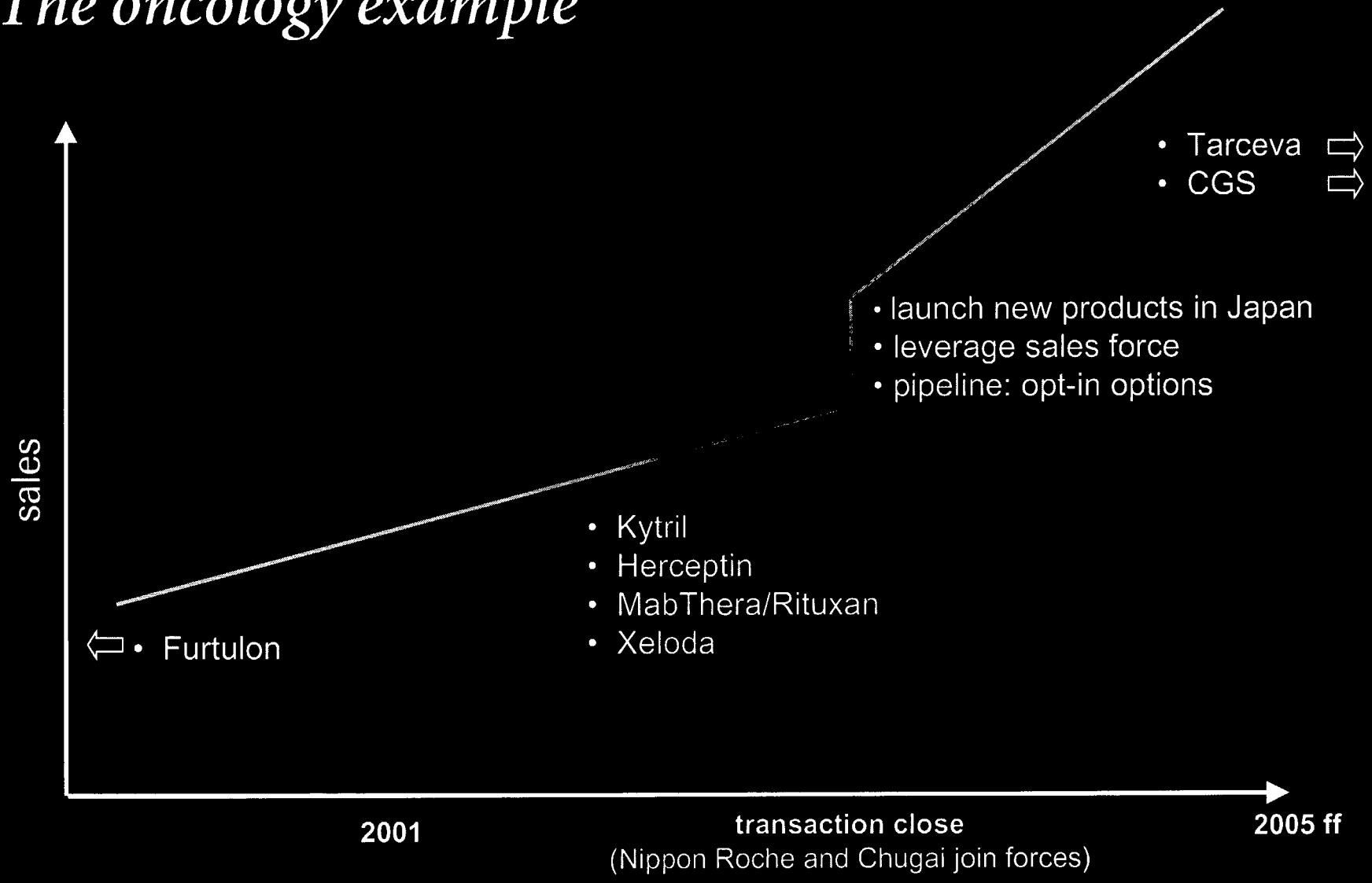
- CellCept (organ transplantation)
- Kytril (oncology)
- Herceptin (oncology)
- MabThera/Rituxan (non-Hodgkin's lymphoma)
- Tamiflu (influenza)
- Pegasys (hepatitis C)
- Xeloda (oncology)

Chugai

- Suvenil (rheumatoid arthritis)
- Oxarol (hyperparathyroidism)
- CGS (oncology)
- raloxifene (osteoporosis)

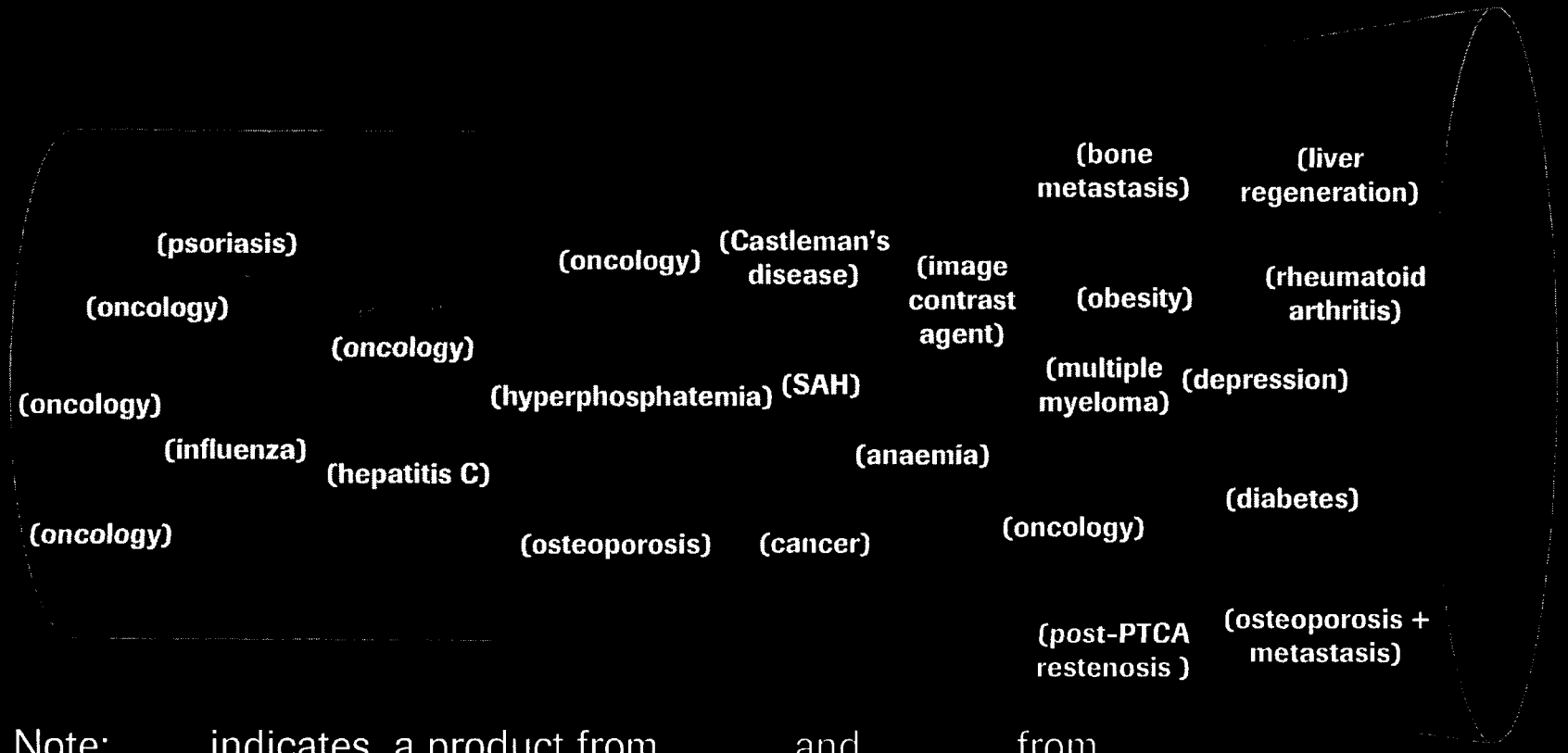
Synergies in sales and development

The oncology example



Leveraging the combined pipeline

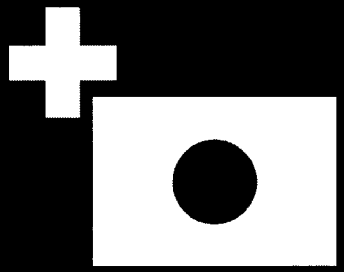
Recent and future product launches



Note: indicates a product from and from

New Chugai

Corporate governance



- **Corporate name**
  - Chugai Pharmaceutical Co., Ltd.
- **Management**
  - O. Nagayama to be Chairman & CEO
  - Autonomous management
  - Close coordination with Roche
- **New members to the Board of Directors**
  - W. Ogawa to join as Executive Vice President
  - F. B. Humer, W. M. Burns and H. Shigeta of Roche to be Directors
- **Listing maintained in Japan**
- **Global reach of new enterprise**

Roche

CHUGAI

Transaction steps and financial impact

Dr Erich Hunziker

Chief Financial Officer, Roche

Value creating transactions by Roche Group

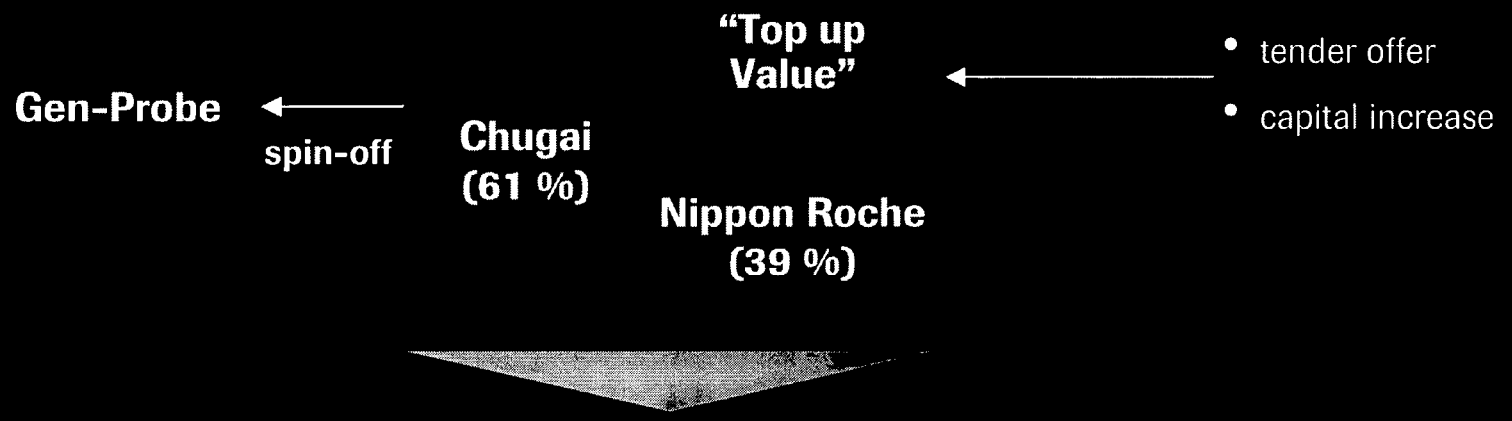
- Majority stake
- Operates independently and is listed in the US
- Discovered leading oncology products: MabThera/Rituxan, Herceptin
- Strong pipeline
- 58 % stake in Genentech acquired for $2.1bn, today worth $17.2 bn

- Developed to global standard in molecular diagnostics
- PCR technology acquired for $300 m, Roche revenues from PCR in 2000 were $470 m, growing at 26 %

- CellCept: leading transplantation medicine, sales expected > CHF 1 bn in 2001
- Regional strengthening in US

- Roche Group becomes world leader in in-vitro diagnostics
- Strong pharma products: NeoRecormon, carvedilol
- Integrated Health Care Solutions

Transaction structure



Step 1 Spin-off Gen-Probe from Chugai

Step 2 Tender offer for 10 % of Chugai's outstanding shares

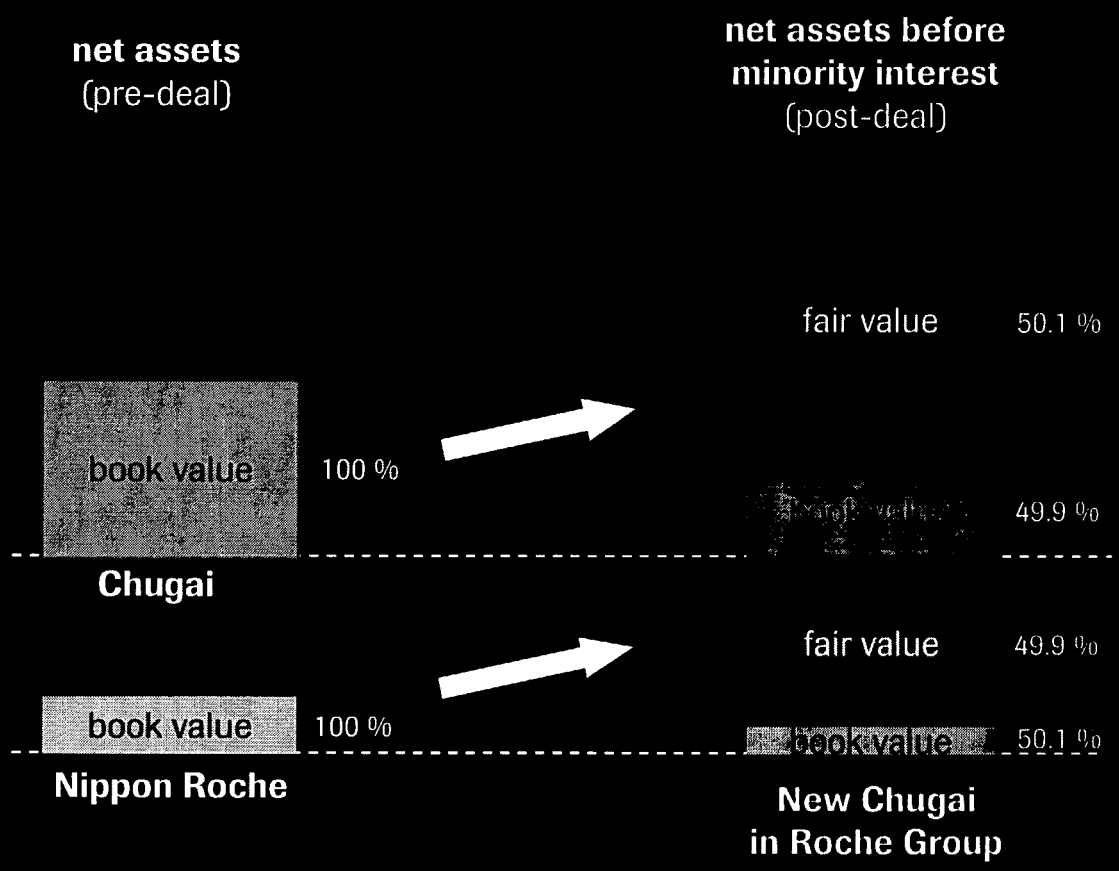
Step 3 Capital increase by Roche
Merger of Chugai and Nippon Roche

Financial impact* on Roche Group

- Incremental sales of JPY 180 bn (CHF 3 bn) to Roche's Group and Pharmaceuticals sales
- Increase in New Chugai's total sales from JPY 250 bn in 2000 to JPY 300 bn three years after closing
- EBITDA expected to increase by CHF 500-600 m in first year after completion (2003); margins will be slightly lower (around 0.5 %)
- Pharmaceuticals operating profit margin target of 20-25 % pushed back by approximately one year to 2004/05 due to an estimated CHF 400 m in new non-cash amortisation charges per year
- Minimally (less than 0.5 %) dilutive in first full year following completion on an EPS basis; accretive on a cash EPS basis
- Anticipated revenue synergies and cost savings will make the transaction accretive in second full year and beyond

* based on 2000 figures and exchange rates; CHF/100 JPY 1.57; excluding non-recurring items

Accounting for the transaction at Roche



- fair value adjustments include:
  - inventories, PP&E
  - intangible assets
  - goodwill
- additional net assets before minority interests > CHF 7 billion (estimate)
- to be expensed over the useful lives of assets

In accordance with IAS, Chugai will be fully consolidated with a separate presentation of minority interests (49.9 %) in the balance sheet and income statement

Next steps



- Chugai Board Meets to execute Merger Agreement
- Annual General Meeting of Chugai shareholders
- Gen-Probe spin-off
- Tender offer
- Capital increase/merger
- Approval by authorities (FTC Japan and others)
- Closing

Summary

Dr Franz Humer

Chairman and Chief Executive Officer, Roche

Strategic rationale for Roche

Japan is an attractive market:

- very large; ageing population;
  improving regulatory/pricing environment

Few global players have established clear leadership positions in Japan

Creating a top tier "local player" with global access

Leading local sales & marketing presence to coincide with recent and near-term product launches in Japan

Maximising our oncology franchise in a major oncology market

Licensing partner of choice in Japan

Cost savings and revenue enhancement possibilities

Creating a new force in Japanese pharma

Roche

Number 5 pharmaceutical company in Japan

Number 4 by sales force size

Dramatically improved product portfolio and pipeline

Strong cultural fit and strength of management

Unique combination of local knowledge and capability gives "first mover advantage" versus competition in Japanese market

Roche

CHUGAI

Roche Holding Ltd

December 2001 - Investor Presentation

As Posted on Roche.com

Furnished Under Rule 12g3-2(b)
Roche Holding 82-3315

Roche

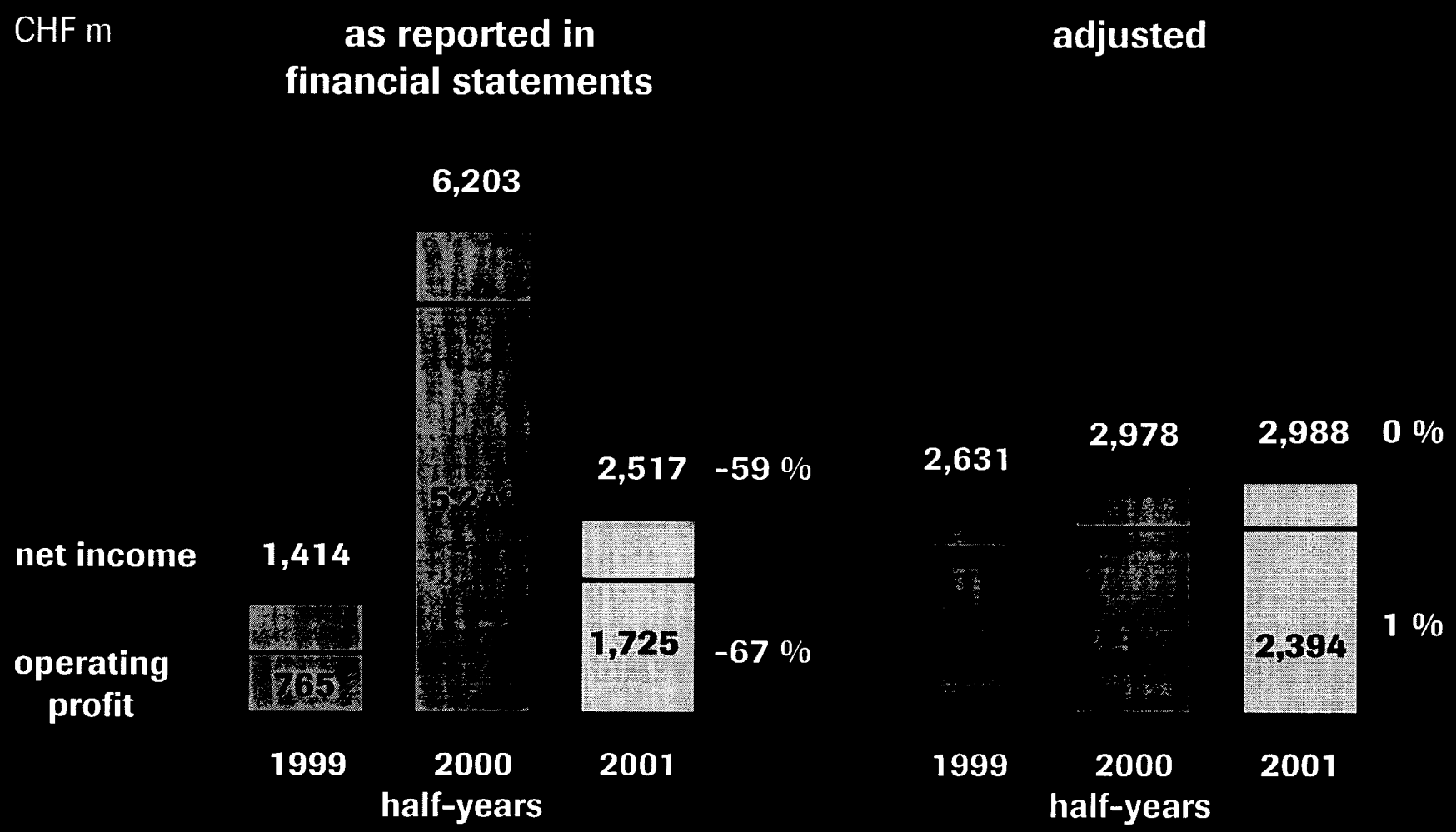
This presentation contains certain forward-looking statements. These forward-looking statements may be identified by words such as "believes", "expects", "anticipates", "projects", "intends", "should", "seeks", "estimates", "future" or similar expressions or by discussion of strategy, goals, plans or intentions. Various factors may cause actual results to differ materially in the future from those reflected in forward-looking statements contained in this presentation among others: (1) pricing and product initiatives of competitors; (2) legislative and regulatory developments and economic conditions; (3) delay or inability in obtaining regulatory approvals or bringing products to market; (4) fluctuations in currency exchange rates and general financial market conditions; (5) uncertainties in the discovery, development or marketing of new products or new uses of existing products; (6) increased government pricing pressures; (7) interruptions in production; (8) loss of or inability to obtain adequate protection for intellectual property rights; (9) litigation; (10) loss of key executives or other employees; and (11) adverse publicity or news coverage.

Roche

Group Financials at Q3 2001

Group profits

Profits maintained on an adjusted basis



The adjusted result

Improving visibility of the underlying business

Adjusted results **the following:**

	CHF m net income effect
H1 2000	
• Givaudan spin-off	-108
• Accounting policy changes including impairments	-252
• Gain on sale of Genentech shares	-3,949
• Charges related to Genentech acquisition in 1999	124
• Income tax and minority interest effects	960
Total difference to financial statements	*-3,225*
H1 2001	
• Pharmaceuticals Division restructuring costs	669
• Income tax effect	-198
Total difference to financial statements	*471*

Group operating performance (adjusted)

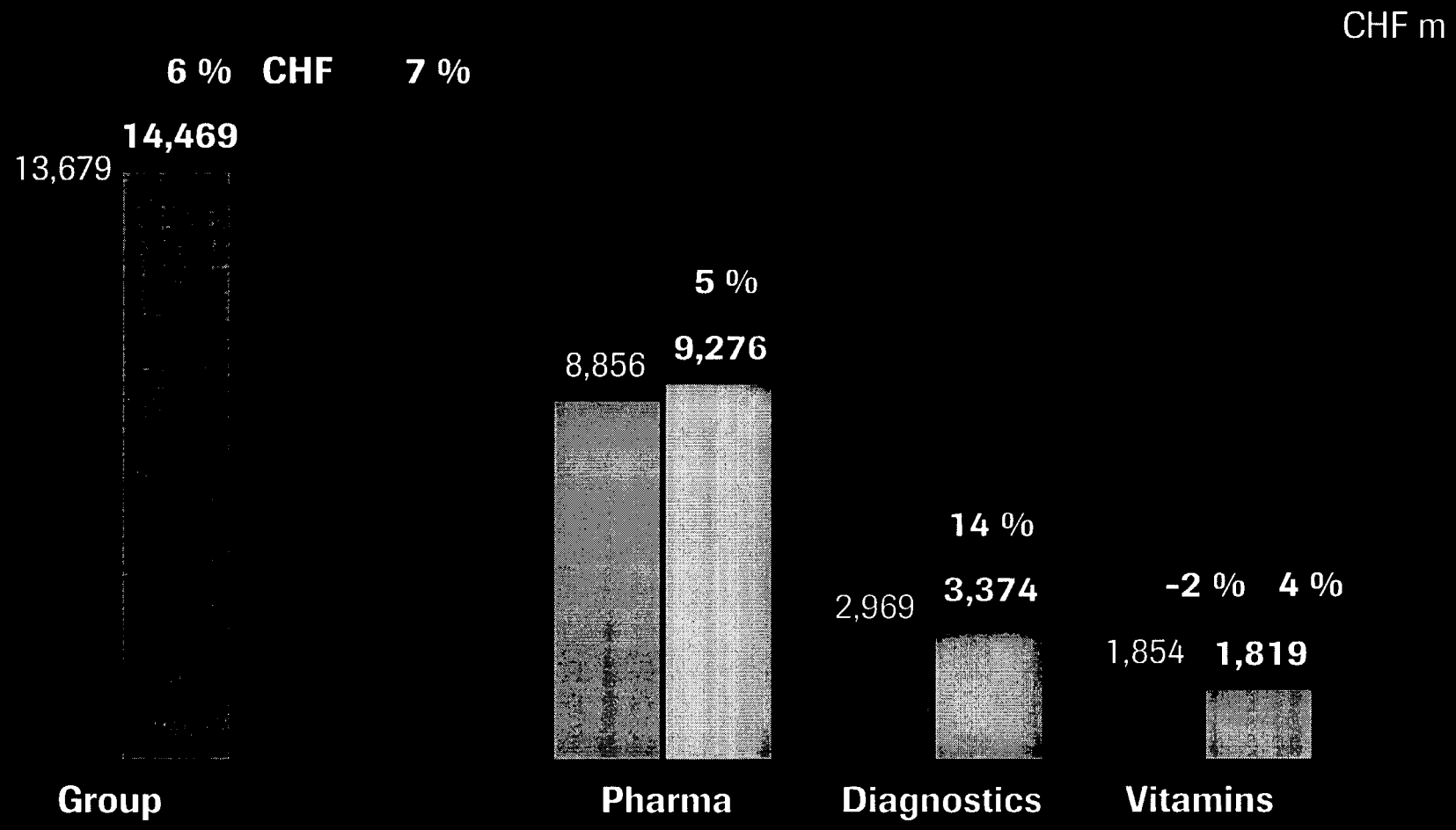
Improved cost structure

CHF m

	H1 2001	% sales	H1 2001 v. H1 2000	
sales	14,469	100	790	+ 6 %
cost of sales	-4,274	-30	-155	+ 4 %
M & D	-4,132	-29	-88	+ 2 %
R & D	-1,955	-14	-55	+ 3 %
administration	-606	-4	-30	+5 %
amortization	-779	-5	-54	+7 %
other operating expense, net	-329	-2	-391	n/a
operating profit	2,394	17	17	+1 %

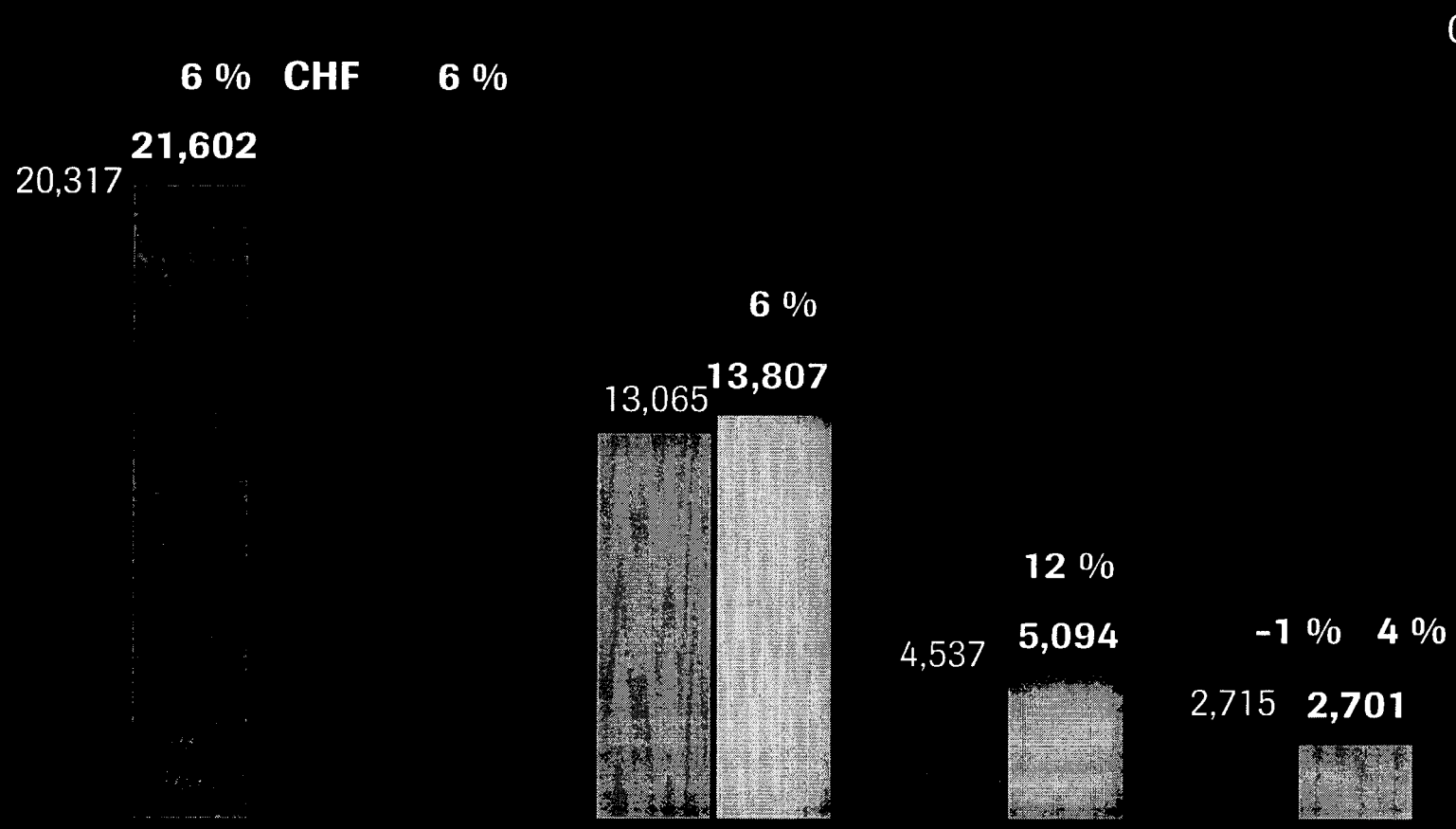
Sales at H1 2001 (adjusted)

Growth in all Divisions



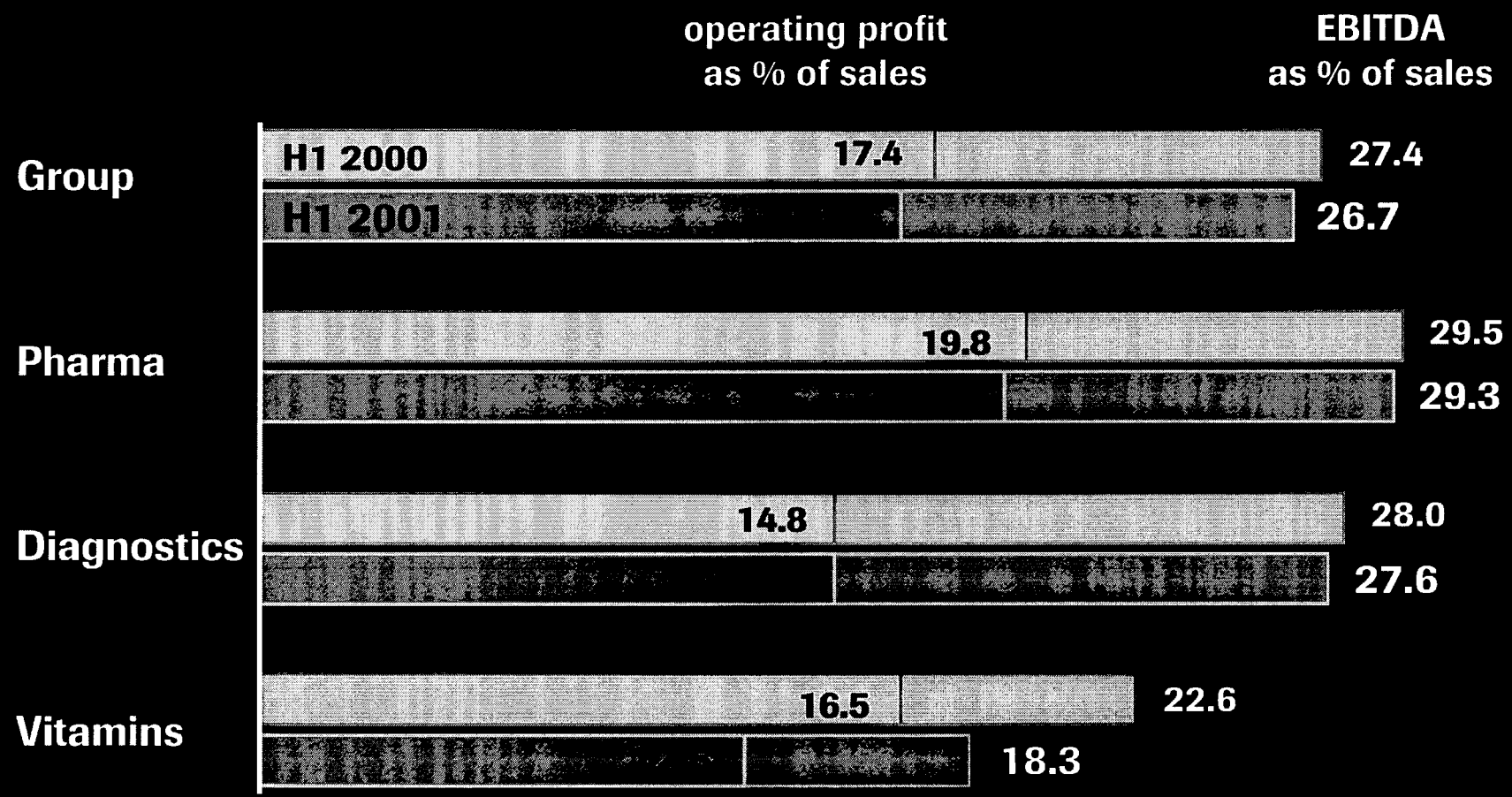
Sales at Q3 2001 (adjusted)

Growth in all Divisions



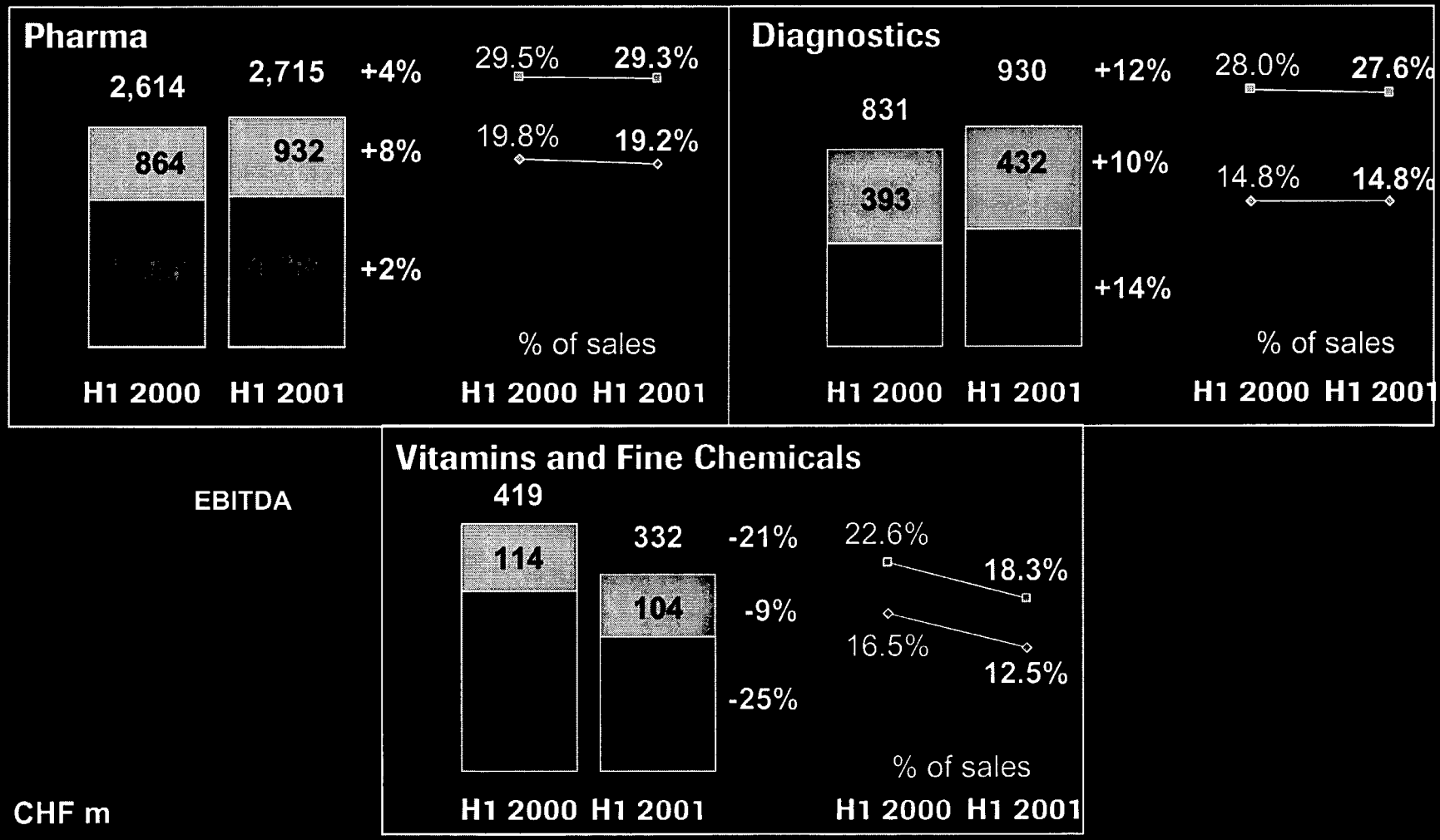
Profitability (adjusted)

Pharma and Diagnostics margins largely maintained



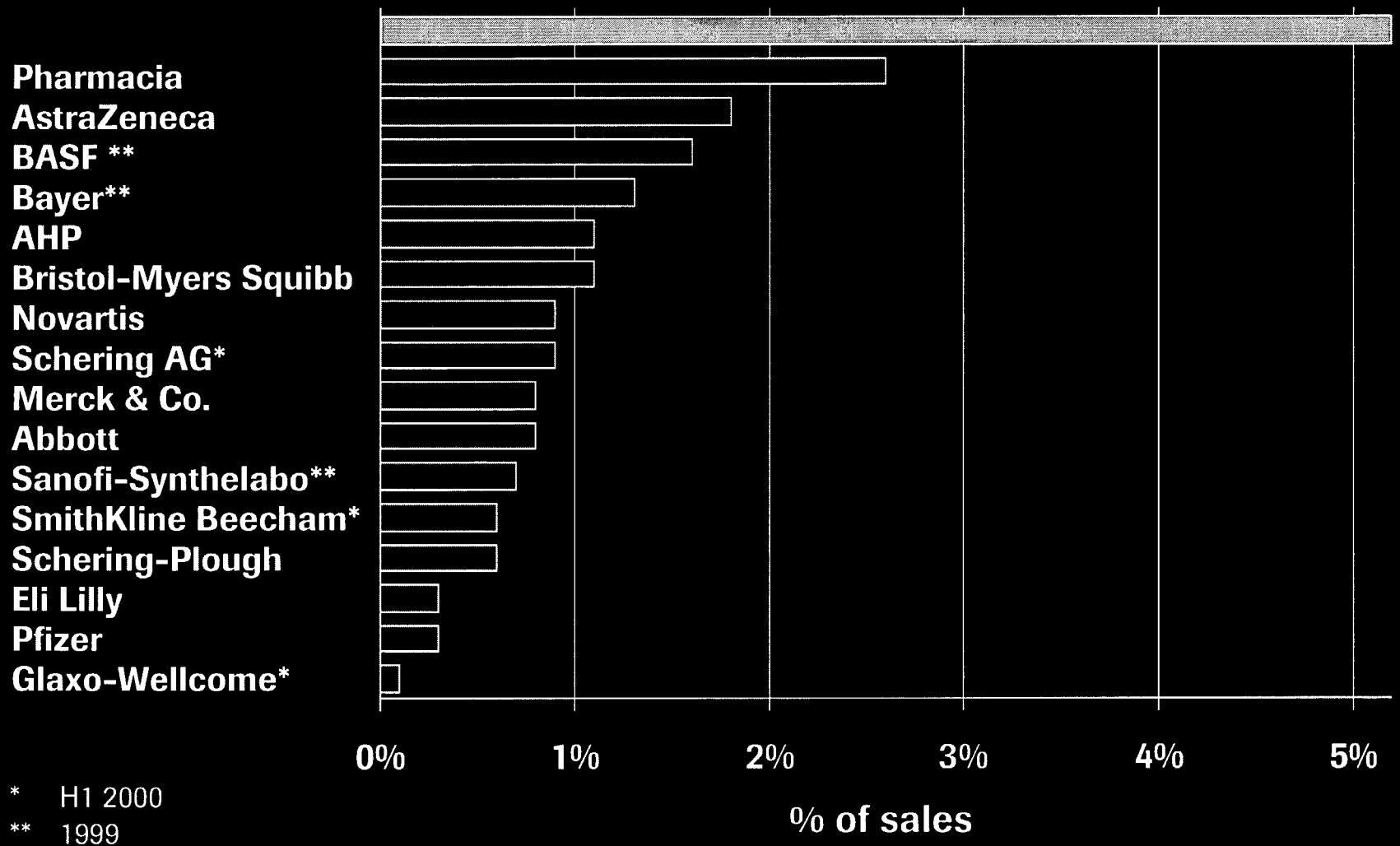
Divisional profitability (adjusted)

Pharma and Diagnostics margins largely maintained



Amortisation

A high charge from acquisition history & IAS policy



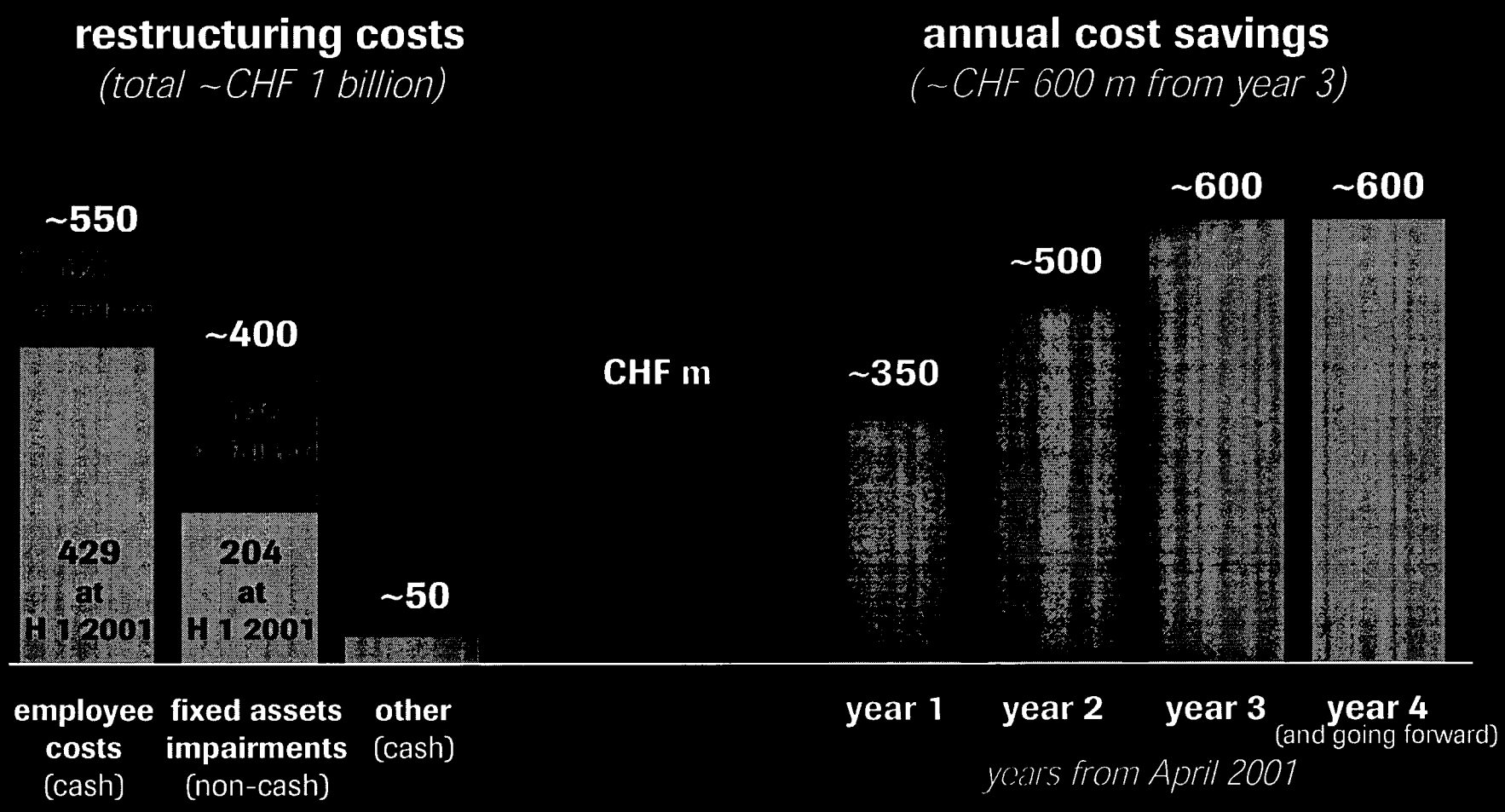
* H1 2000

** 1999

all others at full year 2000

Re-shaping Pharmaceuticals

Cash savings exceed cash costs within two years



Non-operating performance (adjusted)

Increased financial income and taxes

CHF m

	H1 2001	H1 2000	change CHF m	change %
operating profit	**2,394**	**2,377**	**17**	**1**
financial income, net	**1,472**	**1,229**	**243**	**20**
income taxes	**-890**	**-660**	**-230**	**35**
tax rate in %	*23*	*18*		
minority interests	**-24**	**29**	**-53**	**-**
associated companies	**36**	**3**	**33**	**-**
net income	**2,988**	**2,978**	**10**	**0**
% of sales	*21*	*22*		

Financial income, net

Higher income including gains on LabCorp shares

H1 2001	CHF m
net income on marketable securities and investments	2,459
interest expenses	-746
exchange gains (losses), net*	-241
financial income, net	**1,472**
	+20 %

H1 2000	
financial income, net	1,229

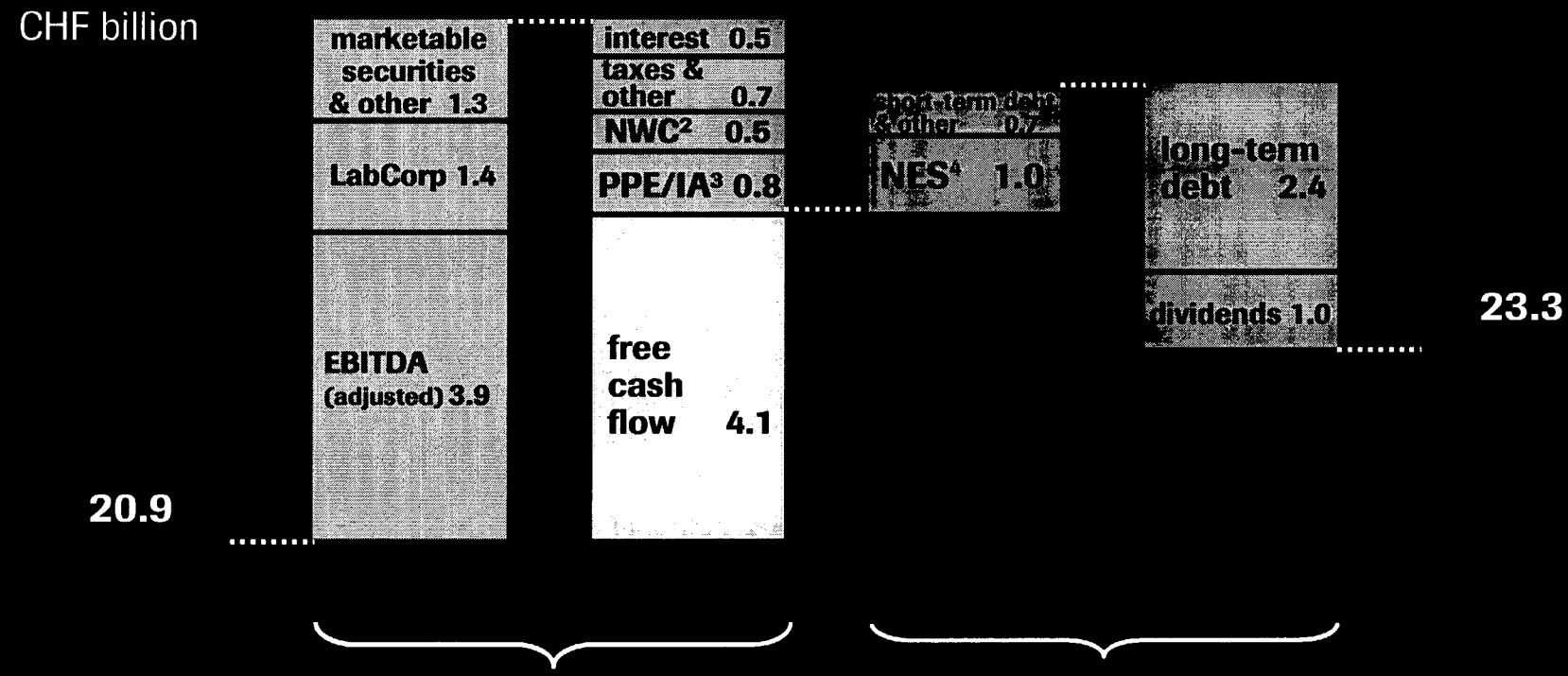
1,160 — *gains from sale of LabCorp shares included*

296

* exchange gains (losses) are unrealised

Cash flow

Free cash flow of over CHF 4 billion

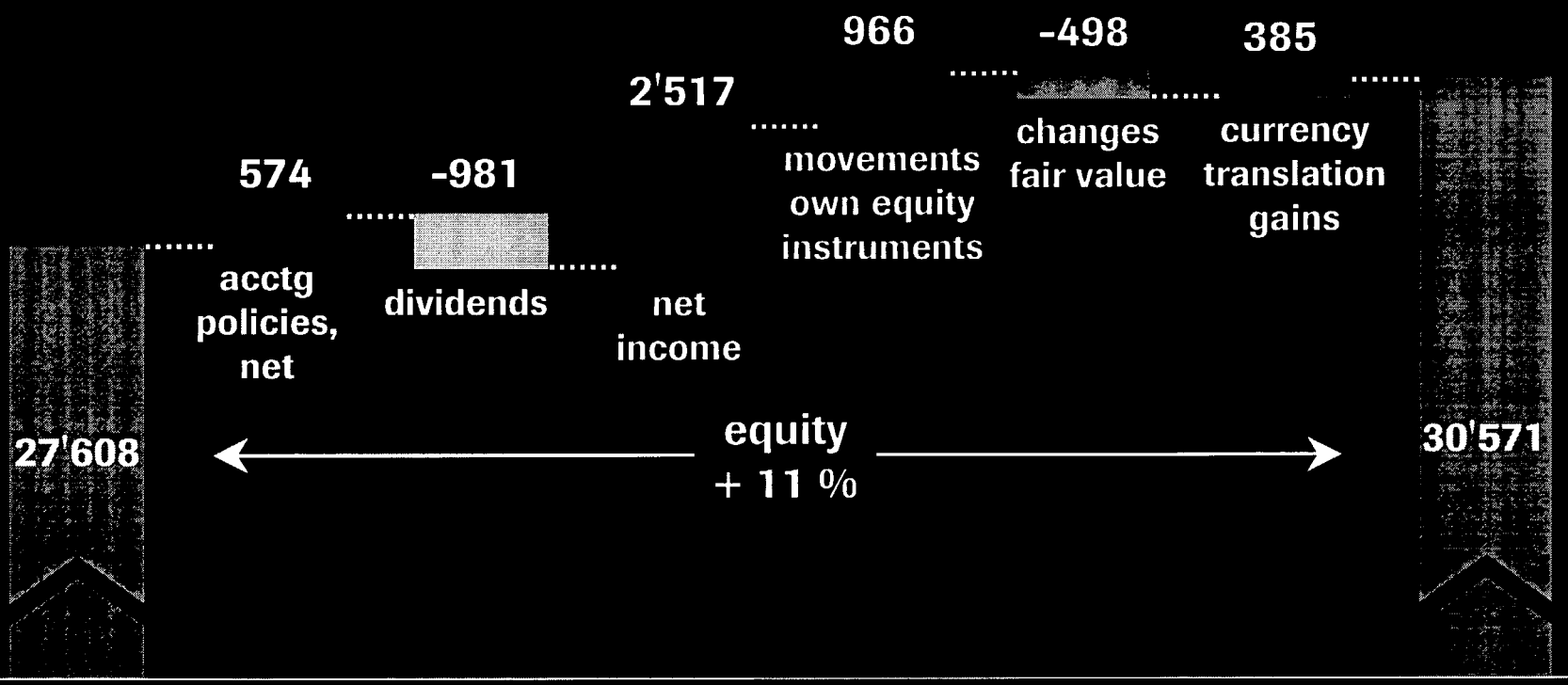


[1] at market values in accordance with new accounting standard
[2] net working capital
[3] property, plant and equipment; intangible assets
[4] non-voting equity securities ('Genussscheine')

Equity movement

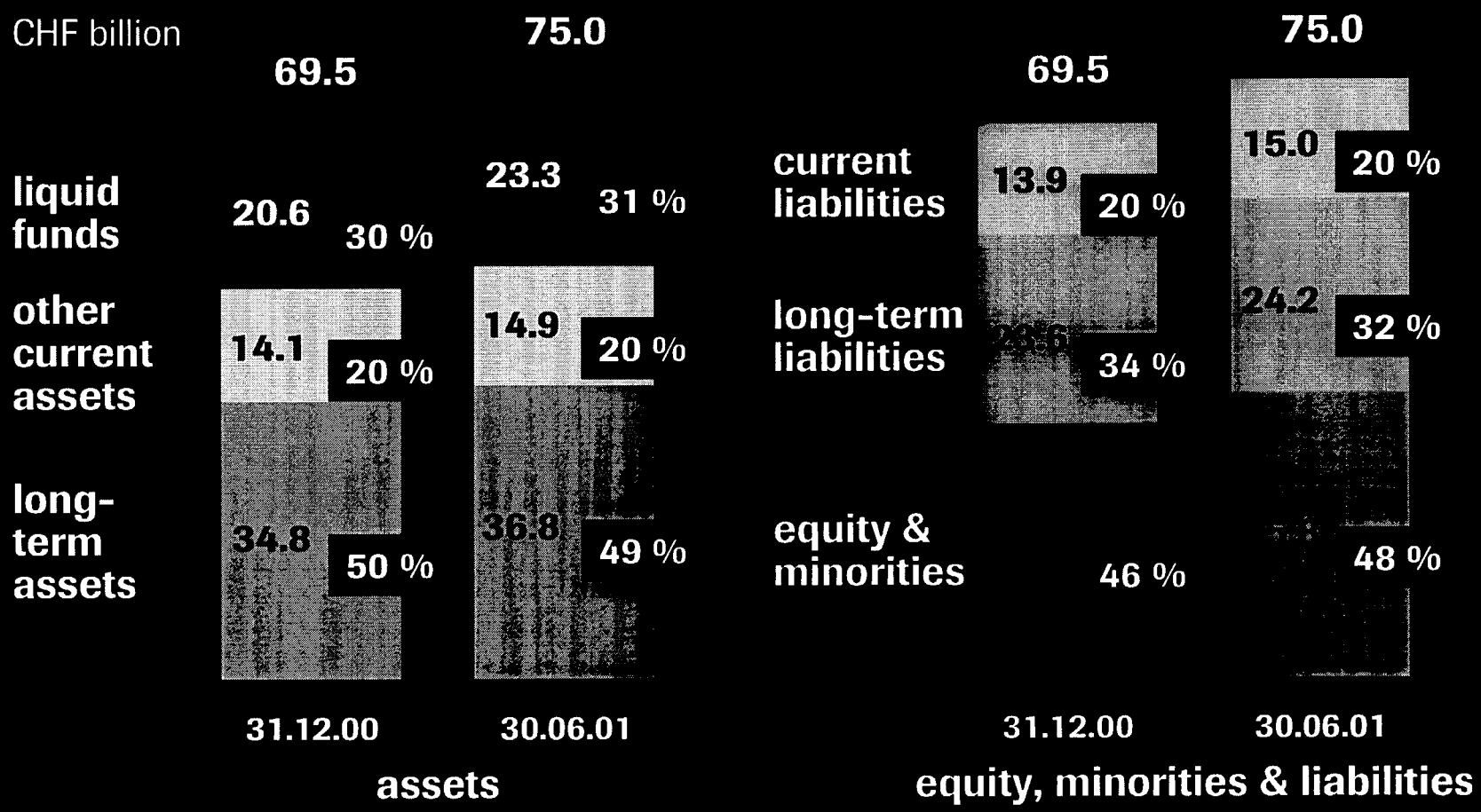
Increase driven by net income

CHF m



Balance sheet

Further strengthened



Group Financials at Q3 2001

Summary

- Profit levels at H1 maintained on an adjusted basis
- 6 % sales growth at H1 and an improved cost structure
  - except amortisation and other operating income/expenses
- 8 % sales growth at Q3
- Operating profit margin at H1 slightly reduced
- Substantial cost savings from Pharma reshaping initiative expected
  - payback of cash costs expected within 2 years
- Increase in net financial income in H1 including gains on LabCorp shares
- Liquidity and balance sheet strengthened

Roche

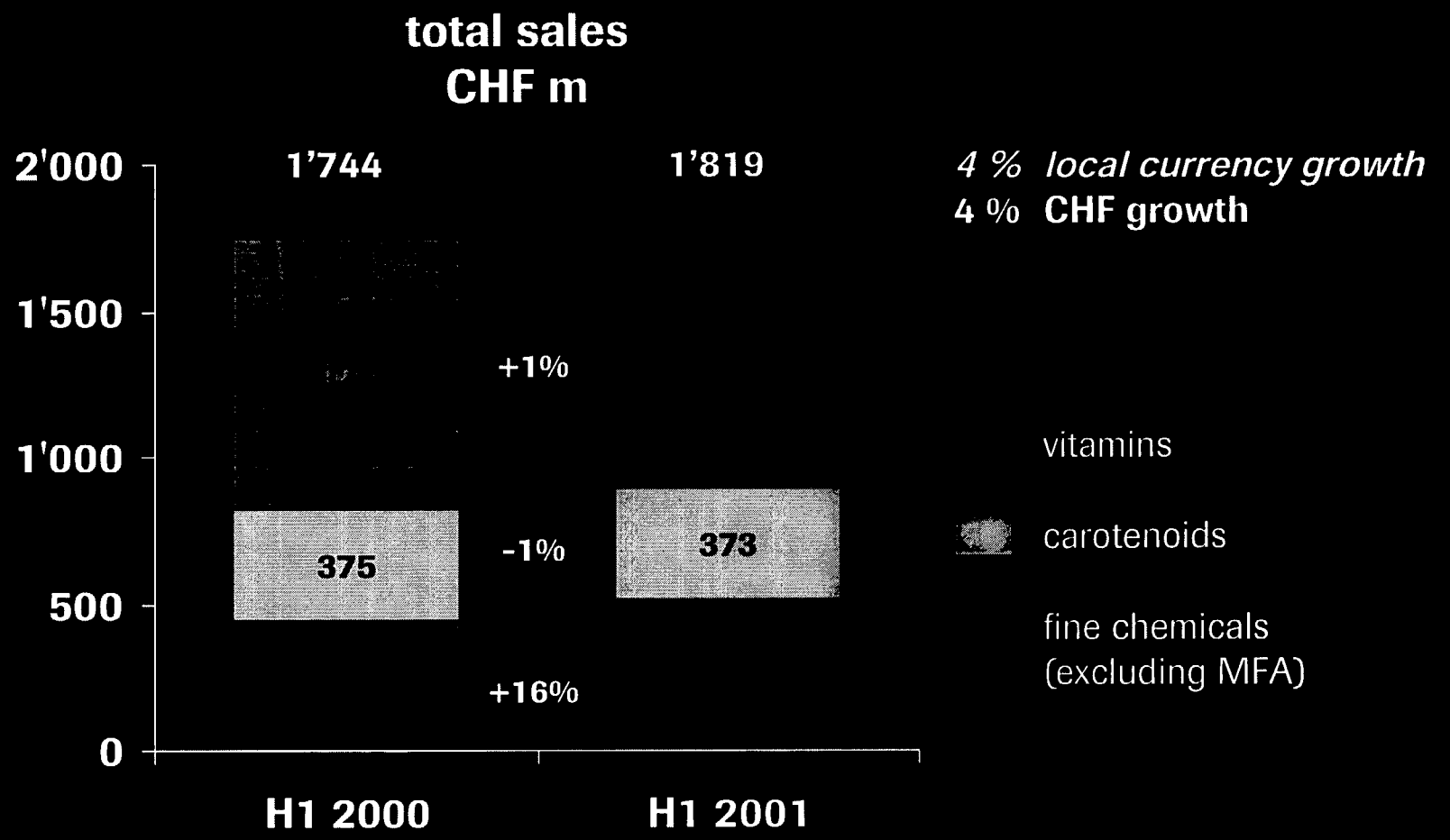
Vitamins and Fine Chemicals Division at Q3 2001

Sales in H1 2001

Back to top line growth

Roche

Vitamins



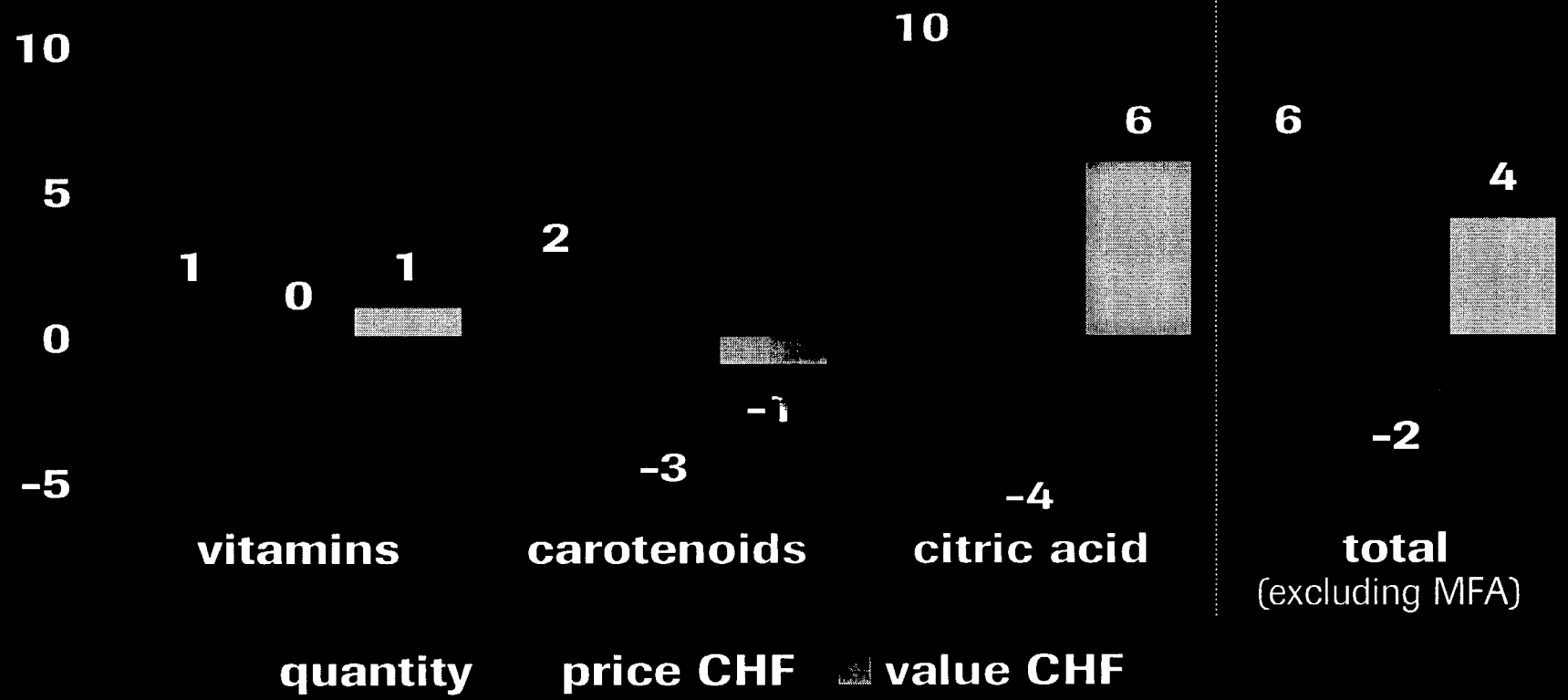
Sources of growth in H1 2001

Quantity driven growth

Roche

Vitamins

deviation from H1 2000 in %

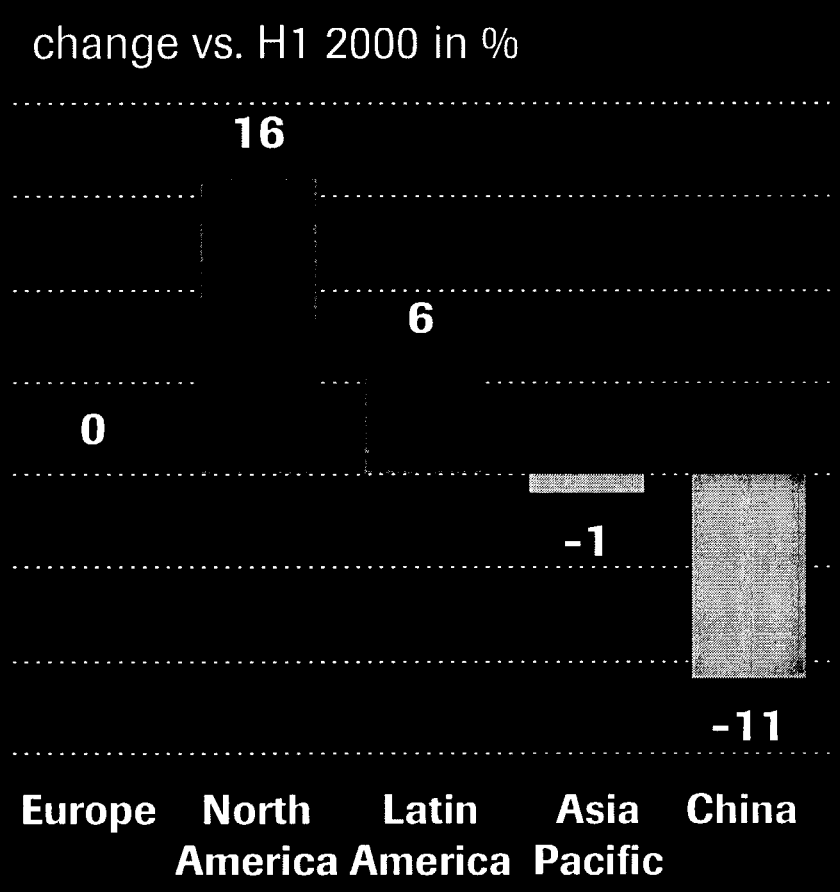


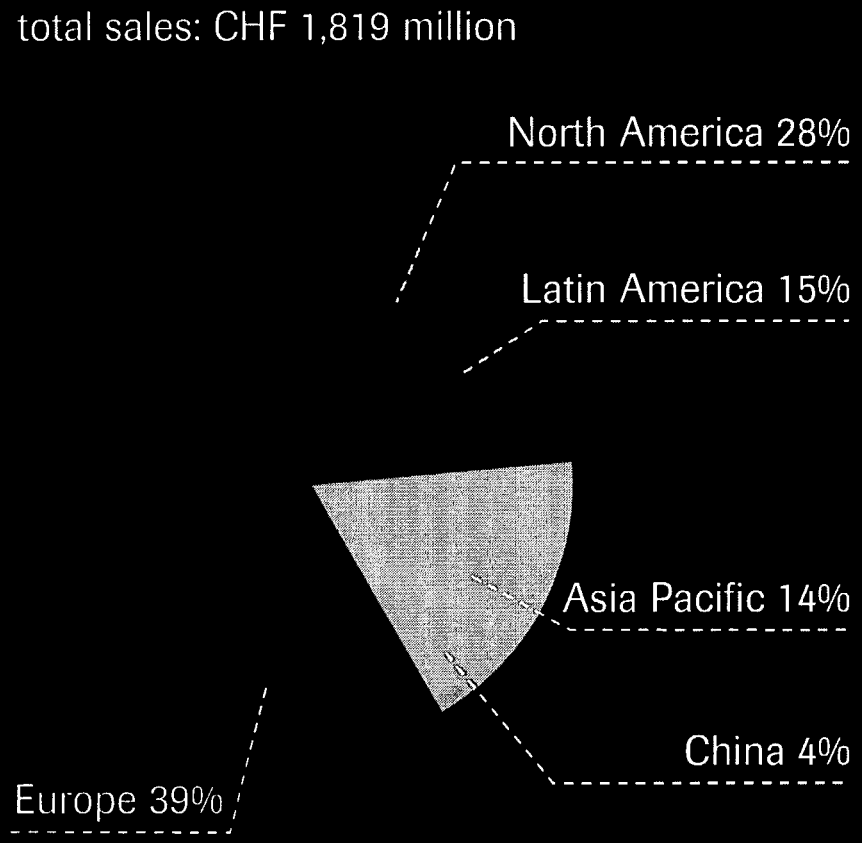
Sales by region H1 2001*

Strong comeback of North America

Roche

Vitamins





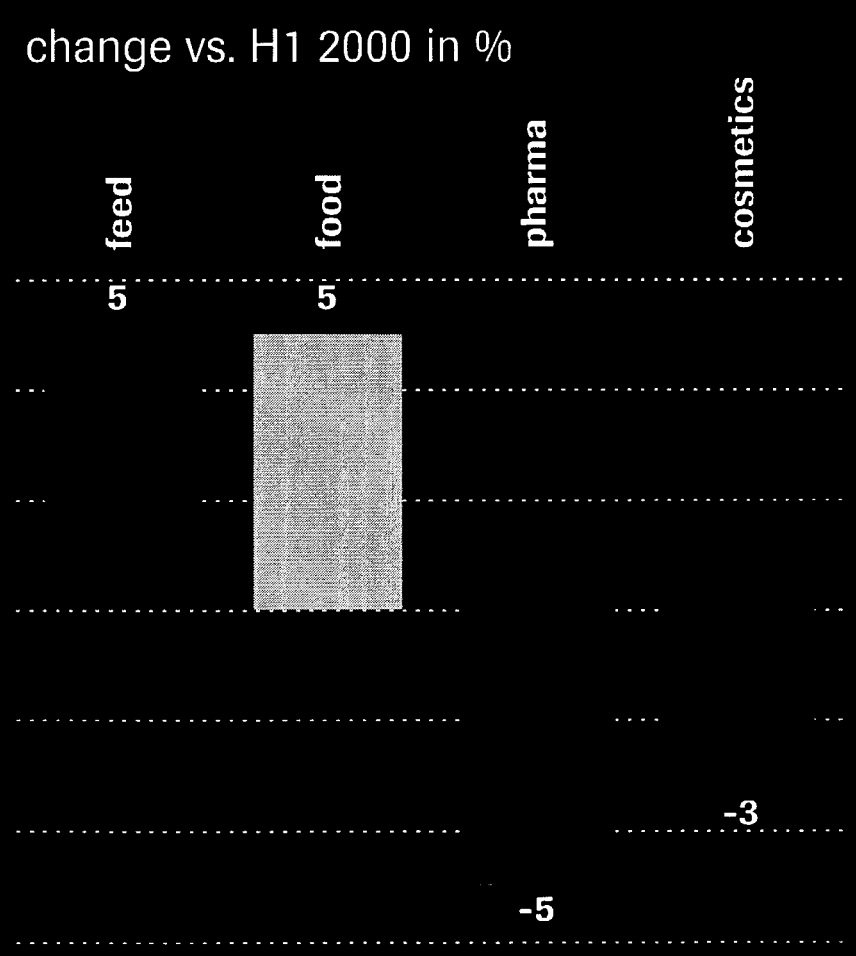
* excluding MFA sales in H1 2000

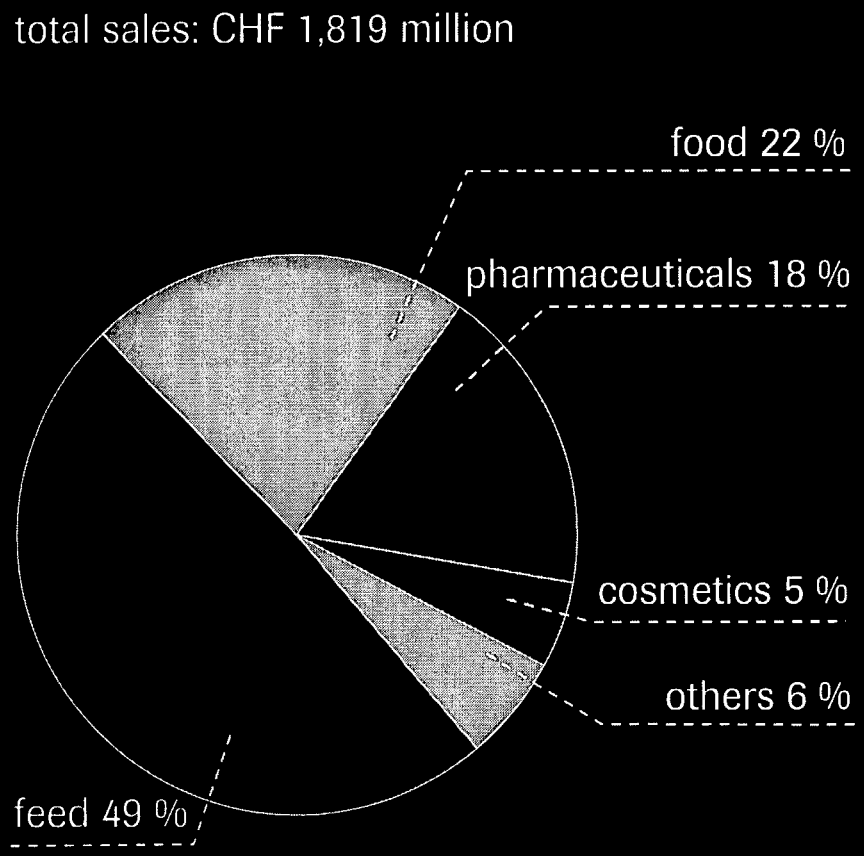
Sales by industry in H1 2001*

Good growth in human and animal nutrition

Roche

Vitamins





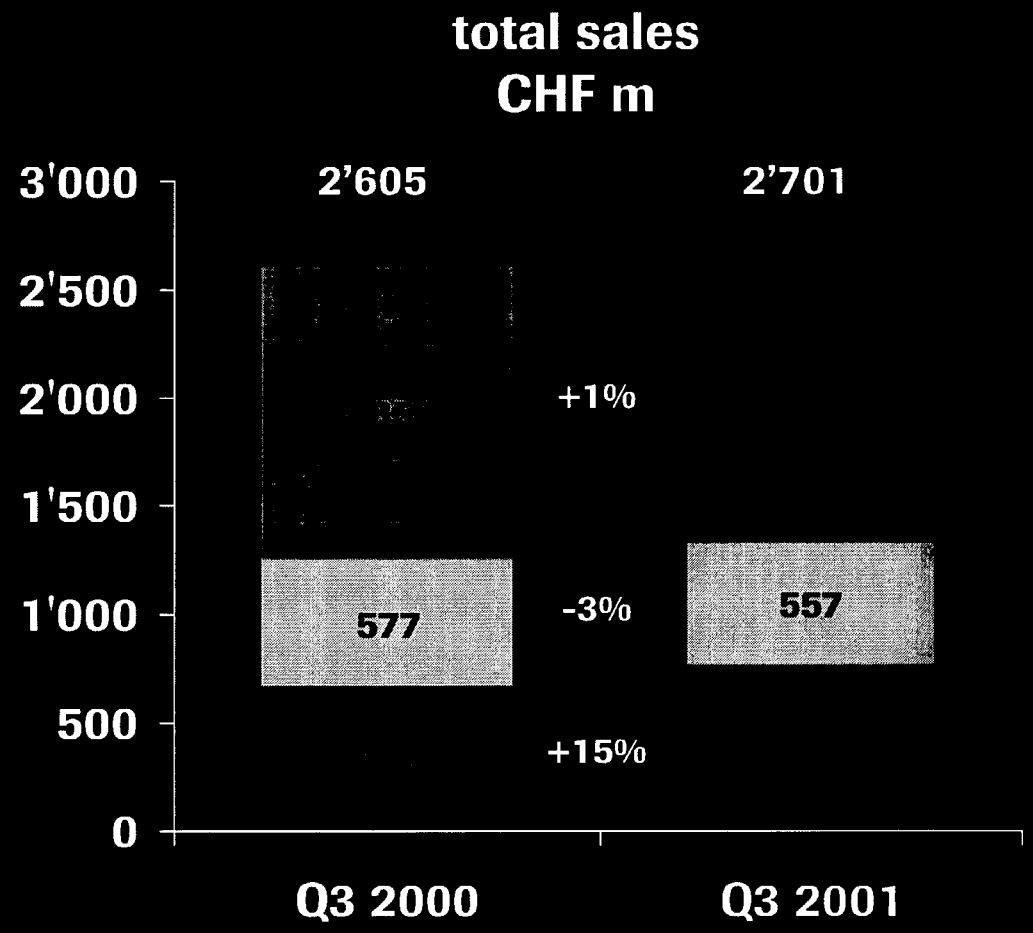
* excluding MFA sales in H1 2000

Sales at Q3 2001

Return to top line growth

Roche

Vitamins



4 % *local currency growth*

4 % CHF growth

vitamins

carotenoids

fine chemicals
(excluding MFA)

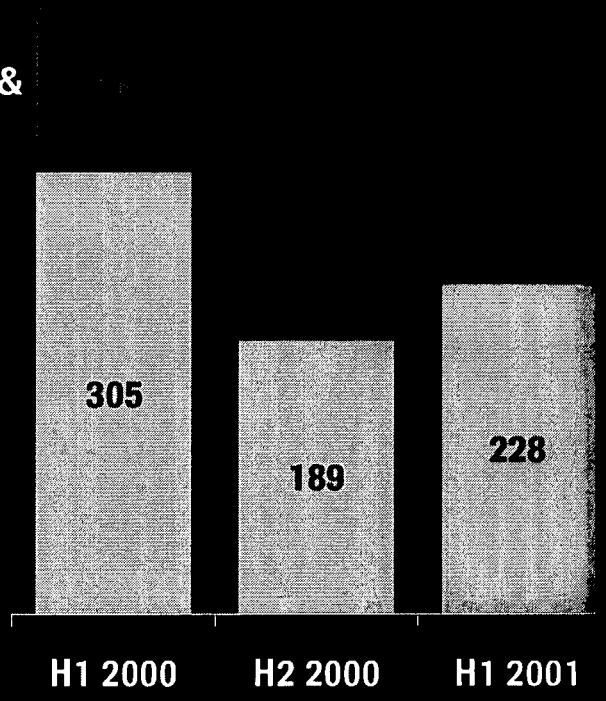
Profitability in H1 2001

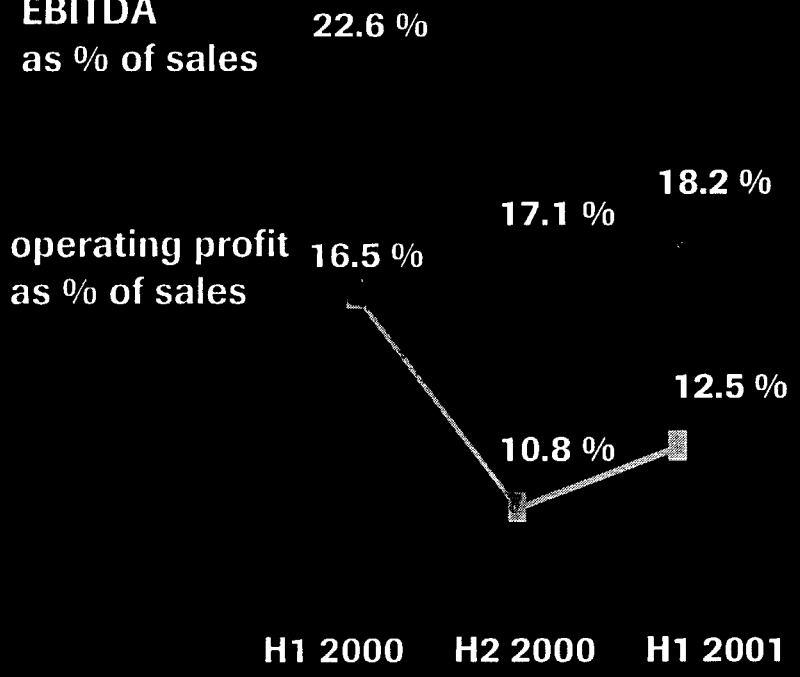
Improving margins

Roche

Vitamins

	CHF m	CHF m	CHF m
EBITDA	**419**	**300**	**332**



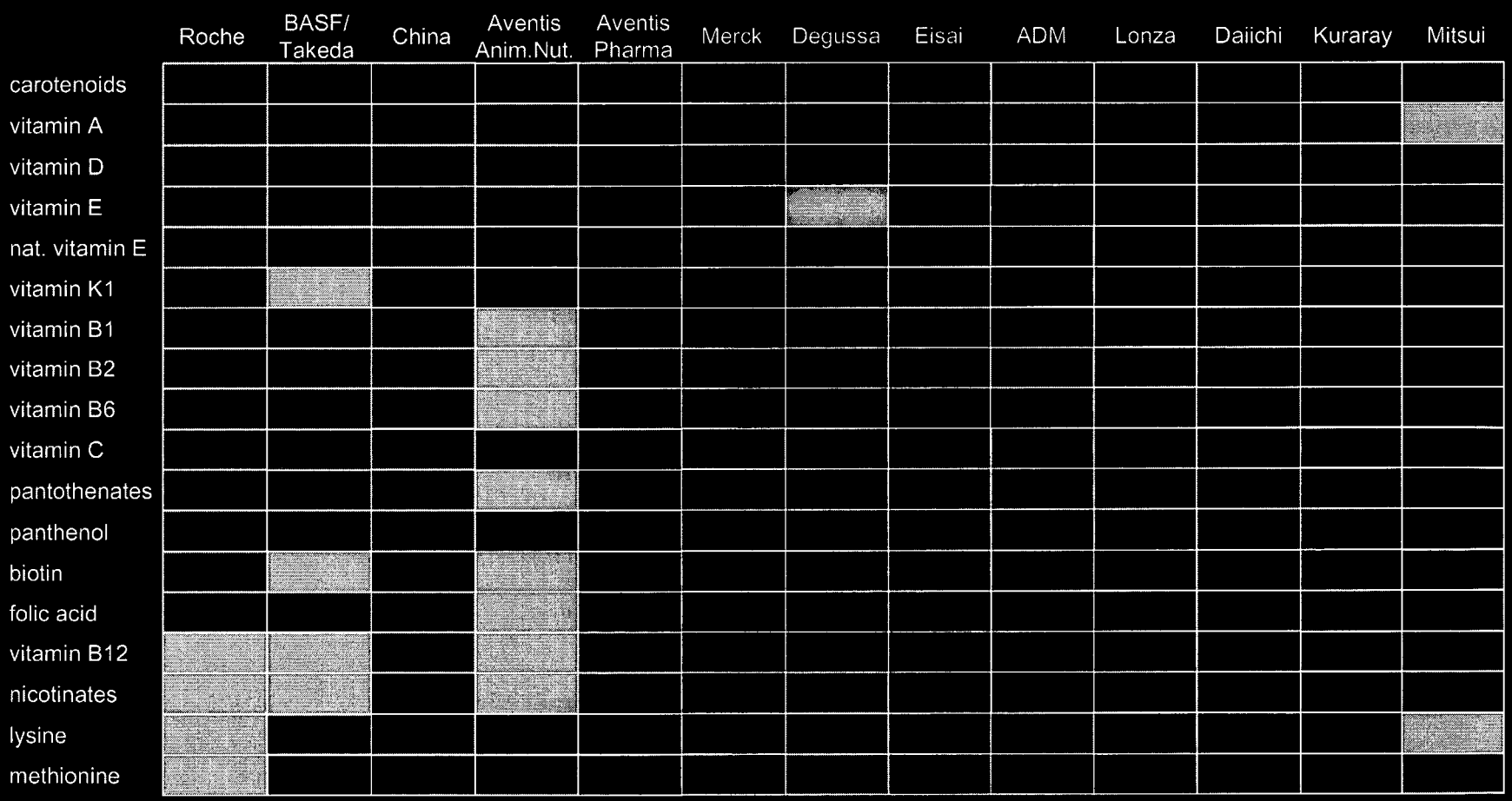


A changing business environment

Roche #1 with 34% market share

Roche

Vitamins



Trends in a CHF 11 billion market

Expected market growth in the range of 3-5%

Roche

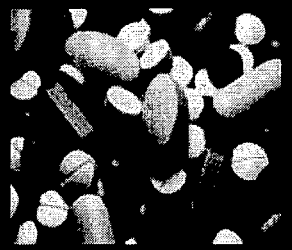
Vitamins

continued reliance on core vitamins; increased demand for natural health and performance enhancers:





changing life-styles trigger demand for health beneficials:



greater health awareness offers wide range of opportunities



high demand for innovative product concepts:

The way forward

Strengthening a leading position

Roche

Vitamins

goals

outperform market growth!



strategy for growth and profitability

increase margins and remain
the industry benchmark!



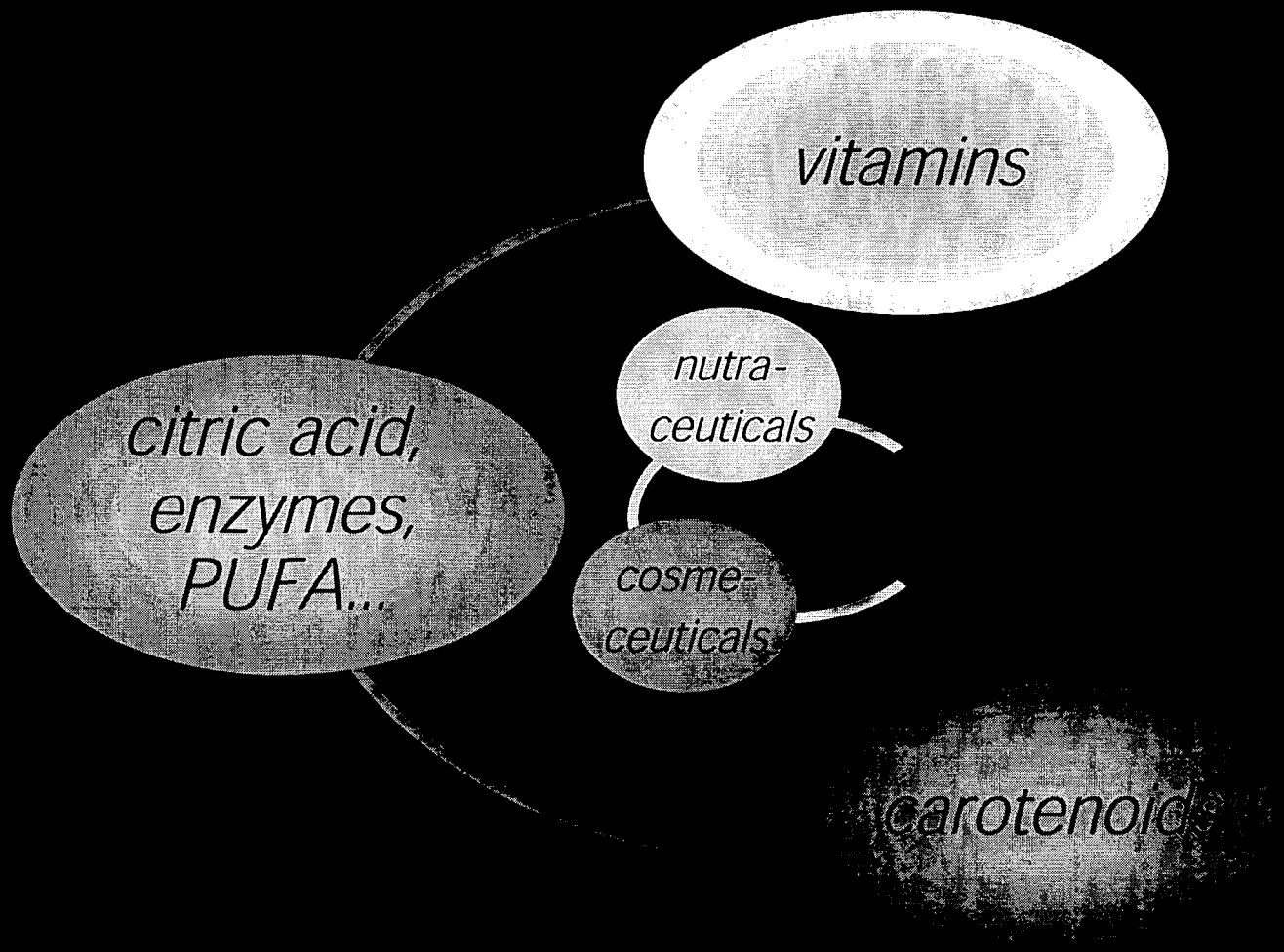
goals

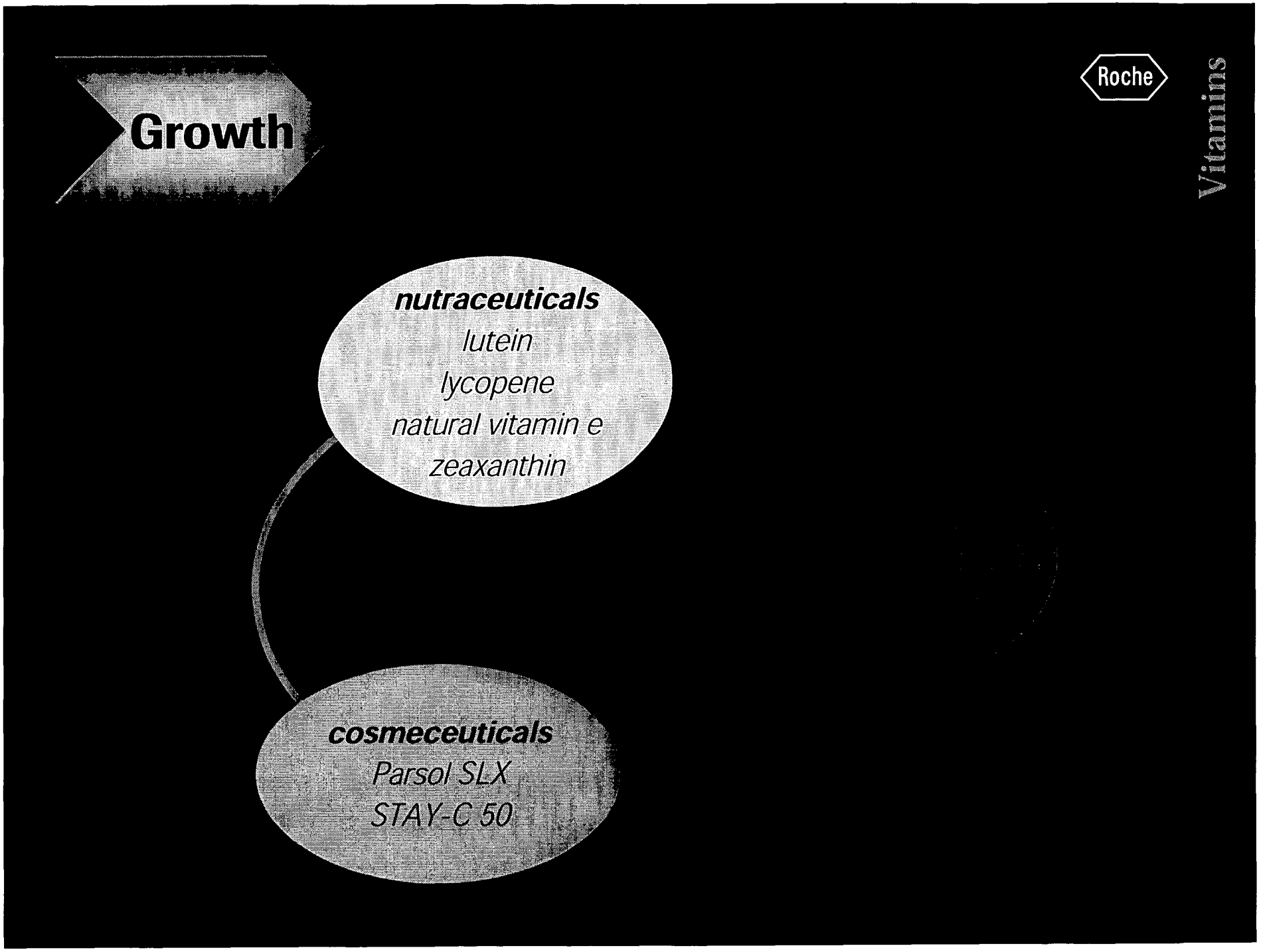
Expand the core

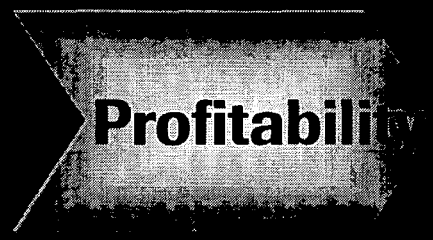
Growth

Roche

Vitamins




Growth
Roche
Vitamins
nutraceuticals
lutein
lycopene
natural vitamin e
zeaxanthin
cosmeceuticals
Parsol SLX
STAY-C 50



Key drivers to achieve profitability targets

Roche

Vitamins

in
process improvements

- Half of R&D resources committed to production innovation
  ⇨ 50 % cost reduction target for key vitamins in next 10 years

for
low cost production

- Invest only to pursue lowest cost position
  ⇨ key projects: vitamins E and C

in all business processes

- Reduce production costs
  ⇨ plan 500
- Reduce operating costs
  ⇨ cost saving program in Europe and USA

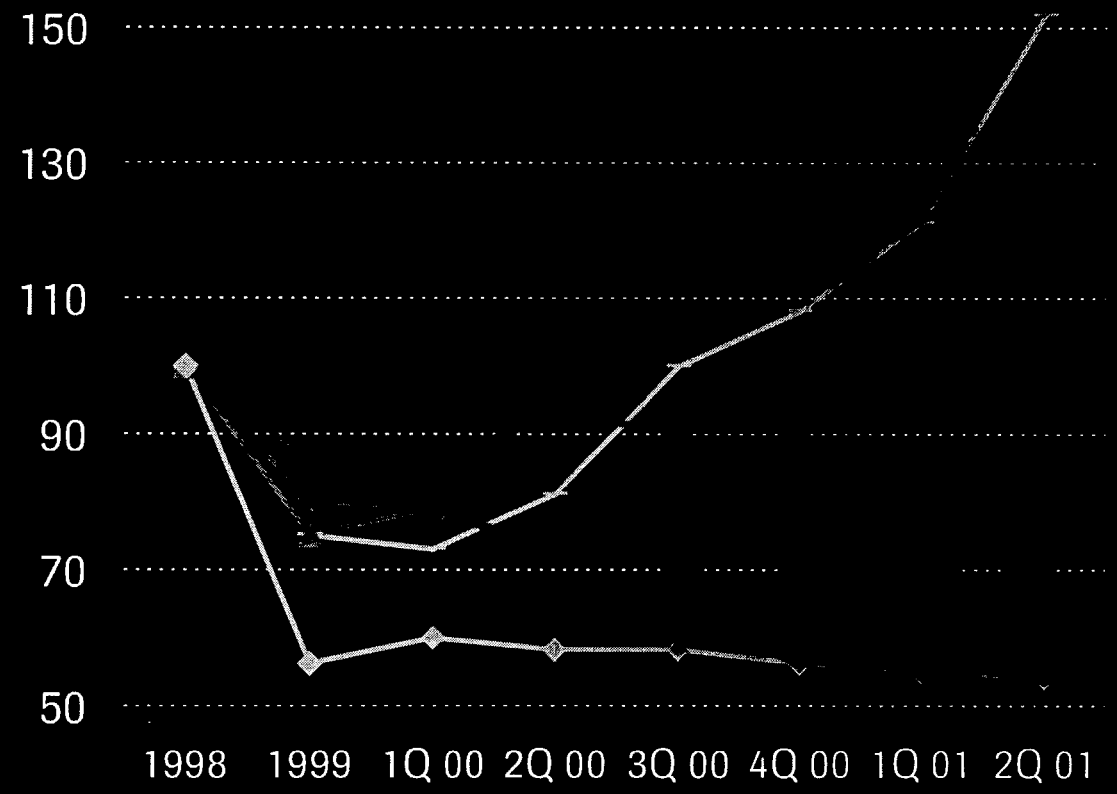
Profitabilit

Stabilisation of major vitamin prices

Roche

Vitamins

*price development index 1998-2001**



products represent
35 % of divisional sales
70 % of vitamins sales

* at constant USD/Euro

Vitamins and Fine Chemicals Division

Summary

Roche

Vitamins

- Prices remaining stable
- Efficiency gains and a rigorous focus on costs are off-setting pressure on profitability
- The way forward: growth and profitability
  ⇨ strengthening our #1 position
- Outlook 2001
  ⇨ continued single-digit sales growth

Roche

Diagnostics Division at Q3 2001

Performance

Roche

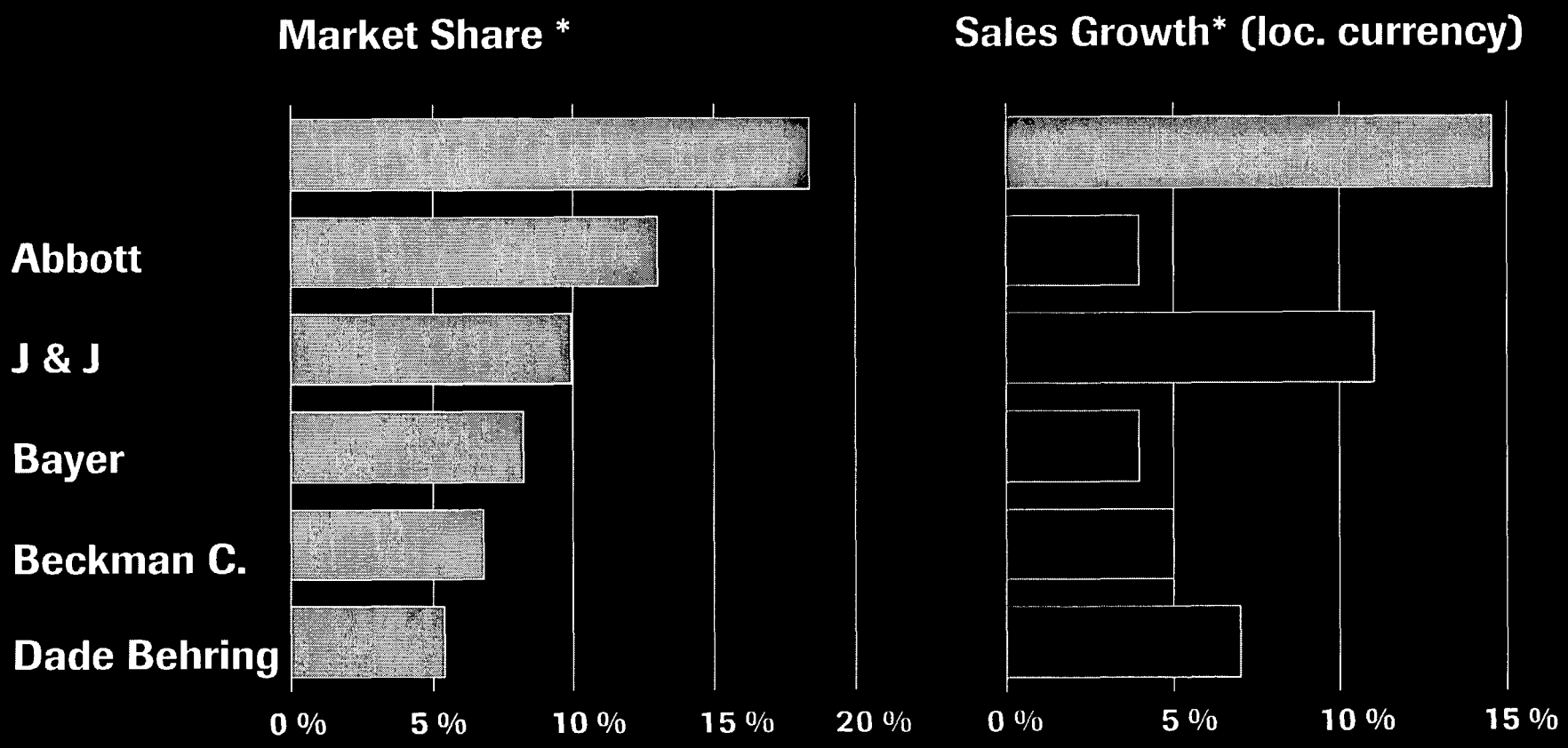
Diagnostics

In Vitro Diagnostics market at Q3 2001

21 billion USD in 2001E (+6 % in local currency)

Roche

Diagnostics



* Basis: Q3 2001 / excludes Applied Sciences

Source: Annual Reports, Boston Biomedical Consultants, Roche Analysis

Roche Diagnostics

New organisation enhances customer focus

Roche

Diagnostics

Research Focus

research lab.
university hospital

Professionals

commercial lab.
hospital
POL
GP

Consumers

patient
consumer

Applied Science

Lab Network

Molecular Diagnostics

Centralised Diagnostics

Near Patient Testing

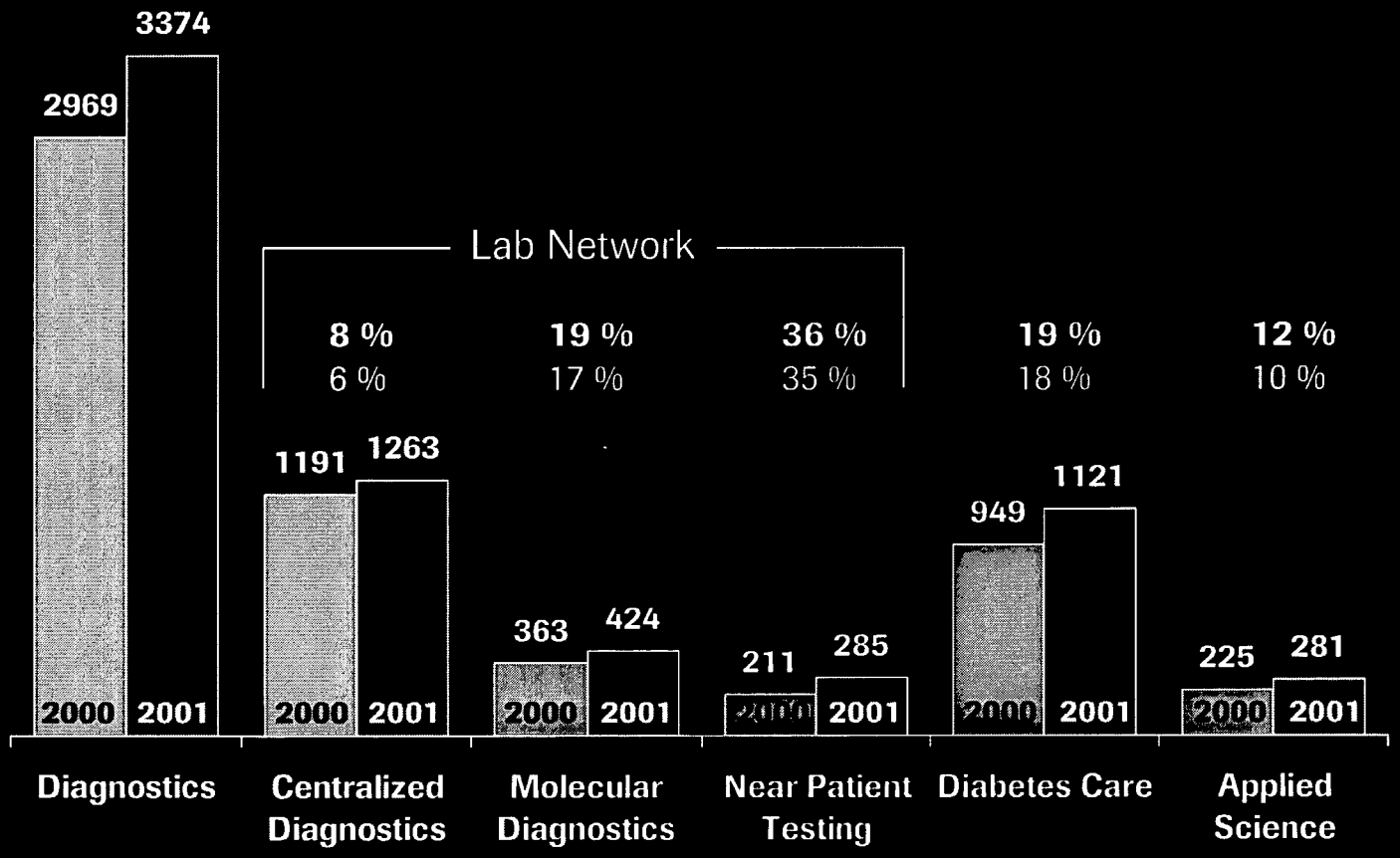
Diabetes Care

Diagnostics sales in H1 2001

Double-digit growth in high margin businesses

Roche

Diagnostics



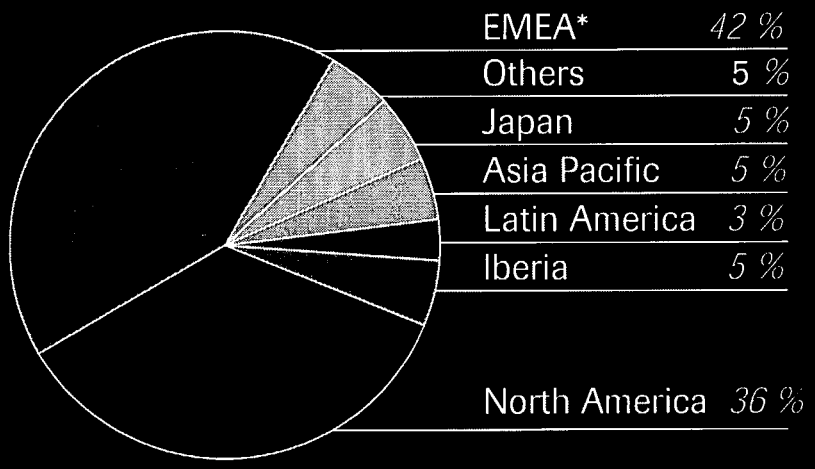
Diagnostics sales in H1 2001

Sales by region/market

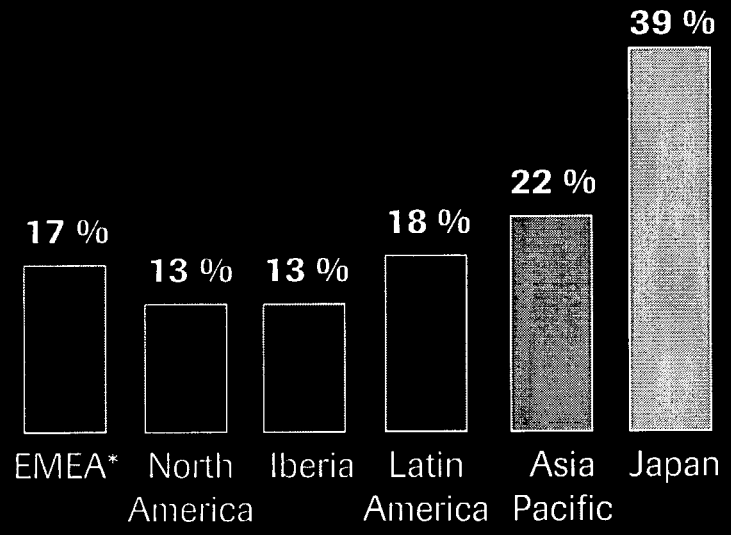
Roche

Diagnostics

CHF 3'374 m



local sales growth



* Europe and Middle East and Africa

Diagnostics sales at Q3 2001

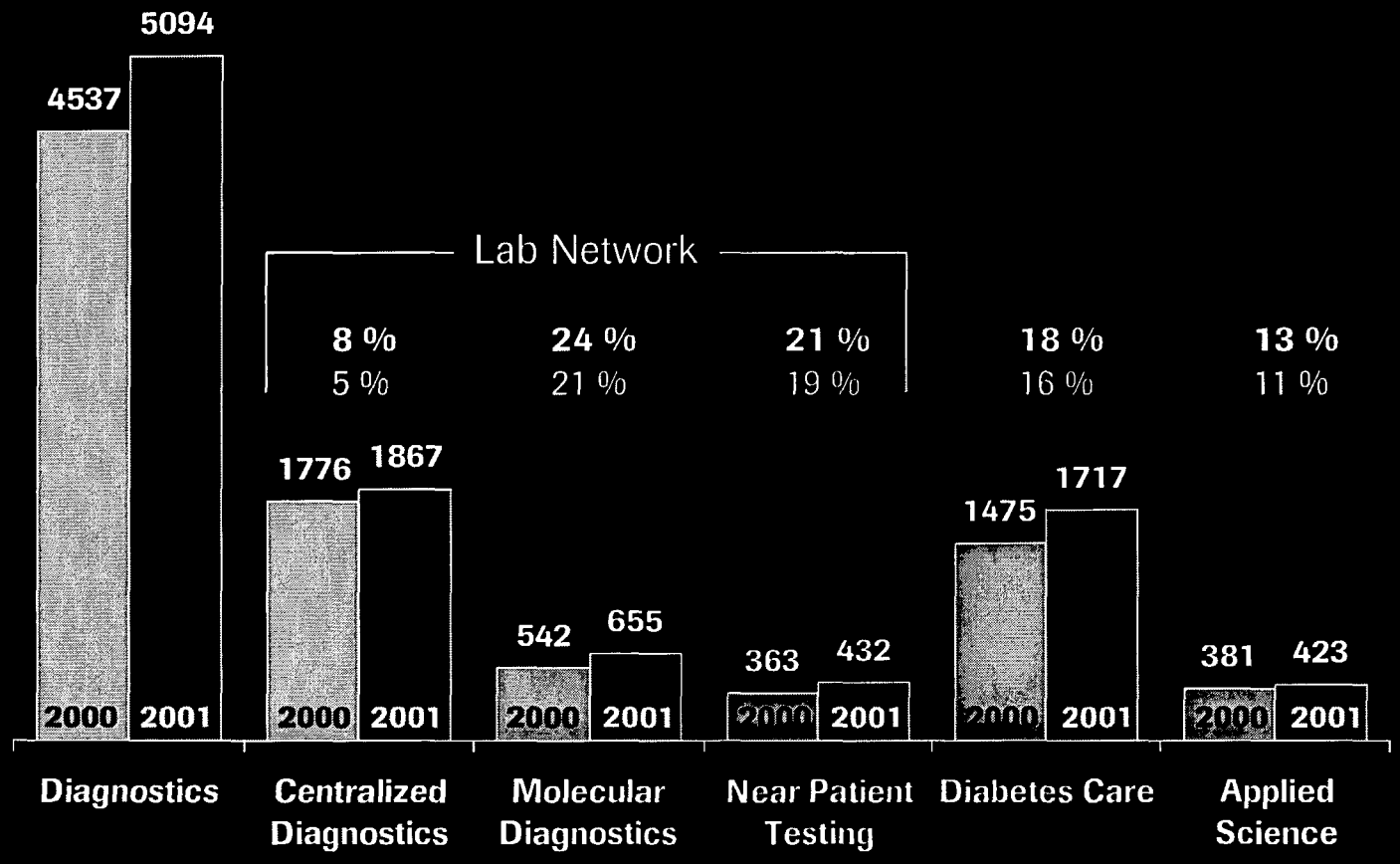
Double-digit growth in high margin businesses

Roche

Diagnostics

CHF m

14 % local currency growth
12 % CHF growth

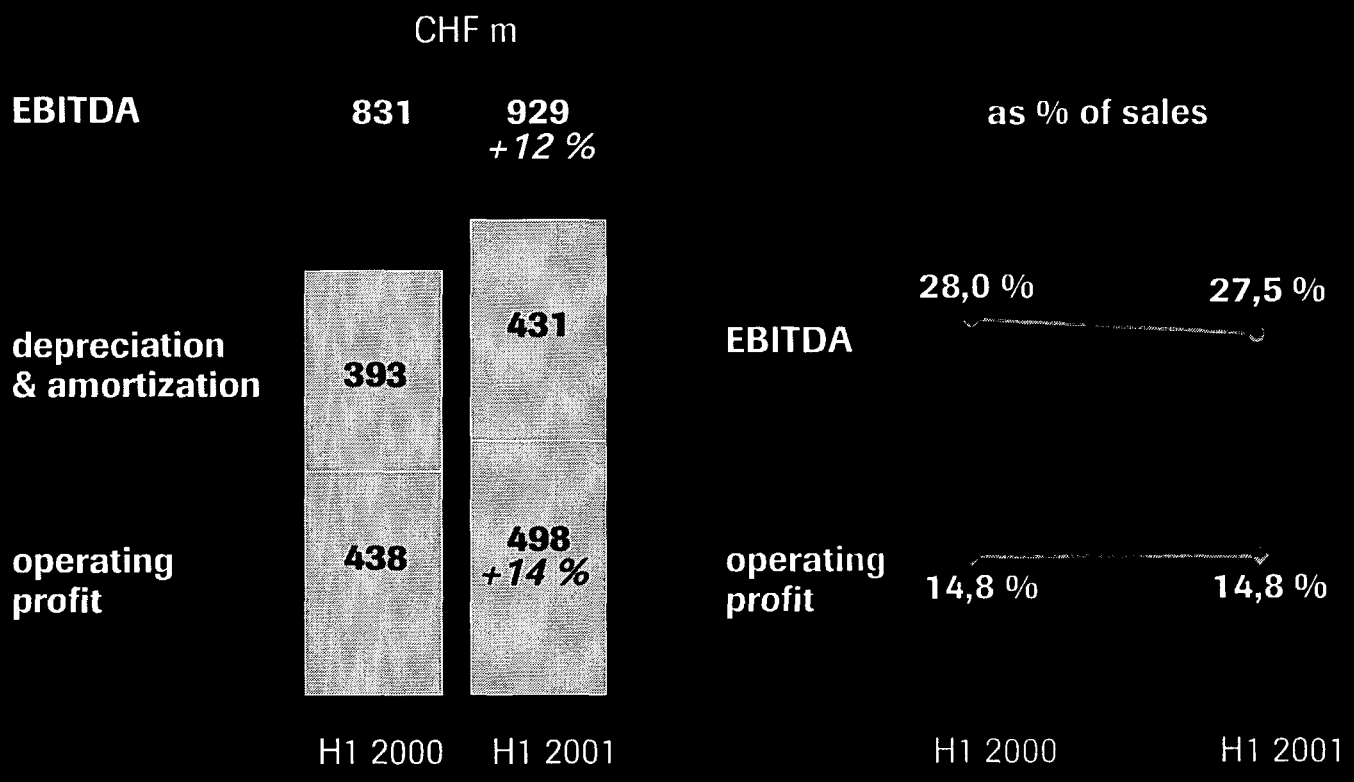


Profit development

Maintaining a high level of profitability

Roche

Diagnostics



Strategy

Roche

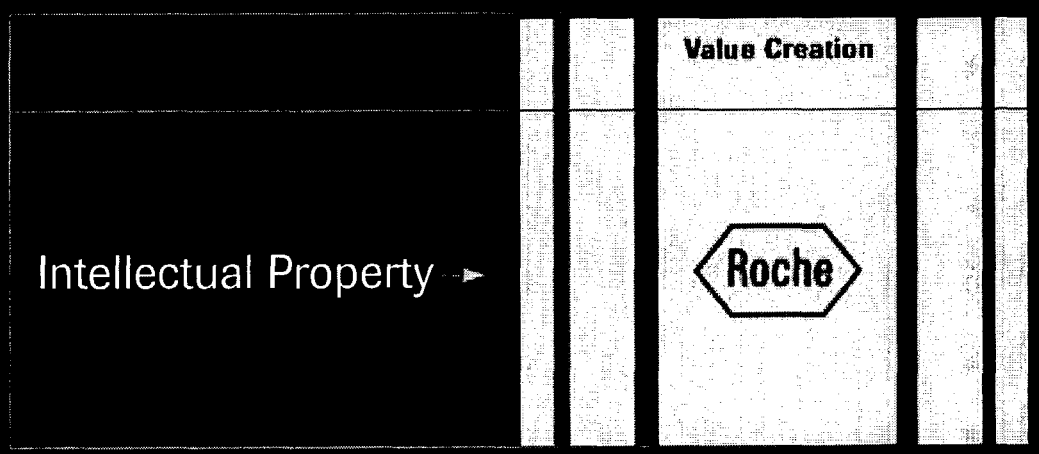
Diagnostics

Our strategy
Capturing future value

Roche

Diagnostics

Roche Diagnostics future business model



Value Capture

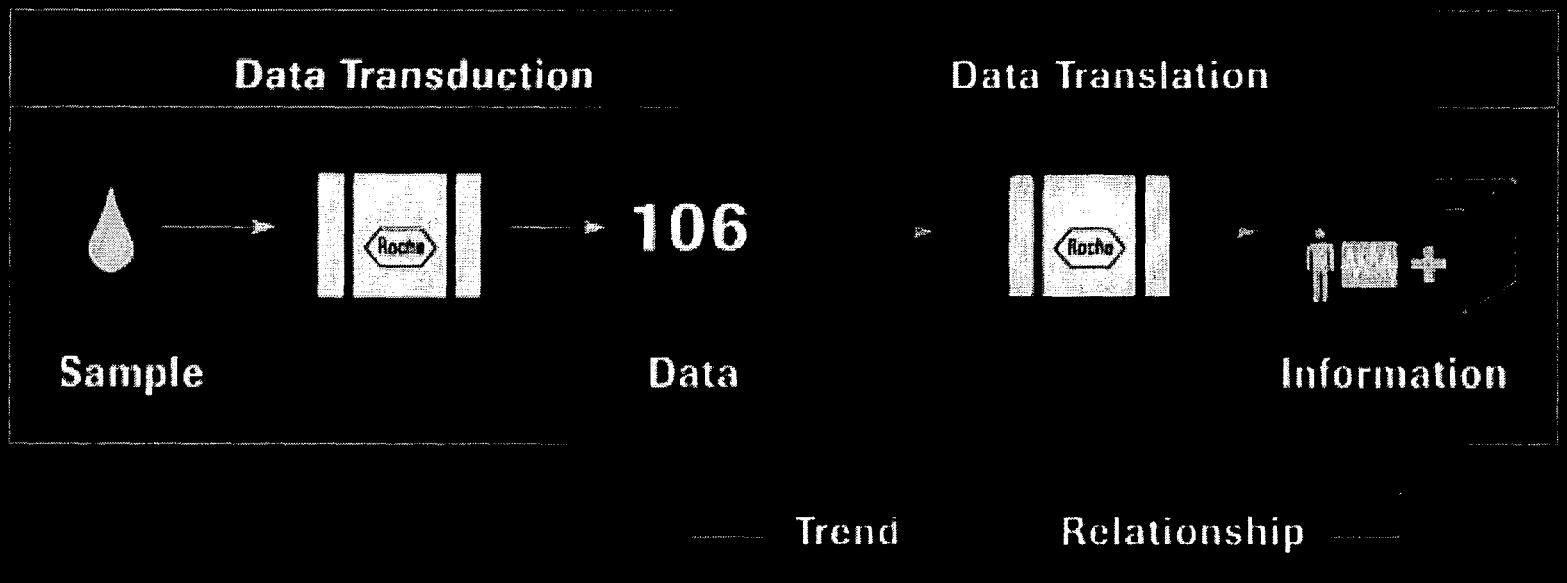
- products
- outlicensing IP
- data translation systems
- information services

Actionable health information

Supplementing data transduction systems with data translation systems

Roche

Diagnostics

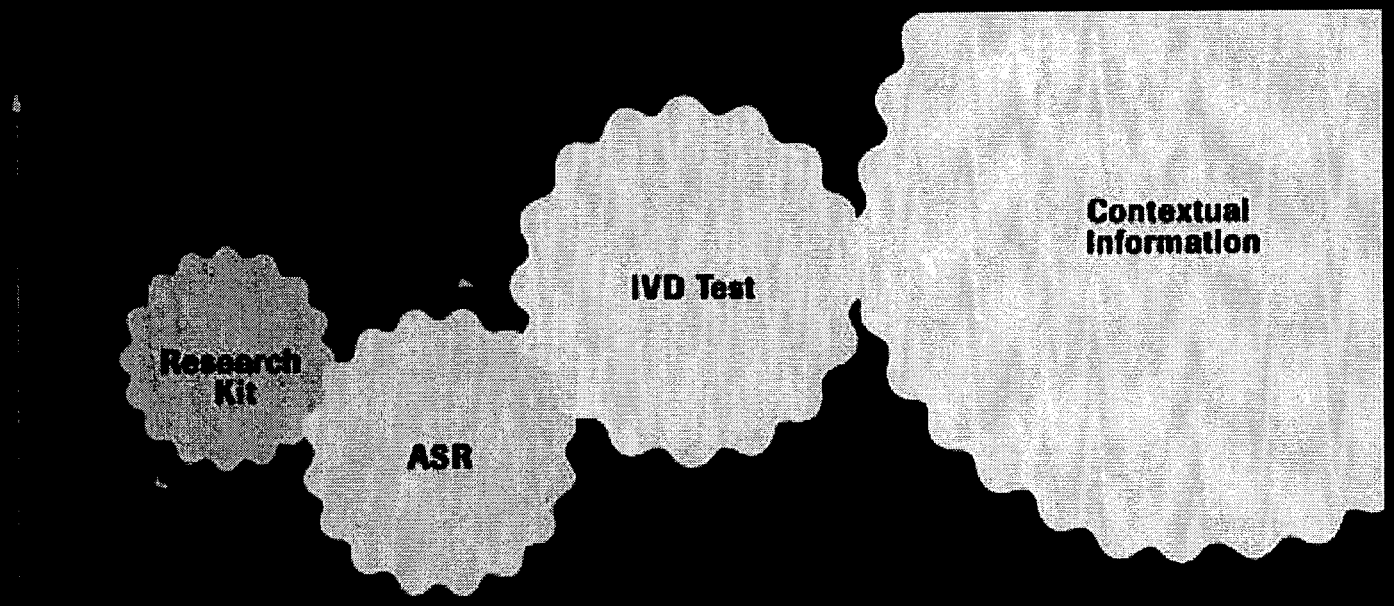


Actionable health information

Driving value creation

Roche

Diagnostics



Possible Value Creation

ASR = analyte specific reagent
IVD = in vitro diagnostics

Business Area objectives

Market and segment leadership

Roche

Diagnostics

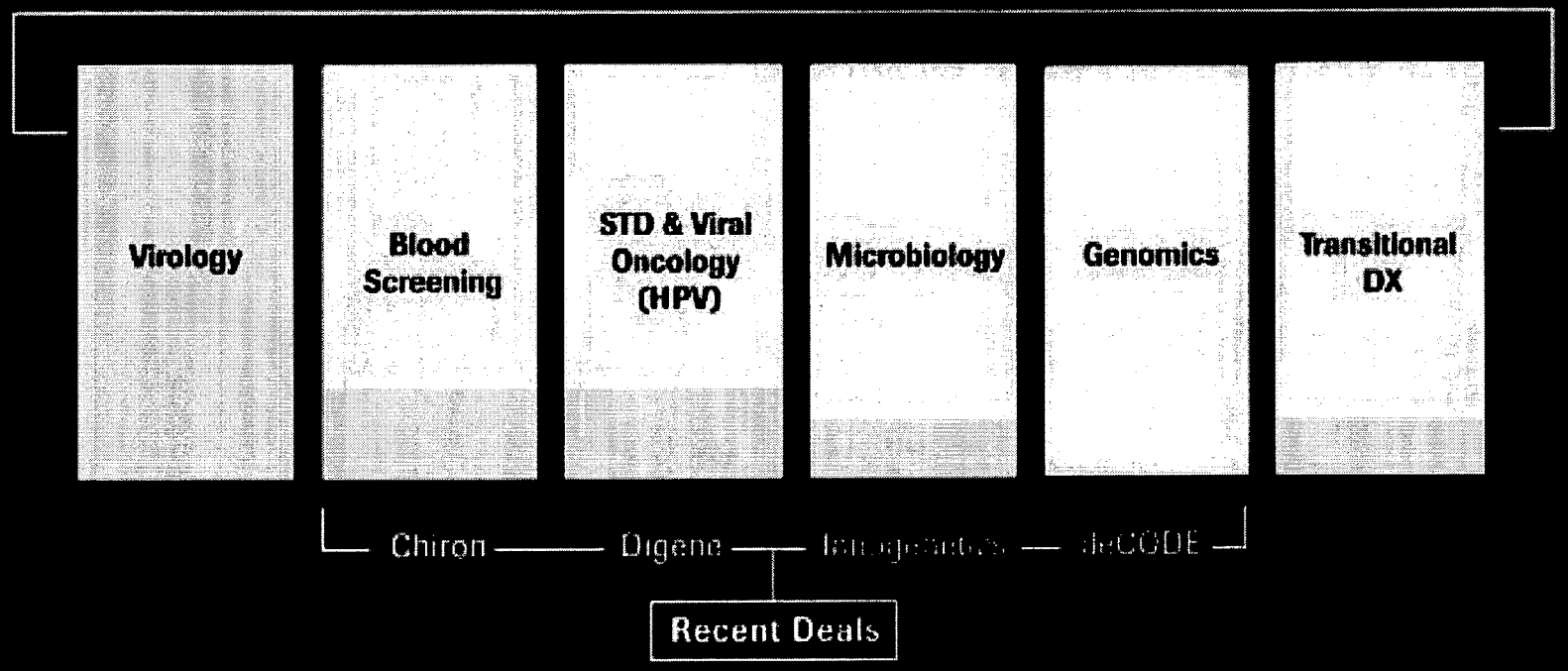
Applied Science	Pioneer platforms for genomics/proteomics research
Lab Network	Drive convergence in professional labs through platform harmonization, reagent standardization and IT connectivity
Molecular Diagnostics	Expand business beyond virology to clinically novel parameters with premium value
Centralized Diagnostics	Become supplier of choice for integrated solutions
Near Patient Testing	Realise the promise of decentralized testing
Diabetes Care	Be the leading provider of diabetes care technology, products and services

Molecular Diagnostics

Building a portfolio of unique PCR businesses

Roche Diagnostics

Molecular Diagnostics portfolio



STD = sexually-transmitted diseases
HPV = human papilloma virus

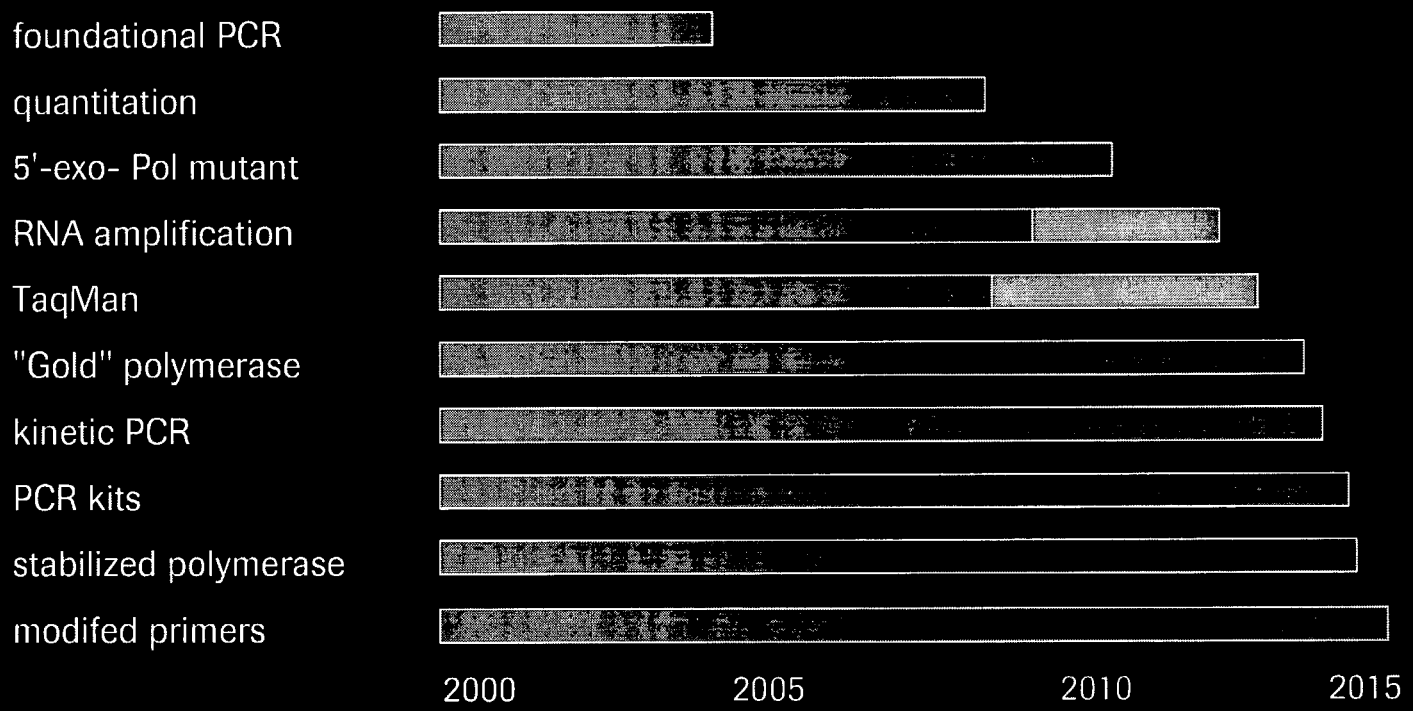
PCR intellectual property

Leading edge patents secure continued protection

Roche

Diagnostics

US patents for key technologies

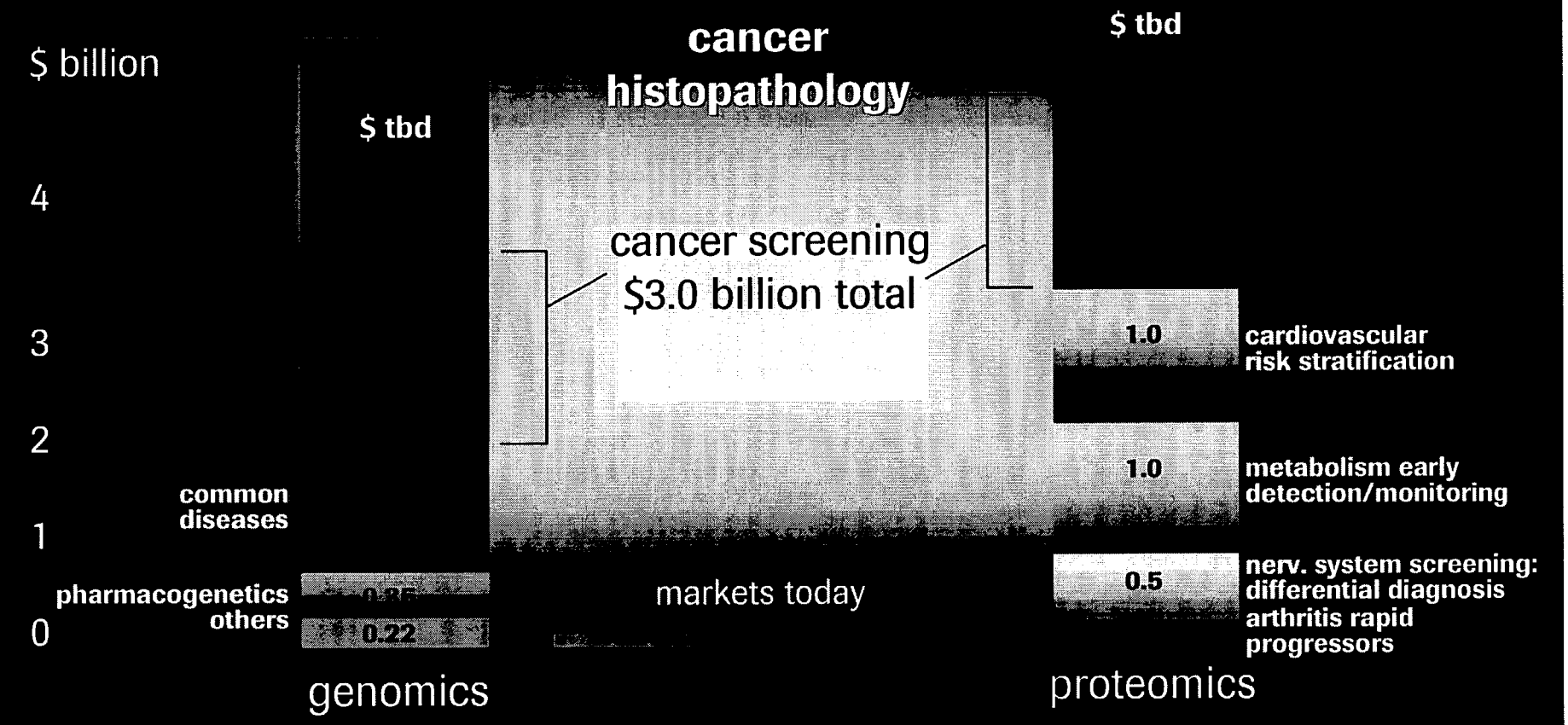


Genomics and proteomics markets in 2010

Explosion of revenues expected

Roche

Diagnostics



Subsegments: monogenetic diseases $100m
paternity $50m
forensic $45m
HLA $35m

Source: Roche estimates

Roche

Diagnostics

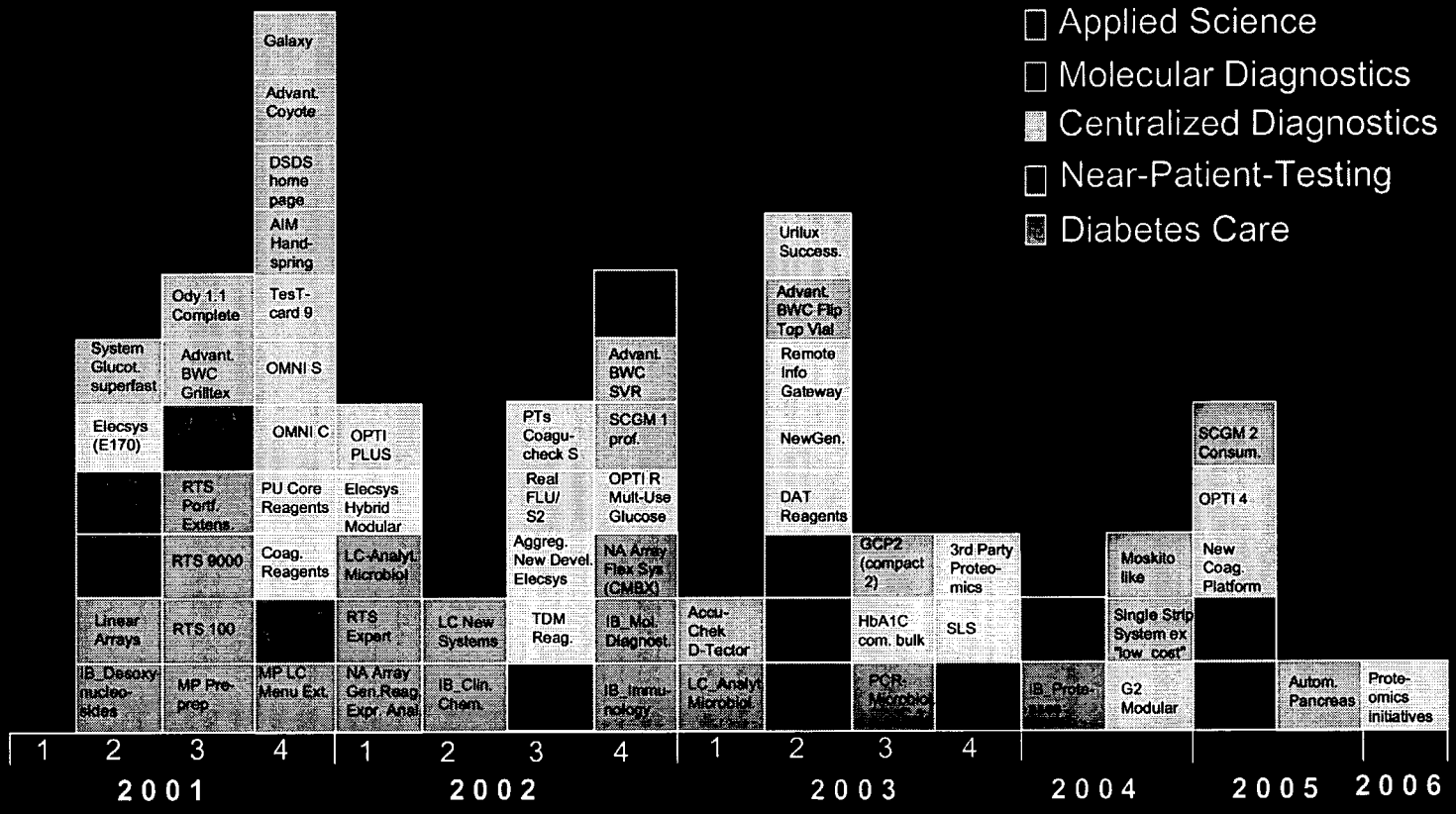
Innovation

Expected launches of major products

Strong pipeline for future growth

Roche

Diagnostics



Launches planned for 2001
On track so far

Roche

Diagnostics

launched	**Hitachi® MODULAR E 170**	Centralized Diagnostics
launched	**Cobas® Ampliprep®**	Molecular Diagnostics
launched	**Accu-Chek Inform®**	Diabetes Care
launched	**Accu-Chek Compact®**	Diabetes Care
launched	**Accu-Chek Active®**	Diabetes Care
on track	**RTS ProteoMaster® system**	Applied Science
on track	**OMNI® S, OMNI® C**	Near Patient Testing

PDA type diabetes monitoring device

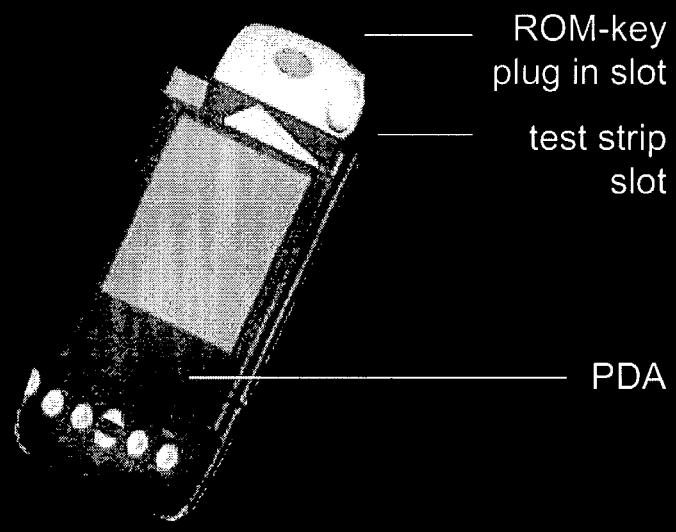
Allows direct consumer contact

Roche

Diagnostics

Features

- diabetes monitoring integrated into personal digital assistant (PDA) device
- open standard for any additional software solutions and tools
- opens up possibilities for wireless connection to new providers of value-adding services in the future (bi-directional)



Expected launch Q4 2001

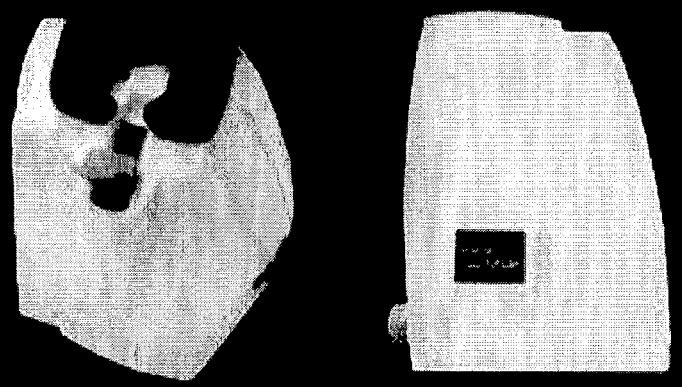
Accu Chek-D-Tector

The only non-invasive diabetic screening technology

Roche Diagnostics

Features

- non-invasive eye examination device to detect undiagnosed type 2 diabetes
- detection of fluorescent compounds (AGES) in the lens of the eye caused by elevated glucose levels
- short (15 seconds) and safe procedure
- positive response from optometrist and diabetologists



Expected launch Q4 2001

OMNI® S

High-throughput blood gas/electrolyte analyser

Roche

Diagnostics

Features

- top of the line parameter panel
- powerful software
- modular analyzer configuration
- easy to use
- full connectivity



Target segments

- medium to large hospitals
  - laboratory
  - point of care

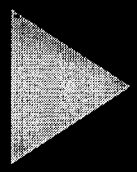
Expected launch Q4 2001

ProBNP test

Important marker for chronic heart failure

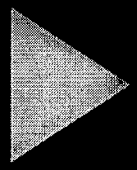
Roche Diagnostics

ischemic heart disease
- stable/unstable angina pectoris
- myocardial infarction



markers of myocardial damage (necrosis)
- Troponin T ✓
- Myoglobin ✓
- CK-MB ✓

heart failure
- obvious chronic left-ventricular dysfunction and preclinical status of heart failure (diagnosis, monitoring)



markers of continuous intraventricular pressure (ventricular overload)
- ProBNP Q4 2001

Roche Diagnostics

Summary

Roche

Diagnostics

- Continued double-digit sales and profit growth
- IVD market leadership increased in all segments
- Organization realigned
  - three Business Areas focused on five customer groups
- Strategic direction pursued through several new alliances
- Outlook: operating margin improvement to the low 20's

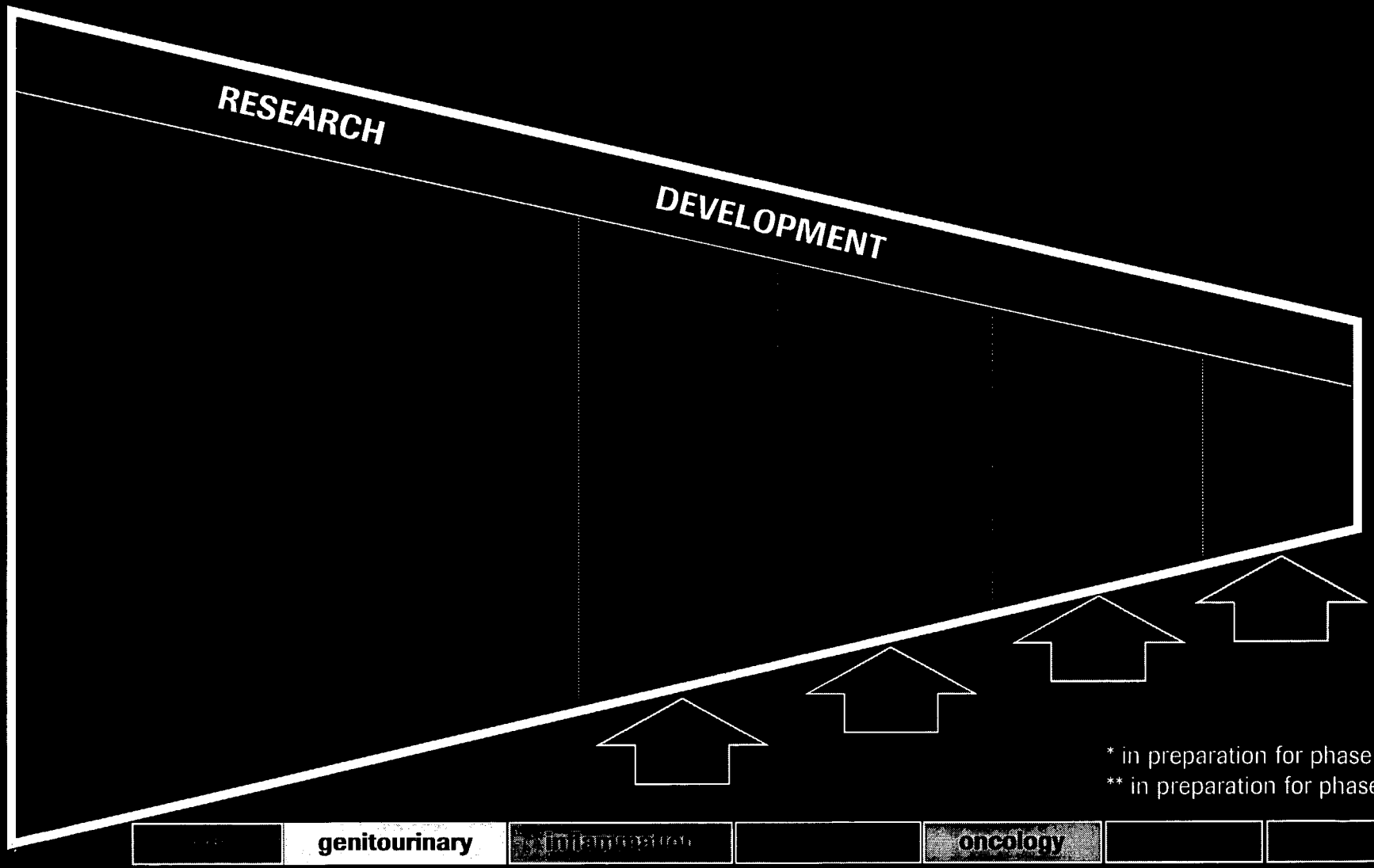


Pharmaceuticals Pipeline

Fueling the R&D pipeline at Roche

Roche

Pharmaceuticals



Roche managed pipeline status at September 2001

Roche R&D pipeline

28 NME's in development at Roche

Roche

Pharmaceuticals

R944 HIV	R411 asthma	R440 (CCR) solid tumors	R420 (Pegasys) HCV
R1067 depression	R545 overactive bladder	R450 [illegible]	R484 (Bonviva) osteoporosis
R1124 emesis	R594 rheumatoid arthritis	[illegible]	R698 (T-20) HIV
R1204 depression /anxiety	R667 emphysema	[illegible]	R1415 (Tarceva) oncology
R1487 rheumatoid arthritis	R701 overactive bladder	R673** (Xu) depression /anxiety	
R1437 benign prostatic hyperplasia	R765 type 2 diabetes	[illegible]	
R1458 type 2 diabetes	R1164* osteoporosis		
R1065 obesity	R1270 (levovirin) HCV		
R1435 thromboembolism	R1273* solid tumors		collaborations

11 projects or planned for in past 12 months

R1125 stroke	R449 alzheimer's	R404 (G) vascular
R1068 depression /anxiety	R665 COPD	R453 osteoporosis
R640 stroke	R672 leukemia	R643 overactive bladder
R1395 solid tumors	R804 cancer	

* in preparation for phase I

** in preparation for phase II

pipeline status at September 2001

Roche R&D pipeline

..plus 13 'opt-in' projects gives 41 NME's

Roche

Pharmaceuticals

- R944 HIV
- R1067 depression
- R1124 emesis
- R1204 depression /anxiety
- R1487 rheumatoid arthritis
- [redacted] benign prostatic hyperplasia
- R1458 type 2 diabetes
- R1065 obesity
- R1435 thromboembolism
- antifungal (B)

- R411 asthma
- R545 overactive bladder
- R594 rheumatoid arthritis
- R667 emphysema
- R701 overactive bladder
- R765 type 2 diabetes
- R1164* osteoporosis
- R1270 (levovirin) HCV
- R1273* solid tumors
- antibiotic (B)
- migraine (P)
- cardiovascular disease (S)
- macular degeneration (G)
- antitumor* (G)
- acute coronary syndrome* (G)

- R440 (CCI) solid tumors
- R450 [redacted]
- [redacted]
- [redacted] depression /anxiety
- [redacted]
- cephalosporin (B)
- psoriasis (B)
- eczema (B)
- SCLC (N)
- inflamm. bowel disease (G)

- R420 (Pegasys) HCV
- R484 (Bonviva)osteoporosis
- R698 (T-20) HIV
- R1415 (Tarceva) oncology
- Oncology (anti-VEGF) (G)

collaborations

opt-in opportunities

- Basilea (B)
- Genentech (G)
- Novus (N)
- Pozen (P)
- Speedel (S)

* in preparation for phase I
** in preparation for phase II

pipeline status at September 2001

Roche R&D pipeline

..plus 5 Genentech NMEs which Genentech will commercialise alone gives 46 NMEs

Roche

Pharmaceuticals

- R944 HIV
- R1067 depression
- R1124 emesis
- R1204 depression /anxiety
- R1487 rheumatoid arthritis
- R1437 benign prostatic hyperplasia
- R1458 type 2 diabetes
- R1065 obesity
- R1435 thromboembolism
- antifungal (B)

- R411 asthma
- R545 overactive bladder
- R594 rheumatoid arthritis
- R667 emphysema
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- R765 type 2 diabetes
- R1164* osteoporosis
- R1270 (levovirin) HCV
- R1273* solid tumors
- antibiotic (B)
- migraine (P)
- cardiovascular disease (S)
- macular degeneration (G)
- antitumor* (G)
- acute coronary syndrome* (G)

- R440 (CCI) solid tumors
- R650 [illegible]
- R483** [illegible]
- R673** (UK) depression /anxiety
- R744** [illegible]
- [illegible]
- cephalosporin (B)
- psoriasis (B)
- eczema (B)
- SCLC (N)
- Inflamm. bowel disease (G)
- F-26** (G)

- R420 (Pegasys) HCV
- R484 (Bonviva) osteoporosis
- R698 (T-20) HIV
- R1415 (Tarceva) oncology
- Oncology (anti-VEGF) (G)
- Xanelim (G)
- Xolair (G)
- Tracleer (G)
- Thrombopoietin (G)

collaborations

opt-in opportunities

- Basilea (B)
- Genentech (G)
- Novus (N)
- Pozen (P)
- Speedel (S)

Genentech (without Roche opt-in but Roche benefits financially)

* in preparation for phase I

** in preparation for phase II

pipeline status at September 2001

Roche R&D pipeline

46 NME's focused primarily in 7 therapy areas

Roche

Pharmaceuticals

R944 HIV

R1067 depression

R411 asthma

R545 overactive bladder

R420 (Pegasys) HCV

R484 (Bonviva)osteoporosis

(T-20) HIV

(Tarceva) oncology

ology (anti-VEGF) (G)

Xanelim (G)

Xolair (G)

Tracleer (G)

Thrombopoietin (G)

R667
emphysema

R1458 type 2 diabetes

R1065 obesity

R1435 thromboembolism

antifungal (B)

R1270

R1273* solid tumors

antibiotic (B)

migraine (P)

cardiovascular disease (S)

macular degeneration (G)

antitumor* (G)

acute coronary syndrome* (G)

cephalosporin (B)

psoriasis (B)

eczema (B)

SCLC (N)

inflamm. bowel disease (G)

collaborations

opt-in opportunities

Basilea (B)

Genentech (G)

Novus (N)

Pozen (P)

Speedel (S)

Genentech (without Roche opt-in but Roche benefits financially)

* in preparation for phase I

** in preparation for phase II

pipeline status at September 2001

R667 in emphysema

Rebuilding lung tissue / improving lung function

Roche

Pharmaceuticals



- a selective retinoid agonist (RAR-γ)
- first compound able to regenerate lung tissue (in animal studies)
- restores lung function in animal models
- potential to reverse the disease process
- selectivity avoids side effects associated with the retinoids

R667 in emphysema

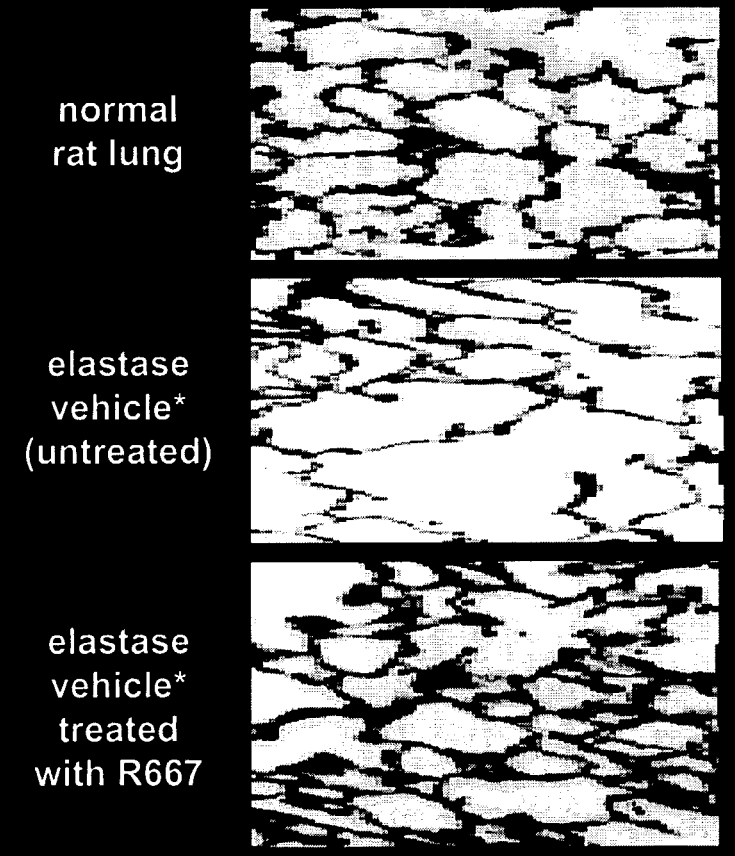
Rebuilding lung tissue / improving lung function

Roche

Pharmaceuticals

phase I

- regeneration of lung tissue
- increases arterial oxygen
- increases total lung capacity
- clean side effect profile
- expected once daily dosing
- phase I completed



* vehicle = disease state model

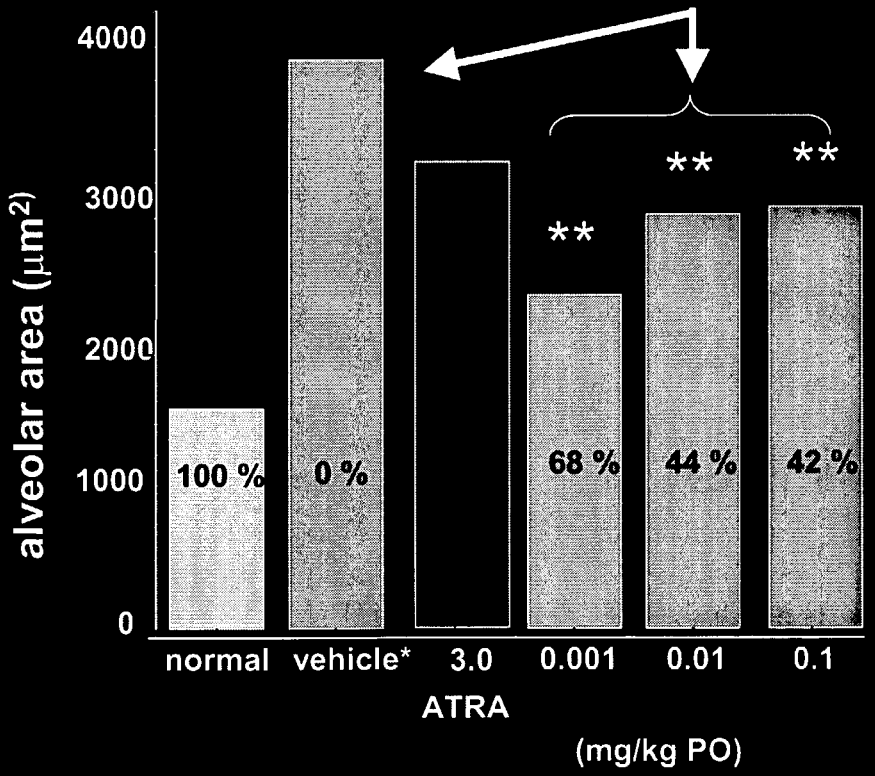
R667 in emphysema

Rebuilding lung tissue / improving lung function

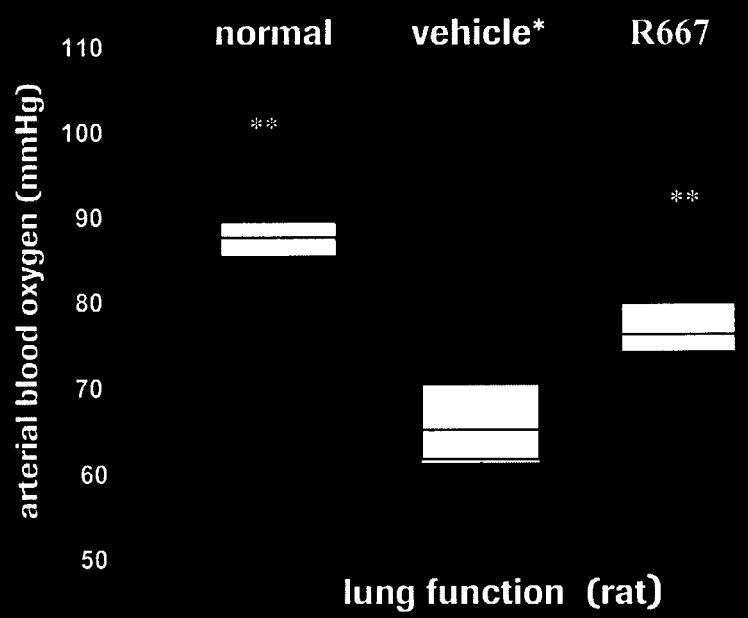
Roche

Pharmaceuticals

lung structure



lung function



* vehicle = disease state model

** statistically significant

Roche R&D pipeline

46 NME's focused primarily in 7 therapy areas

Roche

Pharmaceuticals

R944 HIV

R411 asthma

R420 (Pegasys) HCV

(Bonviva) osteoporosis

(T-20) HIV

(Tarceva) oncology

ology (anti-VEGF) (G)

Xanelim (G)

Xolair (G)

Tracleer (G)

Thrombopoietin (G)

R1437 benign prostatic hyperplasia

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antifungal (B)

R765 type 2 diabetes

R1164* osteoporosis

R1270 (levovirin) HCV

R1273* solid tumors

antibiotic (B)

migraine (P)

cardiovascular disease (S)

macular degeneration (G)

antitumor* (G)

acute coronary syndrome* (G)

cephalosporin (B)

psoriasis (B)

eczema (B)

SCLC (N)

inflamm. bowel disease (G)

collaborations

opt-in opportunities

Basilea (B)

Genentech (G)

Novus (N)

Pozen (P)

Speedel (S)

Genentech (without Roche opt-in but Roche benefits financially)

* in preparation for phase I

** in preparation for phase II

pipeline status at September 2001

R411 in asthma

Novel selective integrin antagonist

Roche

Pharmaceuticals



- selectively targets the underlying disease pathology
- powerful inhibitor of inflammatory cell infiltration
- side effect-free profile in animal studies
- potentially superior safety to inhaled corticosteroids
- better efficacy than the leukotrienes in animal studies
- potential once a day monotherapy for asthma prophylaxis

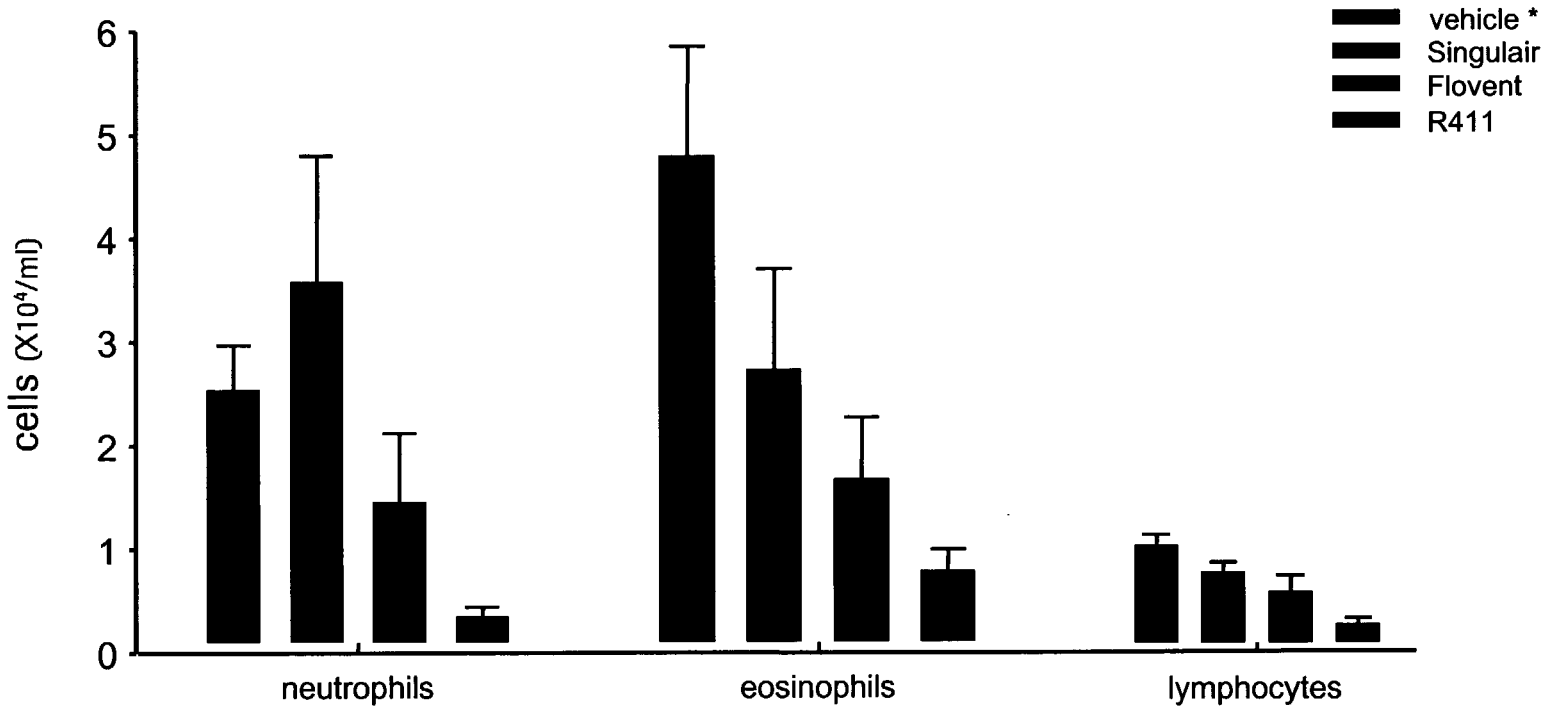
R411 in asthma

Dramatic reduction in inflammatory response in animal studies

Roche

Pharmaceuticals

allergen-induced inflammatory cell influx in the atopic primate



* vehicle = disease state model

Roche R&D pipeline

46 NME's focused primarily in 7 therapy areas

Roche

Pharmaceuticals

R944 HIV

R1067 depressi

R1124 eme

R1204 depression /anxi

R1487 rheumatoid arthri

R1437 benign prostatic hyperplasia

R1458 type 2 diabetes

R1065 obesity

R1435 thromboembolism

antifungal (B)

R411 asthma

rheumatoid arthritis

R765 type 2 diabetes

R1164* osteoporosis

R1270 (levovirin) HCV

R1273* solid tumors

antibiotic (B)

migraine (P)

cardiovascular disease (S)

macular degeneration (G)

antitumor* (G)

acute coronary syndrome* (G)

R420 (Pegasys) HCV

Xanelim (G)

Xolair (G)

Tracleer (G)

Thrombopoietin (G)

cephalosporin (B)

psoriasis (B)

eczema (B)

SCLC (N)

Inflamm. bowel disease (G)

R450 (alpha1 agonist)
stress incontinence

collaborations

opt-in opportunities

Basilea (B)

Genentech (G)

Novus (N)

Pozen (P)

Speedel (S)

Genentech (without Roche opt-in but Roche benefits financially)

* in preparation for phase I

** in preparation for phase II

pipeline status at September 2001

R450 in stress urinary incontinence (SUI)

Potent non-surgical treatment

Roche

Pharmaceuticals



- over 48 million patients in major markets
- no globally approved drug therapy with SUI indication
- high unmet need for a non-surgical treatment
- in preclinical tests, potent effects on bladder outlet muscle tone with minimal cardiovascular effects ("uroselectivity")

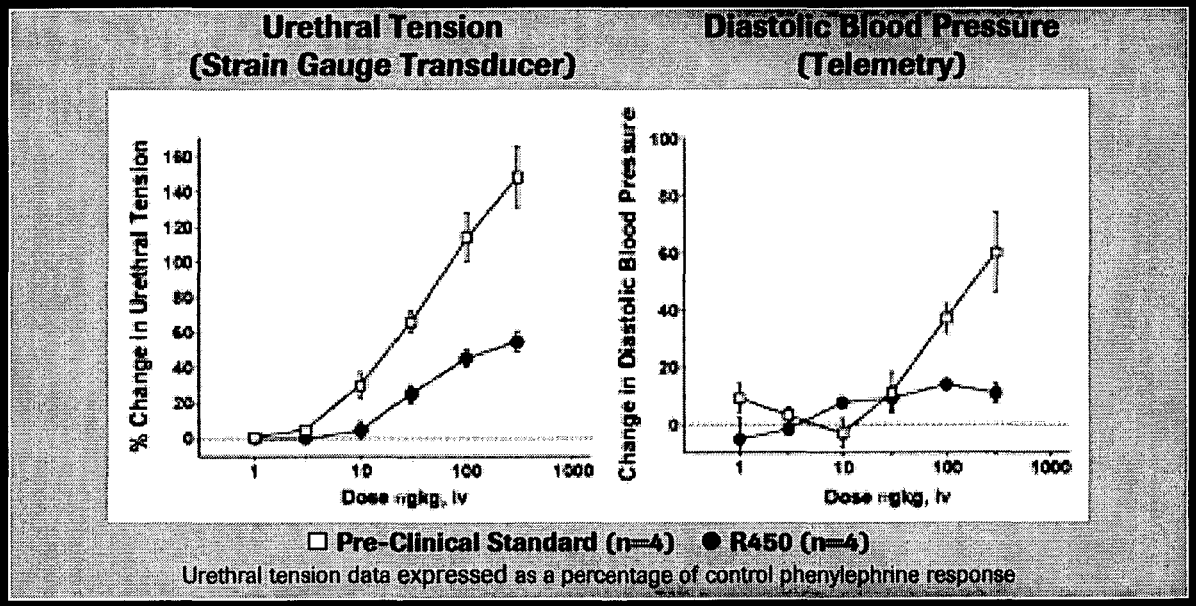
R450 in stress urinary incontinence

Good efficacy and improved safety

Roche

Pharmaceuticals

animal urethra/blood pressure model



phase IIa clinical trial in SUI patients

- significant decrease in incontinent episodes versus placebo
- generally safe and well tolerated
- phase IIb studies have been initiated

Roche R&D pipeline

46 NME's focused primarily in 7 therapy areas

Roche

Pharmaceuticals

R944 HIV

R411 asthma

R420 (Pegasys) HCV

R1067 depression

R1124 em

R1204 depression /an

R1487 rheumatoid arth

R1437 benign prostatic hyperplasia

R1458 type 2 diabetes

R1065 obesity

R1435 thromboembolism

antifungal (B)

R1164* osteoporosis

R1270 (levovirin) HC

R1273* solid tumor

antibiotic (B)

migraine (P)

cardiovascular disease (S)

macular degeneration (G)

antitumor* (G)

acute coronary syndrome* (G)

cephalosporin (B)

psoriasis (B)

eczema (B)

SCLC (N)

Inflamm. bowel disease (G)

E-26** (G)

Xolair (G)

Tracleer (G)

Thrombopoietin (G)

R446 (CCD) solid tumors

collaborations

opt-in opportunities

Basilea (B)

Genentech (G)

Novus (N)

Pozen (P)

Speedel (S)

Genentech (without Roche opt-in but Roche benefits financially)

* in preparation for phase I

** in preparation for phase II

pipeline status at September 2001

R440 (CCI) in oncology

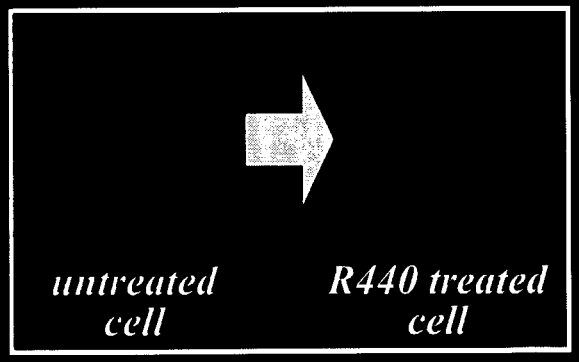
Cell cycle inhibitor for a range of cancers

Roche

Pharmaceuticals

phase II

- novel mechanism
- effective in a range of cancers (pre-clinical data)
- effective in tumors resistant to conventional drugs
- monotherapy or add-on potential
- convenient oral formulation
- well tolerated and safe in phase I studies
- phase II initiated in breast, non-small cell lung and colorectal cancers



R440 (CCI) in oncology

Cell cycle inhibitor for a range of cancers

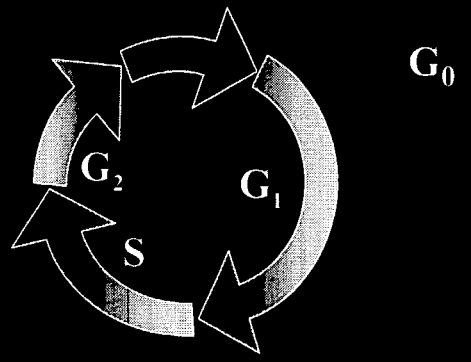
Roche

Pharmaceuticals



Preclinical data

- cell cycle and anti-proliferative activity tested in all tumor cell lines
- anti-tumor activity in 15/16 in vivo tumor models with activities ranging from growth inhibition to regressions and even cures
- active in tumor models resistant to conventional therapy



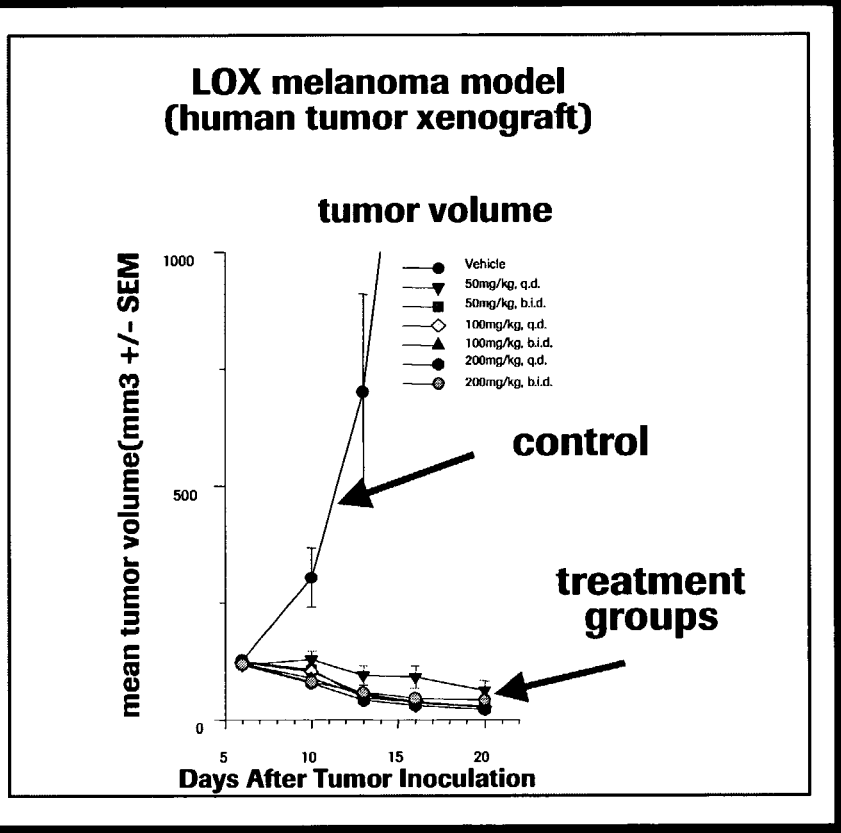
R440 causes cell cycle arrest in M-phase, followed by apoptosis

R440 (CCI) in oncology

Cell cycle inhibitor for a range of cancers

Roche

Pharmaceuticals



- R440 produces antitumor effects ranging from growth inhibition to regressions and cures (depending on the specific model and treatment regimen tested) at well tolerated doses

Roche R&D pipeline

46 NME's focused primarily in 7 therapy areas

Roche

Pharmaceuticals

R944 HIV

R1067 depression

R1124

R1204 depression /a

R1487 rheumatoid a

R1437 benign prostatic hyp

R1458 type 2 diabetes

R1065 obesity

R1435 thromboembolism

antifungal (B)

R411 asthma

R545 overactive bladder

R1270 (levovirin) HCV

R1273* solid tumors

antibiotic (B)

migraine (P)

cardiovascular disease (S)

macular degeneration (G)

antitumor* (G)

acute coronary syndrome* (G)

R440 (CCD) solid tumors

R450 (alpha-fetoprotein)

cephalosporin (B)

psoriasis (B)

eczema (B)

SCLC (N)

Inflamm. bowel disease (G)

R420 (Pegasys) HCV

R484 (Bonviva) osteoporosis

HIV

(G)

Tracleer (G)

Thrombopoietin (G)

R483 (insulin sensitizer) type 2 diabetes

collaborations

opt-in opportunities

Basilea (B)

Genentech (G)

Novus (N)

Pozen (P)

Speedel (S)

Genentech (without Roche opt-in but Roche benefits financially)

* in preparation for phase I

** in preparation for phase II

pipeline status at September 2001

R483 in type 2 diabetes

Roche

Pharmaceuticals



- **the insulin sensitizer with dual effect**
  - significant increase in insulin sensitivity
  - significant inhibition of endogenous glucose production
- **best in class insulin sensitizer**
  - target profile is for superior efficacy in glycemic control and/or improved tolerability compared with other insulin sensitizers

** in preparation for phase II

R483 in type 2 diabetes

Roche

Pharmaceuticals



pre-clinical highlights

- the strongest activation of PPARγ receptors compared to competitive compounds
- the maximum improvement of insulin sensitivity and inhibition of glucose production in clamp studies (dual effect), compared to other insulin sensitizers

phase I study in diabetic patients highlights

- significant increase in insulin sensitivity
- significant improvement of post-prandial glucose (OGTT)
- dose-dependent decrease in fasting glucose
- very good tolerability

** in preparation for phase II

Roche R&D pipeline

46 NME's focused primarily in 7 therapy areas

Roche

Pharmaceuticals

R944 HIV

R1067

R1124

R1204 depressio

R1487 rheumato

R1437 benign prostatic hyperplasia

R1458 type 2 diabetes

R1065 obesity

R1435 thromboembolism

antifungal (B)

R411 asthma

R1164* osteoporosis

R1270 (levovirin) HCV

R1273* spd tumors

antibiotic (B)

migraine (P)

cardiovascular disease (S)

macular degeneration (G)

antitumor* (G)

acute coronary syndrome* (G)

cephalosporin (B)

psoriasis (B)

eczema (B)

SCLC (N)

inflamm. bowel disease (G)

R620 (Pegasys) HCV

eoporosis

-20) HIV

oncology

GF) (G)

Xolair (G)

Tracleer (G)

Thrombopoletin (G)

R673 (NK1)
depression/anxiety

collaborations

opt-in opportunities

Basilea (B)

Genentech (G)

Novus (N)

Pozen (P)

Speedel (S)

Genentech (without Roche opt-in but Roche benefits financially)

* in preparation for phase I

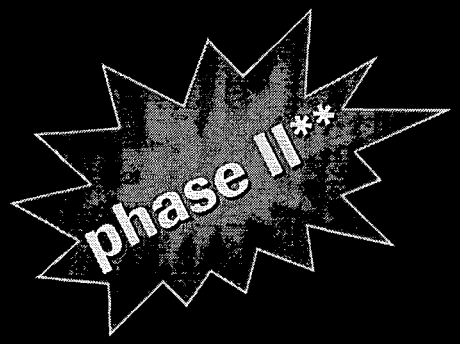
** in preparation for phase II

pipeline status at September 2001

R673 in depression and anxiety

Roche

Pharmaceuticals



- R673 is expected to have improved tolerability compared to SSRI's and superior CNS bioavailability to identified competitor compounds
- excellent brain penetration can be shown functionally in animals and man
- no drug/drug interactions or safety issues identified to date
- compound well tolerated in man

** in preparation for phase II

R673 in depression and anxiety

Positron emission tomography

Roche

Pharmaceuticals



baseline binding

background binding

increasing dose

Roche R&D pipeline

Just 6 of the 46 NME's under development

Roche

Pharmaceuticals

- R944 HIV
- R1067 depression
- R1124 emesis
- R1204 depression /anxiety
- R1487 rheumatoid arthritis
- R1437 benign prostatic hyperplasia
- R1458 type 2 diabetes
- R1065 obesity
- R1435 thromboembolism
- antifungal (B)

- R545 overactive bladder
- R594 rheumatoid arthritis
- R701 overactive bladder
- R765 type 2 diabetes
- R1164* osteoporosis
- R1270 (Ievovirin) HCV
- R1273* solid tumors
- antibiotic (B)
- migraine (P)
- cardiovascular disease (S)
- macular degeneration (G)
- antitumor* (G)
- acute coronary syndrome* (G)

- cephalosporin (B)
- psoriasis (B)
- eczema (B)
- SCLC (N)
- inflamm. bowel disease (G)

- R420 (Pegasys) HCV
- R484 (Bonviva)osteoporosis
- R698 (T-20) HIV
- (Tarceva) oncology
- Oncology (anti-VEGF) (G)
- Xanelim (G)
- Xolair (G)
- Tracleer (G)
- Thrombopoletin (G)

collaborations

opt-in opportunities

- Basilea (B)
- Genentech (G)
- Novus (N)
- Pozen (P)
- Speedel (S)

Genentech (without Roche opt-in but Roche benefits financially)

* in preparation for phase I
** in preparation for phase II

pipeline status at September 2001

Roche R&D pipeline

Summary

Roche

Pharmaceuticals

- substantial investments in process re-engineering and research technologies
- world class capability in research and development
- research investments beginning to bear fruit
- a pipeline of quantity and quality

Roche

Pharmaceuticals Division at Q3 2001

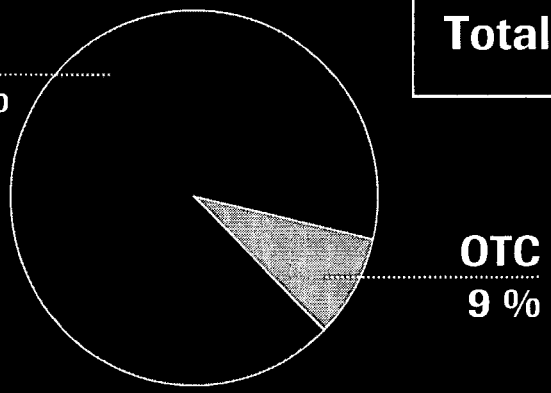
Pharmaceuticals sales at Q3 2001

Stronger performance continues

Roche

Pharmaceuticals

	Q3 2001 CHF m	Q3 2000 CHF m	growth in local currencies
prescription medicines *	12,577	11,825	8 %
'over the counter' medicines	1,230	1,240	1 %
Total	13,807	13,065	7 %



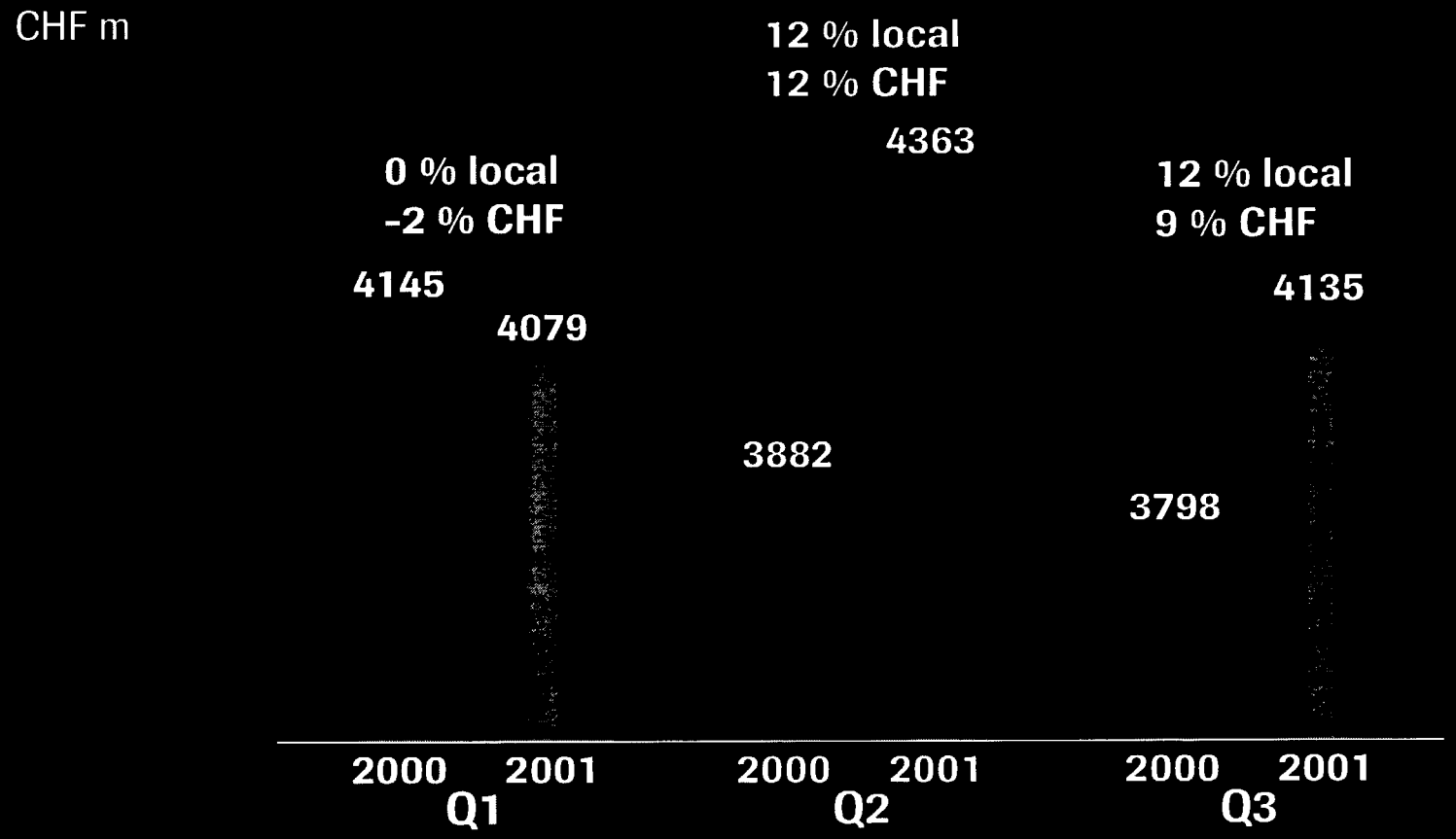
* Roche and Genentech combined

Prescription medicines* quarterly growth in 2001

Good growth returns in Q2 and Q3

Roche

Pharmaceuticals



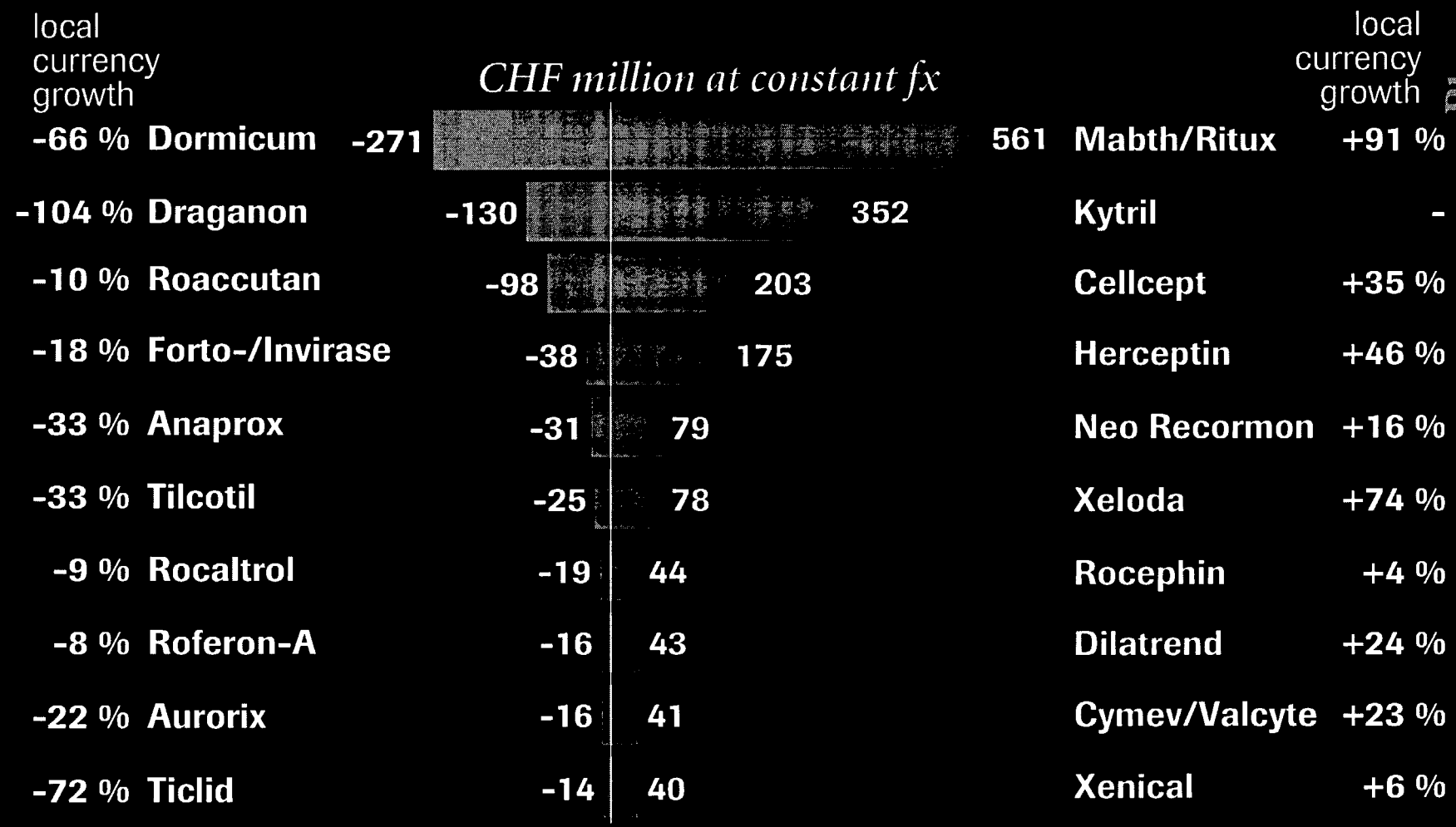
* Roche and Genentech combined

Prescription medicines* sales at Q3 2001

Positives overcome losses of Dormicum and Draganon

Roche

Pharmaceuticals



* Roche and Genentech combined

Prescription medicines sales* at Q3 2001

Five products with annual sales ⩾CHF 1 billion

Roche

Pharmaceuticals

Rocephin	1,281	3 %	4 %
Mabthera/Rituxan	1,185	93 %	91 %
Roaccutane	846	-10 %	-10 %
CellCept	784	35 %	35 %
Xenical	747	4 %	6 %
Herceptin	560	46 %	46 %
NeoRecormon	545	13 %	16 %
Kytril	343	-	-
Viracept	333	-5 %	-3 %
Nutropin/Protropin	325	14 %	12 %
Activase/TNKase	284	-1 %	-2 %
Pulmozyme	238	9 %	9 %
Neupogen	234	3 %	4 %
Cymevene/Valcyte	222	23 %	23 %
Furtulon	218	-10 %	0 %
Dilatrend	212	20 %	24 %
Lexotan	206	-5 %	-3 %
Xeloda	184	74 %	74 %
Madopar	184	0 %	3 %
Rocaltrol	182	-13 %	-9 %

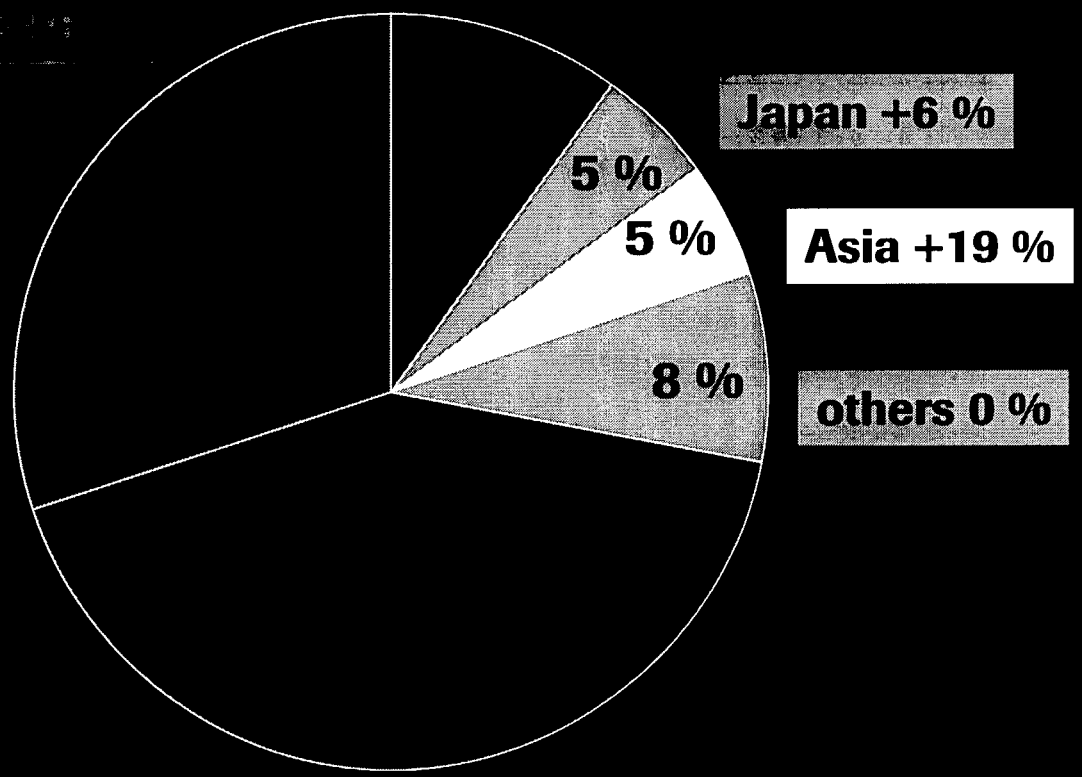
* Roche and Genentech combined

Prescription medicines sales* by region at Q3 2001

North America returns to growth

Roche

Pharmaceuticals



* Roche and Genentech combined

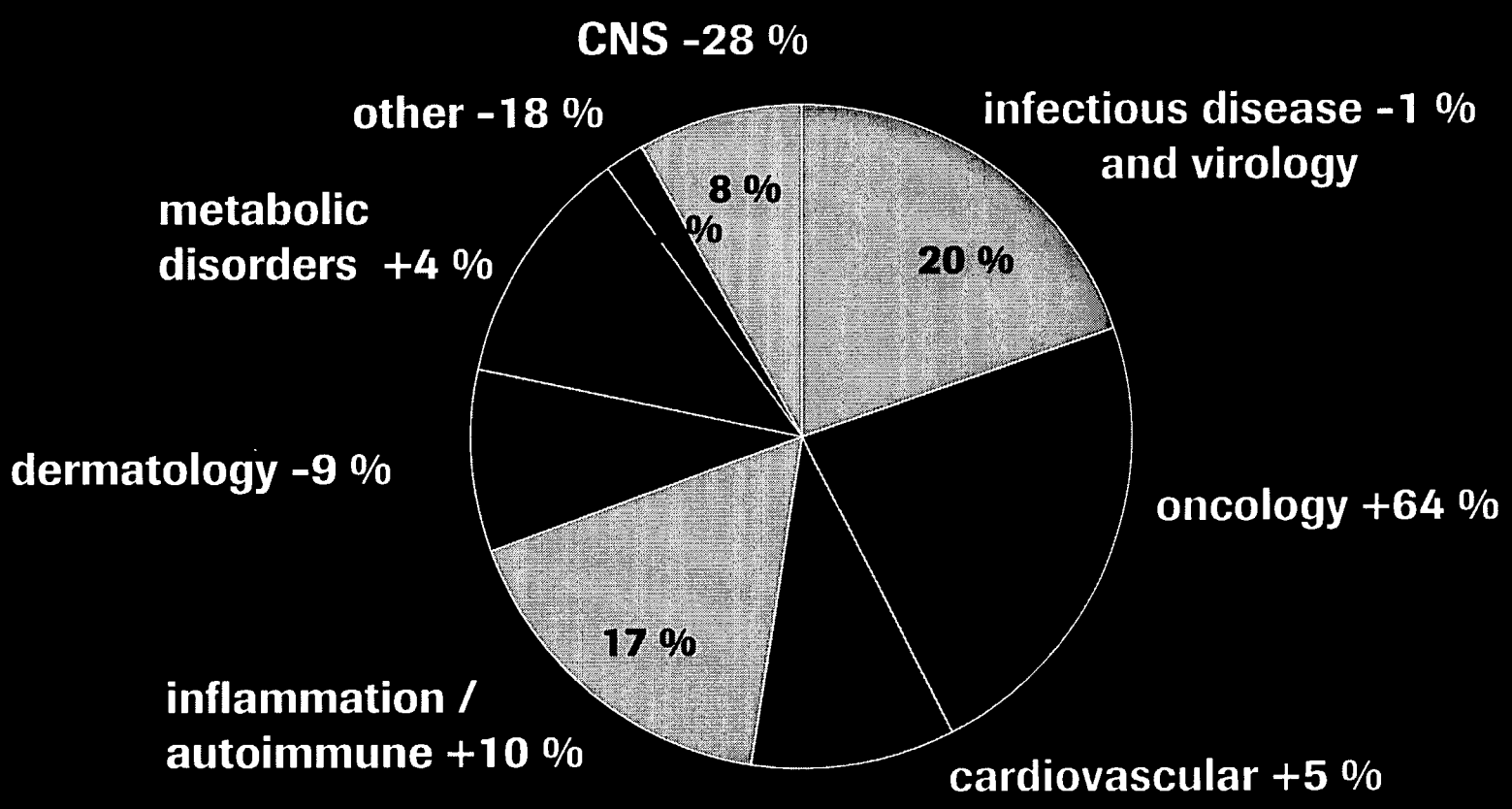
all growth rates in local currencies

Prescription medicines sales* by therapy area at Q3 2001

Future growth areas: oncology, virology, metabolic disorders, inflammation/autoimmune

Roche

Pharmaceuticals



* Roche and Genentech combined

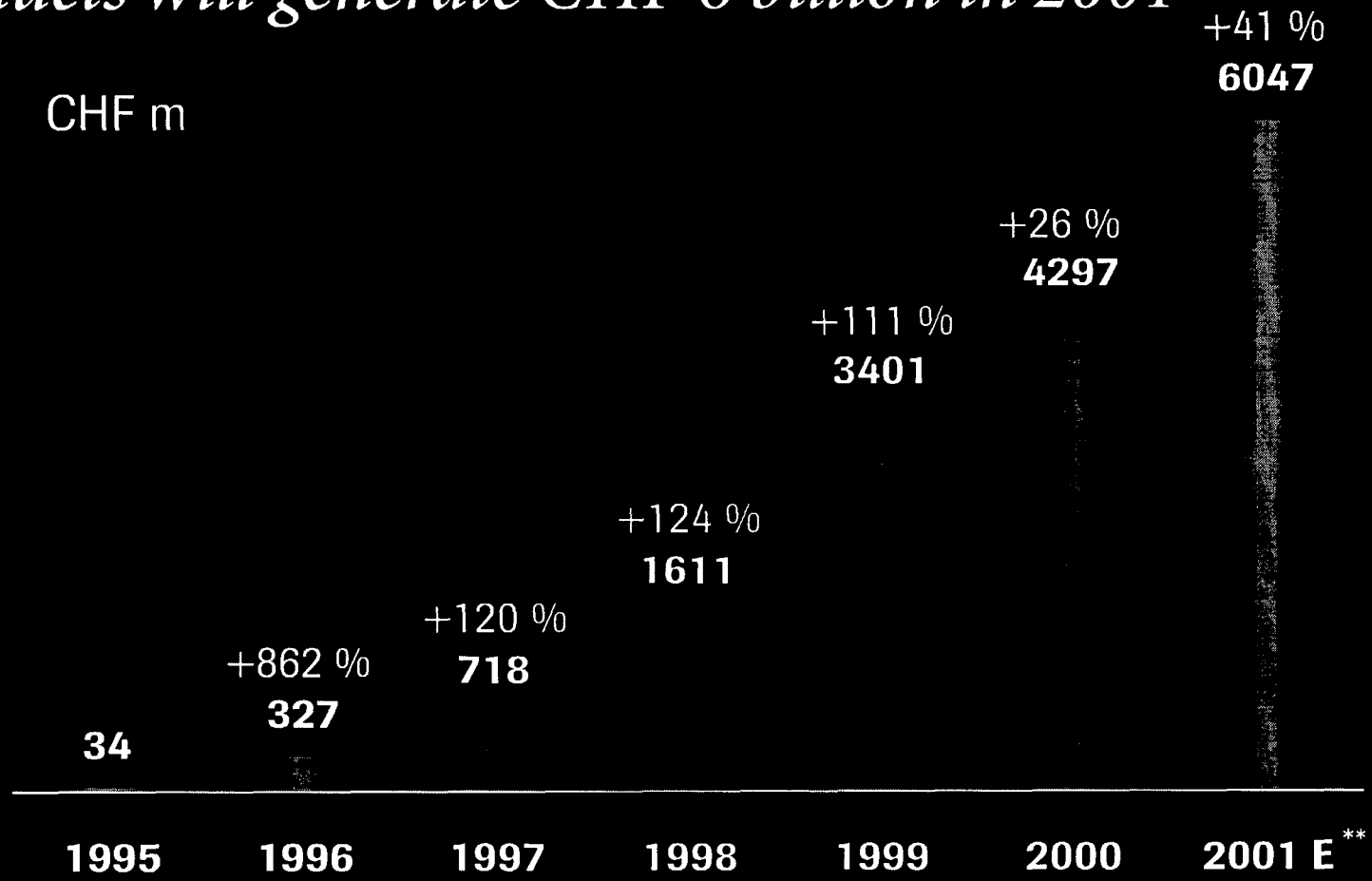
all growth figures are in local currencies

New prescription medicine* sales and growth since 1995

15 products will generate CHF 6 billion in 2001

Roche

Pharmaceuticals



* Roche and Genentech

** Roche and analyst estimates

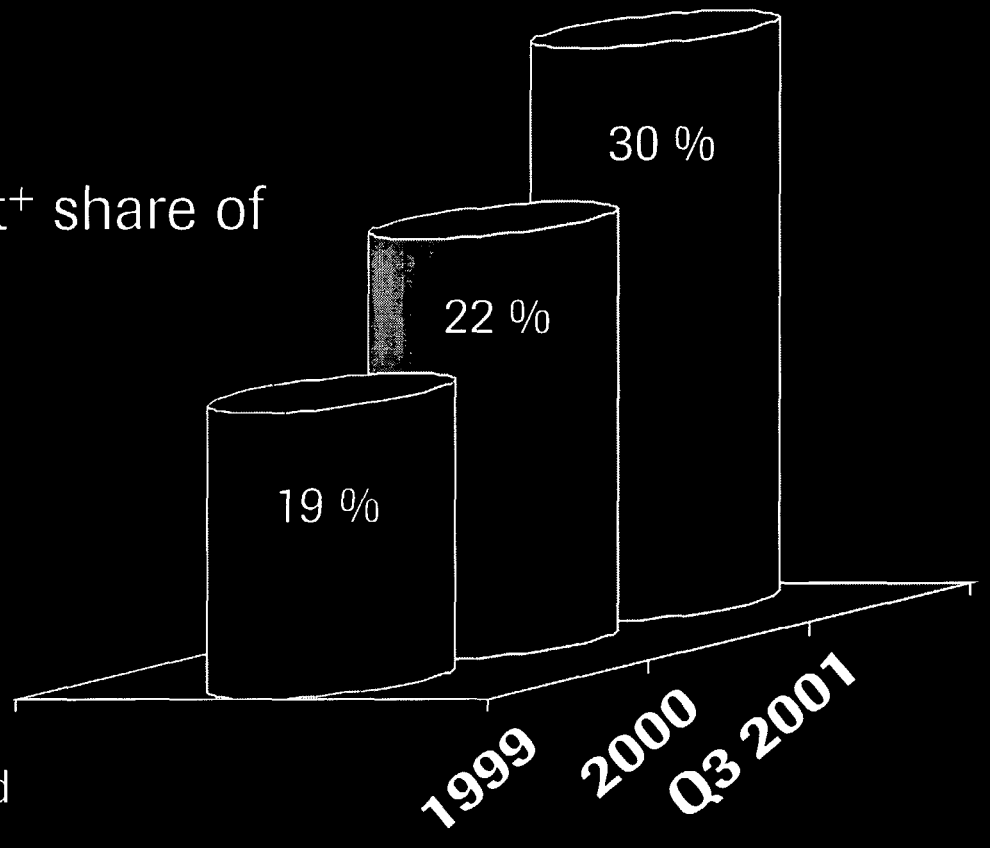
Prescription medicines sales* at Q3 2001

Growing importance of new products+

Roche

Pharmaceuticals

new product+ share of total sales



* Roche and Genentech combined

\+ launched in last five years

'Reshaping For Future Growth'

Roche

Pharmaceuticals

- align resources to attain/retain leadership in priority disease areas
- realise organic growth potential, together with potential strategic moves, to return Division's sales growth to market growth rates or above
- re-shape cost structure to improve operating profit margin to 20-25 % of sales

'Reshaping For Future Growth'

Leaner and fitter

Roche

Pharmaceuticals

	Roche Pharma 2000	Roche Pharma 2004	pharma industry average
cost of goods/sales	21 %	19 %	22.5 %
marketing and distribution/sales	35 %	32 %	33 %
research and development/sales	18 %	17 %	15 %

'Reshaping For Future Growth'

Roche

Pharmaceuticals

Production rationalize site network to reduce over-capacity
- ⇩ manufacturing to be phased out in Welwyn (UK) and chemical production to be reduced in Basel (CH)

Marketing align resources to current product portfolio, particularly in the USA, and greater emphasis on cost-effectiveness
- ⇩ sales force reduced by 500 people to around 2000 representatives in USA

Research concentrate research operations in fewer sites
- ⇩ research at Welwyn (UK) to be closed and projects transferred to Palo Alto

Clinical Development concentrate development operations in fewer number of sites
- ⇩ development at Palo Alto (USA) to be closed and projects transferred to other sites

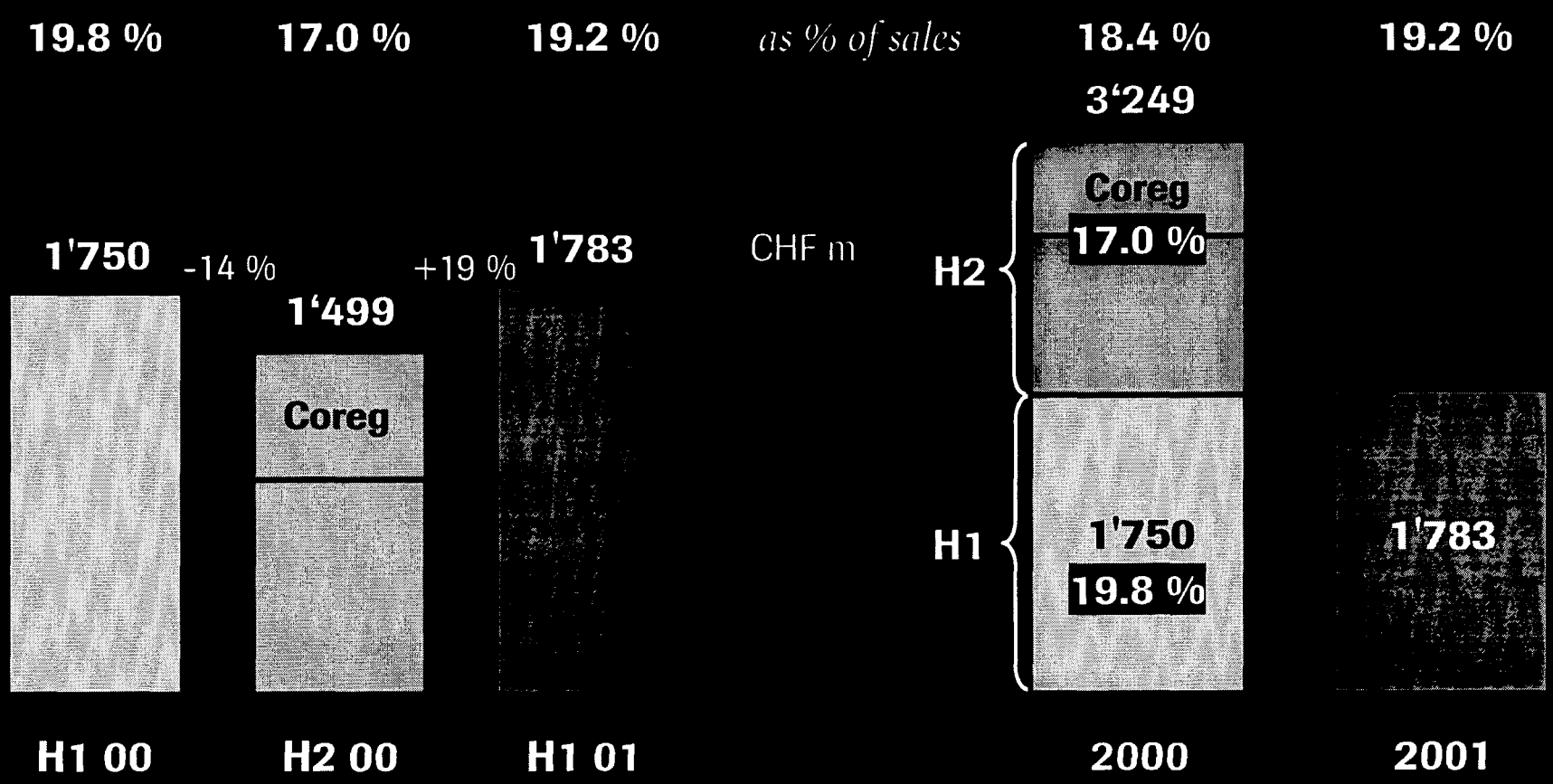
Business Development business development, licensing and alliance activities across Roche Rx pharmaceuticals brought together into one new strengthened function

Pharmaceuticals operating profit H1 2000 to H1 2001 (adjusted)

Profitability maintained

Roche

Pharmaceuticals



Roche oncology going forward

Roche

Pharmaceuticals



- continued launch roll-out in Europe and Japan
- expand market through increased HER2 testing
- initiate adjuvant breast cancer study



- continued launch roll-out in Europe
- Japan launched in September 2001
- pursue first line position for intermediate / high grade NHL in combination with CHOP
- pursue first line position for low grade NHL in combination with CVP

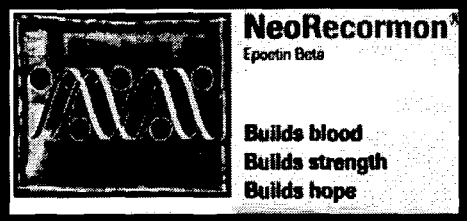


- roll-out of first line indication in metastatic colorectal cancer in Europe and USA
- approval of Xeloda / docetaxel combination in first / second line therapy for metastatic breast cancer achieved in H2 2001 in USA, and expected in 2002 in Europe

Roche oncology going forward

Roche

Pharmaceuticals



- roll-out of new oncology indication (anemia associated with haematological tumours) throughout Europe and smaller markets
- approval for once weekly administration in September 2001 in Europe
- strengthened patent situation after agreement reached between Roche, Genetics Institute, J&J and Amgen
- next generation EPO to progress to phase II



- re-launch in major markets ongoing
- marketing support justified by superior profile
- NDA filing in USA for post-operative nausea and vomiting (PONV) in H2 2001



- phase III results in bone metastases in breast cancer to be discussed with US and EU authorities, with aim of filing NDA in 2002

Tarceva (OSI 774)

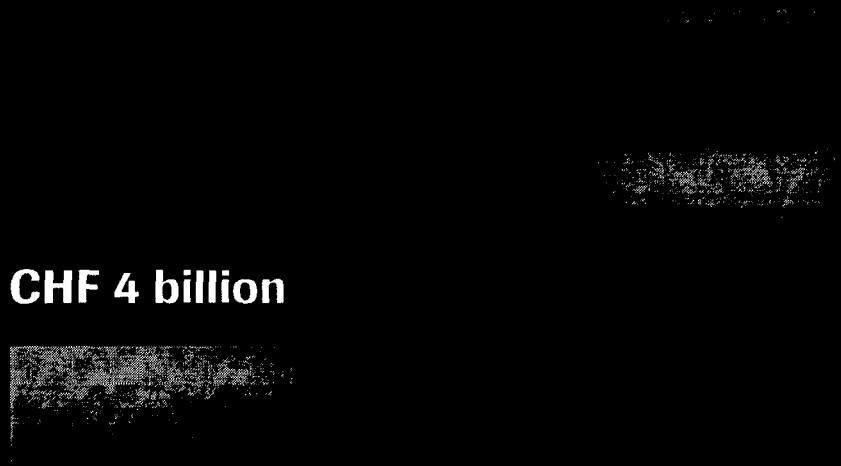
- positive phase II data in ovarian cancer, NSLC, head and neck cancer presented at ASCO
- now in phase III

Roche* sales expectations** in oncology

Our principal growth driver

Roche

Pharmaceuticals



* Roche and Genentech combined

** Roche and analyst estimates

CellCept

Building the next cornerstone of immuno-suppressive therapy

Roche

Pharmaceuticals

- launch roll-out of liver transplant indication
- launch roll-out of paediatric renal transplant indication
- launch roll-out of renal rejection prevention indication in Japan
- data supporting CellCept as cornerstone of immuno-suppressive regimens
- further demonstration of improved long term patient and graft survival

CellCept®

Building the next cornerstone of immuno-suppressive therapy

Roche

Pharmaceuticals



* Roche estimates

XENICAL® orlistat
Lose Weight. Gain Life

Returning to growth

Roche

Pharmaceuticals

Strategy

- focus activities on target doctors
- increase duration of therapy and patient satisfaction
- launch type 2 diabetes indication

Sales beginning to respond

- sales growth: +6 % at Q3 2001 v. -4 % in 2000

XENICAL® orlistat
Lose Weight. Gain Life

Returning to growth

Roche

Pharmaceuticals



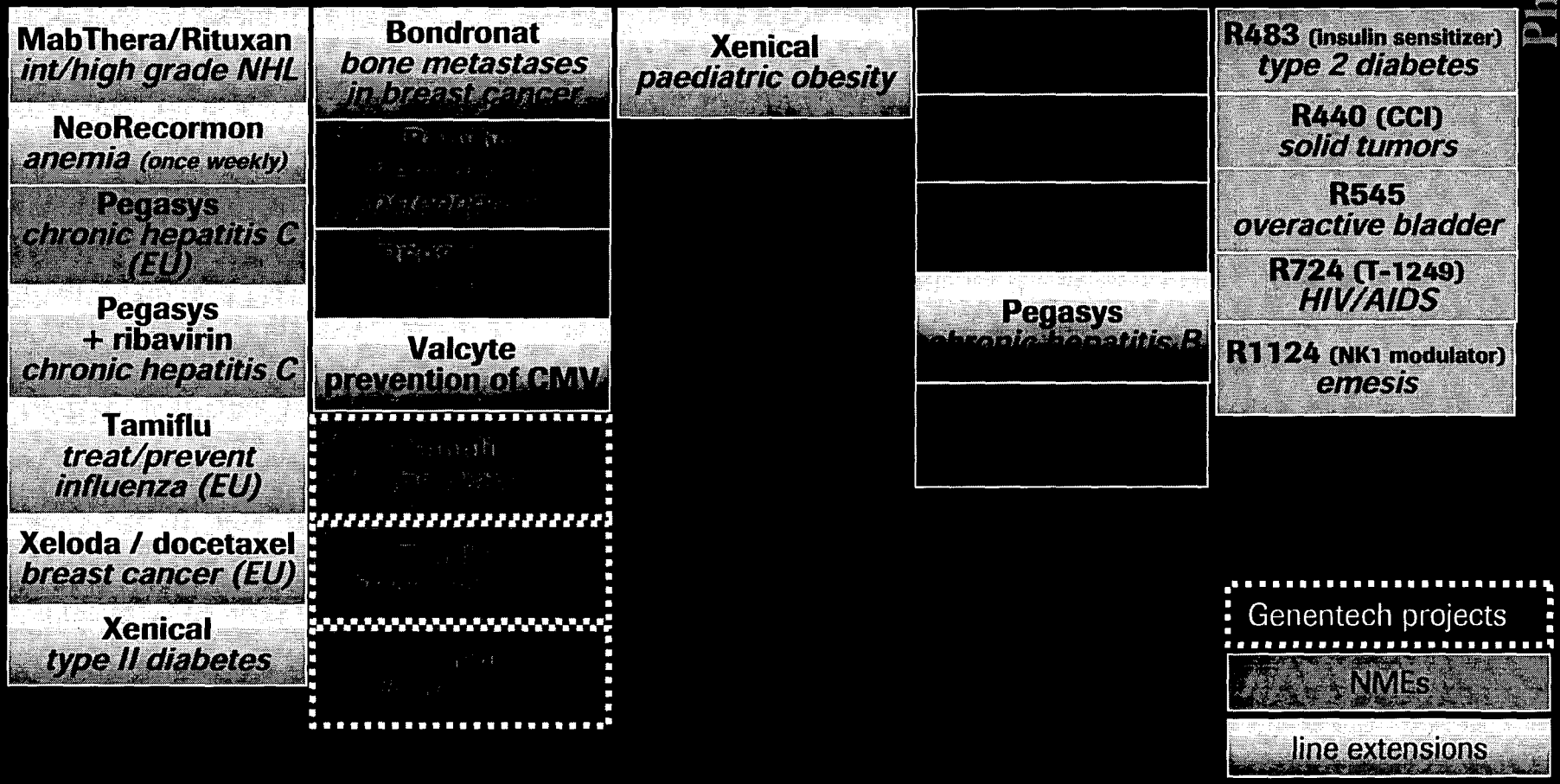
* Roche estimates

Expected first NDA filing dates

15 NME's over next five years

Roche

Pharmaceuticals



status at September 2001

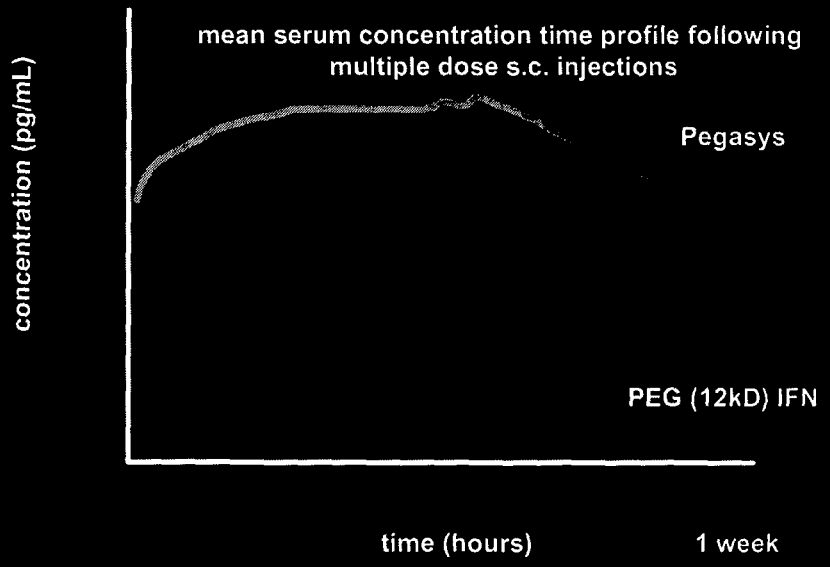
NME = new molecular entity

PEGASYS

Superior kinetics suggest superior efficacy

Roche

Pharmaceuticals



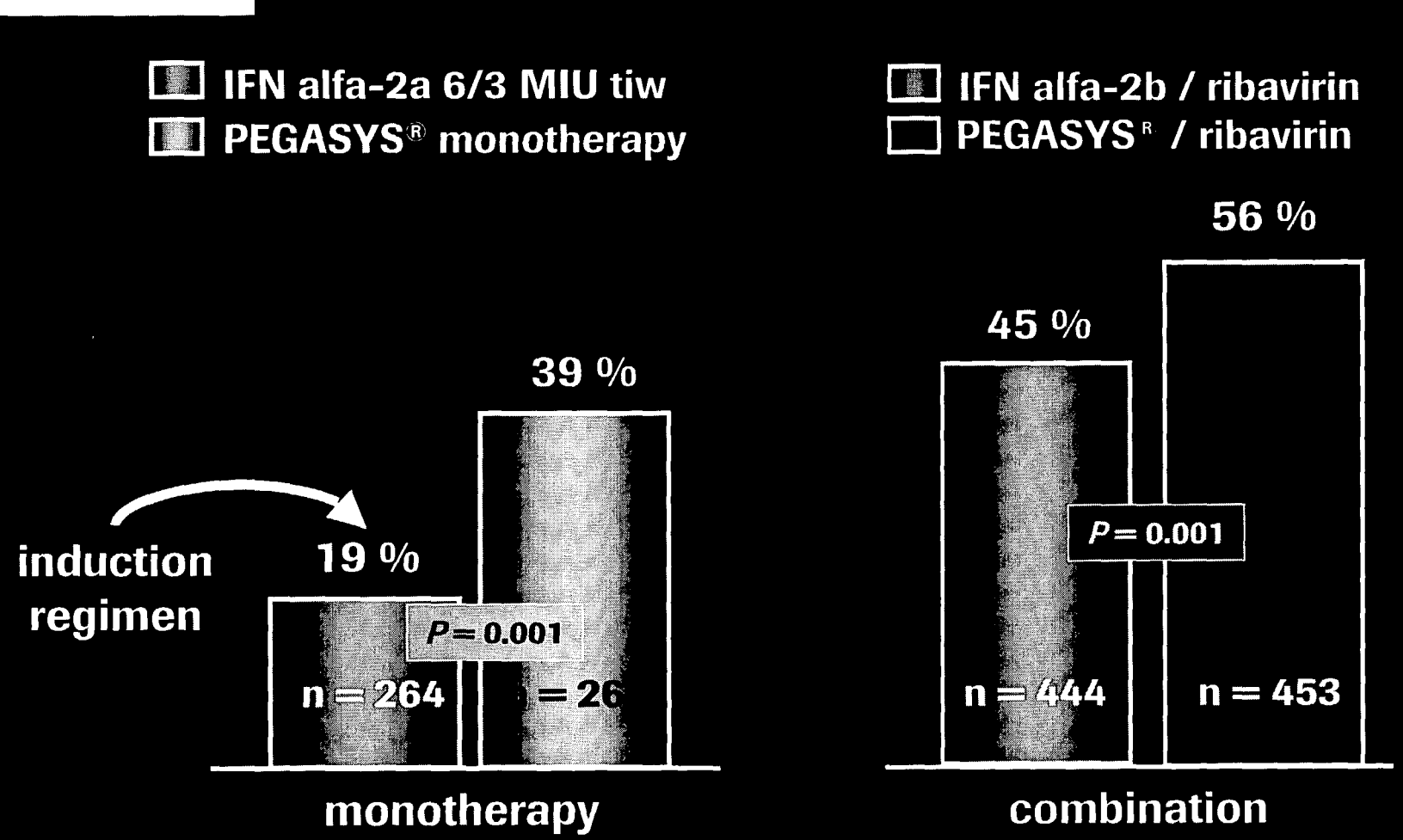


PEGASYS

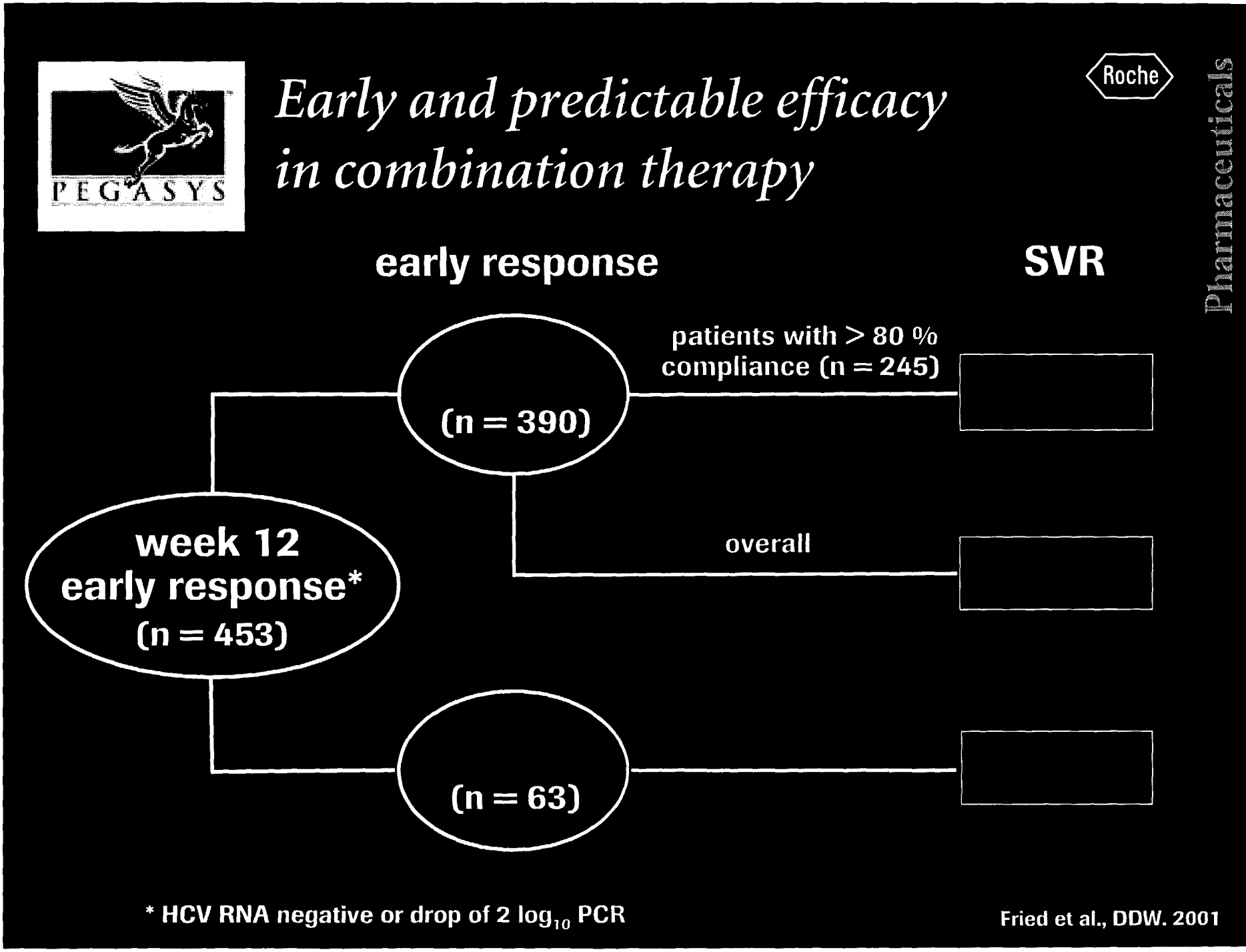
Unsurpassed efficacy in mono- and combination therapy

Roche

Pharmaceuticals



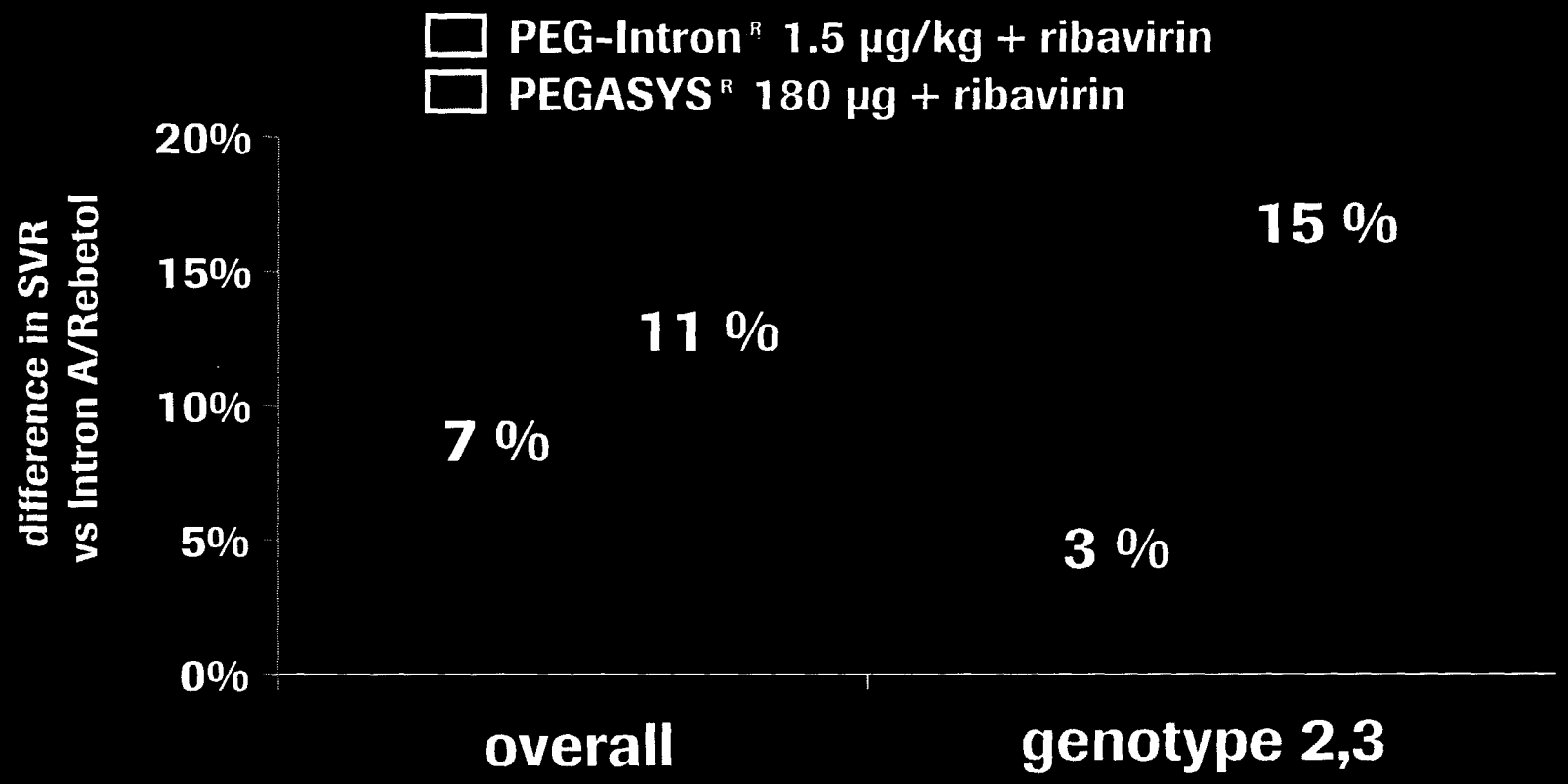
Zeuzem S et al., *N Engl J Med.* 2000;343:1666-1672
Fried et al., DDW. 2001


PEGASYS
Early and predictable efficacy in combination therapy
Roche
Pharmaceuticals
early response
SVR
patients with > 80 % compliance (n = 245)
(n = 390)
overall
week 12 early response*
(n = 453)
(n = 63)
* HCV RNA negative or drop of 2 log10 PCR
Fried et al., DDW. 2001

Superior improvement over current standard therapy

Roche

Pharmaceuticals



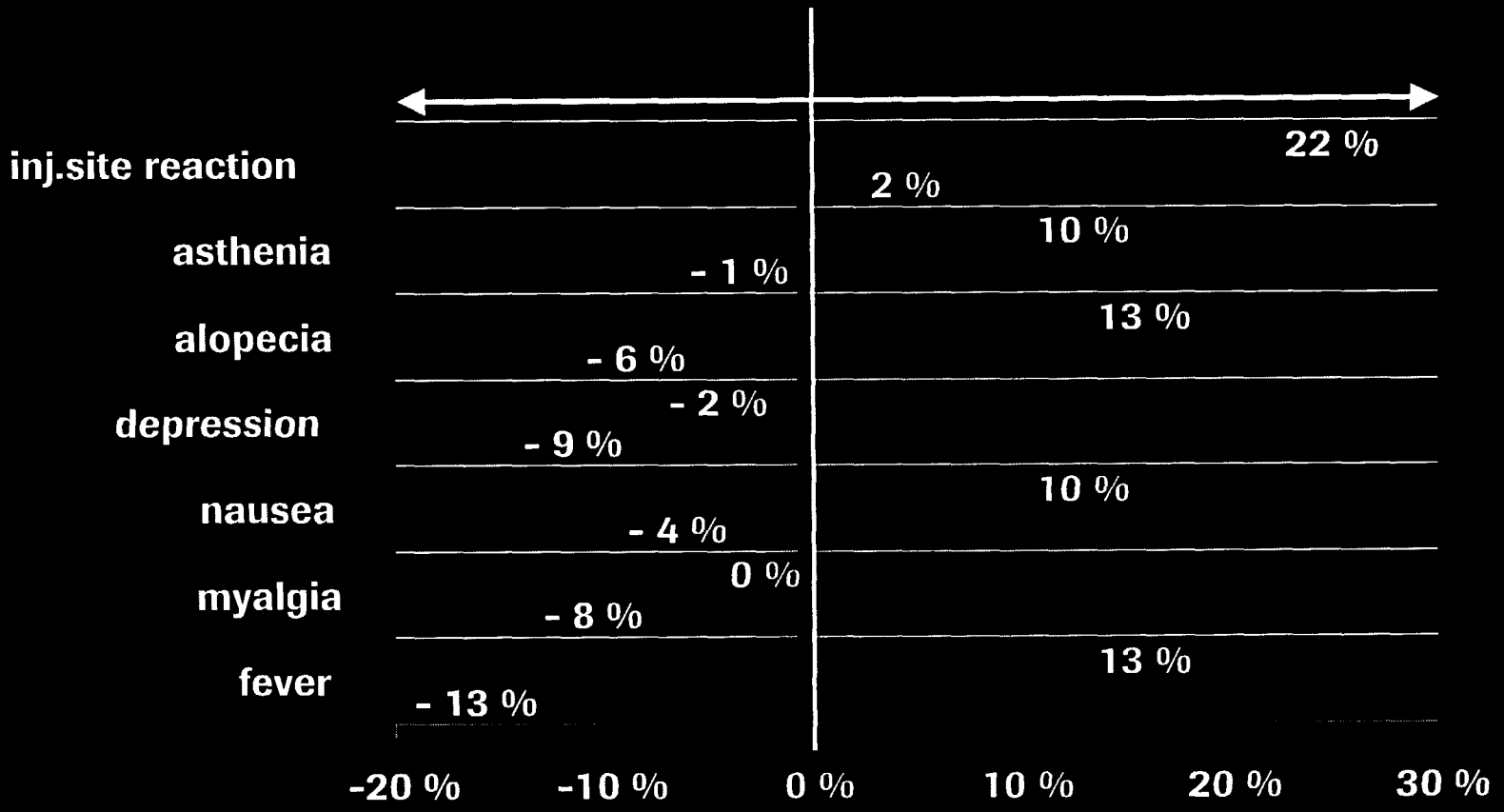
The comparator was the same in both studies:
Rebetron (3 MIU Intron-A tiw + Rebetol 1-1,2g)

Fried et al., *DDW* 2001
Manns et al., *AASLD* 2000

Better tolerated than PEG-Intron®

Roche

Pharmaceuticals



☐ PEG-Intron® 0.5 µg/kg + ribavirin

☐ PEGASYS® 180 µg + ribavirin

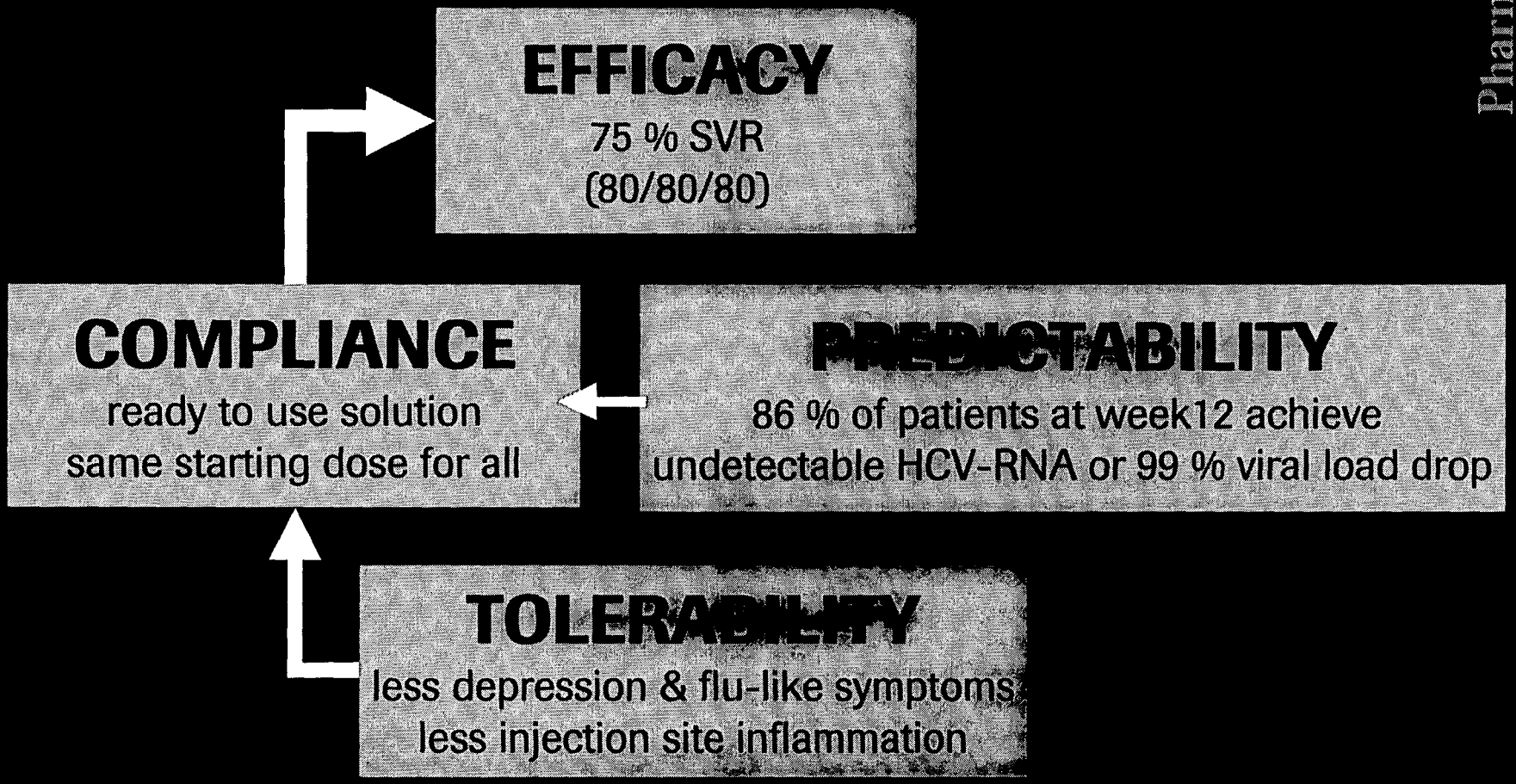
Fried et al., *DDW* 2001
Manns et al., *AASLD* 2000

Pegasys and ribavirin combination[1].

A success cycle

Roche

Pharmaceuticals



[1]. Pegasys + ribavirin combination data (phase 3) in chronic hepatitis C presented at Digestive Disease Week, 22 May 2001



Roche

Pharmaceuticals

Hep C interferon market potential in 2006* (CHF)		Pegasys approval expected
US	1.7 billion	H2 2002
Europe	0.8 billion	mid-year 2002
Latin America	0.2 billion	Q4 2001
Japan	0.2 billion	H2 2002
RoW	0.7 billion	Q3 2001
Total	3.6 billion	

* Roche estimates

HIV fusion inhibitors

A revolutionary approach to HIV infection

Roche

Pharmaceuticals

- first agent clinically developed to act by stopping virus entering the human cell
- good safety profile demonstrated and anti-viral activity confirmed (phase 2 data)
- good activity demonstrated in drug-resistant viruses
- phase 3 studies now recruiting → study completion expected H1 2002

- highly potent antiviral activity demonstrated
- phase 2 to run through 2002

Bonviva

Strong evidence from new osteoporosis data

Roche

Pharmaceuticals

Major phase 3 treatment trial recently completed: promising results with both daily and intermittent oral regimens. Data to be presented in 2002

High potency of ibandronate and new data provides foundation for development of innovative oral and intravenous intermittent regimens

Regulatory strategy and complementary programmes currently being discussed with health authorities

NDA filing of oral formulation for treatment and prevention of post menopausal osteoporosis planned for early 2002

Further development of oral and iv formulations to address unmet needs in osteoporosis planned

Clinical news expected

Roche

Pharmaceuticals

2001

September

FIT study (influenza prophylaxis in families) at ICAAC

October

Xeloda/docetaxel phase III survival data in breast cancer,
Xeloda/oxaliplatin and Xeloda/irinotecan phase II data, at ECCO

November

phase 3 data (48 weeks therapy) at AASLD
'Creeping Creatinine' trial (interim results) at ESOT

December

first line therapy in aggressive NHL in combination with CHOP at ASH

2002

phase 3 results of oral formulation in metastatic bone disease
phase 3 results of oral formulation in osteoporosis
effects of adrenergic blockade on CHF at ACC
'Creeping Creatinine' trial (final results) at AST
once weekly dosing in oncology
phase 3 results

Prescription medicines strategy

Focus for growth

Roche

Pharmaceuticals

Roche

- oncology
- metabolic diseases
- virology
- inflammatory diseases
- genito-urinary diseases
- central nervous system
- peripheral vascular diseases

Genentech, Inc. 25 YEARS

- oncology
- cardiovascular

Recent business development deals

Roche

Pharmaceuticals

year	partner	product/project	therapy area	deal
2001	ICN	levovirin	virology	in-license
2001	OSI/Genentech	Tarceva	oncology	in-license and co-development/marketing
2001	Genemab	MAB	oncology	in-license
2000	Vernalis	NME	obesity	in-license
2000	Morphosys	MAB	CNS	in-license
2000	GlaxoSmithKline	Kytril	oncology	acquisition
1999	Trimeris	T-20 & T-1249	virology	in-license
1999	DeCode	disease gene identification	various	intellectual property access

NME = new molecular entity
MAB = monoclonal antibody

Global Business Development, Licensing and Alliances

One organisation, four processes

Roche

Pharmaceuticals

- one global structure to encompass entire range of deals

- want, find, get, manage

Pharmaceuticals Division outlook

Near term expectations

Roche

Pharmaceuticals

- good single-digit sales growth in 2001
- continued double-digit sales growth for: Mabthera/Rituxan, Herceptin, Xeloda, CellCept, Dilatrend
- single-digit sales growth for Xenical, NeoRecormon
- slow decline: Roaccutane
- flu-dependent: Tamiflu
- operating margin to improve to 20-25 % of sales in next two to three years

Pharmaceuticals Division

Summary (1)

Roche

Pharmaceuticals

- Stronger second and third quarters produce improving sales performance
  - five prescription medicines with annual sales of more than CHF 1 billion
  - North America sales return to growth
  - Xenical returns to growth

- 'Reshaping for the Future' is rolling out
  - aligning resources to maximise growth and achieve leadership in priority areas
  - improving the operating margin to 20-25 % of sales
  - business development, licensing and alliances capability strengthened
  - principal actions identified and many already implemented

- In USA
  - Roche Rx is restructured and focused for growth
  - Genentech continues to grow strongly

Pharmaceuticals Division

Summary (2)

Roche

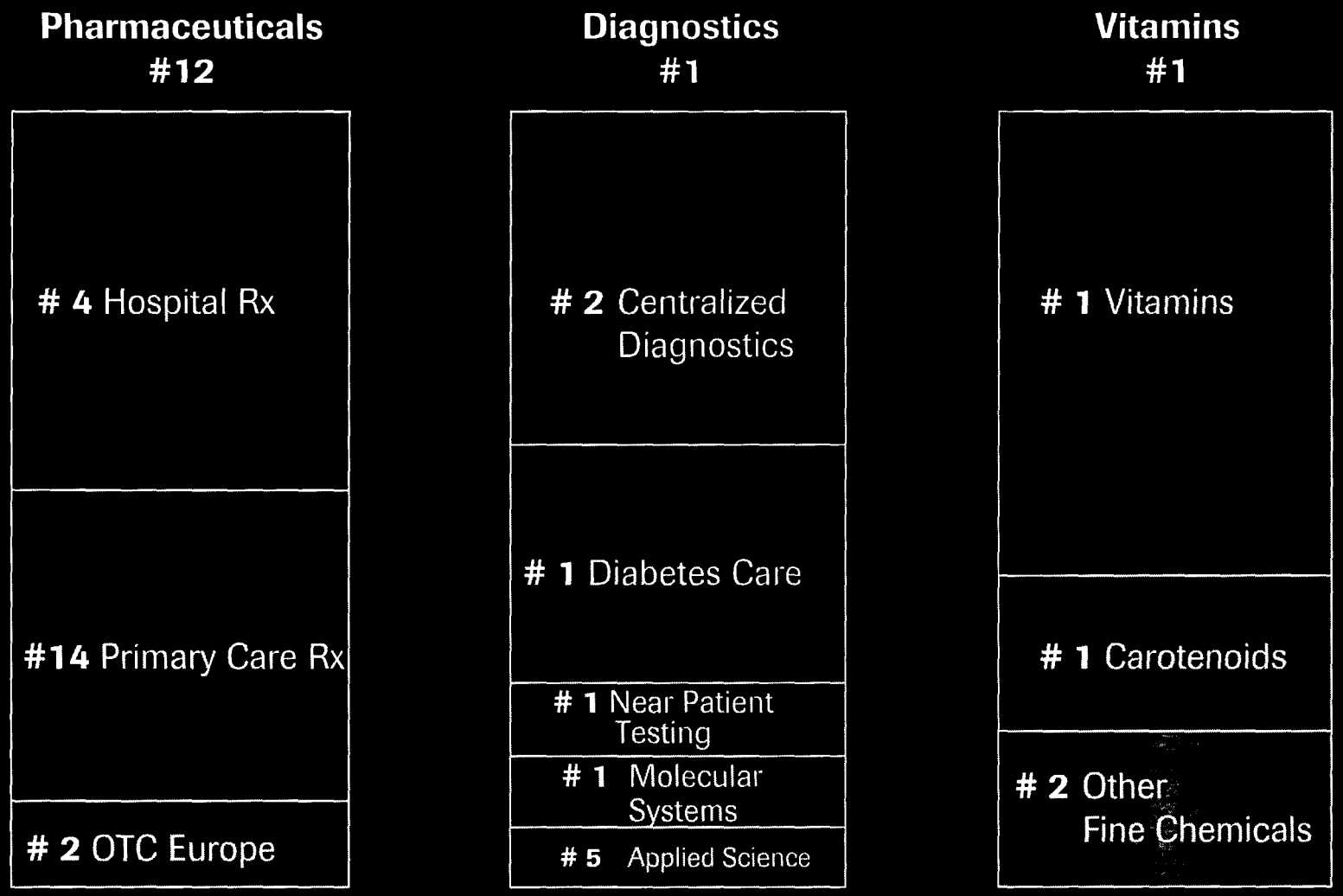
Pharmaceuticals

- World class capability in research and development
- Strengthening pipeline
  - 47 NME's focused on 7 therapy areas
  - 15 NME's expected to be filed over next five years
- Near-term growth expected from oncology, virology, metabolic disorders, inflammation/autoimmune

Roche Group Outlook

Global sector leadership

Our strategic goal



Integrated Health Care

Diagnostics is the critical link

Roche

from today...

diagnosis → therapy → therapy monitoring

...into the future

predisposition screening → targeted monitoring → prevention → diagnosis → therapy → therapy monitoring

lifestyle

nutrition

medicines

Synergy of pharma and diagnostics

Diagnostic label in pharmaceutical drug package inserts

Roche

for pharma companies

- positioning of drugs in competitive environment
- high efficacy and safety of drugs
- lean and shorter trials, faster approval and time to market

for diagnostic companies

- systematic access to new diagnostic tests: drug targets and response profiles
- diagnostic test validation in pharma clinical trials
- faster market penetration of diagnostics: two sales forces promotion & push by the drug

for health care systems

- cost savings by reduced morbidity and mortality
- support of patient management with diagnostics and contextual information

Roche healthcare strategy

The foundation for stakeholder value

Roche

greater share of healthcare market
superior customer value

address unmet needs	improve healthcare effectiveness	reduce healthcare costs
significant pharmaceutical products	*individualised healthcare*	



Pharma

Roche Group Outlook

- Pharmaceutical sales to achieve good single-digit sales growth in 2001
- Pharmaceuticals operating margin to improve to 20 - 25 % of sales over the next two to three years
- Group operating profit in 2001 at least at same level as in 2000
- Group operating margin to improve to over 20 % of sales in the medium term
- Financial income in full year 2001 to be in the range of financial income at half year 2001

Roche Holding Ltd

20 November 2001 - Roche at CSFB
2nd Annual European Large Cap Pharmaceutical Conference, London

As Posted on Roche.com

Furnished Under Rule 12g3-2(b)
Roche Holding 82-3315

Roche

This presentation contains certain forward-looking statements. These forward-looking statements may be identified by words such as “believes”, “expects”, “anticipates”, “projects”, “intends”, “should”, “seeks”, “estimates”, “future” or similar expressions or by discussion of strategy, goals, plans or intentions. Various factors may cause actual results to differ materially in the future from those reflected in forward-looking statements contained in this presentation among others: (1) pricing and product initiatives of competitors; (2) legislative and regulatory developments and economic conditions; (3) delay or inability in obtaining regulatory approvals or bringing products to market; (4) fluctuations in currency exchange rates and general financial market conditions; (5) uncertainties in the discovery, development or marketing of new products or new uses of existing products; (6) increased government pricing pressures; (7) interruptions in production; (8) loss of or inability to obtain adequate protection for intellectual property rights; (9) litigation; (10) loss of key executives or other employees; and (11) adverse publicity or news coverage.

Roche

Diagnostics

Diagnostics
Innovating Health Information

Heino von Prondzynski
Head of Diagnostics Division

Roche Diagnostics in a world of change

Roche

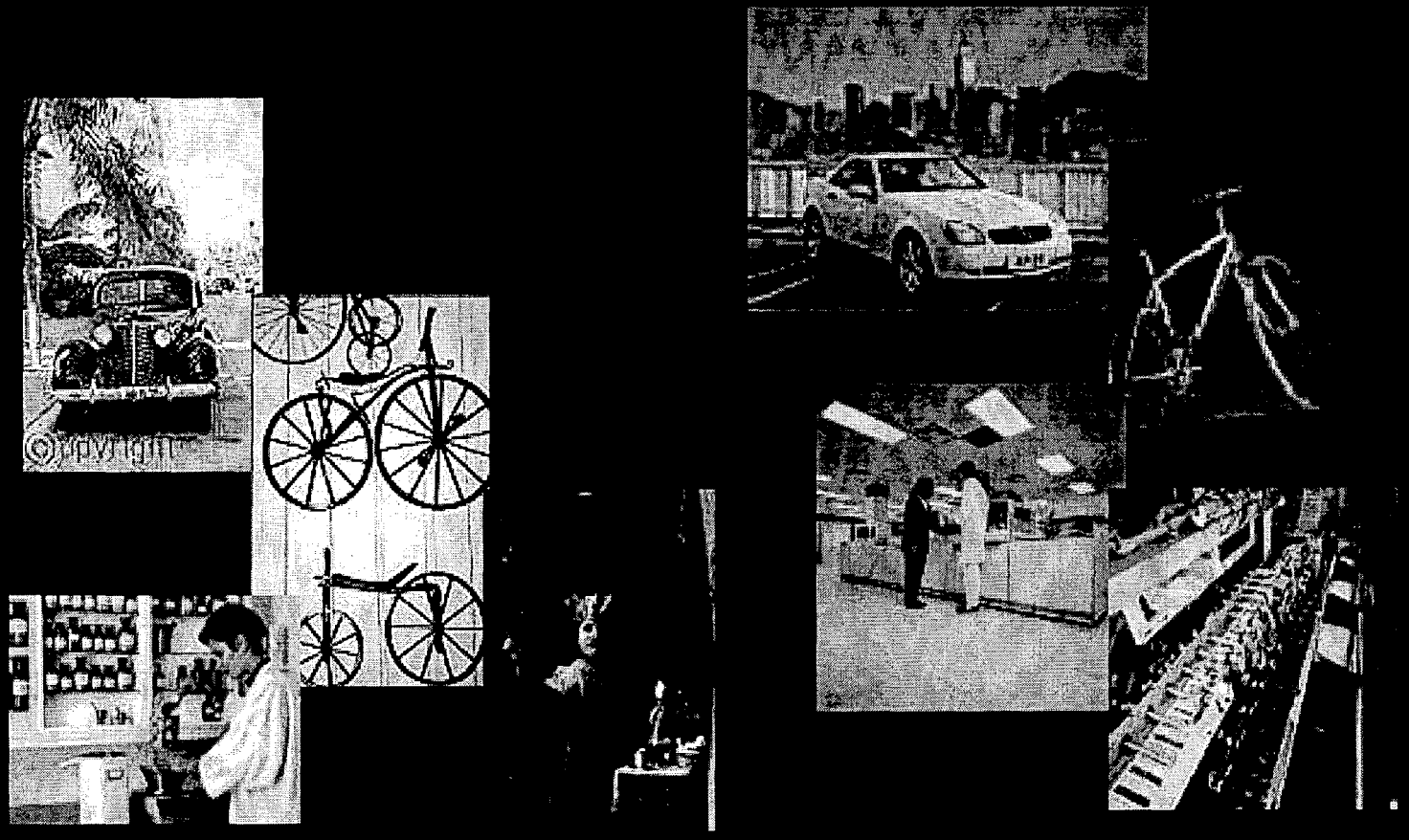
Diagnostics

Change

Not a threat, but an opportunity

Roche

Diagnostics



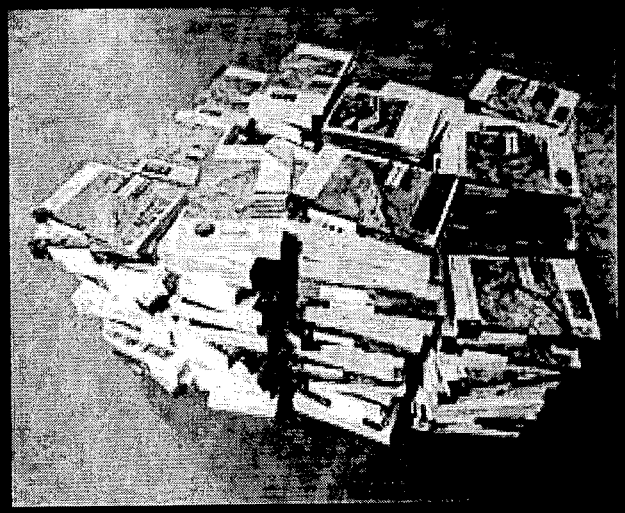
Sequence of the human genome

The beginning, not the end

Roche

Diagnostics

3.12 billion nucleotides



(cf. 200 telephone books worth of information)

Where does it all lead to?

Roche

Diagnostics

dramatic increase in data

information overload

➔ need to filter and select data

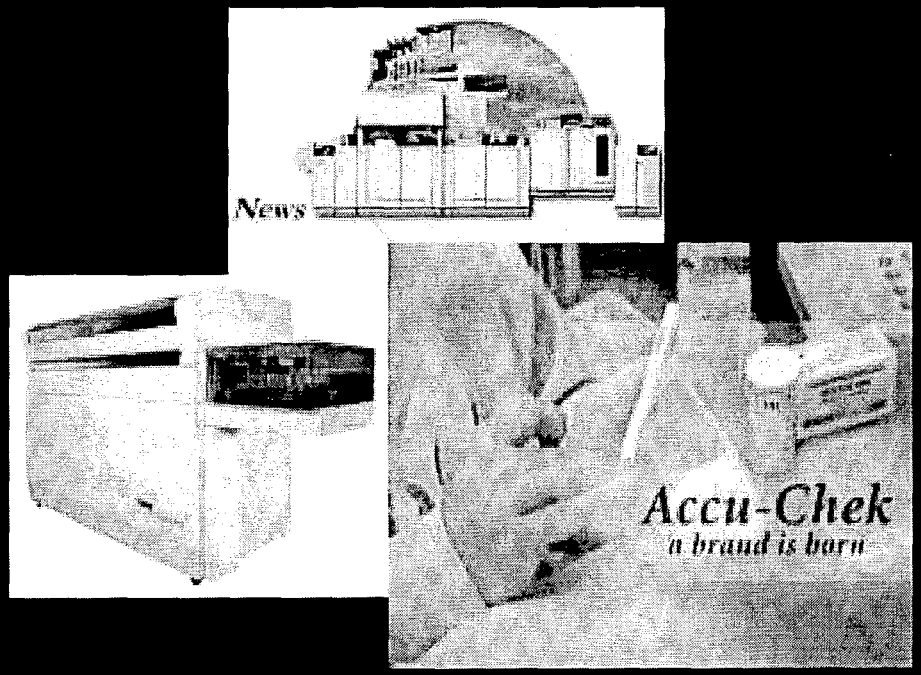
➔ need to obtain meaningful information

➔ need for health information

Roche Diagnostics accepts the challenge…
and shapes the future of its industry

Roche

Diagnostics



the diagnostics industry changes

- from analyzing biochemical parameters
- to providing actionable health information

Roche Diagnostics is well prepared for the challenge

Roche

Diagnostics

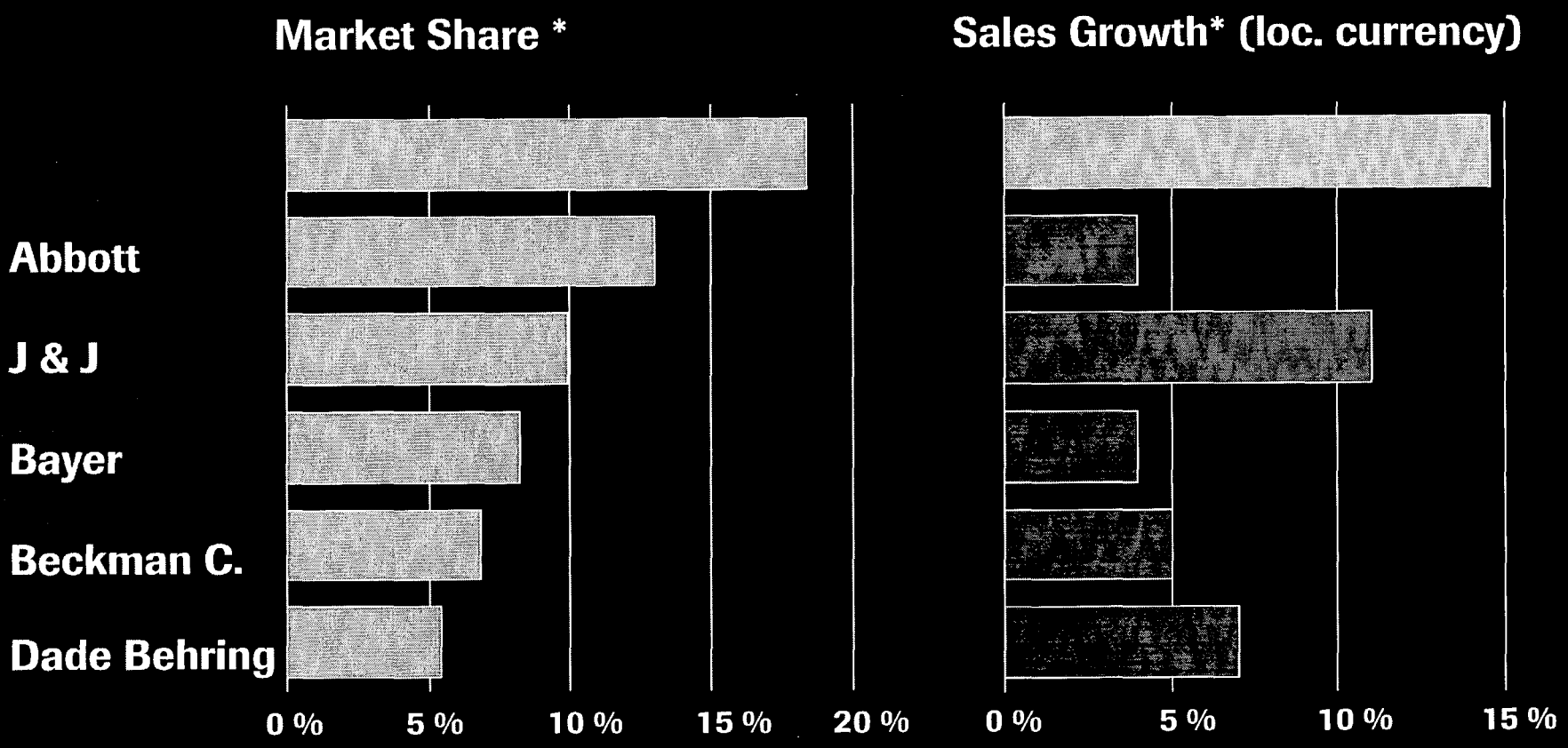
- Roche is the in-vitro diagnostics market leader
- Impressive sales in 2001
- Strong outlook going forward

In Vitro Diagnostics market

21 billion USD in 2001E (+6 % in local currency)

Roche

Diagnostics



* Basis: Q3 2001 / excludes Applied Sciences

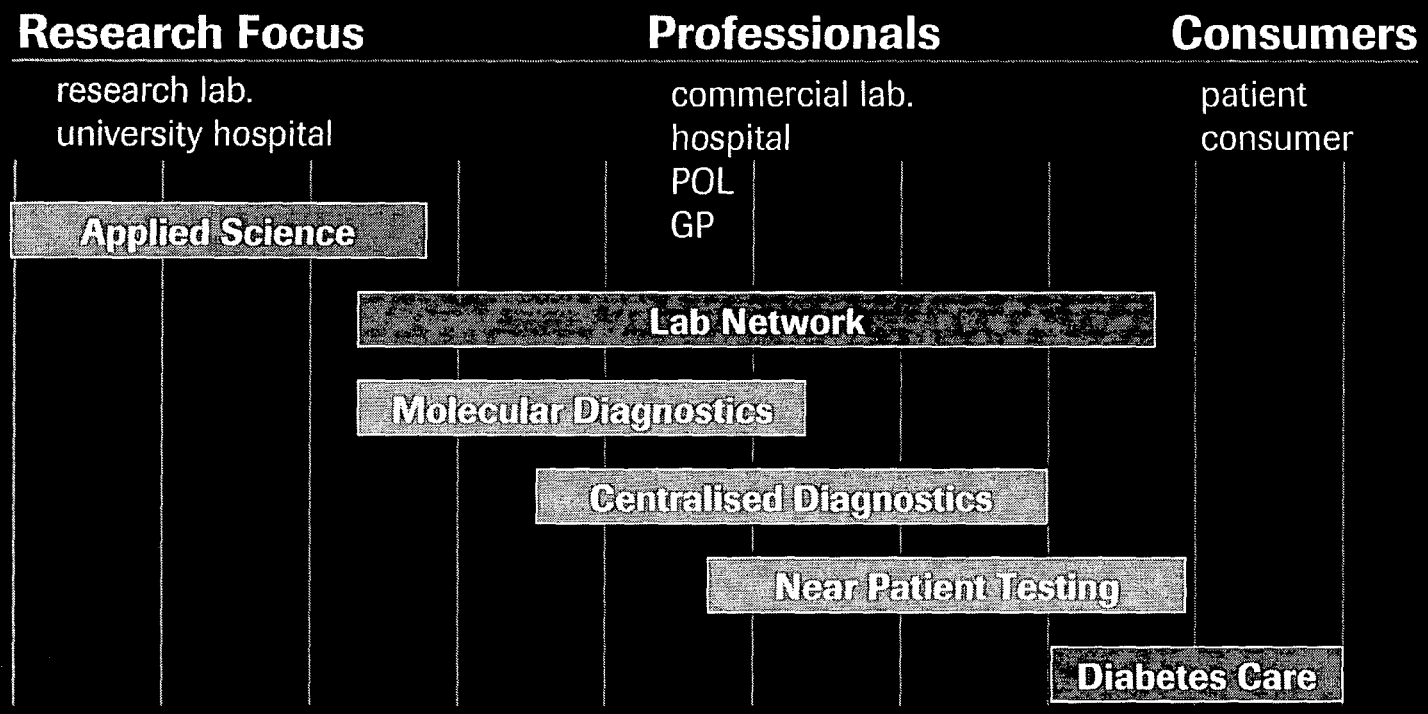
Source: Annual Reports, Boston Biomedical Consultants, Roche Analysis

Roche Diagnostics

New organisation enhances customer focus

Roche

Diagnostics



Diagnostics sales in Q3 2001

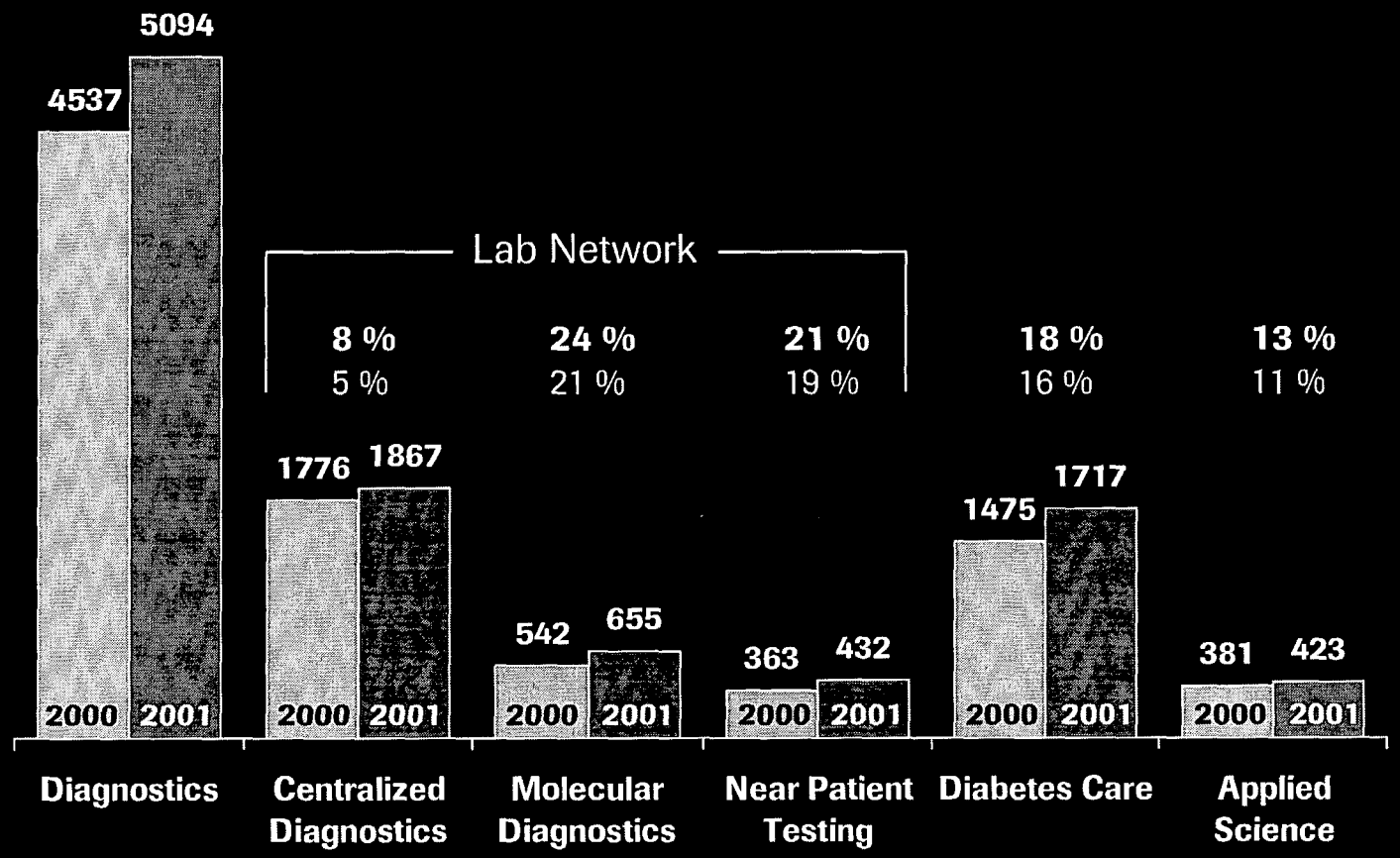
Double-digit growth in high margin businesses

Roche

Diagnostics

CHF m

14 % local currency growth
12 % CHF growth



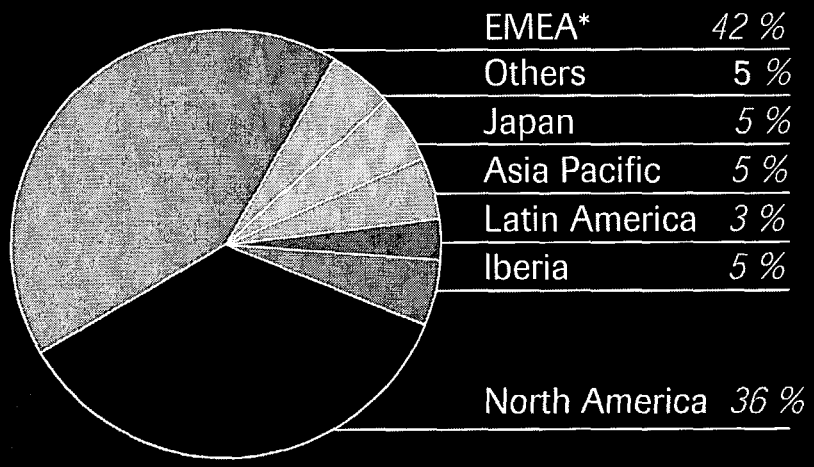
Diagnostics sales in H1 2001

Sales by region/market

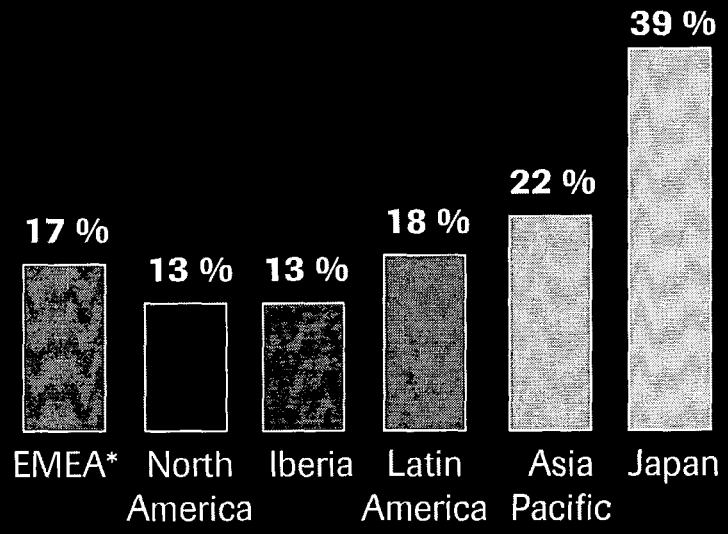
Roche

Diagnostics

CHF 3'374 m



local sales growth



* Europe and Middle East and Africa

Implementing innovation

Roche

Diagnostics

Integrated Health Care

Diagnostics is the critical link

Roche

Diagnostics

from today...

diagnosis → therapy → therapy monitoring

...into the future

predisposition screening → targeted monitoring → prevention → diagnosis → therapy → therapy monitoring

lifestyle

nutrition

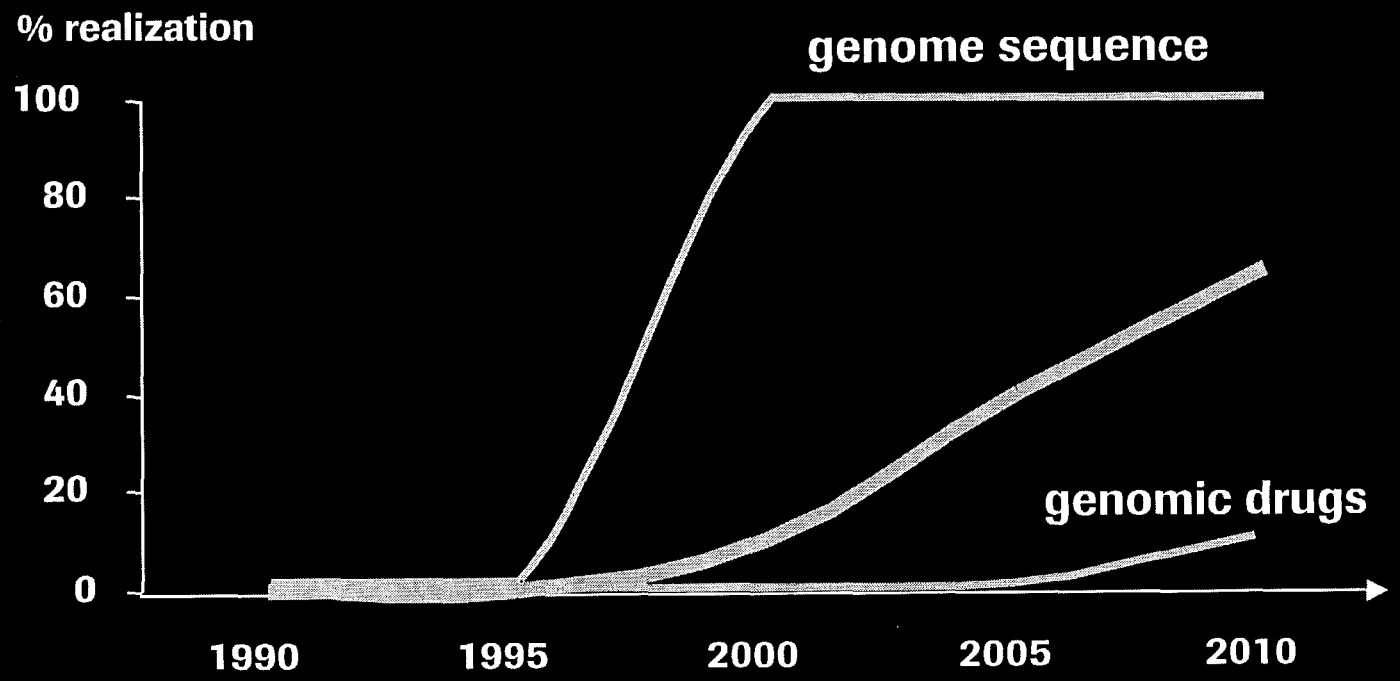
medicines

Drivers accelerating market growth

Genomics: diagnostics will precede drugs

Roche

Diagnostics

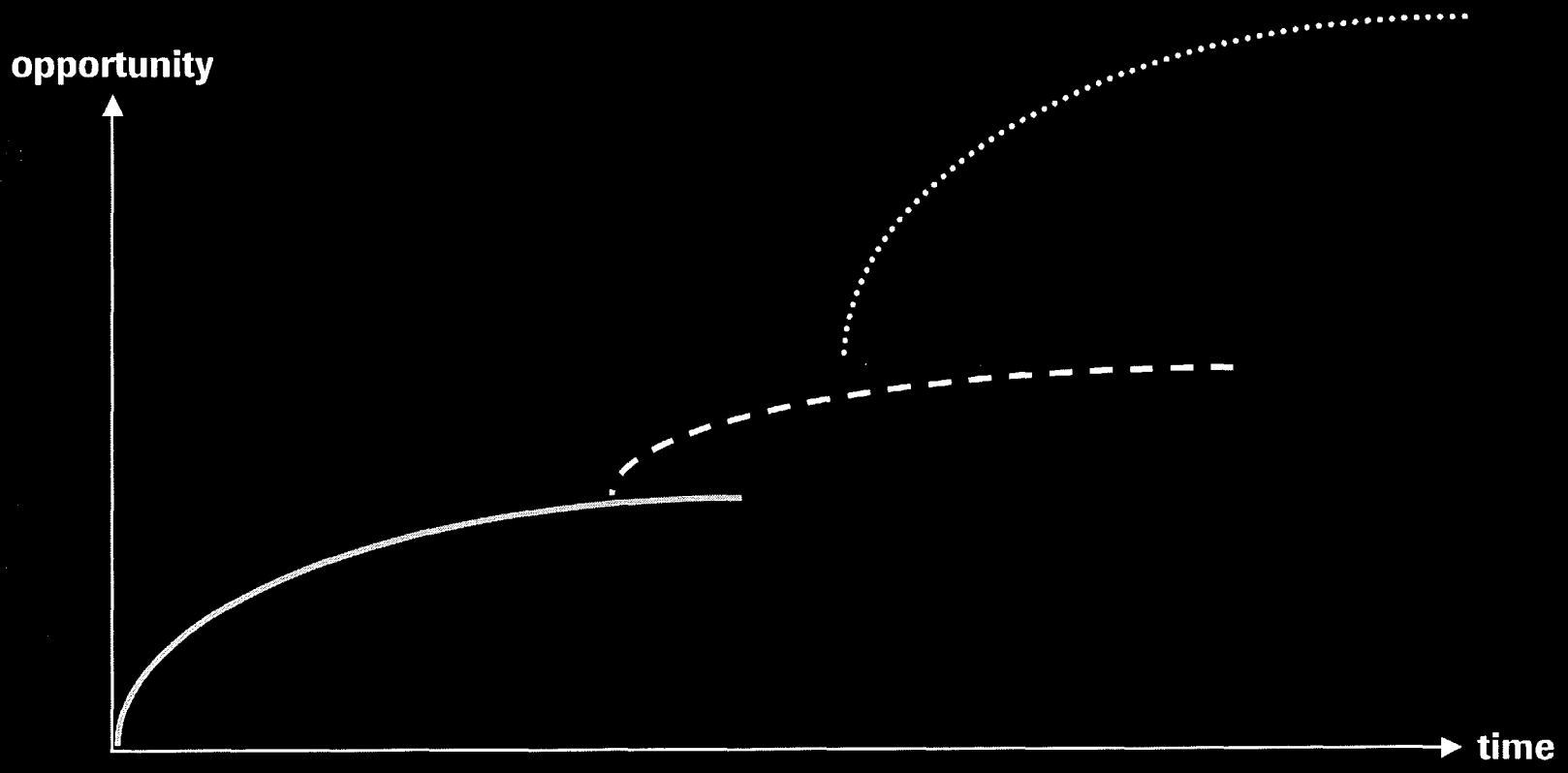


Drivers accelerating market growth

Nucleic acid testing set to create new markets

Roche

Diagnostics

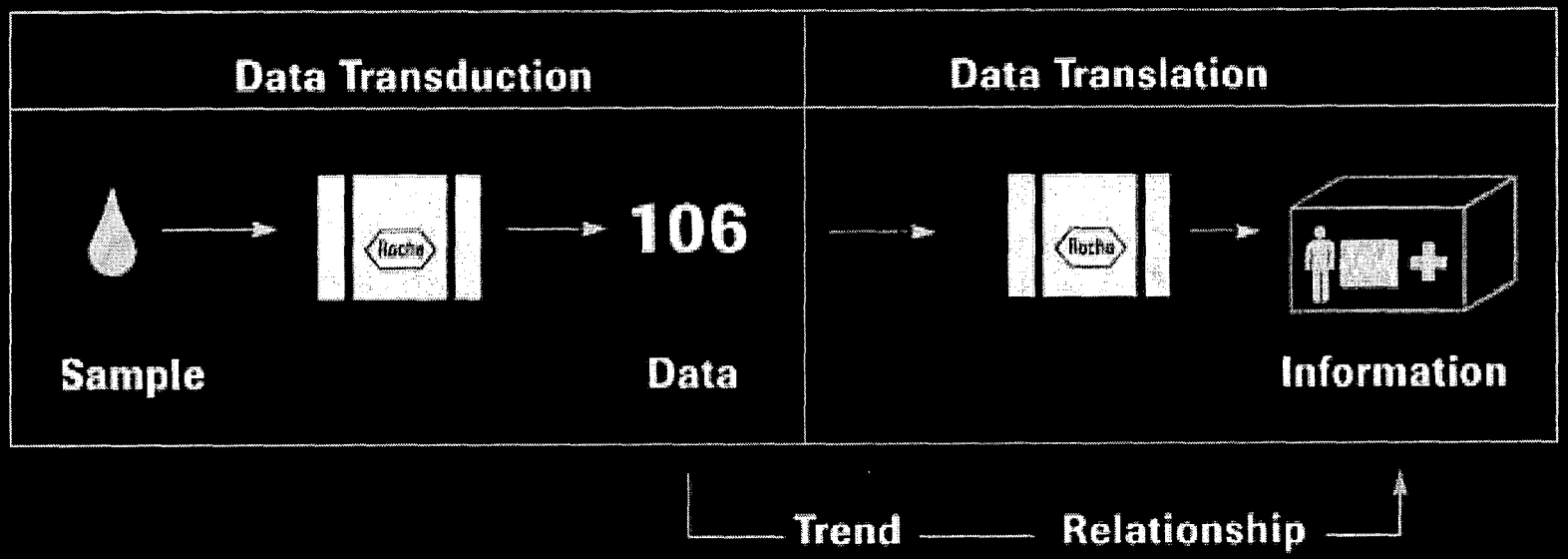


Actionable health information

Supplementing data transduction systems with data translation systems

Roche

Diagnostics

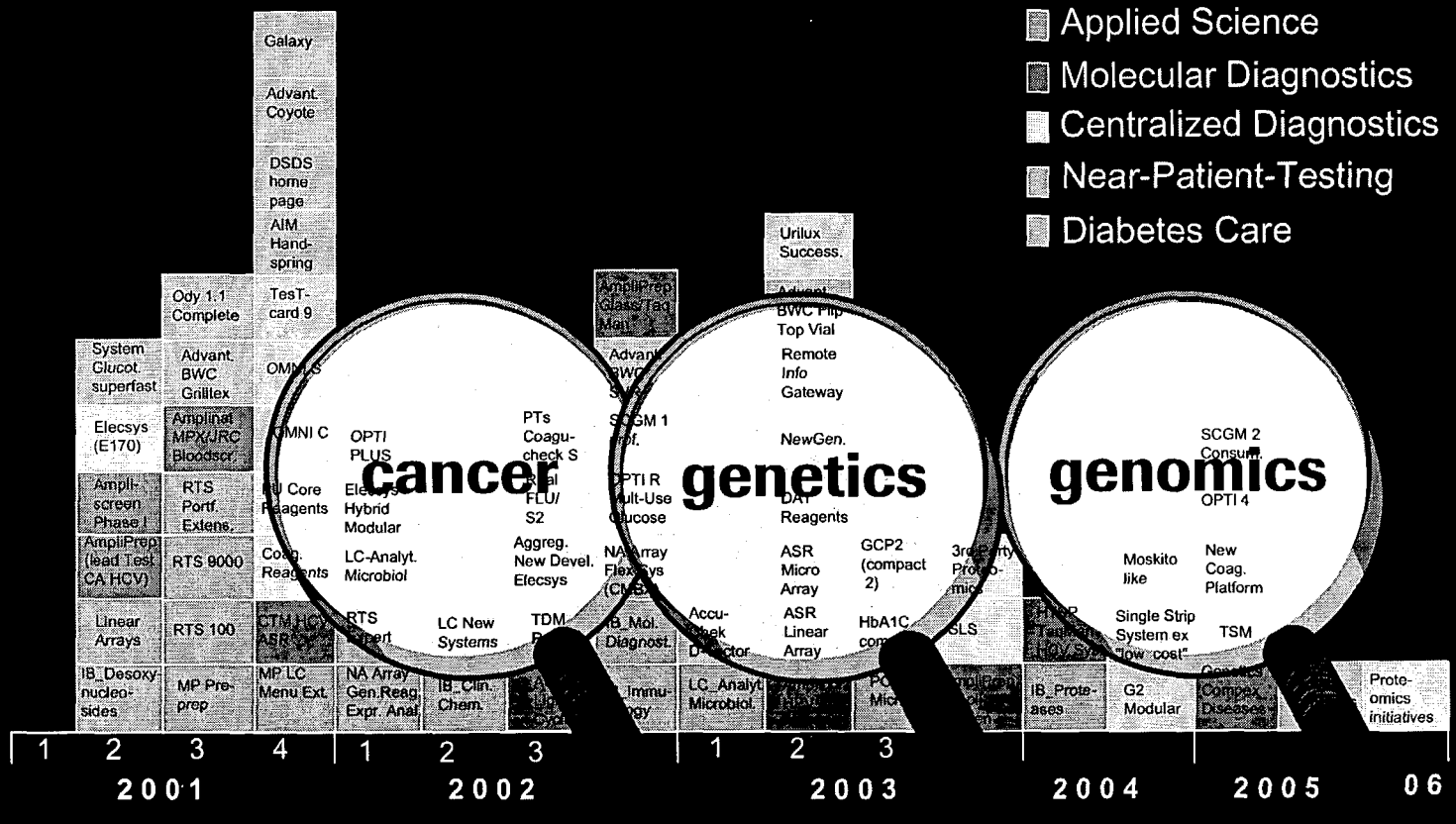


Expected launches of major products

Strong pipeline for future growth

Roche

Diagnostics

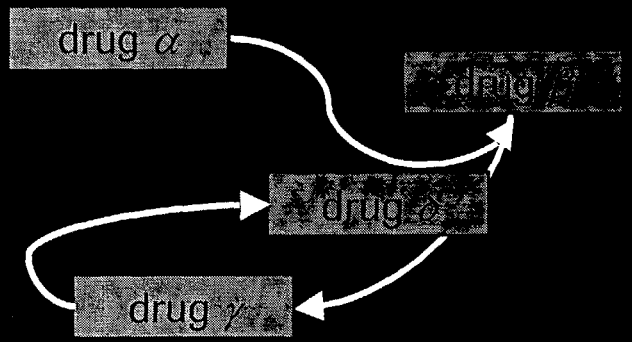


Targeted prescription of medicines

Roche

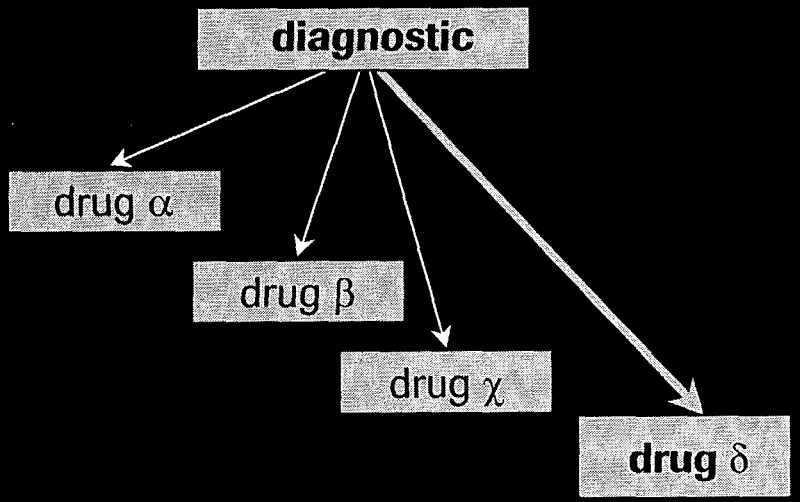
Diagnostics

empirical prescription "mass market"



individual physician experience
Cost: time, money & well-being

rational prescription "targeted"



informed physician diagnosis
Savings: time, money & illness

Cancer incidence, costs, market

Today and trends

Roche

Diagnostics

2000		2010
2,9 million	incidence population	3,6 million *
19,4 million	prevalence population	25,1 million *
50 %	fatality	60 % * * *
24 %	mortality	> 35 % * *
$ 200 billion	total cancer care costs	$ 300 billion
$ 20 billion	cancer drugs	$ 50-70 billion
$ 1,2 billion	diagnostics	> $ 20 billion?

* SRI , 2000; data for the seven major markets: USA, J, FRG, F, I, E, UK
* * leading cause of death
* * * if no progress in treatment

Evolution of Roche's cancer diagnostics portfolio

Roche

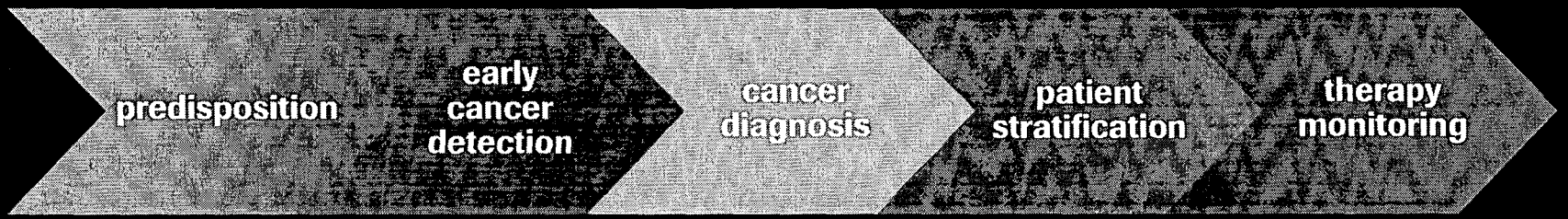
Diagnostics



PSA

IHCS programs:
Her2: Herceptin
enzymes: Xeloda

tumormarker (n=12)
molecular markers of residual disease
(translocations)



where therapies do exist

screening with array platforms

predictive tests : patient management

- risk of metastasis
- drug response and toxicity
- contextual information for therapy guidance

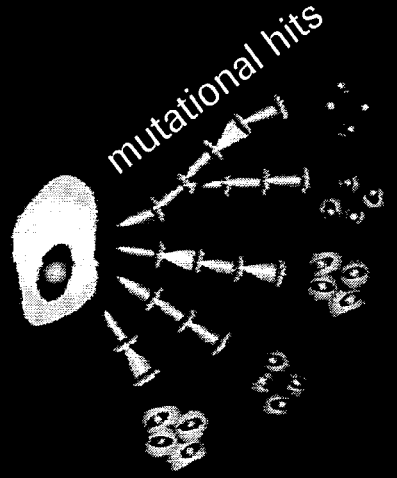
Cancer is a genetic disorder of somatic cells

Carcinogenesis is driven by mutations

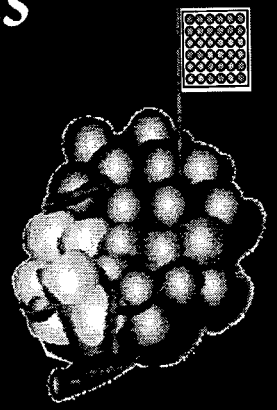
Roche

Diagnostics

normal precursor cell

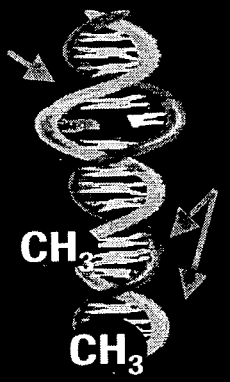


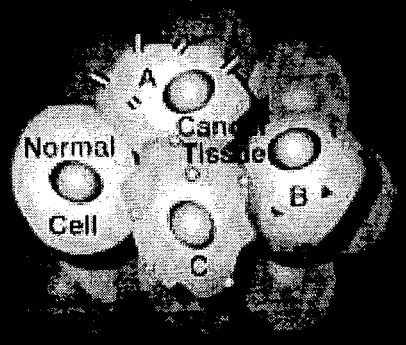
clonal diversity of cells



individual tumor characteristics

- accumulation of mutations in the genome
- genetic instability
- DNA methylation
-





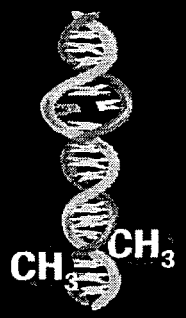
tumor tissue heterogeneity

Diagnostic opportunities in oncology

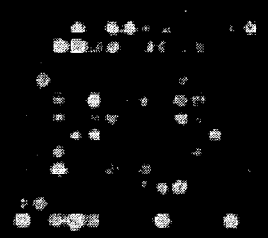
Analytes and technologies

Roche

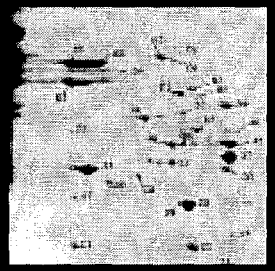
Diagnostics



alterations



altered gene transcription



and translation

diagnostic technologies

intact cells → **in- situ hybridization**

body fluids
cell lysates → **PCR**

A new era is dawning to manage cancer

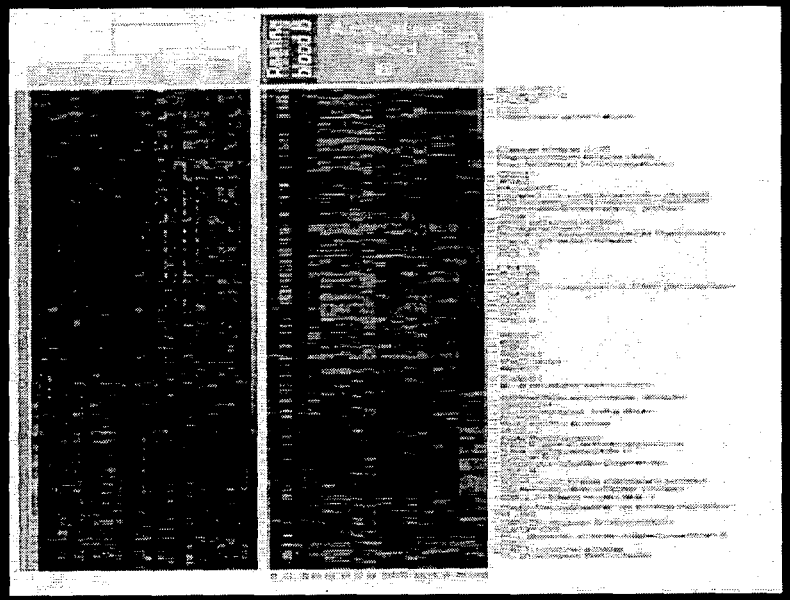
*Tailor-made to molecular tumor profiles**

Roche

Diagnostics

"cancer" is a catchall name for hundreds of different diseases

- same phenotypes vary widely in molecular pattern
- tumor properties correlate to clusters of molecular expression profiles
- hard to vanquish by uniform treatment



A.A. Alizadeh: Nature 2000/ 403/ 503

**Jean Marx, Science Sept.2000 / 289/ 1670*

Roche's diagnostic initiative in cancer

Roche

Diagnostics

marker identification

marker profiling of tumor tissues

DNA
mRNA
proteins
peptides

single markers
and
marker profiles

test platforms and complexity

low

Elecsys (ELISA)
PCR: LightCycler
Amplicor
Taqman
CBMX arrays

medium

linear arrays
CBMX arrays

high

Affymetrix
arrays
Mass spec

time of test development

Re-engineering of patient management by predictive diagnostics

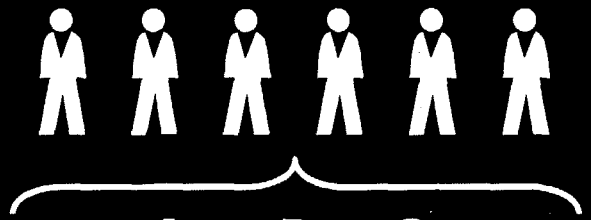
Roche

Diagnostics

From

"Trial and error"

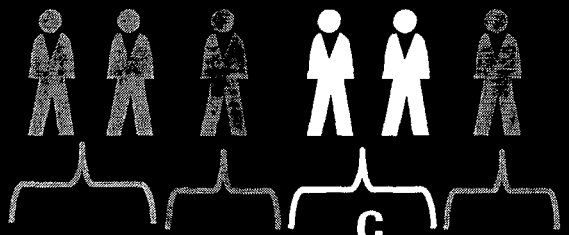
"One schedule fits all patients"

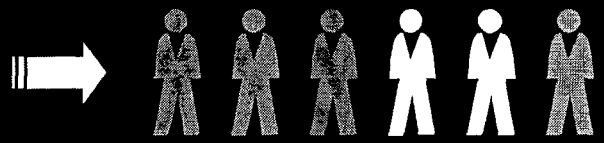




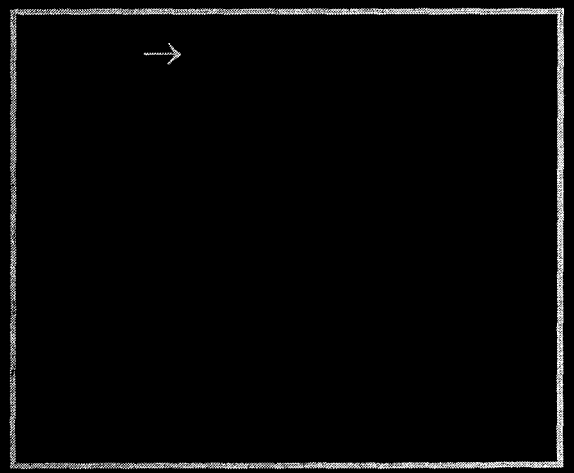
" State of the art " drug combination: same for all

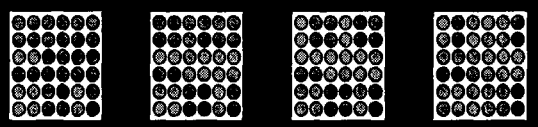
Tailored therapy selection based on individual molecular response profiles of tumors





Individual schedules





Predictive testing

Bioinformatics and IT

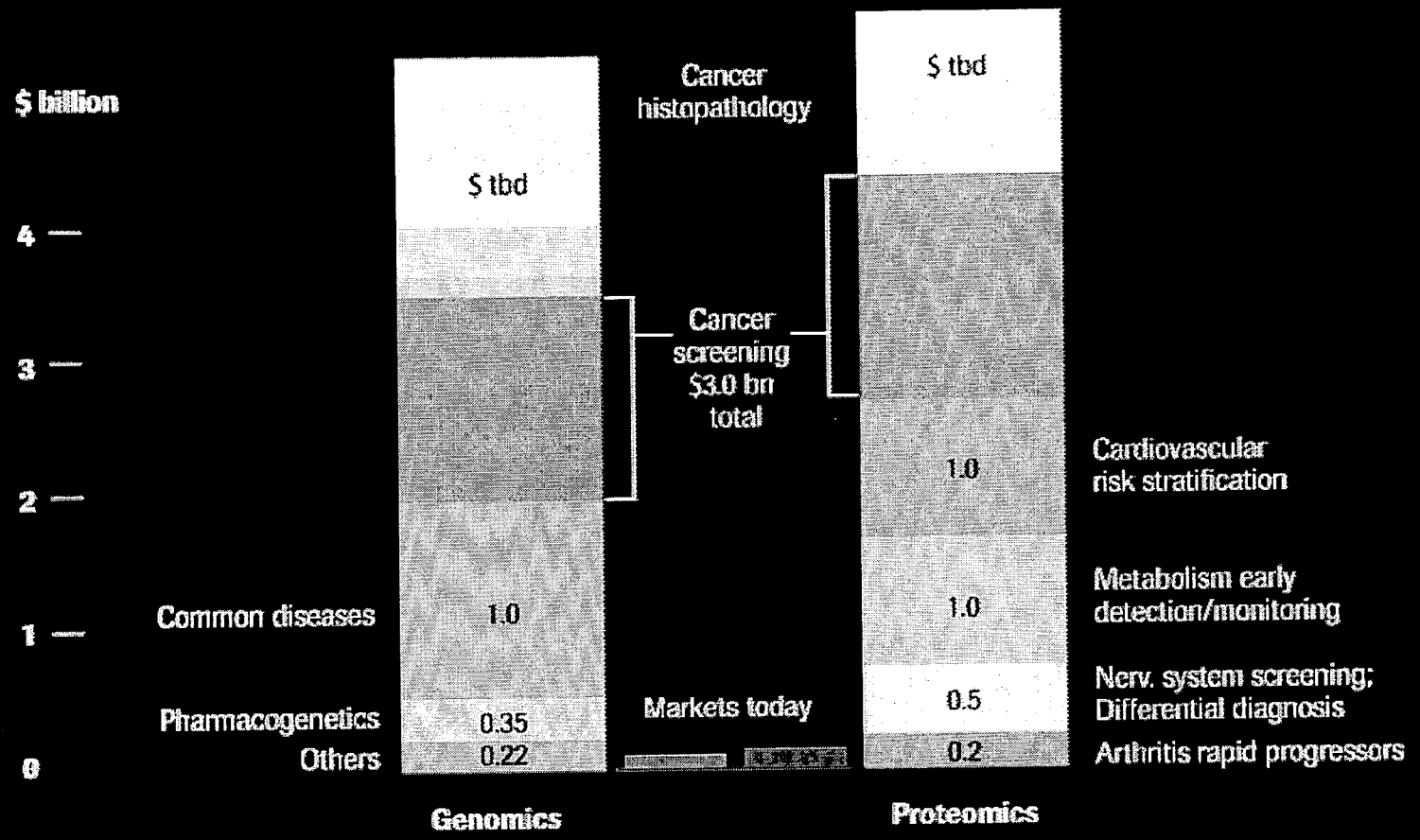
Support of patient management with actionable information

Genomics & proteomics markets in 2010

Explosion of revenues expected

Roche

Diagnostics



Subsegments: monogenetic diseases $100m
paternity $50m
forensic $45m
HLA $35m

Source: Roche estimates

Launch of new cancer test portfolio

Timelines

Roche

Diagnostics

2002	2003	2004	2005	2006	2007

- Screening prostate cancer: prototype test developed
- Screening colorectal and breast cancer: start prototype test development
- Multi-site trial prostate cancer screening
- Multi-site trials colorectal and breast cancer screening
- Start launch of new generation of screening tests for major solid tumors
- Patient stratification: Tests for drug targets, response profiles, molecular tumor characterization

Breast cancer epidemiology
Substantial market opportunity

Roche

Diagnostics

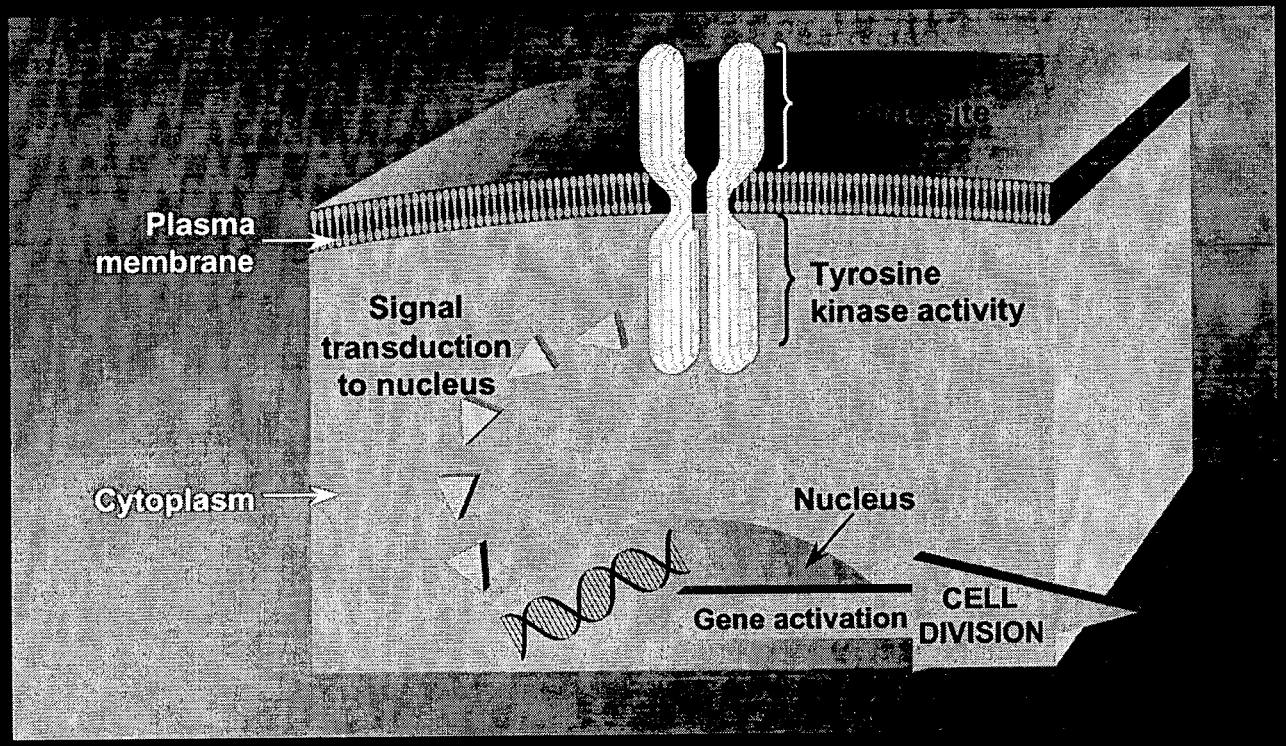
- + 250,000 cases diagnosed annually in Europe
- + 100,000 deaths per year in Europe -370,000 worldwide
- 1 in 10 women will develop breast cancer in her lifetime
- leading cause of death in women 35 to 55
- second leading cause of death in women

Roche

Diagnostics

HER2 receptor

Provides an extra-cellular therapeutic target

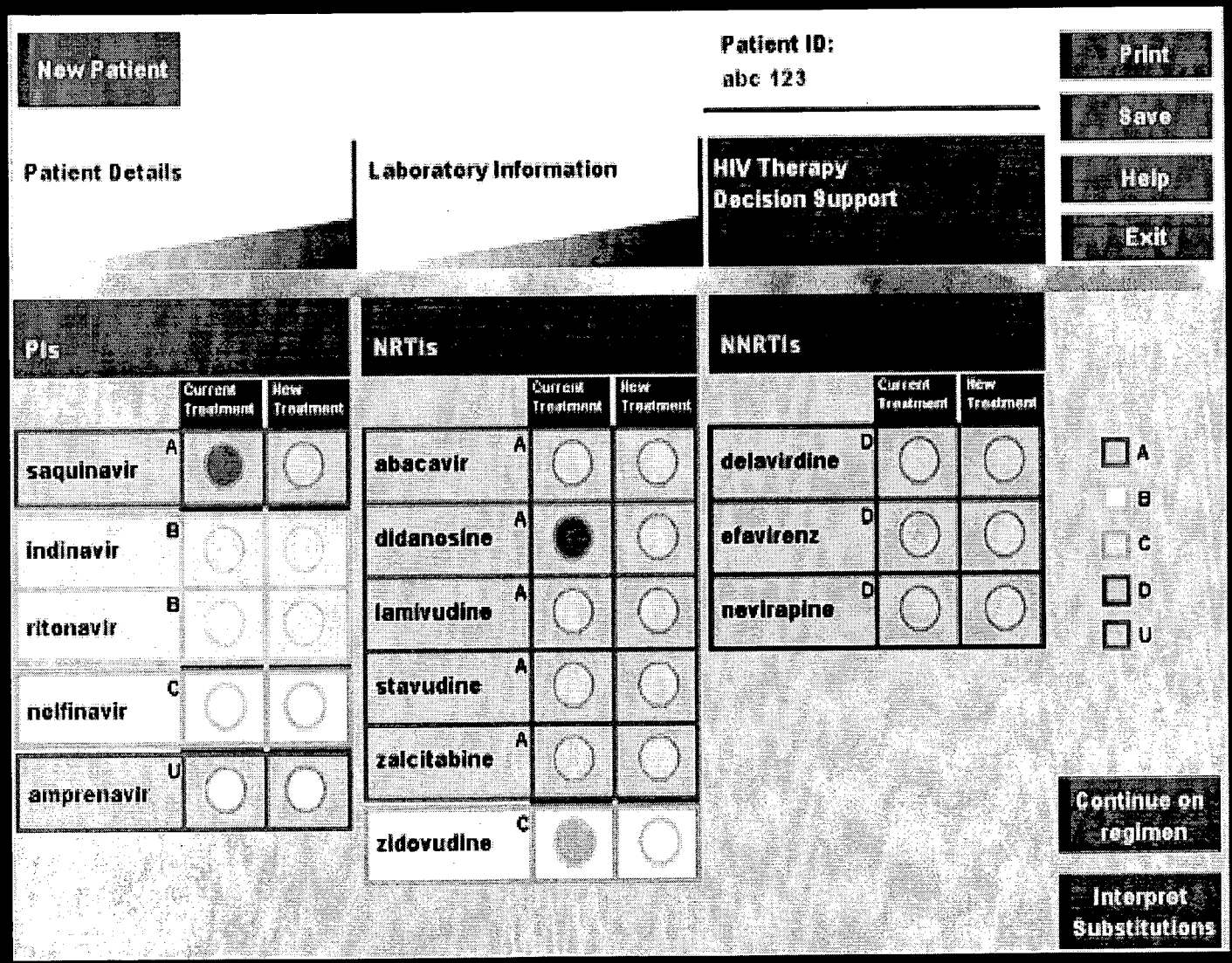


HER2 is

- 15 to 20 % of breast cancer tumors show high HER2 level
- higher incidence of metastases, drug resistance, shorter survival 3 vs. 7 years

HIV
An example

Roche Diagnostics



Synergy of pharma and diagnostics

Diagnostic label in pharmaceutical drug package inserts

Roche

Diagnostics

for pharma companies

- positioning of drugs in competitive environment
- high efficacy and safety of drugs
- lean and shorter trials, faster approval and time to market

for diagnostic companies

- systematic access to new diagnostic tests: drug targets and response profiles
- diagnostic test validation in pharma clinical trials
- faster market penetration of diagnostics: two sales forces promotion & push by the drug

for health care systems

- cost savings by reduced morbidity and mortality
- support of patient management with diagnostics and contextual information

Roche healthcare strategy

The foundation for stakeholder value

Roche

Diagnostics



Roche Diagnostics
Summary

Roche

Diagnostics

- Continued double-digit sales and profit growth
- IVD market leadership increased in all segments
- Organization realigned
  - three Business Areas focused on five customer groups
- Strategic direction pursued through several new alliances
- Outlook: operating margin improvement to the low 20's

Roche

Pharmaceuticals

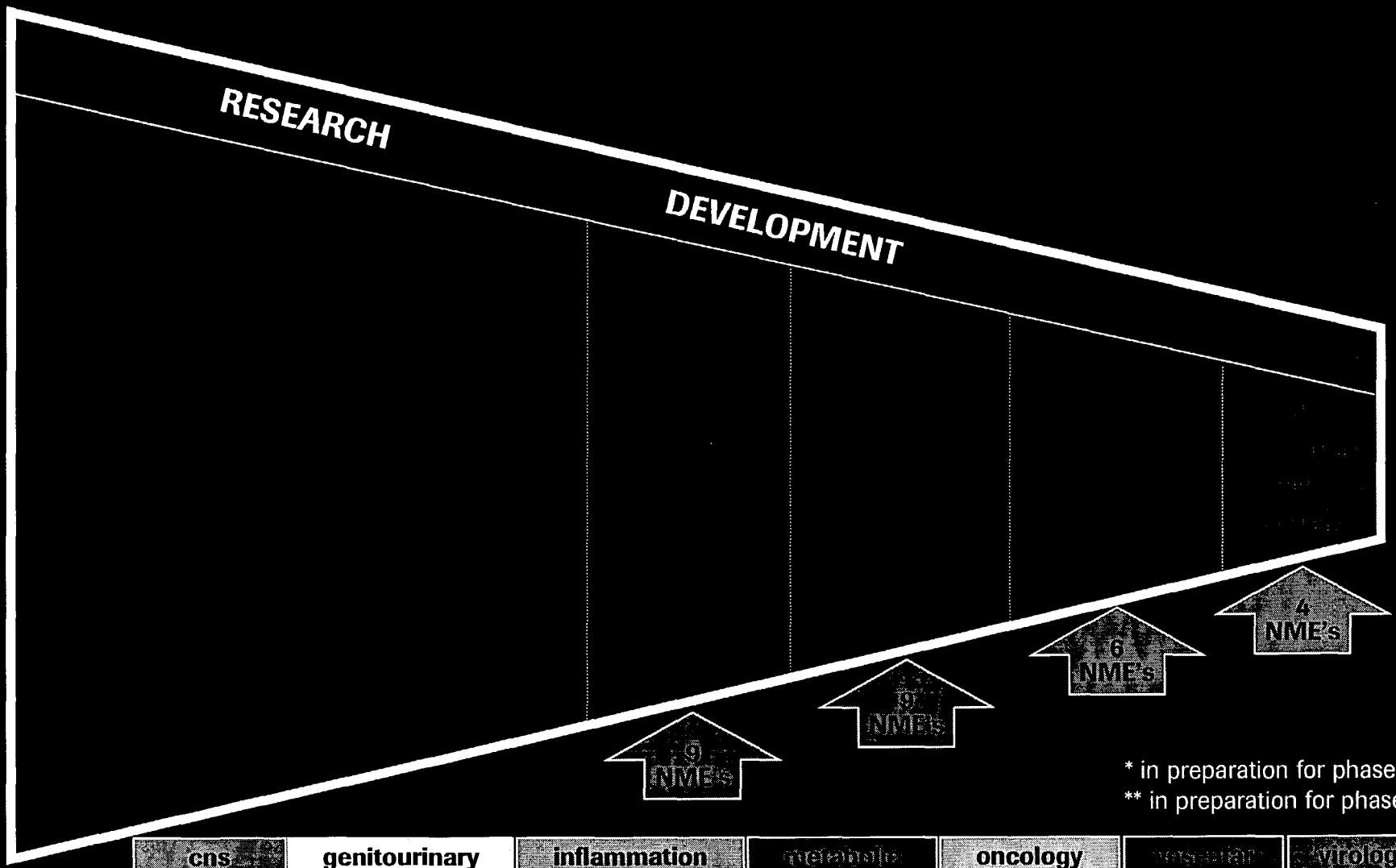
Pharmaceuticals pipeline

Dr Jonathan Knowles
Head of Global Research

Fueling the R&D pipeline at Roche

Roche

Pharmaceuticals



Roche managed pipeline status at September 2001

Roche R&D pipeline

28 NME's in development at Roche

Roche

Pharmaceuticals

R944 HIV	R411 asthma	R440 (CCI) solid tumors	R420 (Pegasys) HCV
R1067 depression	R545 overactive bladder	R450 (alpha 1 agonist) stress incontinence	R484 (Bonviva)osteoporosis
R1124 emesis	R594 *rheumatoid arthritis*	R483** (insulin sensitizer) type 2 diabetes	R698 (T-20) HIV
R1204 depression /anxiety	R667 emphysema	R673** (NK1) depression /anxiety	R1415 (Tarceva) oncology
R1487 rheumatoid arthritis	R701 overactive bladder	R744 (new generation EPO) anemia	
R1437 benign prostatic hyperplasia	R765 type 2 diabetes	R724 (T-1249) HIV	
R1458 type 2 diabetes	R1164* osteoporosis		
R1065 obesity	R1270 (levovirin) HCV		
R1435 thromboembolism	R1273* solid tumors		

..... collaborations

11 projects or planned for in past 12 months

R1125 stroke	R449 alzheimer's	R404 (G) vascular
R1068 depression /anxiety	R665 COPD	R453 osteoporosis
R640 stroke	R672 leukemia	R643 overactive bladder
R1395 solid tumors	R804 cancer	

* in preparation for phase I

** in preparation for phase II

pipeline status at September 2001

Roche R&D pipeline

..plus 13 'opt-in' projects gives 41 NME's

Roche

Pharmaceuticals

R944 HIV	R411 asthma	R440 (CCI) solid tumors	R420 (Pegasys) HCV
R1067 depression	R545 overactive bladder	R450 (alpha 1 agonist) stress incontinence	R484 (Bonviva)osteoporosis
R1124 emesis	R594 rheumatoid arthritis	R483** (insulin sensitizer) type 2 diabetes	R698 (T-20) HIV
R1204 depression /anxiety	R667 emphysema	R673** (NK1) depression /anxiety	R1415 (Tarceva) oncology
R1487 rheumatoid arthritis	R701 overactive bladder	R744 (new generation EPO) anemia	Oncology (anti-VEGF) (G)
R1443/7 benign prostatic hyperplasia	R765 type 2 diabetes	R724 (T-1249) HIV	
R1458 type 2 diabetes	R1164* osteoporosis	cephalosporin (B)	
R1065 obesity	R1270 (levovirin) HCV	psoriasis (B)	
R1435 thromboembolism	R1273* solid tumors	eczema (B)	
antifungal (B)	antibiotic (B)	SCLC (N)	
	migraine (P)	inflamm. bowel disease (G)	
	cardiovascular disease (S)		
	macular degeneration (G)		
	antitumor* (G)		
	acute coronary syndrome* (G)		

..... collaborations

opt-in opportunities

Basilea (B)
Genentech (G)
Novus (N)
Pozen (P)
Speedel (S)

* in preparation for phase I
** in preparation for phase II

pipeline status at September 2001

Roche R&D pipeline

..plus 6 Genentech NMEs which Genentech will commercialise alone gives 47 NMEs

Roche

Pharmaceuticals

R944 HIV	R411 asthma	R440 (CCI) solid tumors	R420 (Pegasys) HCV
R1067 depression	R545 overactive bladder	R450 (alpha 1 agonist) stress incontinence	R484 (Bonviva)osteoporosis
R1124 emesis	R594 *rheumatoid arthritis*	R483** (insulin sensitizer) type 2 diabetes	R698 (T-20) HIV
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R1487 rheumatoid arthritis	R701 overactive bladder	R744 (new generation EPO) anemia	Oncology (anti-VEGF) (G)
R1437 benign prostatic hyperplasia	R765 type 2 diabetes	R724 (T-1249) HIV	Xanelim (G)
R1458 type 2 diabetes	R1164* osteoporosis	cephalosporin (B)	Xolair (G)
R1065 obesity	R1270 (levovirin) HCV	psoriasis (B)	Tracleer (G)
R1435 thromboembolism	R1273* solid tumors	eczema (B)	TNKase (G)
antifungal (B)	antibiotic (B)	SCLC (N)	Thrombopoietin (G)
	migraine (P)	inflamm. bowel disease (G)	
	cardiovascular disease (S)	E-26** (G)	
	macular degeneration (G)		
	antitumor* (G)		
	acute coronary syndrome* (G)		

..... collaborations

opt-in opportunities

Basilea (B)
Genentech (G)
Novus (N)
Pozen (P)
Speedel (S)

Genentech (without Roche opt-in but Roche benefits financially)

* in preparation for phase I
** in preparation for phase II

pipeline status at September 2001

Roche R&D pipeline

47 NME's focused primarily in 7 therapy areas

Roche

Pharmaceuticals

R944 HIV

R1067 depression

R411 asthma

R545 overactive bladder

R440 (CCI) solid tumors

R450 (alpha 1 agonist) stress incontinence

R420 (Pegasys) HCV

R484 (Bonviva)osteoporosis

(T-20) HIV

(Tarceva) oncology

ology (anti-VEGF) (G)

Xanelim (G)

Xolair (G)

Tracleer (G)

TNKase (G)

Thrombopoietin (G)

R667
emphysema

R1458 type 2 diabetes

R1065 obesity

R1435 thromboembolism

antifungal (B)

R1270 (levovirin) HCV

R1273* solid tumors

antibiotic (B)

migraine (P)

cardiovascular disease (S)

macular degeneration (G)

antitumor* (G)

acute coronary syndrome* (G)

R724 (T-1249) HIV

cephalosporin (B)

psoriasis (B)

eczema (B)

SCLC (N)

inflamm. bowel disease (G)

E-26** (G)

collaborations

opt-in opportunities

Basilea (B)

Genentech (G)

Novus (N)

Pozen (P)

Speedel (S)

Genentech (without Roche opt-in but Roche benefits financially)

* in preparation for phase I

** in preparation for phase II

pipeline status at September 2001

R667 in emphysema

Rebuilding lung tissue / improving lung function

Roche

Pharmaceuticals



- a selective retinoid agonist (RAR-γ)
- first compound able to regenerate lung tissue (in animal studies)
- restores lung function in animal models
- potential to reverse the disease process
- selectivity avoids side effects associated with the retinoids

R667 in emphysema

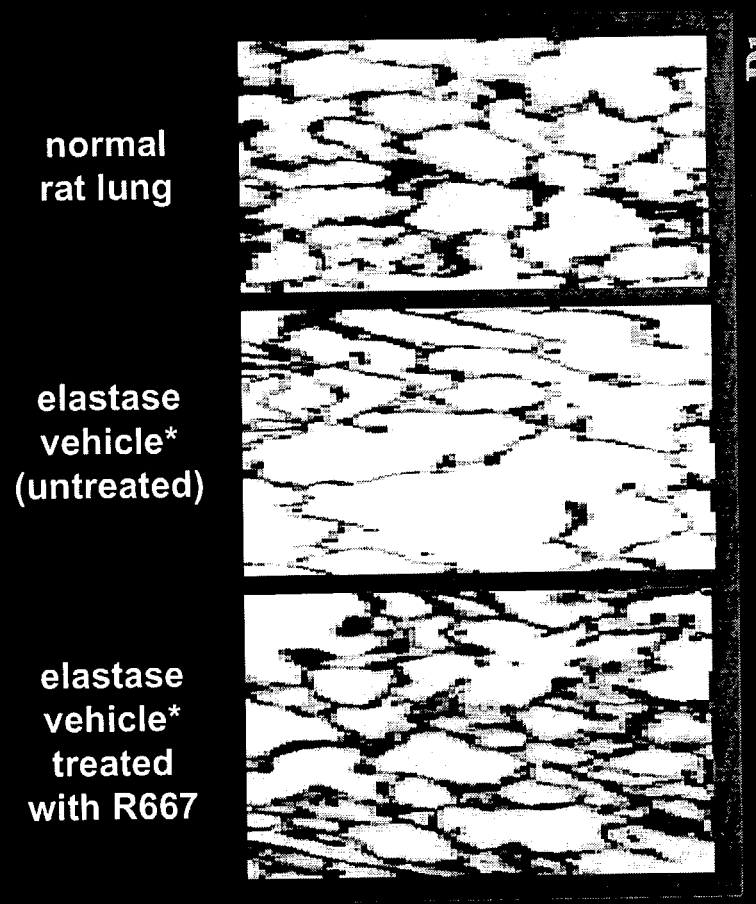
Rebuilding lung tissue / improving lung function

Roche

Pharmaceuticals

phase I

- regeneration of lung tissue
- increases arterial oxygen
- increases total lung capacity
- clean side effect profile
- expected once daily dosing
- phase I completed



* vehicle = disease state model

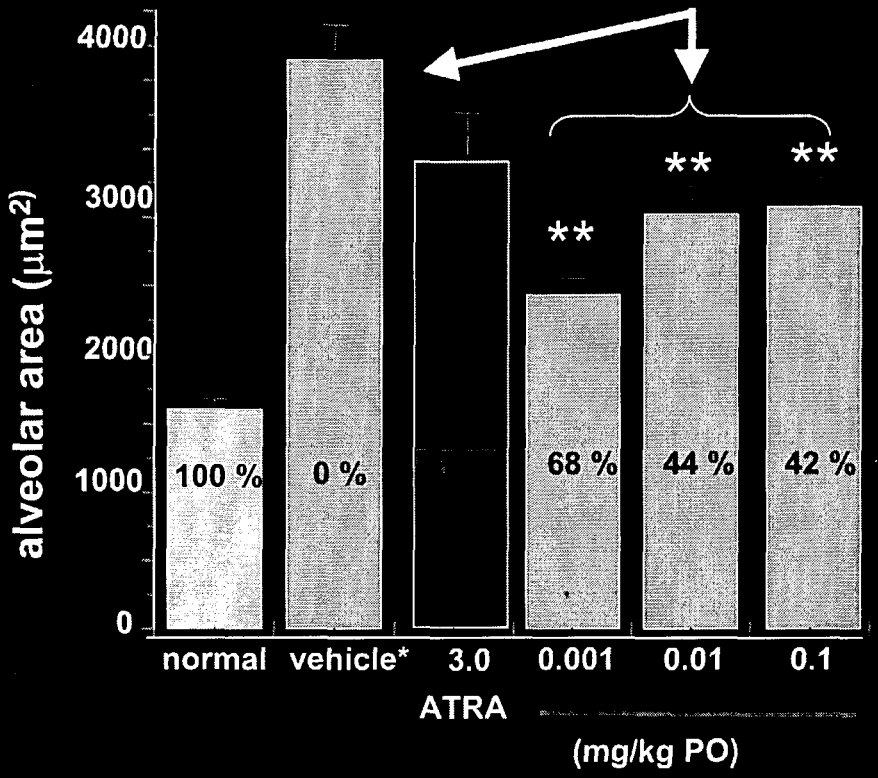
R667 in emphysema

Rebuilding lung tissue / improving lung function

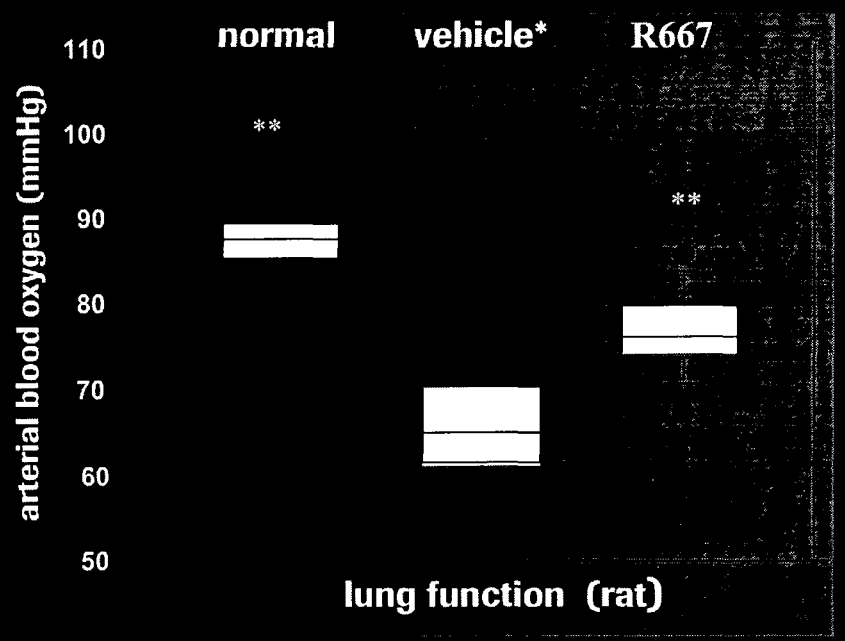
Roche

Pharmaceuticals

lung structure



lung function



* vehicle = disease state model

** statistically significant

Roche R&D pipeline

47 NME's focused primarily in 7 therapy areas

Roche

Pharmaceuticals

R944 HIV

R10

R11

R12

R14

R411 asthma

R411
asthma

R440 (CCI) solid tumors

R420 (Pegasys) HCV

(Bonviva)osteoporosis

(T-20) HIV

5 (Tarceva) oncology

ology (anti-VEGF) (G)

Xanelim (G)

Xolair (G)

Tracleer (G)

TNKase (G)

Thrombopoietin (G)

R1437 benign prostatic hyperplasia

R1458 type 2 diabetes

R1065 obesity

R1435 thromboembolism

antifungal (B)

R765 type 2 diabetes

R1164* osteoporosis

R1270 (levovirin) HCV

R1273* solid tumors

antibiotic (B)

migraine (P)

cardiovascular disease (S)

macular degeneration (G)

antitumor* (G)

acute coronary syndrome* (G)

R744 (new generation EPO) anemia

R724 (T-1249) HIV

cephalosporin (B)

psoriasis (B)

eczema (B)

SCLC (N)

inflamm. bowel disease (G)

E-26** (G)

..... collaborations

opt-in opportunities

Basilea (B)

Genentech (G)

Novus (N)

Pozen (P)

Speedel (S)

Genentech (without Roche opt-in but Roche benefits financially)

* in preparation for phase I

** in preparation for phase II

pipeline status at September 2001

R411 in asthma

Novel selective integrin antagonist



- selectively targets the underlying disease pathology
- powerful inhibitor of inflammatory cell infiltration
- side effect-free profile in animal studies
- potentially superior safety to inhaled corticosteroids
- better efficacy than the leukotrienes in animal studies
- potential once a day monotherapy for asthma prophylaxis

Roche

Pharmaceuticals

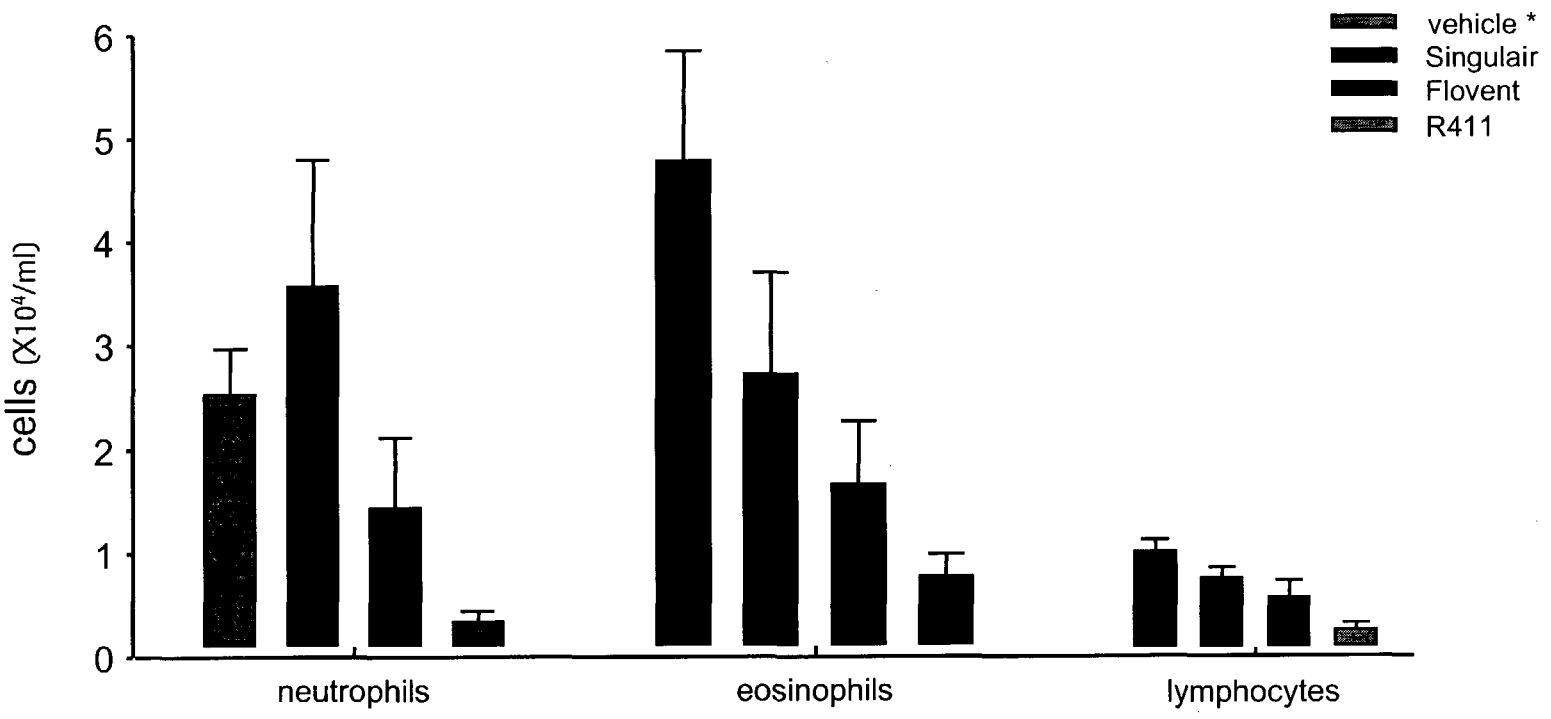
R411 in asthma

Dramatic reduction in inflammatory response in animal studies

Roche

Pharmaceuticals

allergen-induced inflammatory cell influx in the atopic primate



* vehicle = disease state model

Roche R&D pipeline

47 NME's focused primarily in 7 therapy areas

Roche

Pharmaceuticals

R944 HIV

R1067 depressi

R1124 eme

R1204 depression /anxi

R1487 rheumatoid arthr

R1437 benign prostatic hyperplasia

R1458 type 2 diabetes

R1065 obesity

R1435 thromboembolism

antifungal (B)

R411 asthma

rheumatoid arthritis

R765 type 2 diabetes

R1164* osteoporosis

R1270 (levovirin) HCV

R1273* solid tumors

antibiotic (B)

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cephalosporin (B)

psoriasis (B)

eczema (B)

SCLC (N)

inflamm. bowel disease (G)

E-26** (G)

R420 (Pegasys) HCV

Xanelim (G)

Xolair (G)

Tracleer (G)

TNKase (G)

Thrombopoietin (G)

R450 (alpha1 agonist) stress incontinence

..... collaborations

opt-in opportunities

Basilea (B)

Genentech (G)

Novus (N)

Pozen (P)

Speedel (S)

Genentech (without Roche opt-in but Roche benefits financially)

* in preparation for phase I

** in preparation for phase II

pipeline status at September 2001

R450 in stress urinary incontinence (SUI)

Potent non-surgical treatment



- over 48 million patients in major markets
- no globally approved drug therapy with SUI indication
- high unmet need for a non-surgical treatment
- in preclinical tests, potent effects on bladder outlet muscle tone with minimal cardiovascular effects ("uroselectivity")

Roche

Pharmaceuticals

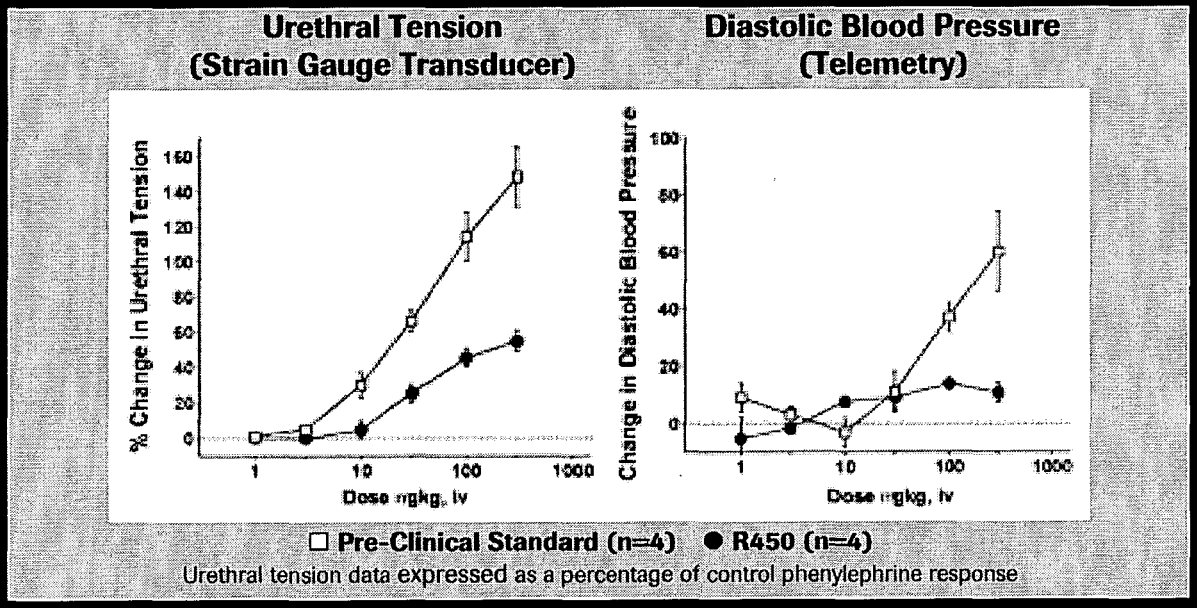
R450 in stress urinary incontinence

Good efficacy and improved safety

Roche

Pharmaceuticals

animal urethra/blood pressure model



phase IIa clinical trial in SUI patients

- significant decrease in incontinent episodes versus placebo
- generally safe and well tolerated
- phase IIb studies have been initiated

Roche R&D pipeline

47 NME's focused primarily in 7 therapy areas

Roche

Pharmaceuticals

R944 HIV

R1067 depression

R1124 em

R1204 depression /anx

R1487 rheumatoid arth

R1437 benign prostatic hyperplasia

R1458 type 2 diabetes

R1065 obesity

R1435 thromboembolism

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R545 overactive bladder

R1164* osteoporosis

R1270 (levovirin) HIV

R1273* solid tumors

antibiotic (B)

migraine (P)

cardiovascular disease (S)

macular degeneration (G)

antitumor* (G)

acute coronary syndrome* (G)

R440 (CCI) solid tumors

R450 (alpha 1 agonist)

anemia

R724 (T-1249) HIV

cephalosporin (B)

psoriasis (B)

eczema (B)

SCLC (N)

inflamm. bowel disease (G)

E-26** (G)

R420 (Pegasys) HCV

R484 (Bonviva)osteoporosis

Xolair (G)

Tracleer (G)

TNKase (G)

Thrombopoietin (G)

R440 (CCI) solid tumors

collaborations

opt-in opportunities

Basilea (B)

Genentech (G)

Novus (N)

Pozen (P)

Speedel (S)

Genentech (without Roche opt-in but Roche benefits financially)

* in preparation for phase I

** in preparation for phase II

pipeline status at September 2001

R440 (CCI) in oncology

Cell cycle inhibitor for a range of cancers

Roche

Pharmaceuticals

phase II

- novel mechanism
- effective in a range of cancers (pre-clinical data)
- effective in tumors resistant to conventional drugs
- monotherapy or add-on potential
- convenient oral formulation
- well tolerated and safe in phase I studies
- phase II initiated in breast, non-small cell lung and colorectal cancers



R440 (CCI) in oncology

Cell cycle inhibitor for a range of cancers

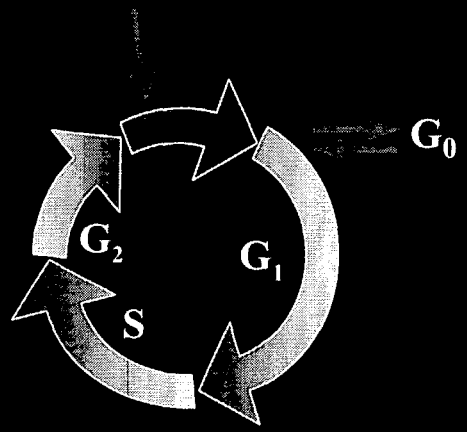
Roche

Pharmaceuticals

phase II

Preclinical data

- cell cycle and anti-proliferative activity tested in all tumor cell lines
- anti-tumor activity in 15/16 in vivo tumor models with activities ranging from growth inhibition to regressions and even cures
- active in tumor models resistant to conventional therapy



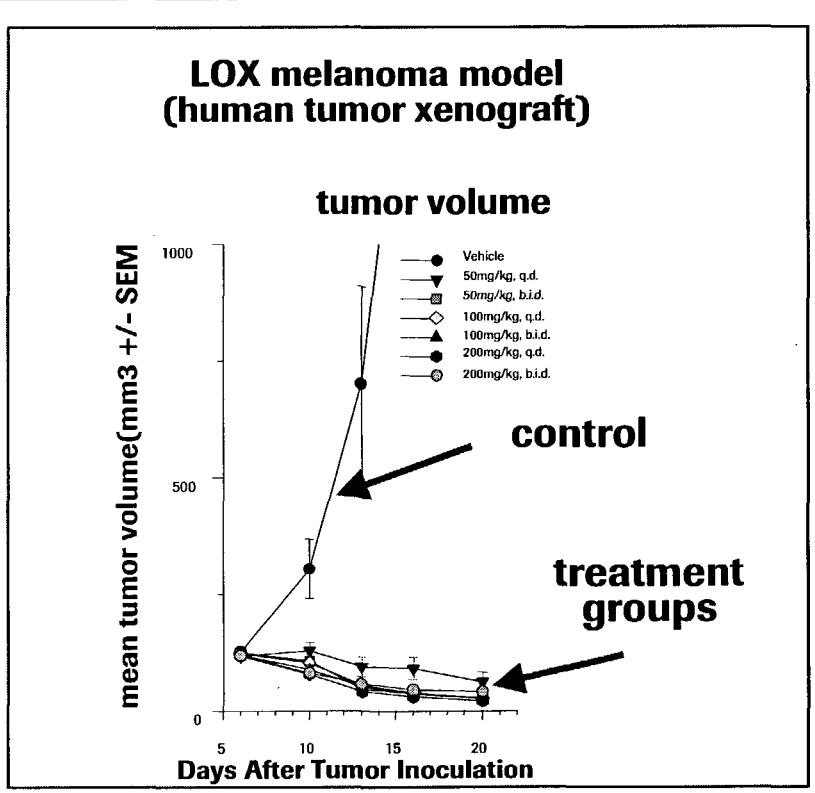
R440 causes cell cycle arrest in M-phase, followed by apoptosis

R440 (CCI) in oncology

Cell cycle inhibitor for a range of cancers

Roche

Pharmaceuticals



- R440 produces antitumor effects ranging from growth inhibition to regressions and cures (depending on the specific model and treatment regimen tested) at well tolerated doses

Roche R&D pipeline

47 NME's focused primarily in 7 therapy areas

Roche

Pharmaceuticals

R944 HIV

R1067 depression

R1124

R1204 depression /a

R1487 rheumatoid a

R1437 benign prostatic hyp

R1458 type 2 diabetes

R1065 obesity

R1435 thromboembolism

antifungal (B)

R411 asthma

R545 overactive bladder

R483 (insulin sensitizer) type 2 diabetes

R1270 (levovirin) HCV

R1273* solid tumors

antibiotic (B)

migraine (P)

cardiovascular disease (S)

macular degeneration (G)

antitumor* (G)

acute coronary syndrome* (G)

R440 (CCI) solid tumors

R450 (alpha 1 agonist) stress incontinence

R724 (T-1249) HIV

cephalosporin (B)

psoriasis (B)

eczema (B)

SCLC (N)

inflamm. bowel disease (G)

E-26** (G)

R420 (Pegasys) HCV

R484 (Bonviva)osteoporosis

HIV

ology

(G)

Tracleer (G)

TNKase (G)

Thrombopoietin (G)

..... collaborations

opt-in opportunities

Basilea (B)

Genentech (G)

Novus (N)

Pozen (P)

Speedel (S)

Genentech (without Roche opt-in but Roche benefits financially)

* in preparation for phase I

** in preparation for phase II

pipeline status at September 2001

R483 in type 2 diabetes

Roche

Pharmaceuticals



- **the insulin sensitizer with dual effect**
  - significant increase in insulin sensitivity
  - significant inhibition of endogenous glucose production
- **best in class insulin sensitizer**
  - target profile is for superior efficacy in glycemic control and/or improved tolerability compared with other insulin sensitizers

** in preparation for phase II

R483 in type 2 diabetes

Roche

Pharmaceuticals



pre-clinical highlights

- the strongest activation of PPARγ receptors compared to competitive compounds
- the maximum improvement of insulin sensitivity and inhibition of glucose production in clamp studies (dual effect), compared to other insulin sensitizers

phase I study in diabetic patients highlights

- significant increase in insulin sensitivity
- significant improvement of post-prandial glucose (OGTT)
- dose-dependent decrease in fasting glucose
- very good tolerability

** in preparation for phase II

Roche R&D pipeline

47 NME's focused primarily in 7 therapy areas

Roche

Pharmaceuticals

R944 HIV	R411 asthma	R440 (CCI) solid tumors	R420 (Pegasys) HCV
R1067			eoporosis
R1124			-20) HIV
R1204 depressio			oncology
R1487 rheumato			GF) (G)
R1437 benign prostatic hyperplasia		anemia	Xolair (G)
R1458 type 2 diabetes	R1164* osteoporosis	R724 (T-1249) HIV	Tracleer (G)
R1065 obesity	R1270 (levovirin) HCV	cephalosporin (B)	TNKase (G)
R1435 thromboembolism	R1273* solid tumors	psoriasis (B)	Thrombopoietin (G)
antifungal (B)	antibiotic (B)	eczema (B)	····· collaborations
	migraine (P)	SCLC (N)	*opt-in opportunities*
	cardiovascular disease (S)	inflamm. bowel disease (G)	Basilea (B)
	macular degeneration (G)	E-26** (G)	Genentech (G)
	antitumor* (G)		Novus (N)
	acute coronary syndrome* (G)		Pozen (P)
			Speedel (S)
			Genentech (without Roche opt-in but Roche benefits financially)

R673 (NK1)
depression/anxiety

* in preparation for phase I
** in preparation for phase II

pipeline status at September 2001

R673 in depression and anxiety

Roche

Pharmaceuticals



- R673 is expected to have improved tolerability compared to SSRI's and superior CNS bioavailability to identified competitor compounds
- excellent brain penetration can be shown functionally in animals and man
- no drug/drug interactions or safety issues identified to date
- compound well tolerated in man

** in preparation for phase II

R673 in depression and anxiety

Positron emission tomography

Roche

Pharmaceuticals



baseline binding

background binding

increasing dose

Roche R&D pipeline

Just 6 of the 47 NME's under development

Roche

Pharmaceuticals

- R944 HIV
- R1067 depression
- R1124 emesis
- R1204 depression /anxiety
- R1487 rheumatoid arthritis
- R1437 benign prostatic hyperplasia
- R1458 type 2 diabetes
- R1065 obesity
- R1435 thromboembolism
- antifungal (B)

- [redacted]
- R545 overactive bladder
- R594 rheumatoid arthritis
- [redacted]
- R701 overactive bladder
- R765 type 2 diabetes
- R1164* osteoporosis
- R1270 (levovirin) HCV
- R1273* solid tumors
- antibiotic (B)
- migraine (P)
- cardiovascular disease (S)
- macular degeneration (G)
- antitumor* (G)
- acute coronary syndrome* (G)

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- R744 (new generation EPO) anemia
- R724 (T-1249) HIV
- cephalosporin (B)
- psoriasis (B)
- eczema (B)
- SCLC (N)
- inflamm. bowel disease (G)
- E-26** (G)

- R420 (Pegasys) HCV
- R484 (Bonviva)osteoporosis
- R698 (T-20) HIV
- R1415 (Tarceva) oncology
- Oncology (anti-VEGF) (G)
- Xanelim (G)
- Xolair (G)
- Tracleer (G)
- TNKase (G)
- Thrombopoietin (G)

..... collaborations

opt-in opportunities

- Basilea (B)
- Genentech (G)
- Novus (N)
- Pozen (P)
- Speedel (S)

Genentech (without Roche opt-in but Roche benefits financially)

* in preparation for phase I

** in preparation for phase II

pipeline status at September 2001

Roche R&D pipeline

Summary

Roche

Pharmaceuticals

- substantial investments in process re-engineering and research technologies
- world class capability in research and development
- research investments beginning to bear fruit
- a pipeline of quantity and quality

Roche

Pharmaceuticals

Pharmaceuticals

William M Burns
Head of Pharmaceuticals Division

Roche

Pharmaceuticals

H1 and Q3 2001 results

'Reshaping for Future Growth'

Near-term growth drivers

Prescription medicines strategy

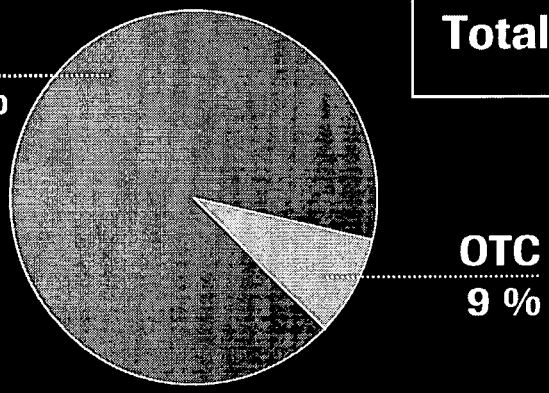
Pharmaceuticals sales at Q3 2001

Stronger performance continues

Roche

Pharmaceuticals

	Q3 2001 CHF m	Q3 2000 CHF m	growth in local currencies
prescription medicines *	12,577	11,825	8 %
'over the counter' medicines	1,230	1,240	1 %
Total	13,807	13,065	7 %



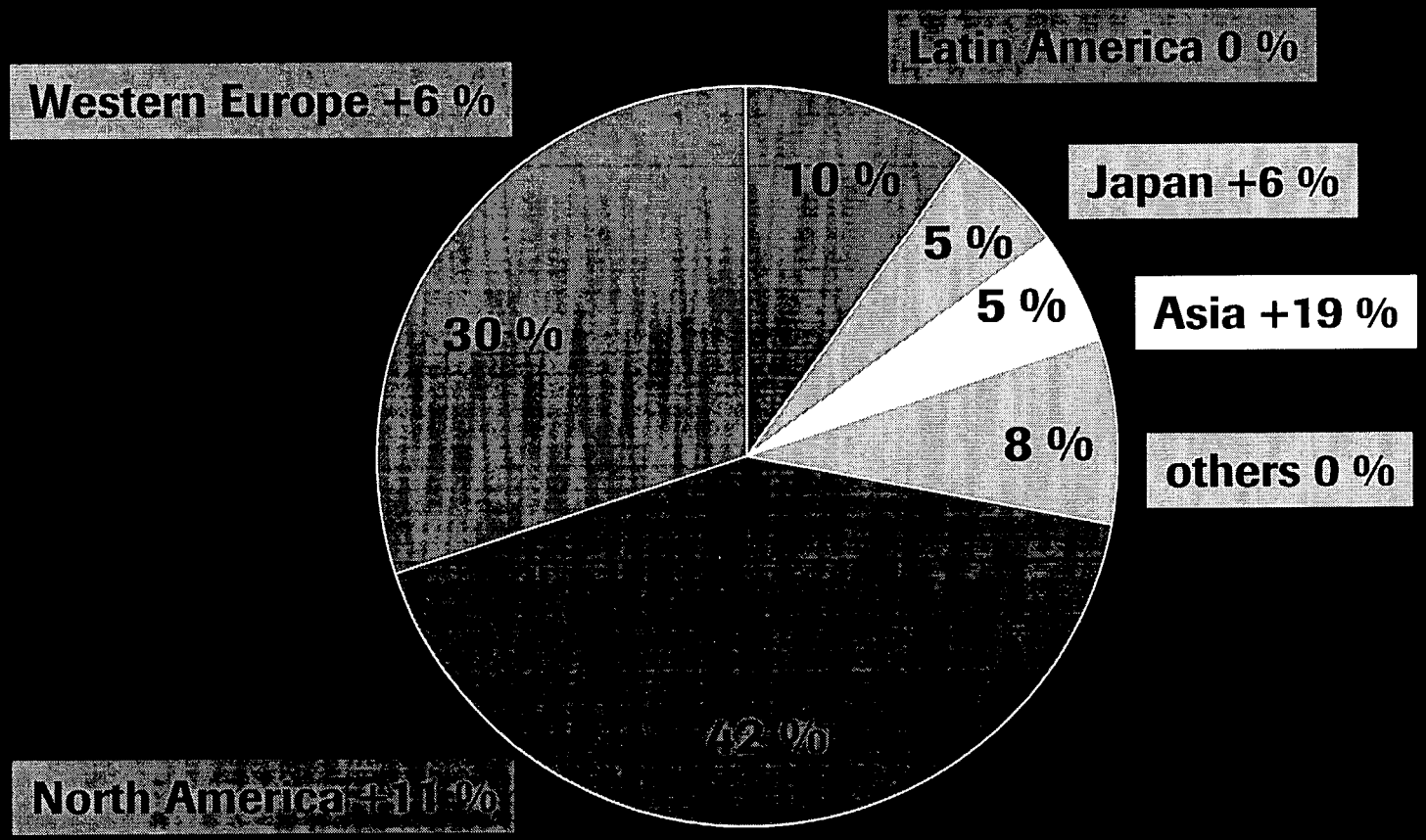
* Roche and Genentech combined

Prescription medicines sales* by region at Q3 2001

North America returns to growth

Roche

Pharmaceuticals



* Roche and Genentech combined

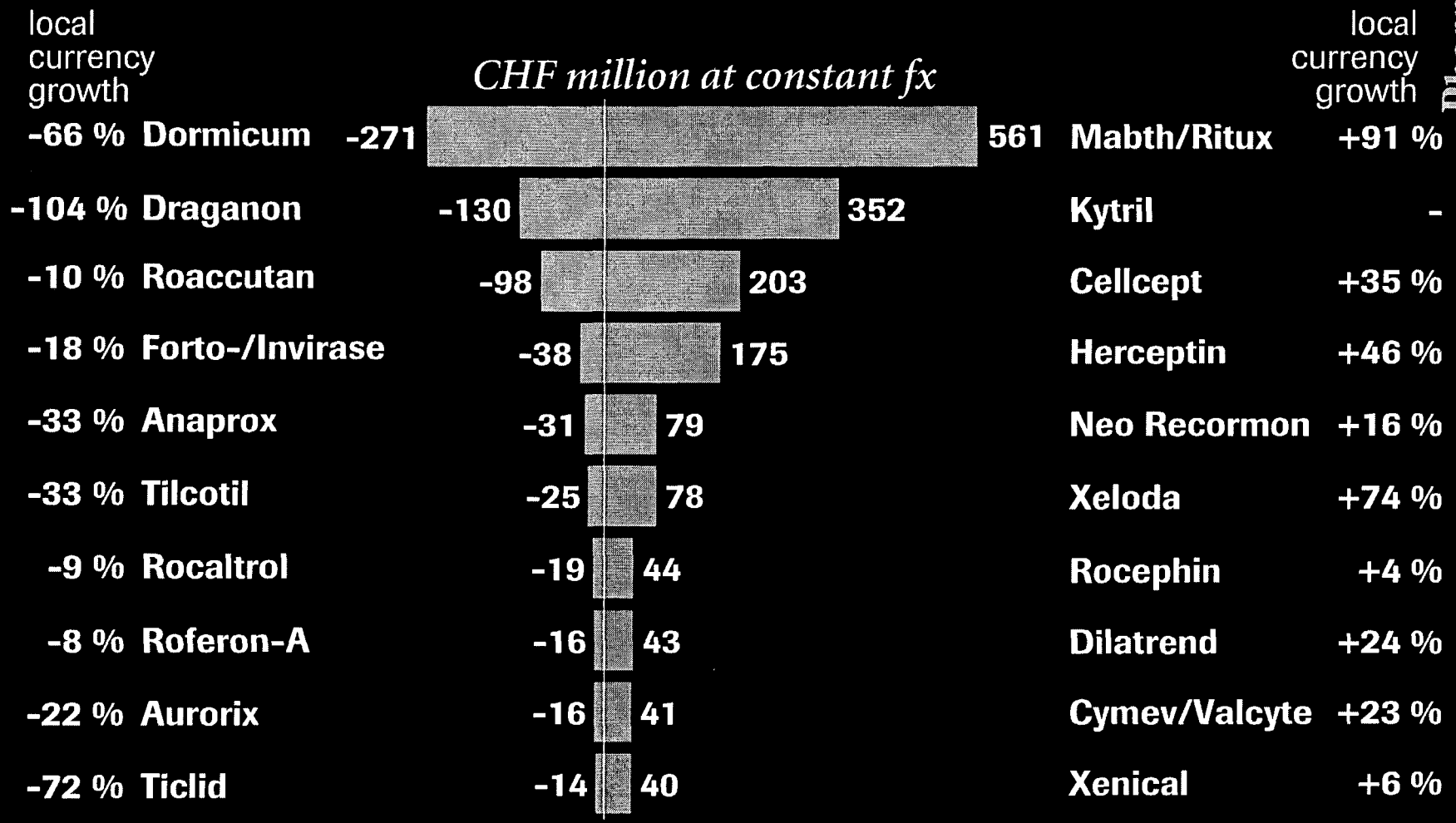
all growth rates in local currencies

Prescription medicines* sales at Q3 2001

Positives overcome losses of Dormicum and Draganon

Roche

Pharmaceuticals



* Roche and Genentech combined

Prescription medicines sales* at Q3 2001

Five products with annual sales ≥CHF 1 billion

Roche

Pharmaceuticals

Rocephin	1,281	3 %	4 %
Mabthera/Rituxan	1,185	93 %	91 %
Roaccutane	846	-10 %	-10 %
CellCept	784	35 %	35 %
Xenical	747	4 %	6 %
Herceptin	560	46 %	46 %
NeoRecormon	545	13 %	16 %
Kytril	343	-	-
Viracept	333	-5 %	-3 %
Nutropin/Protropin	325	14 %	12 %
Activase/TNKase	284	-1 %	-2 %
Pulmozyme	238	9 %	9 %
Neupogen	234	3 %	4 %
Cymevene/Valcyte	222	23 %	23 %
Furtulon	218	-10 %	0 %
Dilatrend	212	20 %	24 %
Lexotan	206	-5 %	-3 %
Xeloda	184	74 %	74 %
Madopar	184	0 %	3 %
Rocaltrol	182	-13 %	-9 %

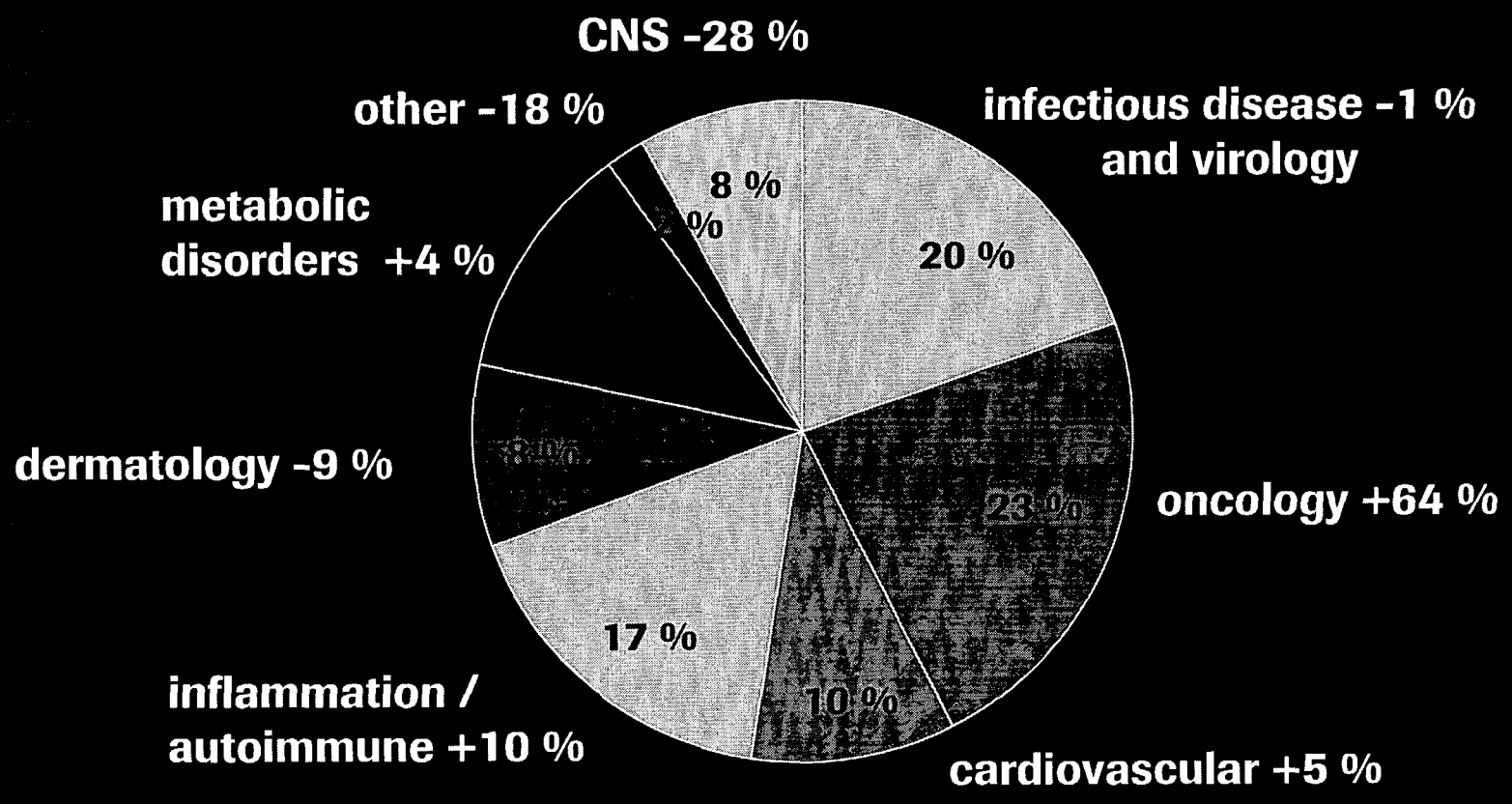
* Roche and Genentech combined

Prescription medicines sales* by therapy area at Q3 2001

Future growth areas: oncology, virology, metabolic disorders, inflammation/autoimmune

Roche

Pharmaceuticals



* Roche and Genentech combined

all growth figures are in local currencies

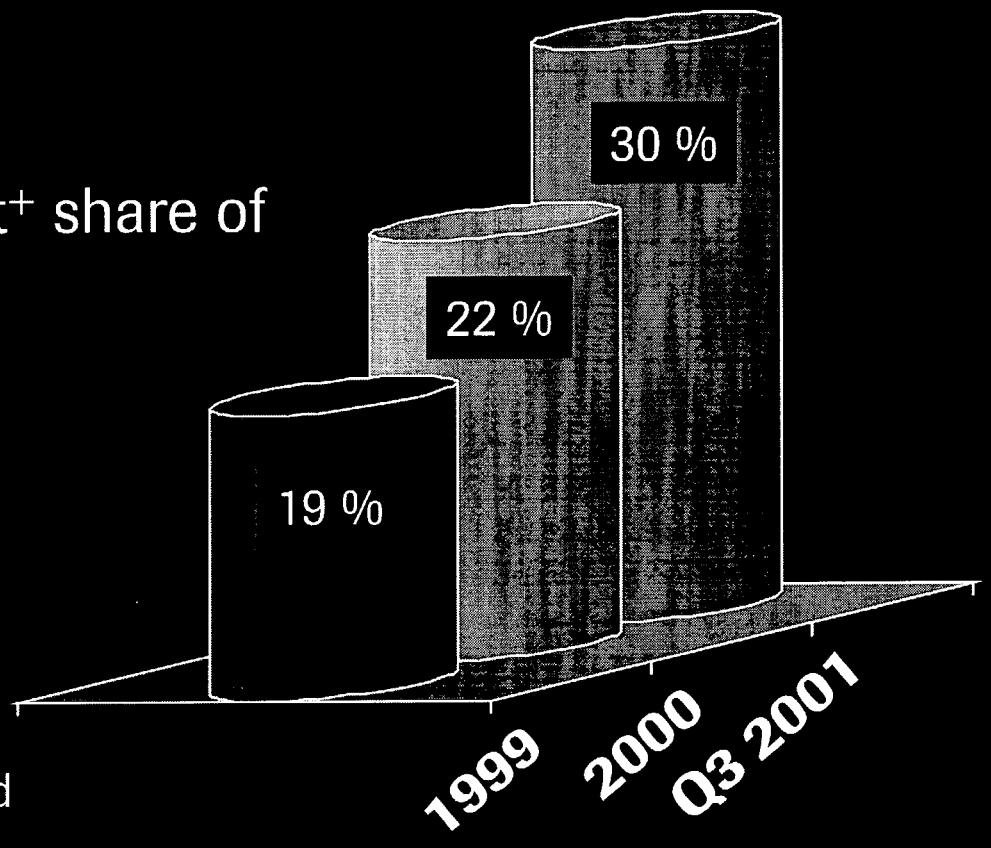
Prescription medicines sales* at Q3 2001

Growing importance of new products+

Roche

Pharmaceuticals

new product+ share of total sales



* Roche and Genentech combined

\+ launched in last five years

'Reshaping For Future Growth'

Roche

Pharmaceuticals

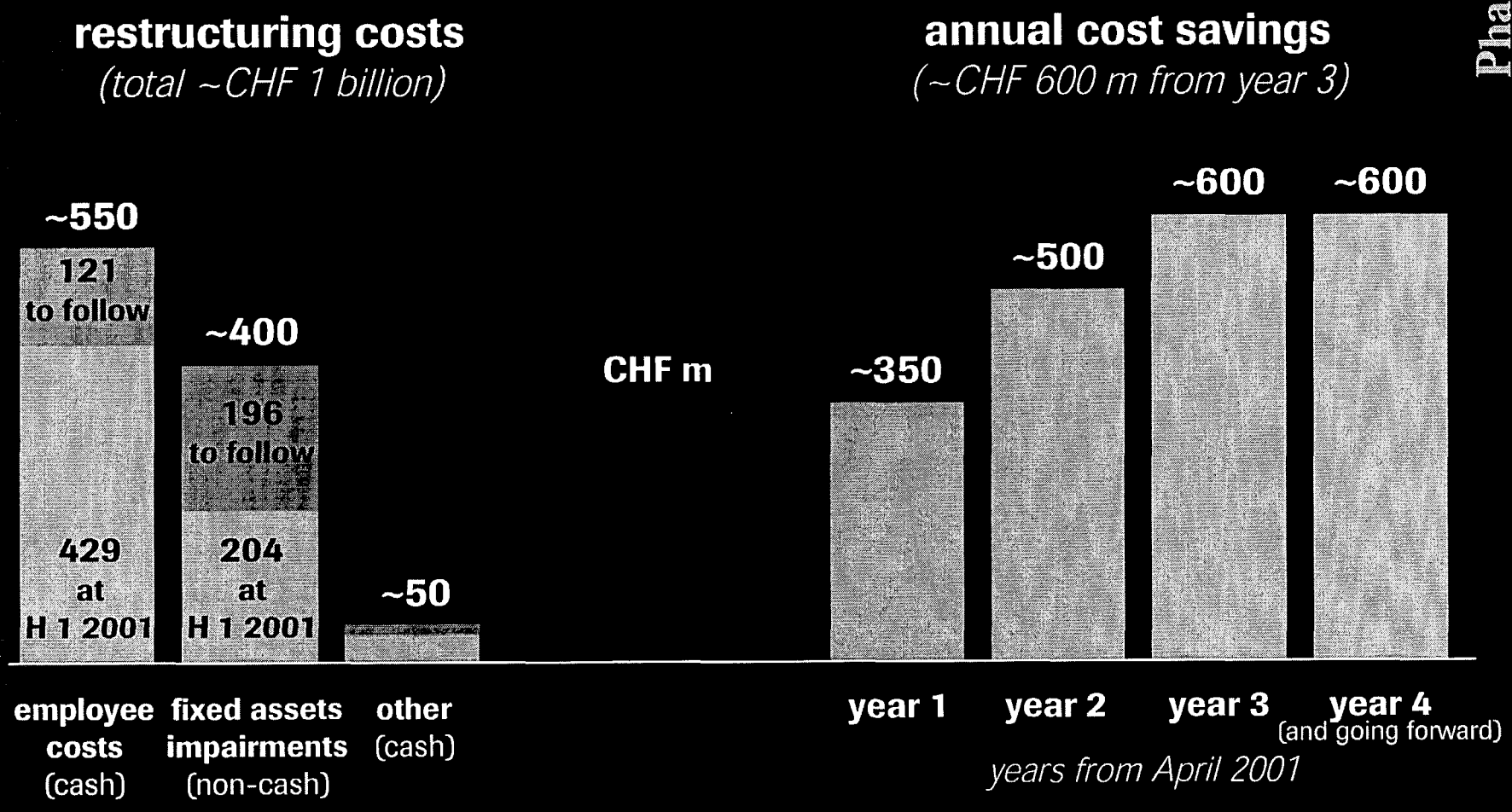
- align resources to attain/retain leadership in priority disease areas
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Re-shaping Pharmaceuticals

Cash savings exceed cash costs within two years

Roche

Pharmaceuticals



'Reshaping For Future Growth'

Leaner and fitter

Roche

Pharmaceuticals

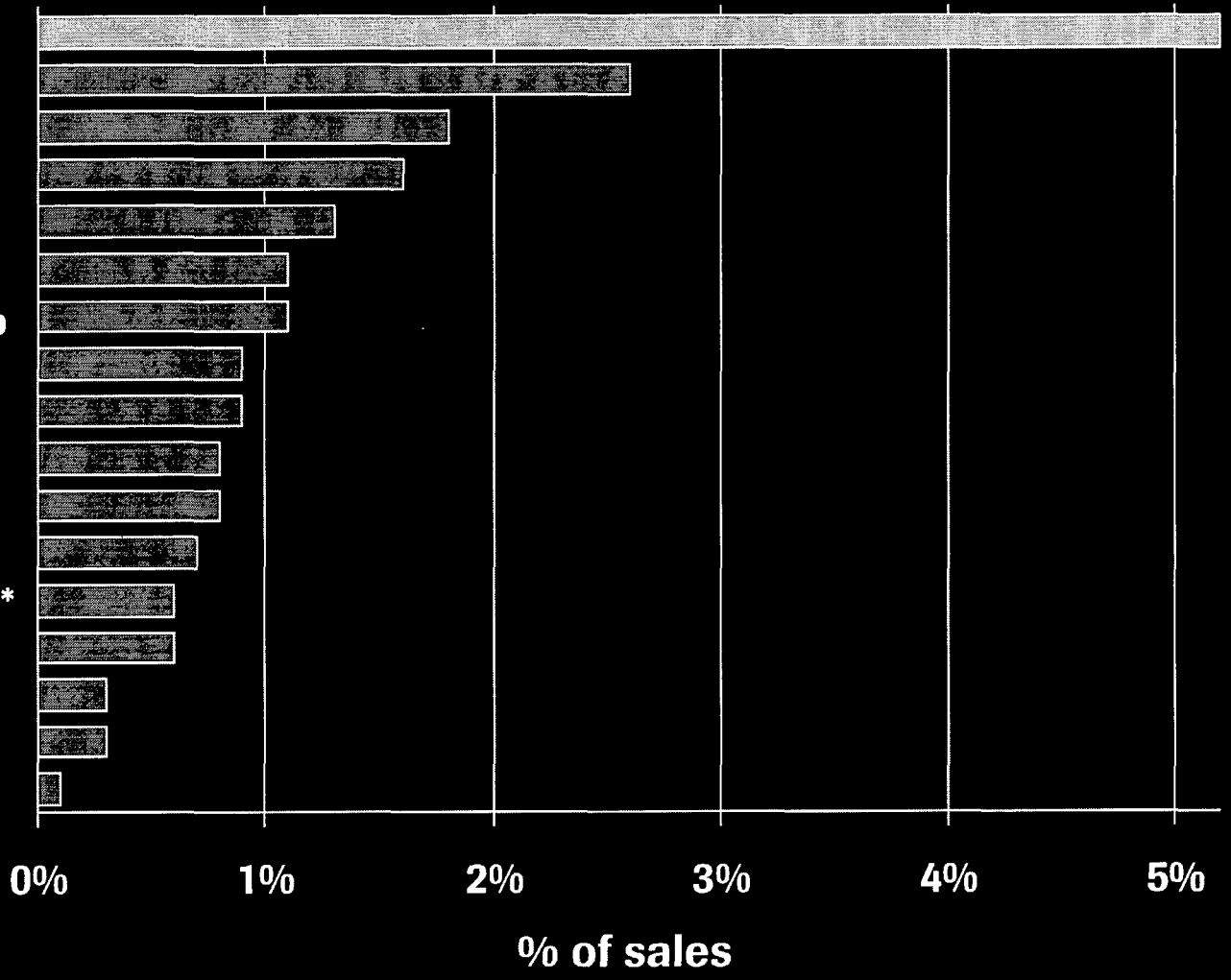
	Roche Pharma 2000	Roche Pharma 2004	pharma industry average
cost of goods/sales	21 %	19 %	22.5 %
marketing and distribution/sales	35 %	32 %	33 %
research and development/sales	18 %	17 %	15 %

Amortisation

A high charge from acquisition history & IAS policy

Roche

Pharmaceuticals



* H1 2000

** 1999

all others at full year 2000

Roche oncology going forward

Roche

Pharmaceuticals

Herceptin®
Trastuzumab
anti-HER2 monoclonal antibody

- continued launch roll-out in Europe and Japan
- expand market through increased HER2 testing
- initiate adjuvant breast cancer study

MABTHERA®
RITUXIMAB

- continued launch roll-out in Europe
- Japan launched in September 2001
- pursue first line position for intermediate / high grade NHL in combination with CHOP
- pursue first line position for low grade NHL in combination with CVP

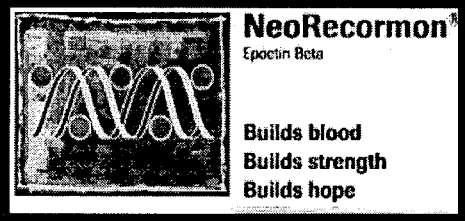
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(capecitabine)

- roll-out of first line indication in metastatic colorectal cancer in Europe and USA
- approval of Xeloda / docetaxel combination in first / second line therapy for metastatic breast cancer achieved in H2 2001 in USA, and expected in 2002 in Europe

Roche oncology going forward

Roche

Pharmaceuticals



- roll-out of new oncology indication (anemia associated with haematological tumours) throughout Europe and smaller markets
- approval for once weekly administration in September 2001 in Europe
- strengthened patent situation after agreement reached between Roche, Genetics Institute, J&J and Amgen
- next generation EPO expected to progress to phase II



- re-launch in major markets ongoing
- marketing support justified by superior profile
- NDA filing in USA for post-operative nausea and vomiting (PONV) in H2 2001



- phase III results in bone metastases in breast cancer to be discussed with US and EU authorities, with aim of filing NDA in 2002

pegylated GCSF

- in phase III for neutropenia with Amgen
- Roche to co-promote

Tarceva (OSI 774)

- positive phase II data in ovarian cancer, NSLC, head and neck cancer presented at ASCO
- now in phase III

CellCept®

Building the next cornerstone of immuno-suppressive therapy

Roche

Pharmaceuticals

- launch roll-out of liver transplant indication
- launch roll-out of paediatric renal transplant indication
- launch roll-out of renal rejection prevention indication in Japan
- data supporting CellCept as cornerstone of immuno-suppressive regimens
- further demonstration of improved long term patient and graft survival



Returning to growth

Roche

Pharmaceuticals

Strategy

- focus activities on target doctors
- increase duration of therapy and patient satisfaction
- launch type 2 diabetes indication

Sales beginning to respond

- sales growth: +6 % at Q3 2001 v. -4 % in 2000

Expected first NDA filing dates

15 NME's over next five years

Roche

Pharmaceuticals

2001	2002	2003	2004	2005
MabThera/Rituxan *int/high grade NHL*	**Bondronat** *bone metastases in breast cancer*	**Xenical** *paediatric obesity*	**R450** (alpha 1 agonist) *stress incontinence*	**R483** (insulin sensitizer) *type 2 diabetes*
NeoRecormon *anemia (once weekly)*	**Bonviva** *treat/prevent osteoporosis*		**R744** (next generation EPO) *anemia*	**R440** (CCI) *solid tumors*
Pegasys *chronic hepatitis C (EU)*	**R698** (T-20) *HIV/AIDS*		**R673** (NK1 modulator) *anxiety/depression*	**R545** *overactive bladder*
Pegasys + ribavirin *chronic hepatitis C*	**Valcyte** *prevention of CMV*		**Pegasys** *chronic hepatitis B*	**R724** (T-1249) *HIV/AIDS*
Tamiflu *treat/prevent influenza (EU)*	**Xanelim** *psoriasis*		**R1415** Tarceva (OSI-774) *non-small cell lung cancer*	**R1124** (NK1 modulator) *emesis*
Xeloda / docetaxel *breast cancer (EU)*	**Tracleer** *chronic heart failure*			
Xenical *type II diabetes*	**Xolair** *allergic asthma*			

Genentech projects

NMEs

line extensions

status at September 2001

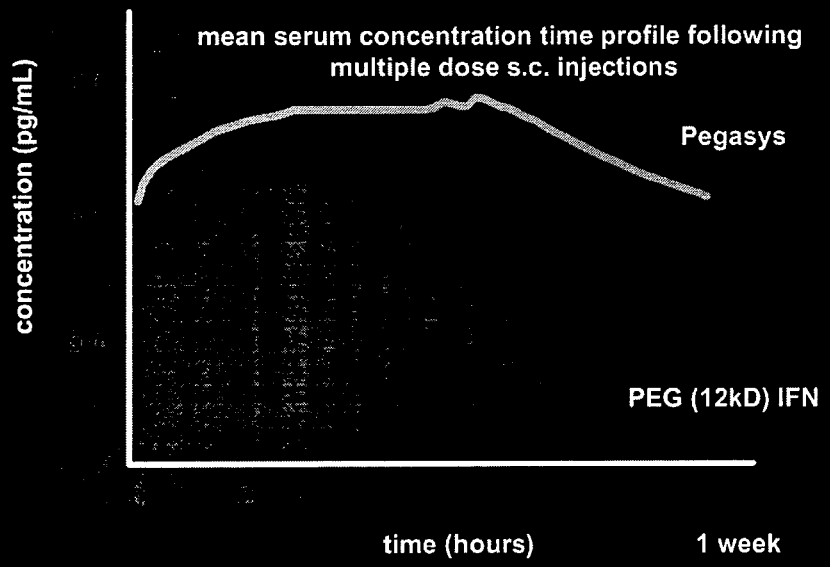
NME = new molecular entity

PEGASYS

Superior kinetics suggest superior efficacy

Roche

Pharmaceuticals



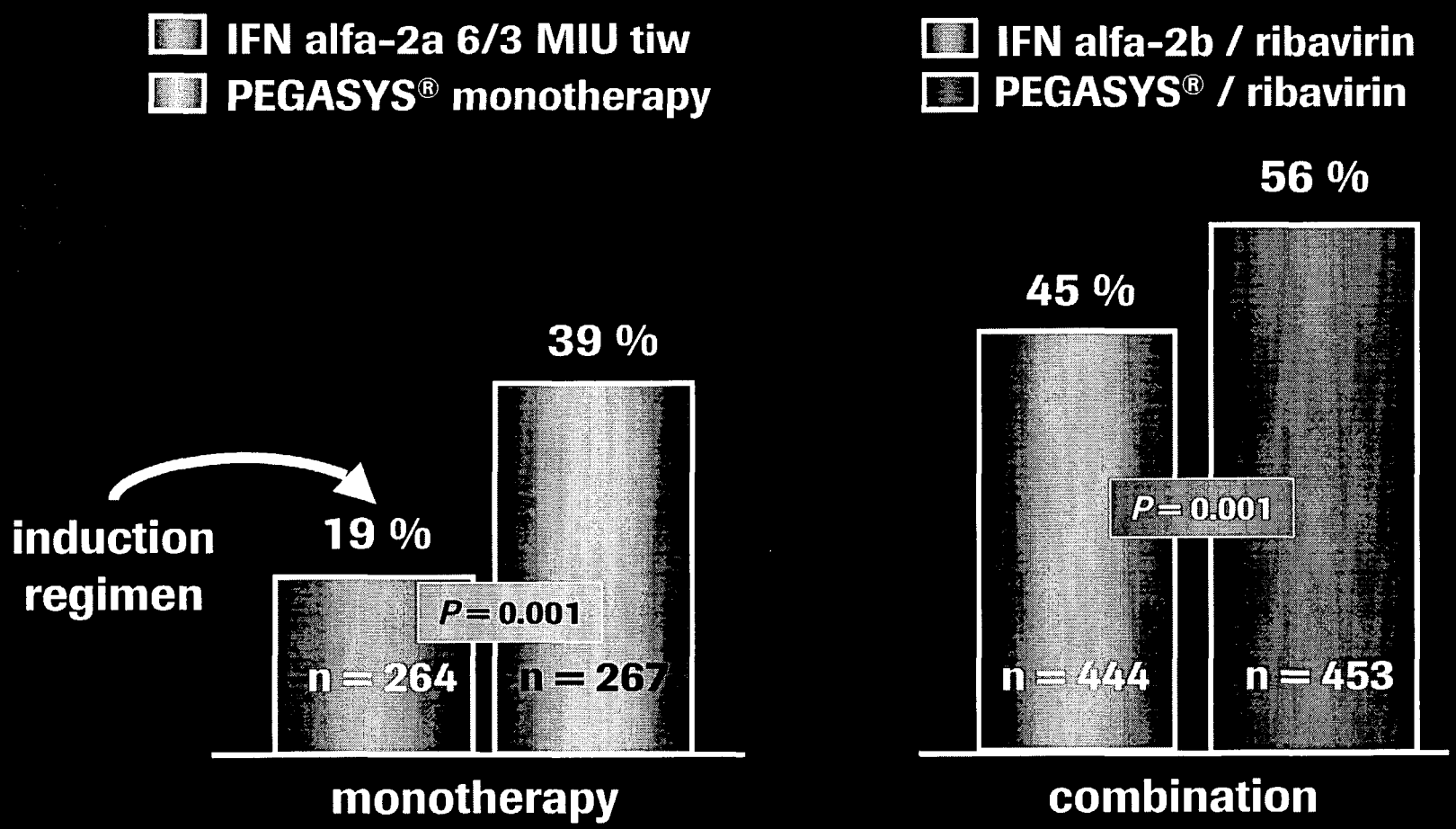


PEGASYS

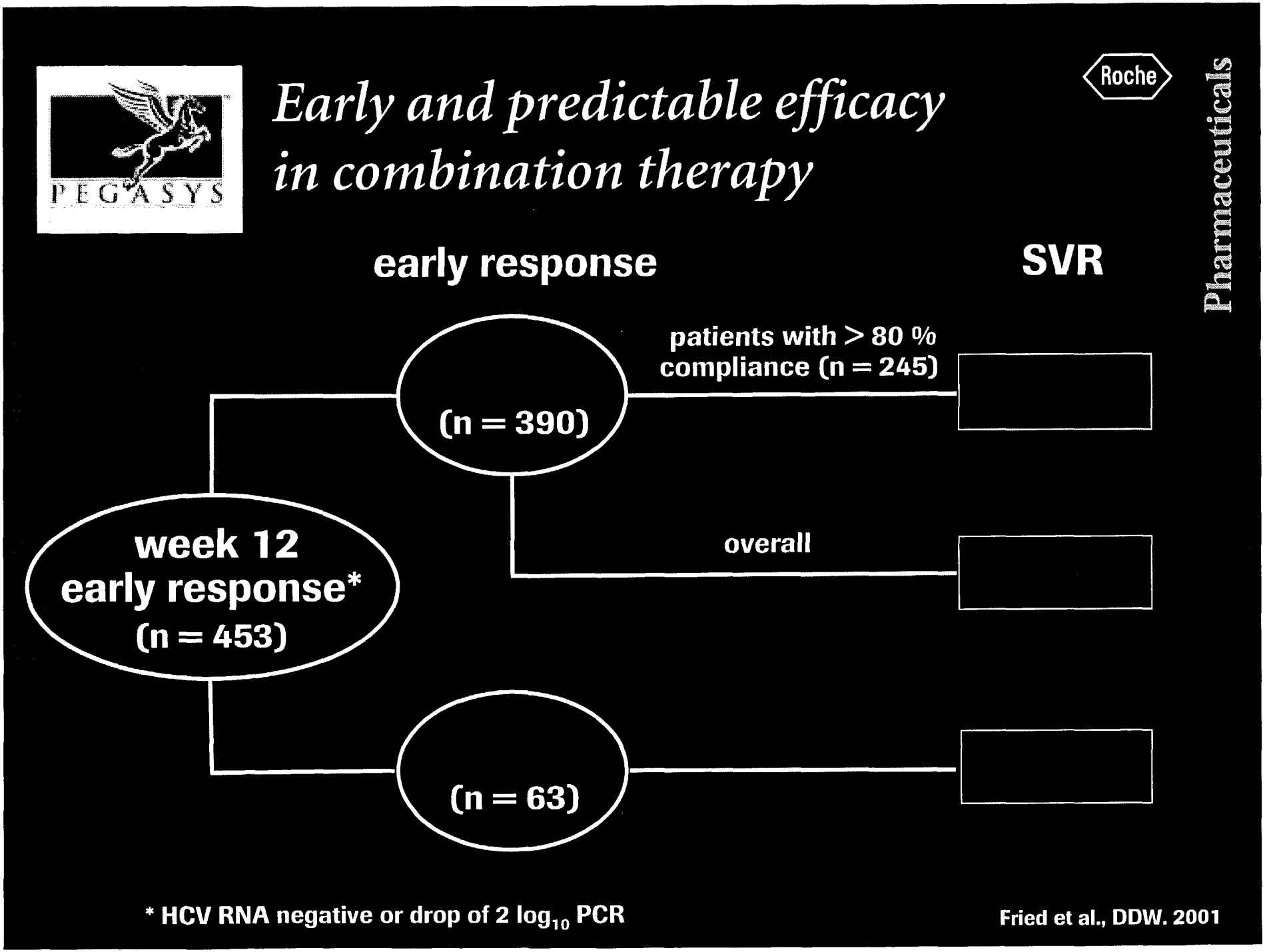
Unsurpassed efficacy in mono- and combination therapy

Roche

Pharmaceuticals



Zeuzem S et al., *N Engl J Med.* 2000;343:1666-1672
Fried et al., DDW. 2001

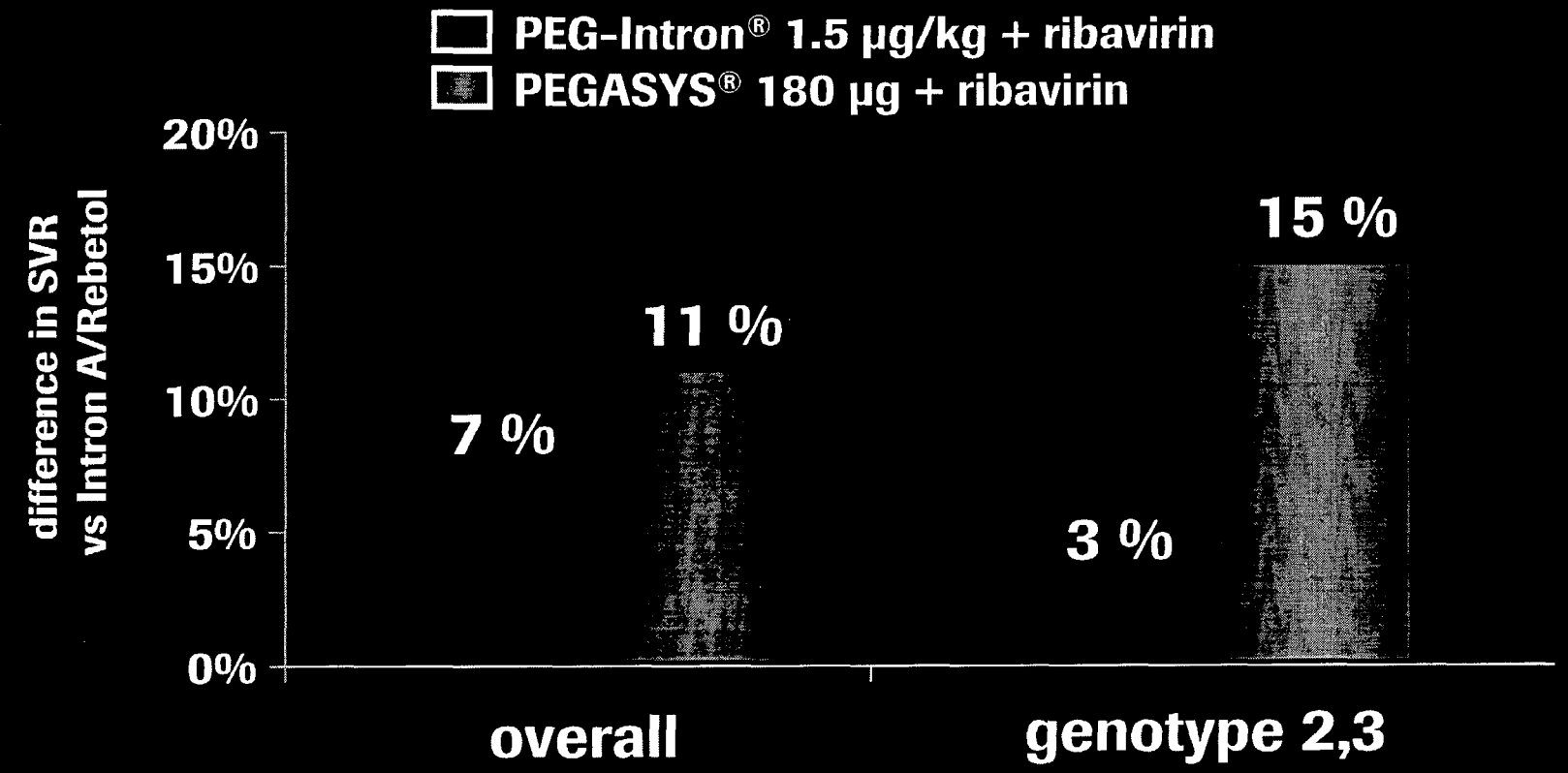

PEGASYS
Early and predictable efficacy in combination therapy
Roche
Pharmaceuticals
early response
SVR
patients with > 80 % compliance (n = 245)
(n = 390)
week 12 early response* (n = 453)
overall
(n = 63)
* HCV RNA negative or drop of 2 log10 PCR
Fried et al., DDW. 2001

PEGASYS

Superior improvement over current standard therapy

Roche

Pharmaceuticals



The comparator was <u>the same</u> in both studies:
Rebetron (3 MIU Intron-A tiw + Rebetol 1-1,2g)

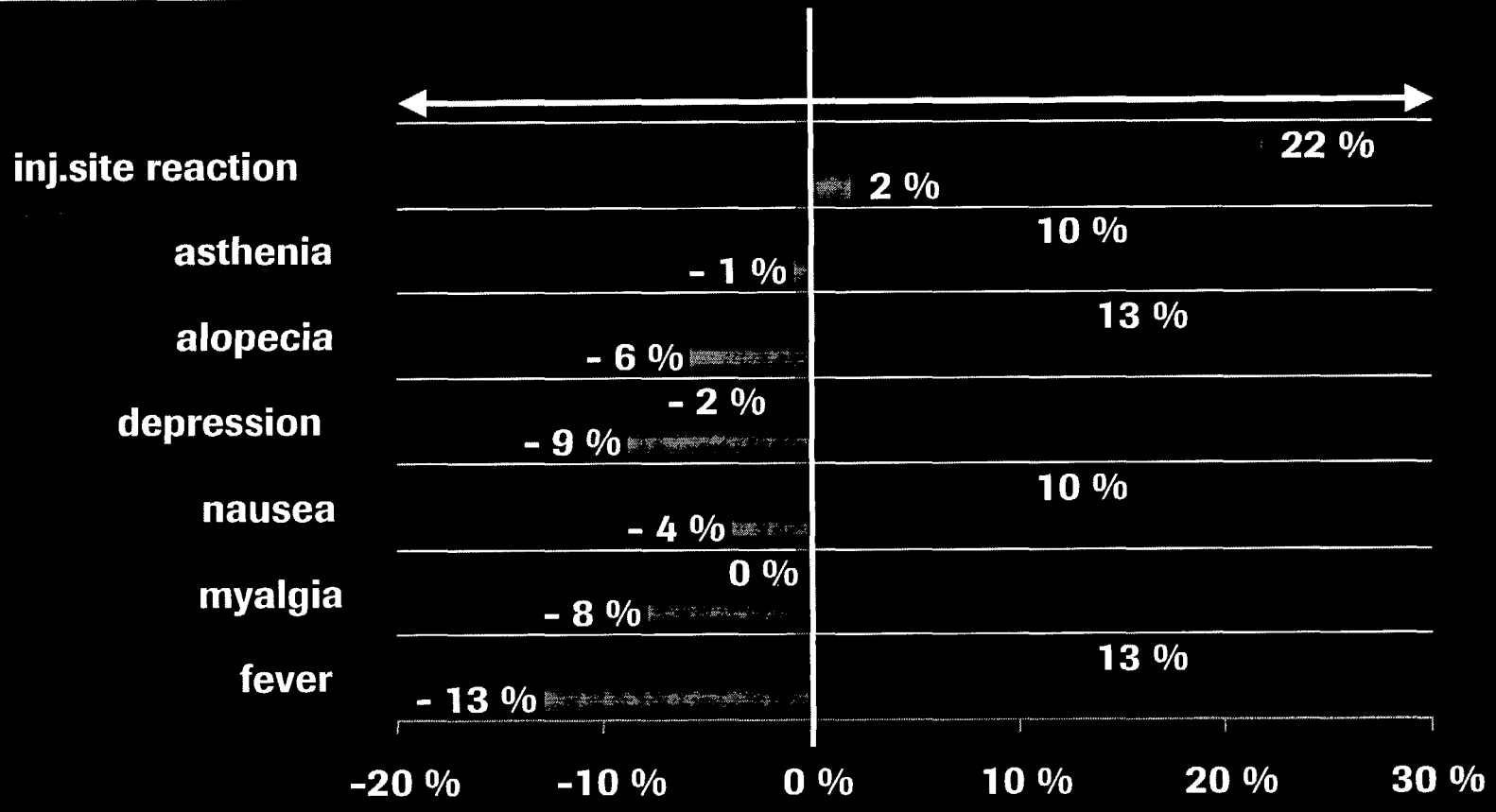
Fried et al., *DDW* 2001
Manns et al., *AASLD* 2000

PEGASYS

Better tolerated than PEG-Intron®

Roche

Pharmaceuticals



PEG-Intron® 0.5 µg/kg + ribavirin

PEGASYS® 180 µg + ribavirin

Fried et al., *DDW* 2001

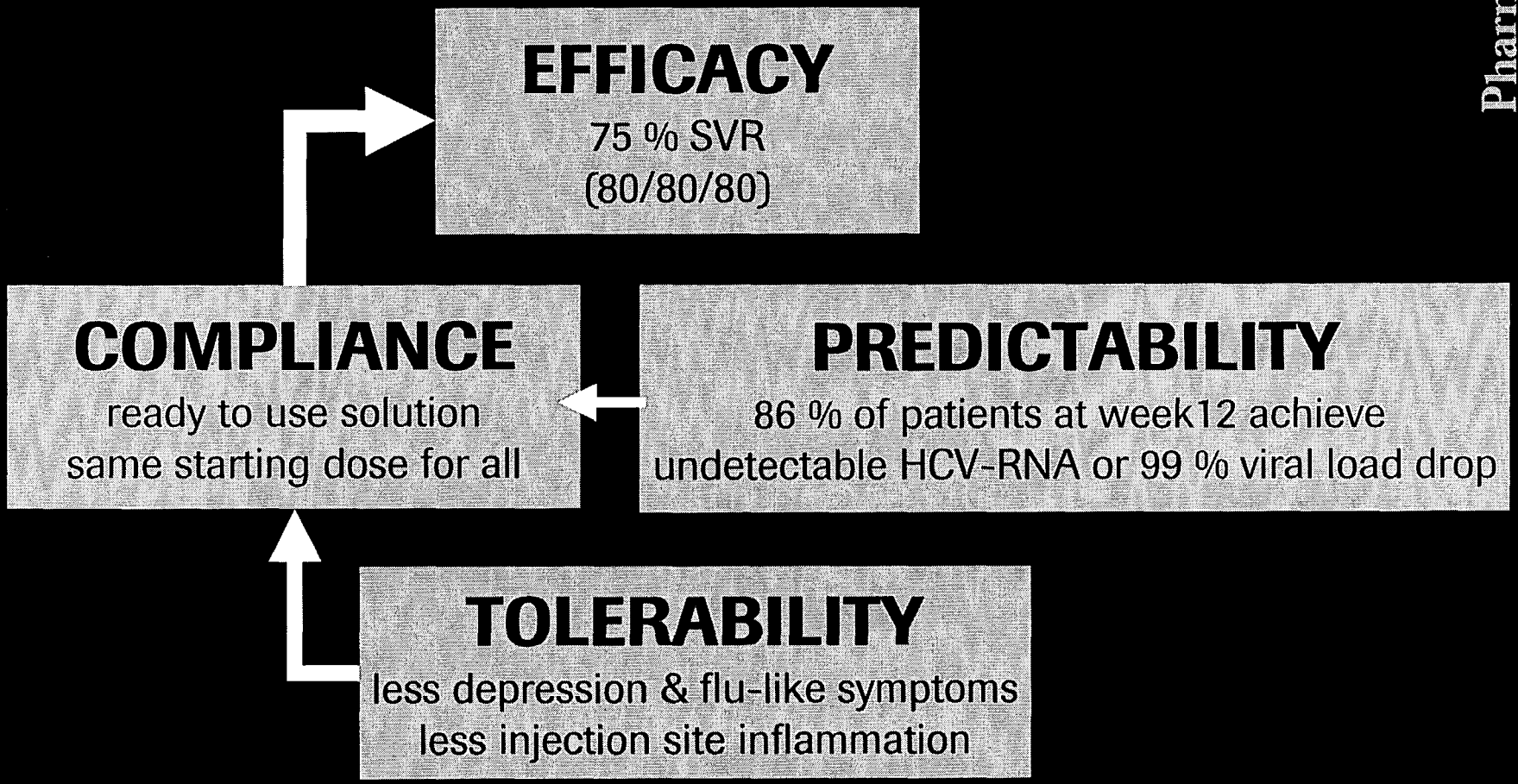
Manns et al., *AASLD* 2000

Pegasys and ribavirin combination[1].

A success cycle

Roche

Pharmaceuticals



[1] Pegasys + ribavirin combination data (phase 3) in chronic hepatitis C presented at Digestive Disease Week, 22 May 2001

Bonviva

Strong evidence from new osteoporosis data

Roche

Pharmaceuticals

Major phase 3 treatment trial recently completed: promising results with both daily and intermittent oral regimens. Data to be presented in 2002

High potency of ibandronate and new data provides foundation for development of innovative oral and intravenous intermittent regimens

Regulatory strategy and complementary programmes currently being discussed with health authorities

NDA filing of oral formulation for treatment and prevention of post menopausal osteoporosis planned for early 2002

Further development of oral and iv formulations to address unmet needs in osteoporosis planned

HIV fusion inhibitors

A revolutionary approach to HIV infection

Roche

Pharmaceuticals

- first agent clinically developed to act by stopping virus entering the human cell
- good safety profile demonstrated and anti-viral activity confirmed (phase 2 data)
- good activity demonstrated in drug-resistant viruses
- phase 3 studies now recruiting → study completion expected H1 2002

- highly potent antiviral activity demonstrated
- phase 2 to run through 2002

Prescription medicines strategy

Focus for growth

Roche

Pharmaceuticals

Roche

- oncology
- metabolic diseases
- virology
- inflammatory diseases
- genito-urinary diseases
- central nervous system
- peripheral vascular diseases

Genentech, Inc. 25 YEARS
IN BUSINESS FOR LIFE

- oncology
- cardiovascular
- opportunistic

Global Business Development, Licensing and Alliances

One organisation, four processes

Roche

Pharmaceuticals

- one global structure to encompass entire range of deals
- want, find, get, manage

Pharmaceuticals Division outlook

Near term expectations

Roche

Pharmaceuticals

- good single-digit sales growth in 2001
- continued double-digit sales growth for: Mabthera/Rituxan, Herceptin, Xeloda, CellCept, Dilatrend
- single-digit sales growth for Xenical, NeoRecormon
- slow decline: Roaccutane
- flu-dependent: Tamiflu
- operating margin to improve to 20-25 % of sales in next two to three years

Pharmaceuticals Division

Summary (1)

Roche

Pharmaceuticals

- Stronger second and third quarters produce improving sales performance
  - five prescription medicines with annual sales of more than CHF 1 billion
  - North America sales return to growth
  - Xenical returns to growth
- 'Reshaping for the Future' is rolling out
  - aligning resources to maximise growth and achieve leadership in priority areas
  - improving the operating margin to 20-25 % of sales
  - business development, licensing and alliances capability strengthened
  - principal actions identified and many already implemented
- In USA
  - Roche Rx is restructured and focused for growth
  - Genentech continues to grow strongly

Pharmaceuticals Division

Summary (2)

Roche

Pharmaceuticals

- World class capability in research and development
- Strengthening pipeline
  - 47 NME's focused on 7 therapy areas
  - 15 NME's expected to be filed over next five years
- Near-term growth expected from oncology, virology, metabolic disorders, inflammation/autoimmune

Roche Holding Ltd

21 November 2001 - Presentation to Investors by
Dr. Franz Humer, Chairman and Chief Executive Officer

As Posted on Roche.com

Furnished Under Rule 12g3-2(b)
Roche Holding 82-3315

Roche

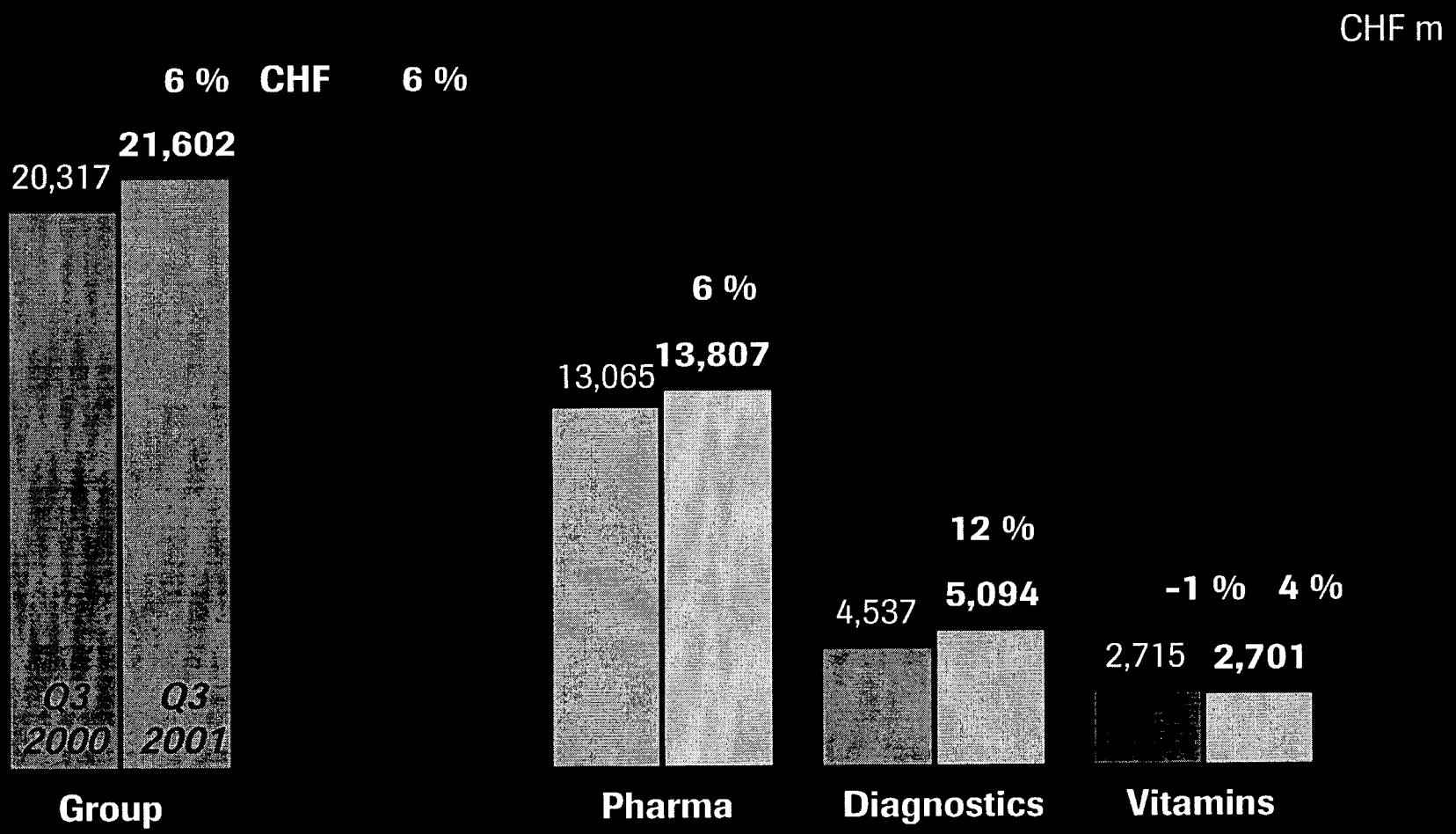
This presentation contains certain forward-looking statements. These forward-looking statements may be identified by words such as "believes", "expects", "anticipates", "projects", "intends", "should", "seeks", "estimates", "future" or similar expressions or by discussion of strategy, goals, plans or intentions. Various factors may cause actual results to differ materially in the future from those reflected in forward-looking statements contained in this presentation among others: (1) pricing and product initiatives of competitors; (2) legislative and regulatory developments and economic conditions; (3) delay or inability in obtaining regulatory approvals or bringing products to market; (4) fluctuations in currency exchange rates and general financial market conditions; (5) uncertainties in the discovery, development or marketing of new products or new uses of existing products; (6) increased government pricing pressures; (7) interruptions in production; (8) loss of or inability to obtain adequate protection for intellectual property rights; (9) litigation; (10) loss of key executives or other employees; and (11) adverse publicity or news coverage.

Roche at Q3 2001

- Better than expected results in a difficult year
  - sales growth in all Divisions
  - accelerating sales growth in Pharmaceuticals
  - operating profit and net income levels maintained
- Pharmaceuticals reshaping for future growth
- Diagnostics delivering double-digit sales and profit growth
- Vitamins and Fine Chemicals returning to top-line growth

Sales at Q3 2001 (adjusted)

Growth in all Divisions

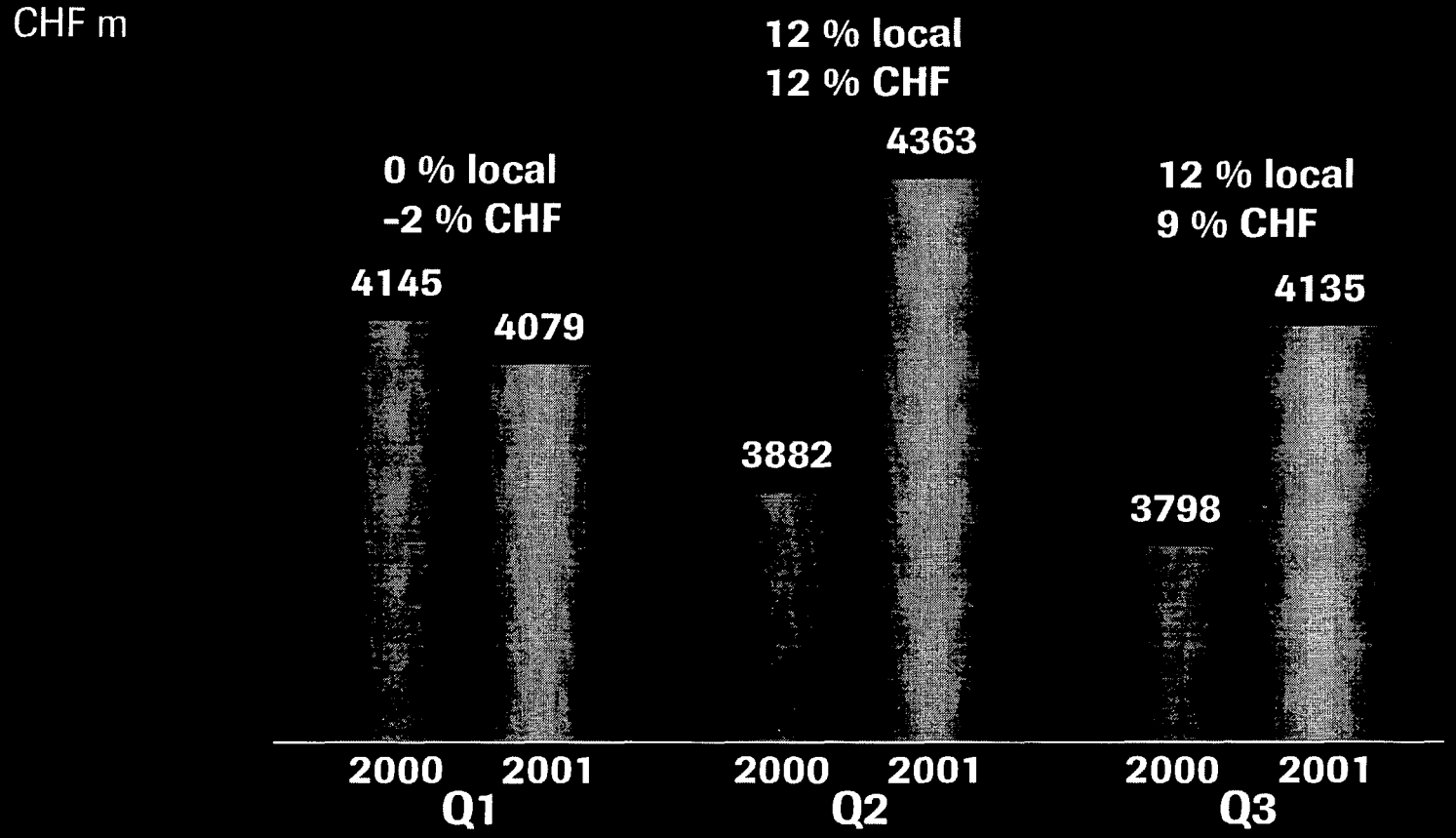


Prescription medicines* quarterly growth in 2001

Good growth returns in Q2 and Q3

Roche

Pharmaceuticals



* Roche and Genentech combined

Prescription medicines sales* at Q3 2001

Five products with annual sales ≥CHF 1 billion

Roche

Pharmaceuticals

Rocephin	1,281	3 %	4 %
Mabthera/Rituxan	1,185	93 %	91 %
Roaccutane	846	-10 %	-10 %
CellCept	784	35 %	35 %
Xenical	747	4 %	6 %
Herceptin	560	46 %	46 %
NeoRecormon	545	13 %	16 %
Kytril	343	-	-
Viracept	333	-5 %	-3 %
Nutropin/Protropin	325	14 %	12 %
Activase/TNKase	284	-1 %	-2 %
Pulmozyme	238	9 %	9 %
Neupogen	234	3 %	4 %
Cymevene/Valcyte	222	23 %	23 %
Furtulon	218	-10 %	0 %
Dilatrend	212	20 %	24 %
Lexotan	206	-5 %	-3 %
Xeloda	184	74 %	74 %
Madopar	184	0 %	3 %
Rocaltrol	182	-13 %	-9 %

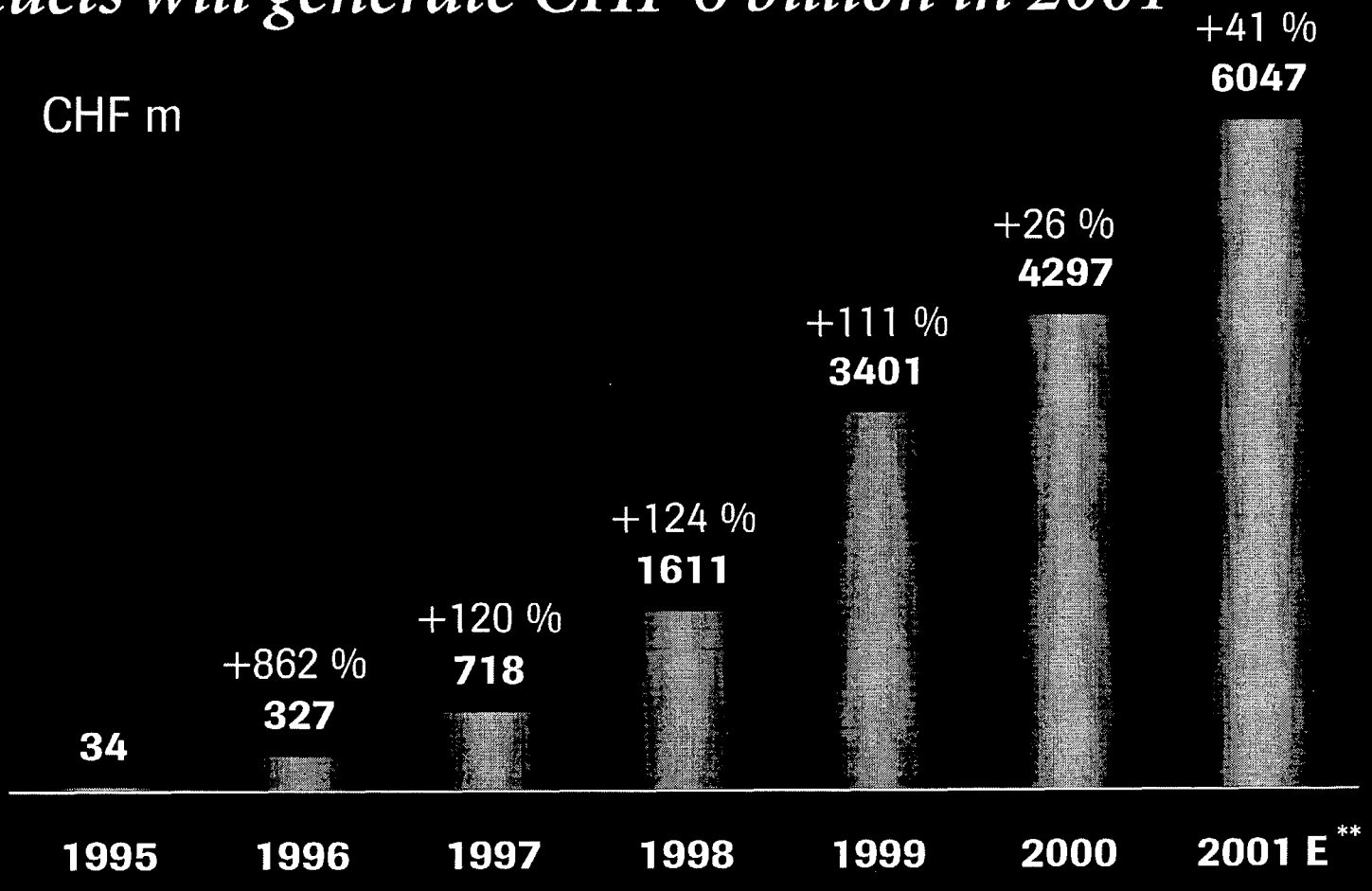
* Roche and Genentech combined

New prescription medicine* sales and growth since 1995

15 products will generate CHF 6 billion in 2001

Roche

Pharmaceuticals



* Roche and Genentech

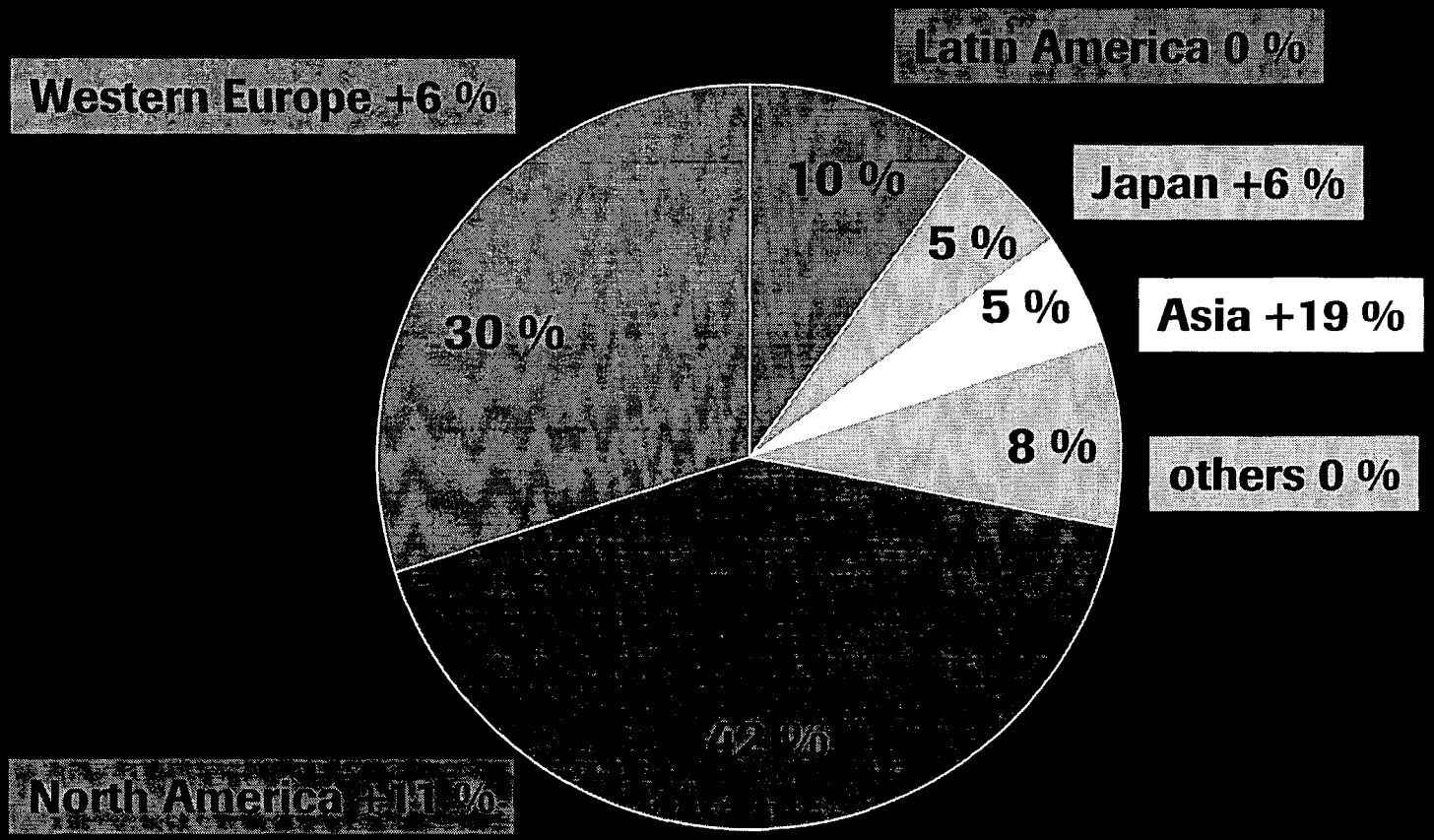
** Roche and analyst estimates

Prescription medicines sales* by region at Q3 2001

North America returns to growth

Roche

Pharmaceuticals



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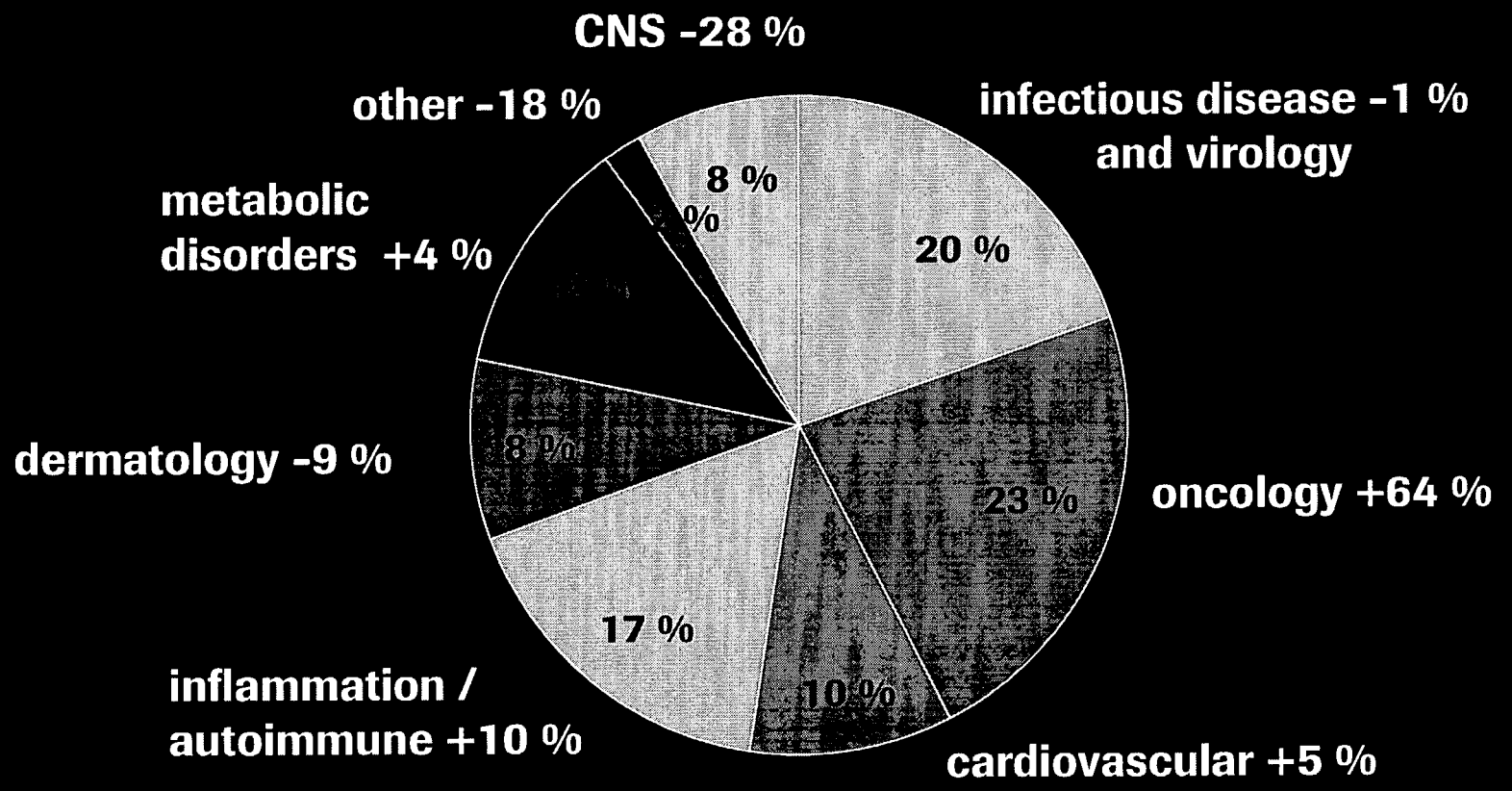
all growth rates in local currencies

Prescription medicines sales* by therapy area at Q3 2001

Future growth areas: oncology, virology, metabolic disorders, inflammation/autoimmune

Roche

Pharmaceuticals



* Roche and Genentech combined

all growth figures are in local currencies

'Reshaping For Future Growth'

Roche

Pharmaceuticals

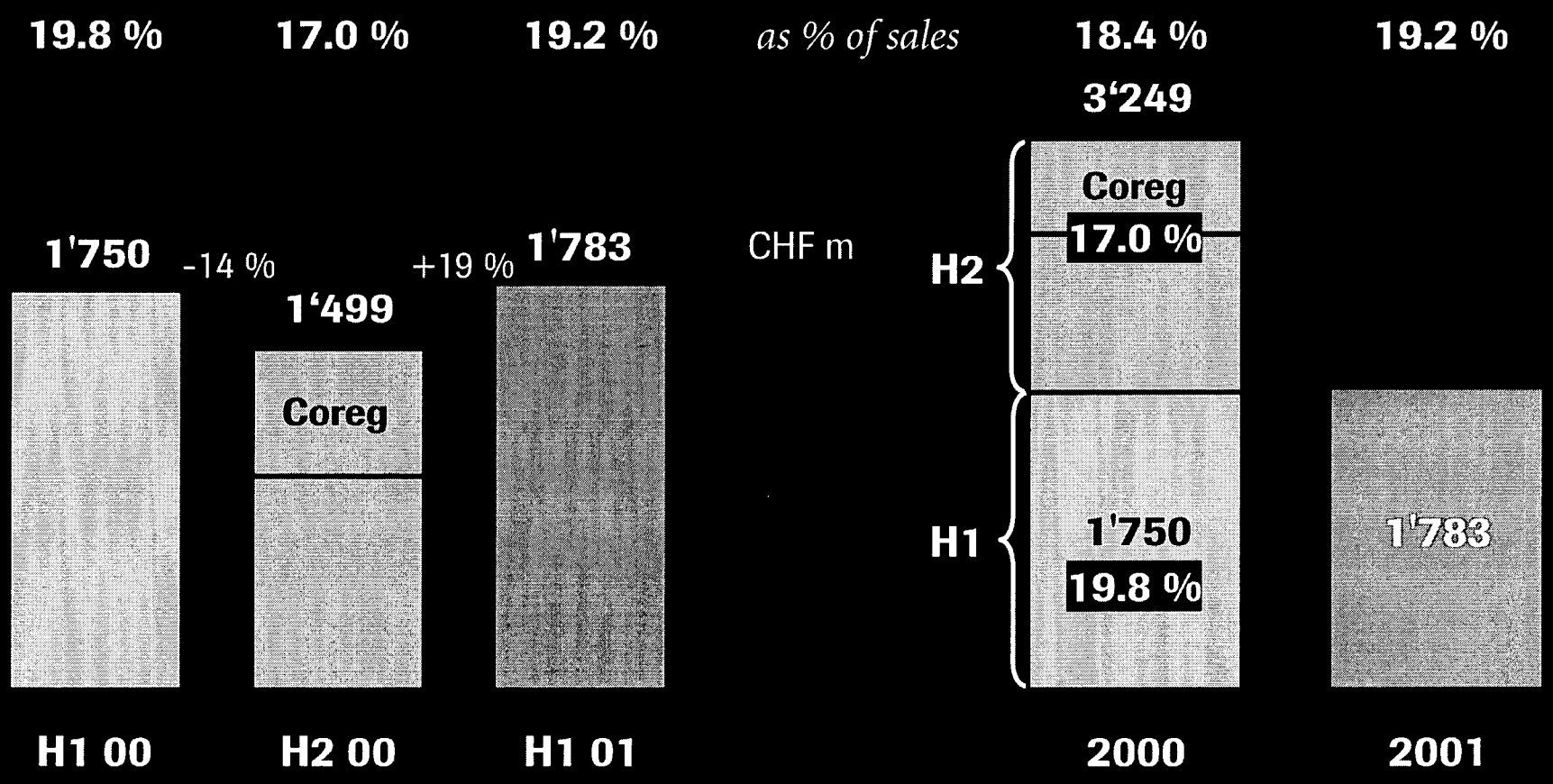
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Pharmaceuticals operating profit H1 2000 to H1 2001 (adjusted)

Profitability maintained

Roche

Pharmaceuticals

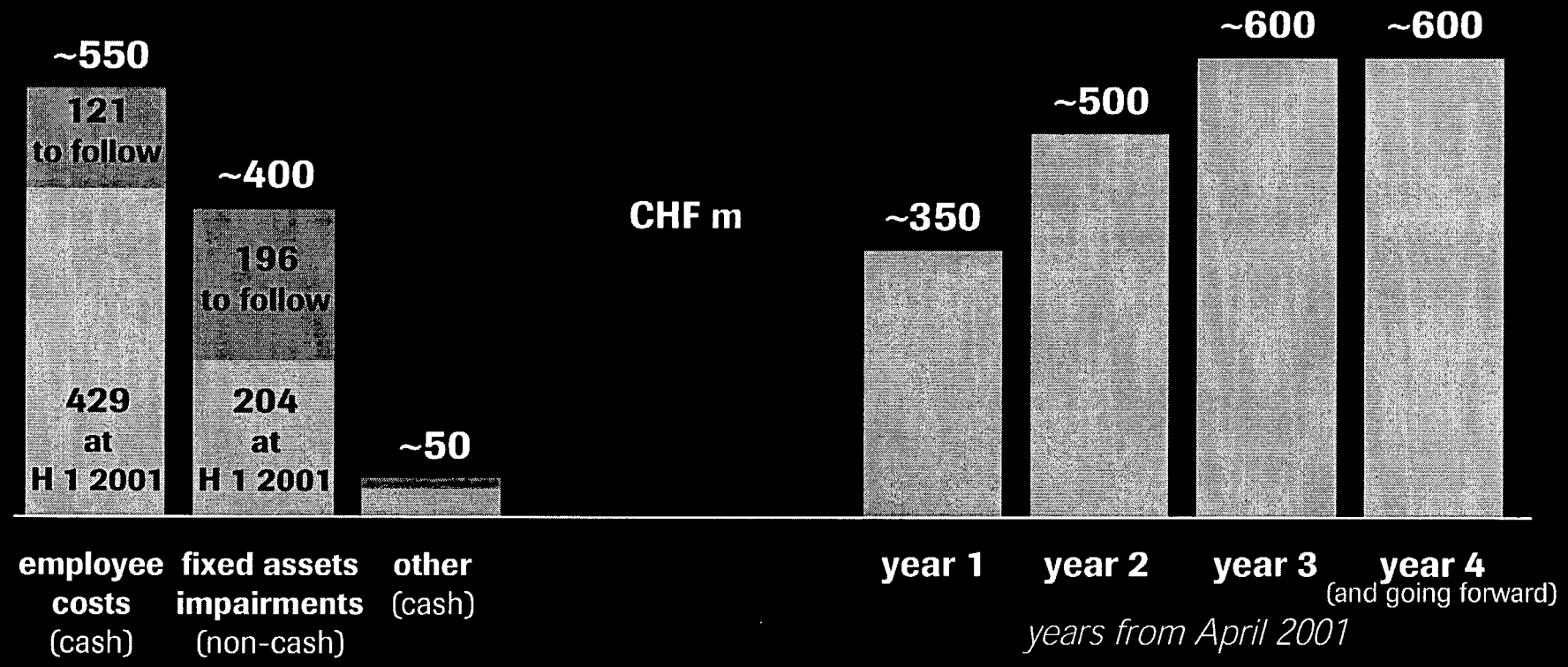


Re-shaping Pharmaceuticals

Cash savings exceed cash costs within two years

Roche

Pharmaceuticals



'Reshaping For Future Growth'

Leaner and fitter

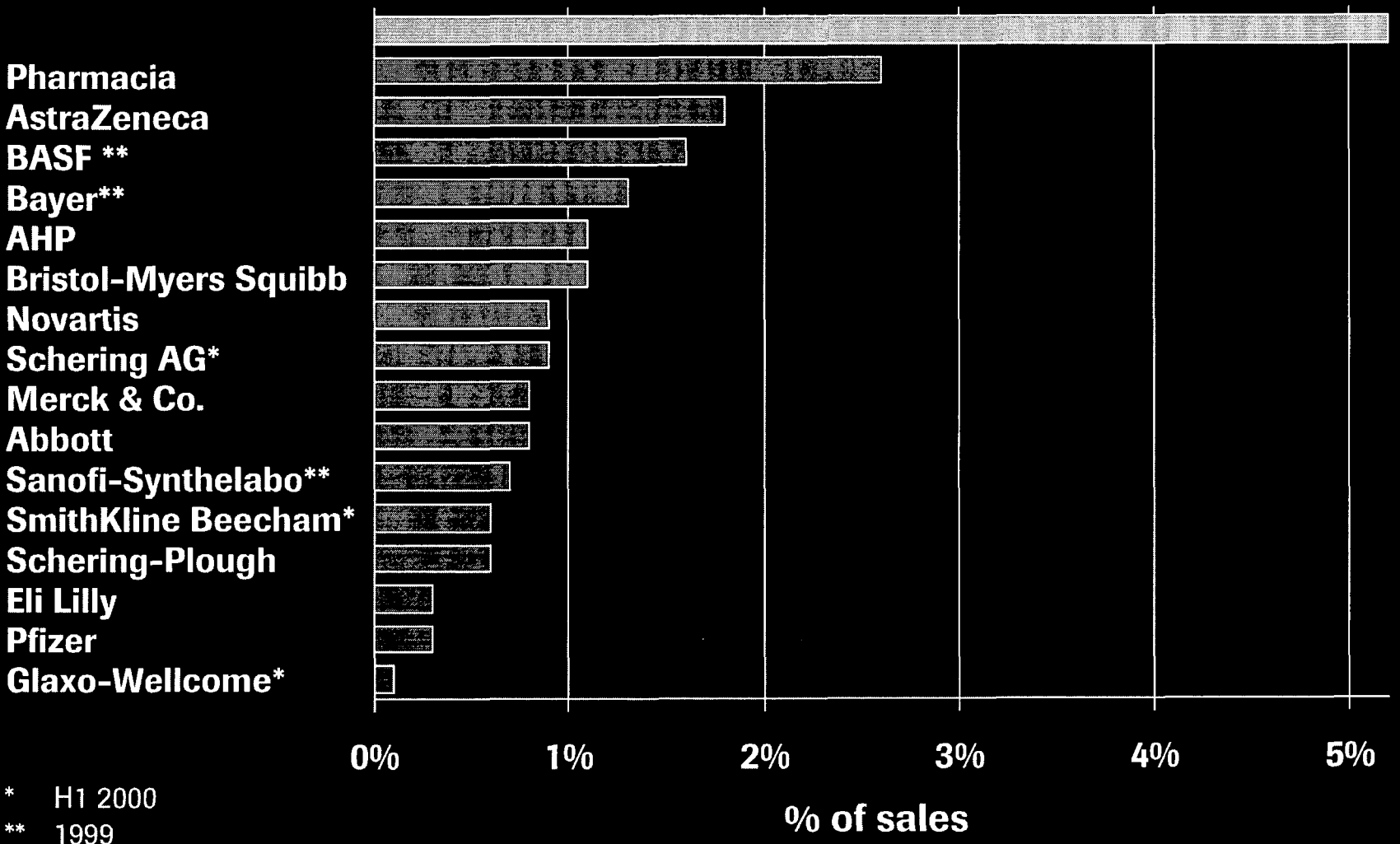
Roche

Pharmaceuticals

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Roche oncology going forward

Roche

Pharmaceuticals

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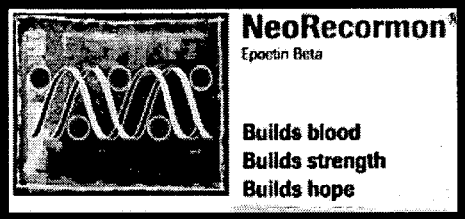
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Roche

Pharmaceuticals



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- next generation EPO to progress to phase II

KYTRIL granisetron HCl Tablets and Injection

- re-launch in major markets ongoing
- marketing support justified by superior profile
- NDA filing in USA for post-operative nausea and vomiting (PONV) in H2 2001

BONDRONAT

- phase III results in bone metastases in breast cancer to be discussed with US and EU authorities, with aim of filing NDA in 2002

Tarceva (OSI 774)

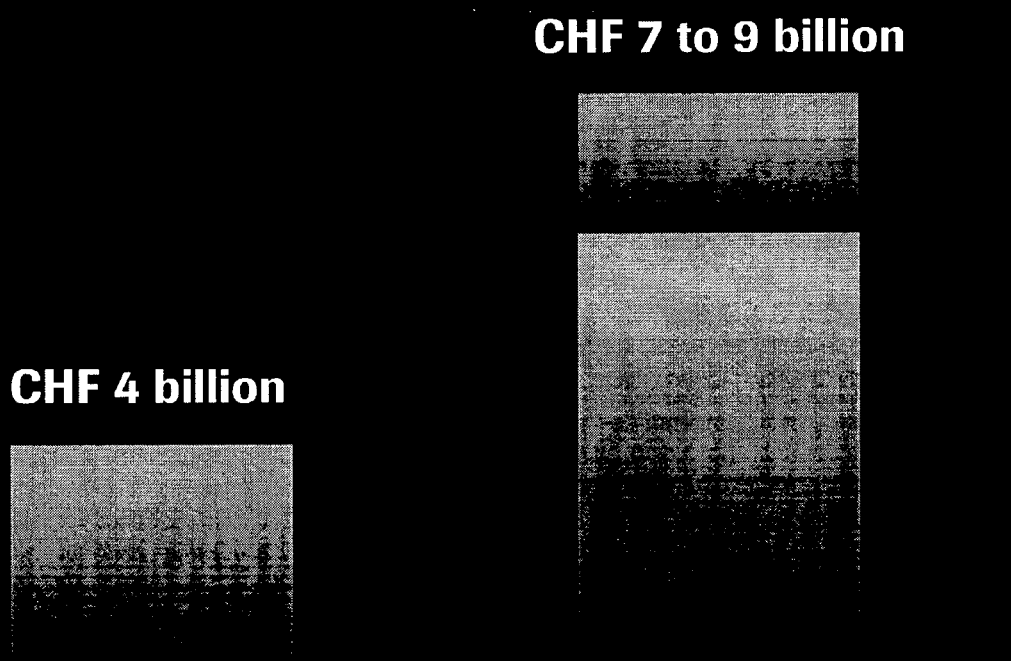
- positive phase II data in ovarian cancer, NSLC, head and neck cancer presented at ASCO
- now in phase III

Roche* sales expectations** in oncology

Our principal growth driver

Roche

Pharmaceuticals



* Roche and Genentech combined

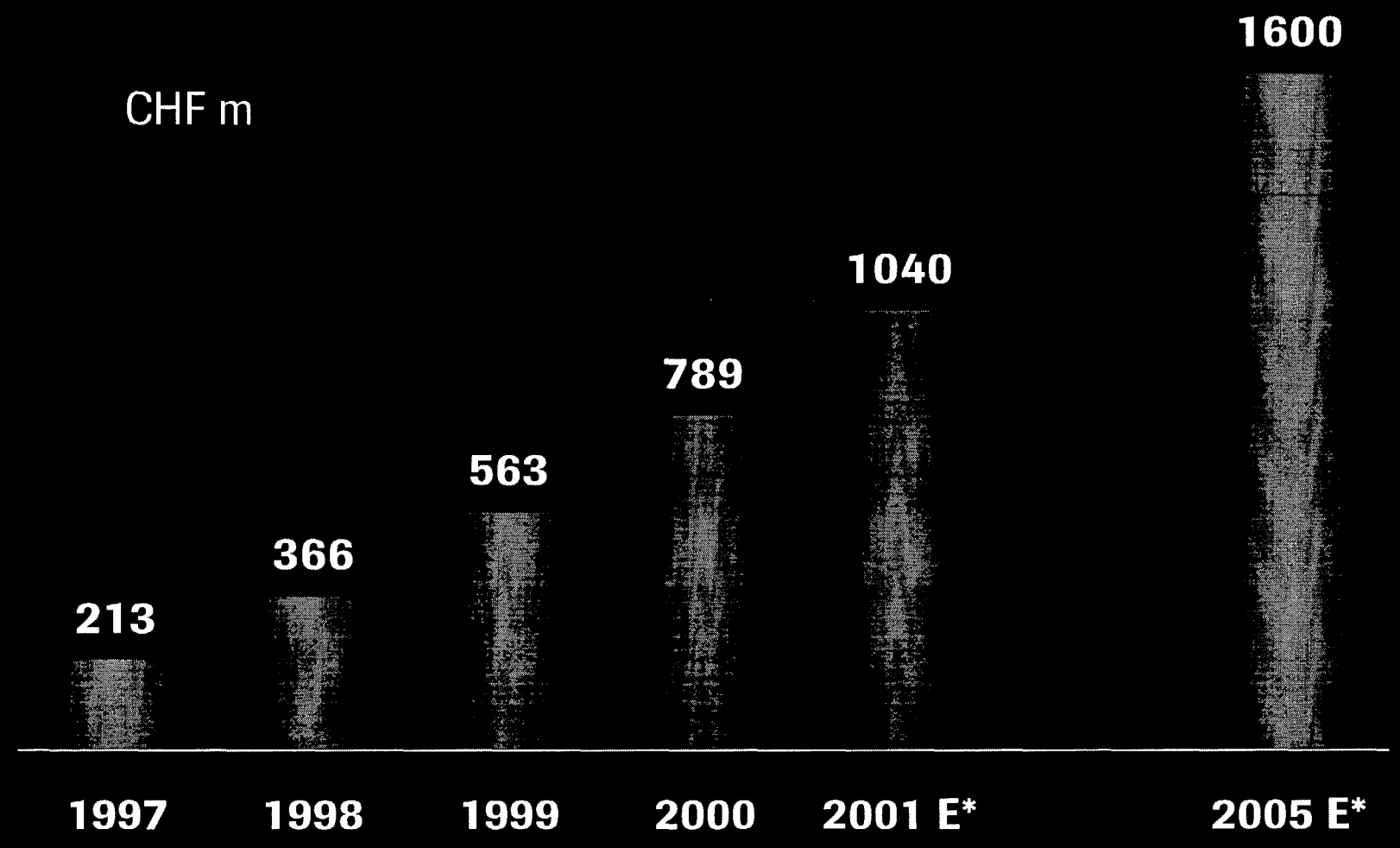
** Roche and analyst estimates

CellCept®

Building the next cornerstone of immuno-suppressive therapy

Roche

Pharmaceuticals



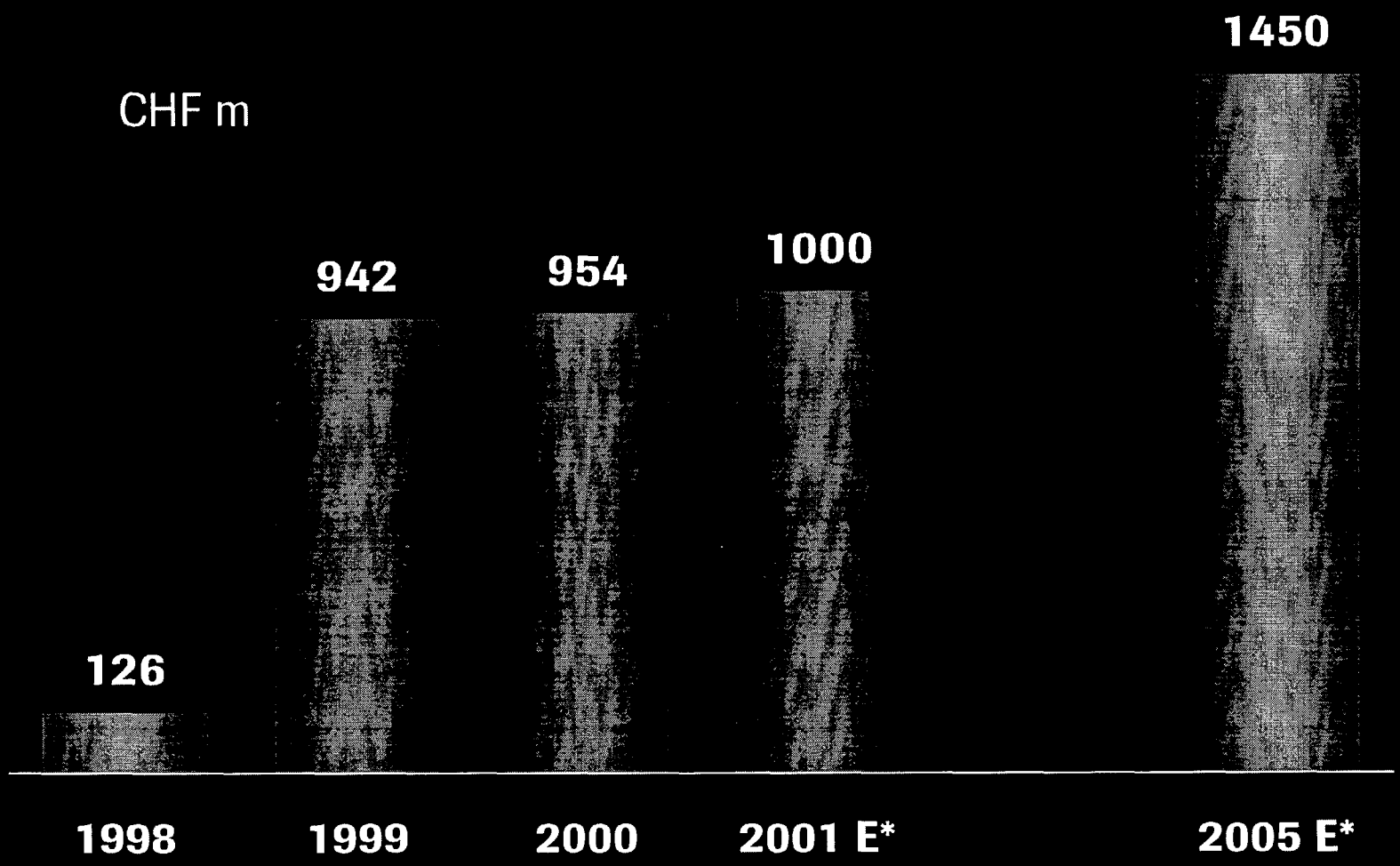
* Roche estimates

XENICAL® orlistat
Lose Weight. Gain Life

Returning to growth

Roche

Pharmaceuticals



* Roche estimates

Roche R&D pipeline

28 NME's in development at Roche

Roche

Pharmaceuticals

R944 HIV	R411 asthma	R440 (CCI) solid tumors	R420 (Pegasys) HCV
R1067 depression	R545 overactive bladder	R450 (alpha 1 agonist) stress incontinence	R484 (Bonviva)osteoporosis
R1124 emesis	R594 rheumatoid arthritis	R483** (insulin sensitizer) type 2 diabetes	R698 (T-20) HIV
R1204 depression /anxiety	R667 *emphysema*	R673** (NK1) depression /anxiety	R1415 (Tarceva) oncology
R1487 rheumatoid arthritis	R701 overactive bladder	R744 (new generation EPO) anemia	
R1437 benign prostatic hyperplasia	R765 type 2 diabetes	R724 (T-1249) HIV	
R1458 type 2 diabetes	R1164* osteoporosis		
R1065 (5HT2c) obesity	R1270 (levovirin) HCV		
R1435 deep vein thrombosis	R1273* solid tumors		

..... collaborations

11 projects or planned for in past 12 months

R1125 stroke	R449 alzheimer's	R404 (G) vascular
R1068 depression /anxiety	R665 COPD	R453 osteoporosis
R640 stroke	R672 leukemia	R643 overactive bladder
R1395 solid tumors	R804 cancer	

* in preparation for phase I

** in preparation for phase II

pipeline status at Septermber 2001

Roche R&D pipeline

..plus 13 'opt-in' projects gives 41 NME's

Roche

Pharmaceuticals

R944 HIV	R411 asthma	R440 (CCI) solid tumors	R420 (Pegasys) HCV
R1067 depression	R545 overactive bladder	R450 (alpha 1 agonist) stress incontinence	R484 (Bonviva)osteoporosis
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R1487 rheumatoid arthritis	R701 overactive bladder	R744 (new generation EPO) anemia	Oncology (anti-VEGF) (G)
R1437 benign prostatic hyperplasia	R765 type 2 diabetes	R724 (T-1249) HIV	
R1458 type 2 diabetes	R1164* osteoporosis	cephalosporin (B)	
R1065 (5HT2c) obesity	R1270 (levovirin) HCV	eczema (B)	
R1435 deep vein thrombosis	R1273* solid tumors	SCLC (N)	
antifungal (B)	antibiotic (B)	inflamm. bowel disease (G)	
	psoriasis (B)		
	migraine (P)		
	cardiovascular disease (S)		
	macular degeneration (G)		
	antitumor* (G)		
	acute coronary syndrome* (G)		

..... collaborations

opt-in opportunities

Basilea (B)
Genentech (G)
Novus (N)
Pozen (P)
Speedel (S)

* in preparation for phase I
** in preparation for phase II

pipeline status at September 2001

Roche R&D pipeline

..plus 6 Genentech NMEs which Genentech will commercialise alone gives 47 NMEs

Roche

Pharmaceuticals

R944 HIV	R411 asthma	R440 (CCI) solid tumors	R420 (Pegasys) HCV
R1067 depression	R545 overactive bladder	R450 (alpha 1 agonist) stress incontinence	R484 (Bonviva)osteoporosis
R1124 emesis	R594 rheumatoid arthritis	R483** (insulin sensitizer) type 2 diabetes	R698 (T-20) HIV
R1204 depression /anxiety	R667 emphysema	R673** (NK1) depression /anxiety	R1415 (Tarceva) oncology
R1487 rheumatoid arthritis	R701 overactive bladder	R744 (new generation EPO) anemia	Oncology (anti-VEGF) (G)
R1437 benign prostatic hyperplasia	R765 type 2 diabetes	R724 (T-1249) HIV	Xanelim (G)
R1458 type 2 diabetes	R1164* osteoporosis	cephalosporin (B)	Xolair (G)
R1065 (5HT2c) obesity	R1270 (levovirin) HCV	eczema (B)	Tracleer (G)
R1435 deep vein thrombosis	R1273* solid tumors	SCLC (N)	TNKase (G)
antifungal (B)	antibiotic (B)	inflamm. bowel disease (G)	Thrombopoietin (G)
	psoriasis (B)	E-26** (G)	
	migraine (P)		
	cardiovascular disease (S)		
	macular degeneration (G)		
	antitumor* (G)		
	acute coronary syndrome* (G)		

..... collaborations

opt-in opportunities

Basilea (B)
Genentech (G)
Novus (N)
Pozen (P)
Speedel (S)

Genentech (without Roche opt-in but Roche benefits financially)

* in preparation for phase I
** in preparation for phase II

pipeline status at September 2001

Expected first NDA filing dates

15 NME's over next five years

Roche

Pharmaceuticals

2001	2002	2003	2004	2005
MabThera/Rituxan *int/high grade NHL*	**Bondronat** *bone metastases in breast cancer*	**Xenical** *paediatric obesity*	**R450** (alpha-1 agonist) *stress incontinence*	**R483** (insulin sensitizer) *type 2 diabetes*
NeoRecormon *anemia (once weekly)*	**Bonviva** *treat/prevent osteoporosis*		**R744** (next generation EPO) *anemia*	**R440** (CCI) *solid tumors*
Pegasys *chronic hepatitis C (EU)*	**R698** (T-20) *HIV/AIDS*		**R673** (NK1 modulator) *anxiety/depression*	**R545** *overactive bladder*
Pegasys + ribavirin *chronic hepatitis C*	**Valcyte** *prevention of CMV*		**Pegasys** *chronic hepatitis B*	**R724** (T-1249) *HIV/AIDS*
Tamiflu *treat/prevent influenza (EU)*	**Xanelim** *psoriasis*		**R1415** (Tarceva, OSI-774) *non-small cell lung cancer*	**R1124** (NK1 modulator) *emesis*
Xeloda / docetaxel *breast cancer (EU)*	**Tracleer** *chronic heart failure*			
Xenical *type II diabetes*	**Xolair** *allergic asthma*			

Genentech projects

NMEs

line extensions

status at September 2001

NME = new molecular entity



Roche

Pharmaceuticals

Hep C interferon market potential in 2006* (CHF)		Pegasys approval expected
US	1.7 billion	H2 2002
Europe	0.8 billion	mid-year 2002
Latin America	0.2 billion	Q4 2001
Japan	0.2 billion	H2 2002
RoW	0.7 billion	Q3 2001
Total	3.6 billion	

* Roche estimates

Prescription medicines strategy

Focus for growth

Roche

Pharmaceuticals

Roche

- oncology
- metabolic diseases
- virology
- inflammatory diseases
- genito-urinary diseases
- central nervous system
- peripheral vascular diseases

Genentech, Inc. 25 YEARS IN BUSINESS FOR LIFE

- oncology
- cardiovascular

Recent business development deals

Roche

Pharmaceuticals

year	partner	product/project	therapy area	deal
2001	ICN	levovirin	virology	in-license
2001	OSI/Genentech	Tarceva	oncology	in-license and co-development/marketing
2001	Genemab	MAB	oncology	in-license
2000	Vernalis	NME	obesity	in-license
2000	Morphosys	MAB	CNS	in-license
2000	GlaxoSmithKline	Kytril	oncology	acquisition
1999	Trimeris	T-20 & T-1249	virology	in-license
1999	DeCode	disease gene identification	various	intellectual property access

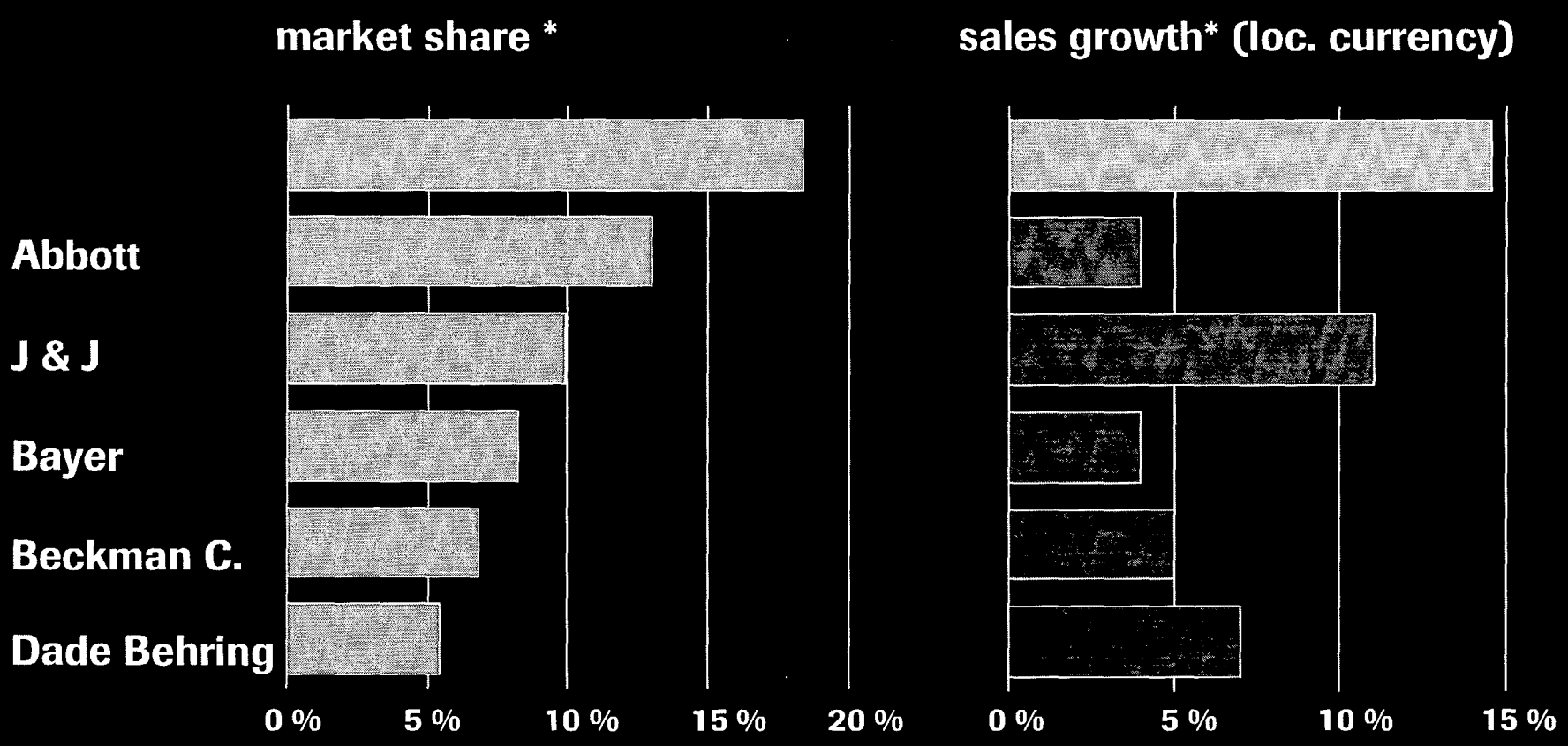
NME = new molecular entity
MAB = monoclonal antibody

In Vitro Diagnostics market

21 billion USD in 2001E (+6 % in local currency)

Roche

Diagnostics



* Basis: Q3 2001 / excludes Applied Sciences

Source: Annual Reports, Boston Biomedical Consultants, Roche Analysis

Diagnostics sales at Q3 2001

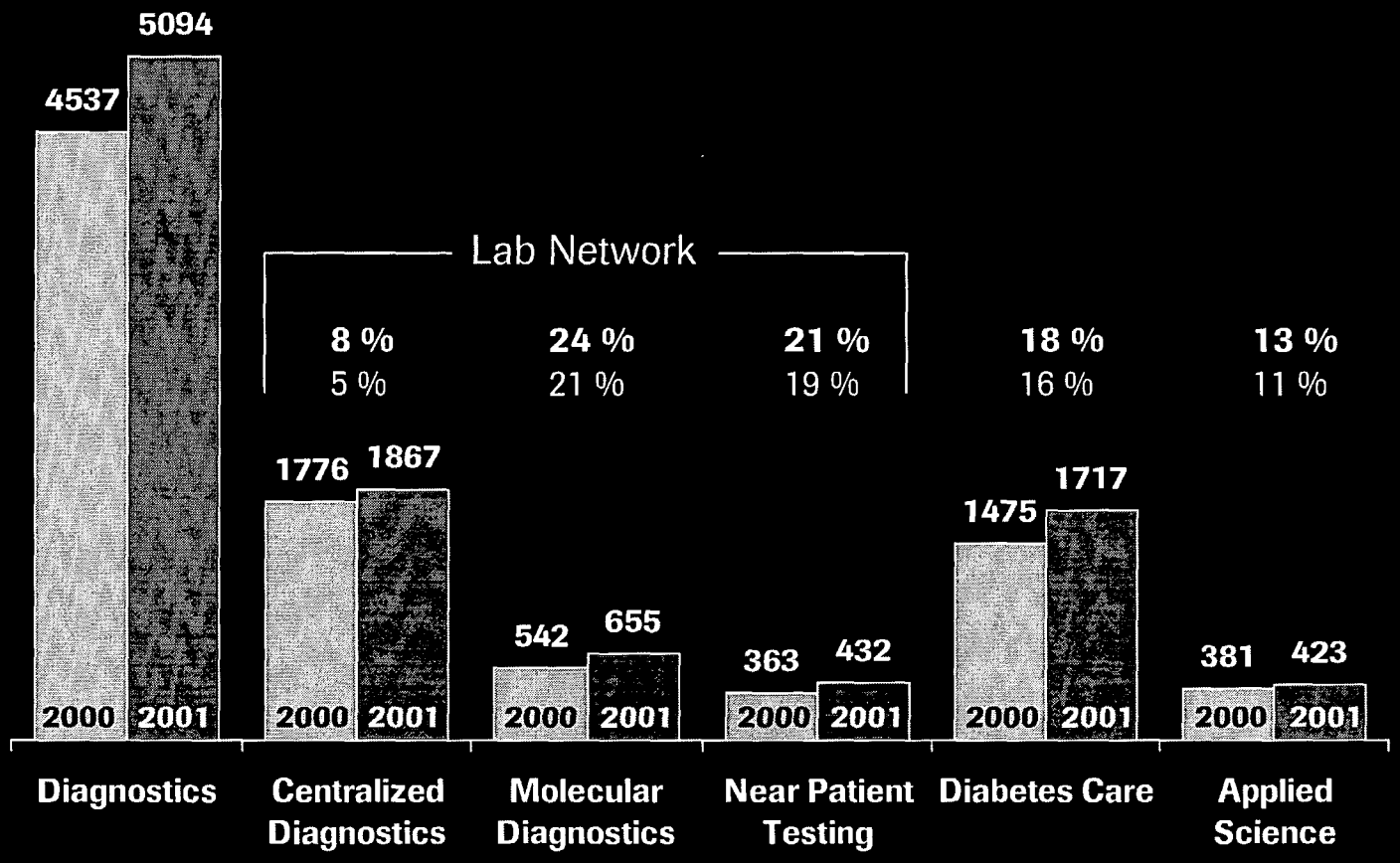
Double-digit growth in high margin businesses

Roche

Diagnostics

CHF m

14 % local currency growth
12 % CHF growth

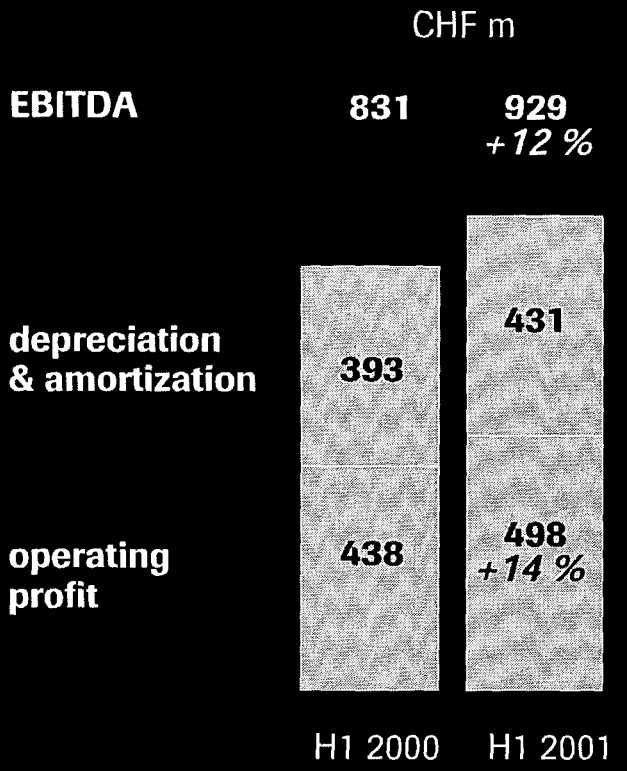


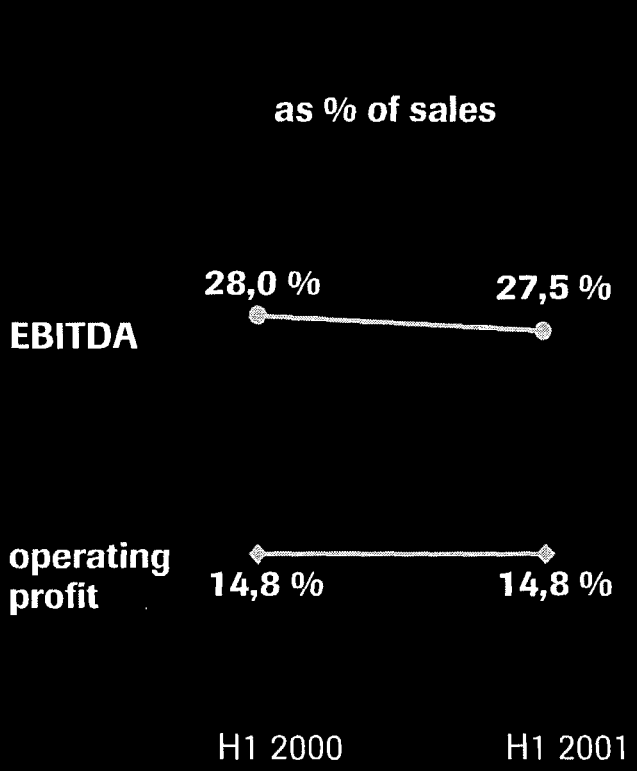
Profit development

Maintaining a high level of profitability

Roche

Diagnostics



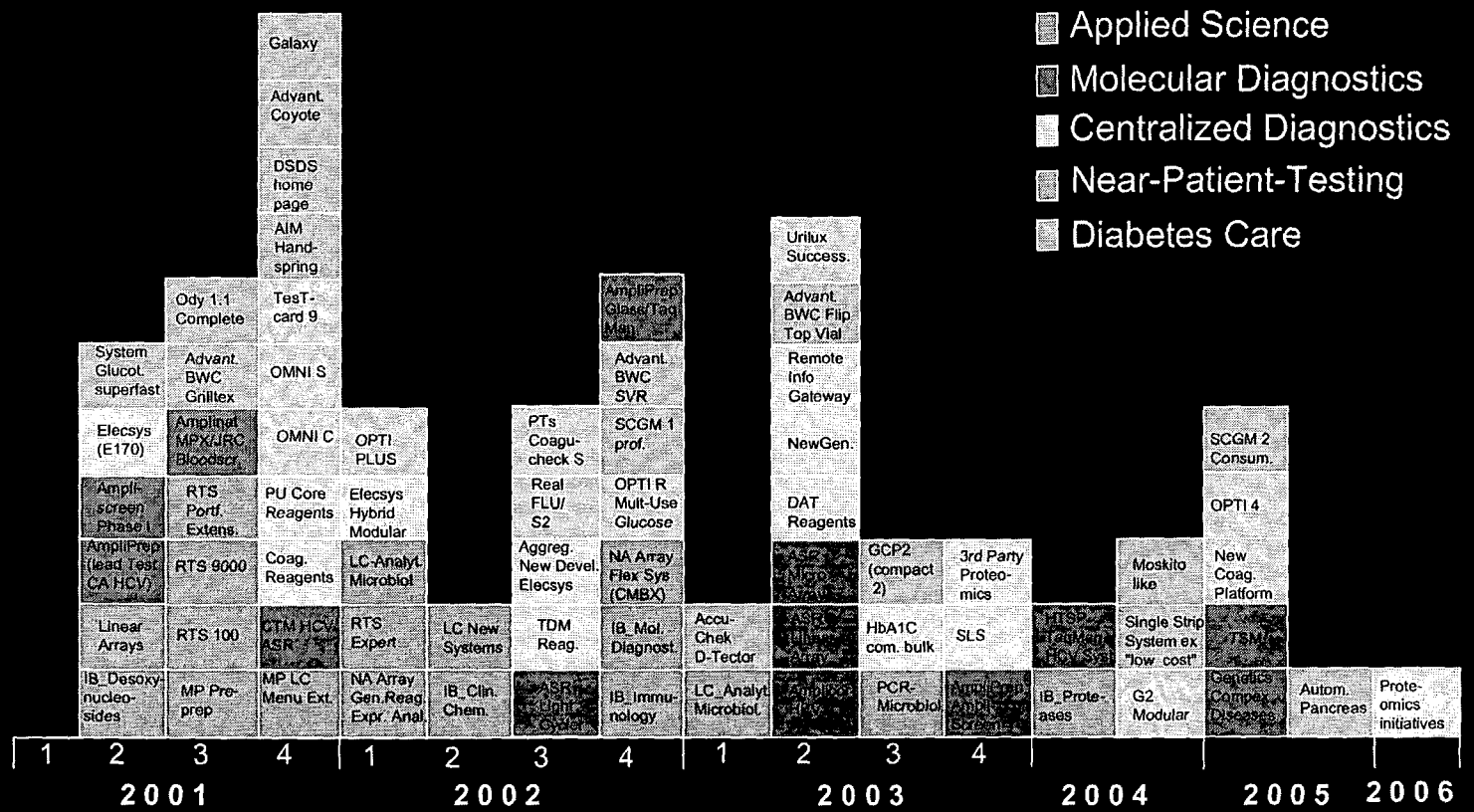


Expected launches of major products

Strong pipeline for future growth

Roche

Diagnostics



Integrated Health Care

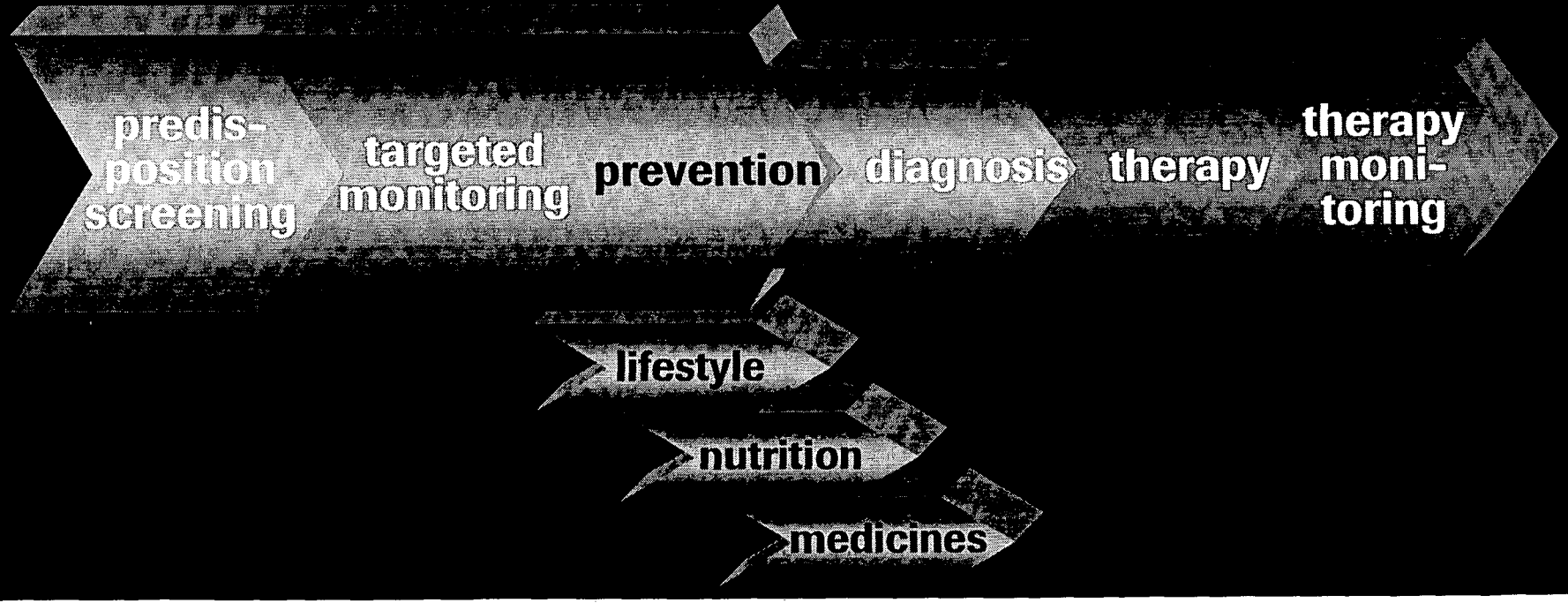
Diagnostics is the critical link

Roche

from today...



...into the future



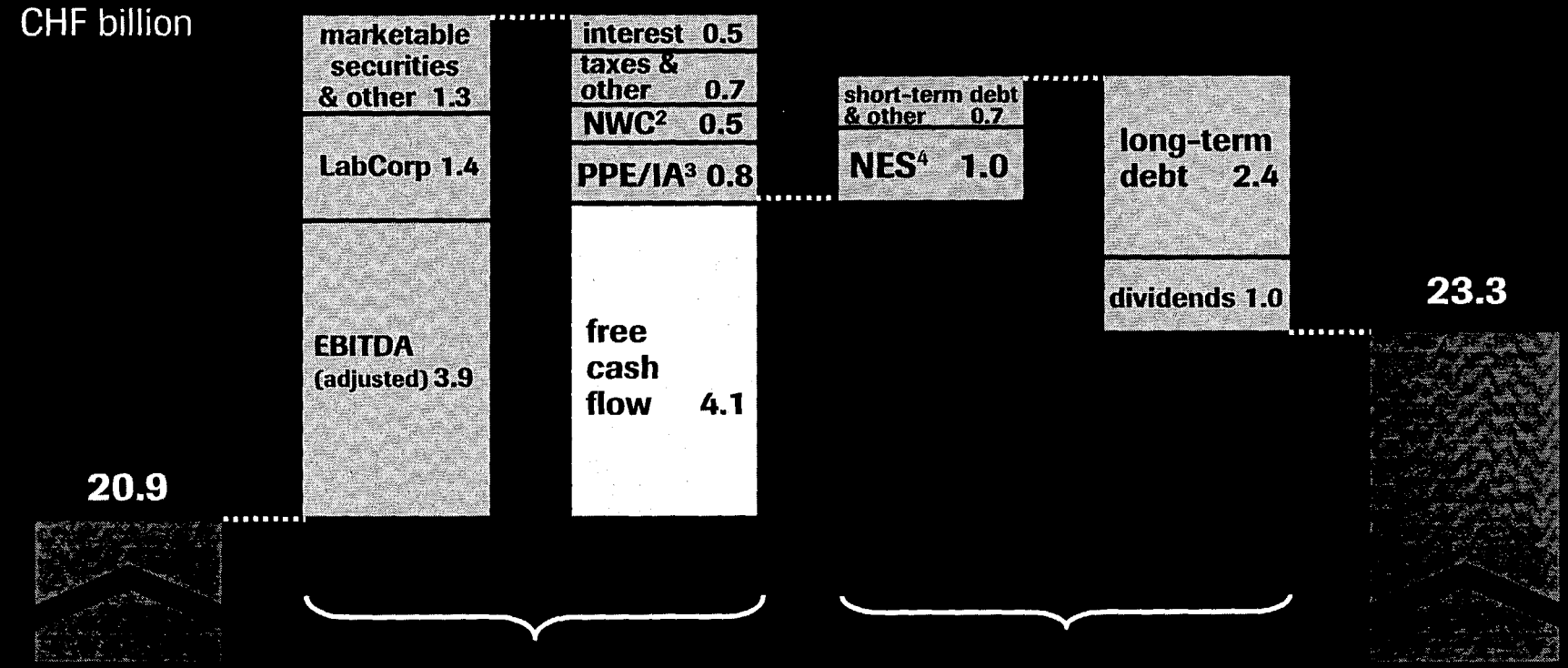
Roche healthcare strategy

The foundation for stakeholder value



Cash flow

Free cash flow of over CHF 4 billion



[1] at market values in accordance with new accounting standard

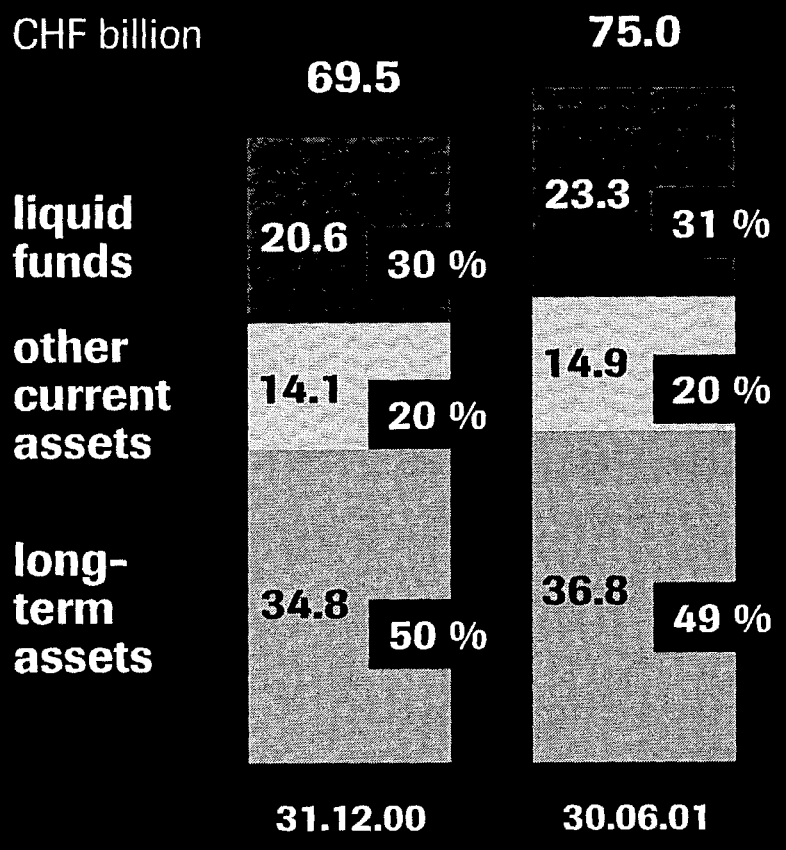
[2] net working capital

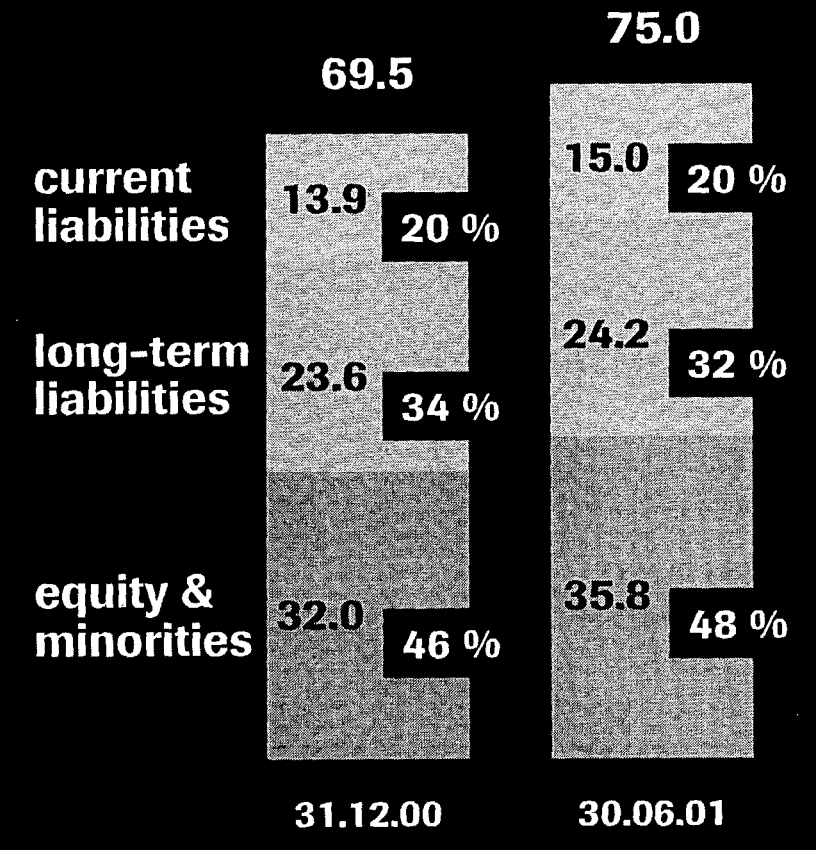
[3] property, plant and equipment; intangible assets

[4] non-voting equity securities ('Genussscheine')

Balance sheet

Further strengthened





Roche Group Outlook

- Pharmaceutical sales to achieve good single-digit sales growth in 2001
- Pharmaceuticals operating margin to improve to 20 - 25 % of sales over the next two to three years
- Group operating profit in 2001 at least at same level as in 2000
- Group operating margin to improve to over 20 % of sales in the medium term
- Financial income in full year 2001 to be in the range of financial income at half year 2001

Roche Holding Ltd

17 October 2001 - Roche at Cheuvreux 2nd,
"Vital Signs" Healthcare Conference, Lucerne

As Posted on Roche.com

Furnished Under Rule 12g3-2(b)
Roche Holding 82-3315

Roche

Diagnostics

This presentation contains certain forward-looking statements. These forward-looking statements may be identified by words such as "believes", "expects", "anticipates", "projects", "intends", "should", "seeks", "estimates", "future" or similar expressions or by discussion of strategy, goals, plans or intentions. Various factors may cause actual results to differ materially in the future from those reflected in forward-looking statements contained in this presentation among others: (1) pricing and product initiatives of competitors; (2) legislative and regulatory developments and economic conditions; (3) delay or inability in obtaining regulatory approvals or bringing products to market; (4) fluctuations in currency exchange rates and general financial market conditions; (5) uncertainties in the discovery, development or marketing of new products or new uses of existing products; (6) increased government pricing pressures; (7) interruptions in production; (8) loss of or inability to obtain adequate protection for intellectual property rights; (9) litigation; (10) loss of key executives or other employees; and (11) adverse publicity or news coverage.

Roche

Diagnostics

Roche Diagnostics
Innovating Health Information

Heino von Prondzynski

Roche

Diagnostics

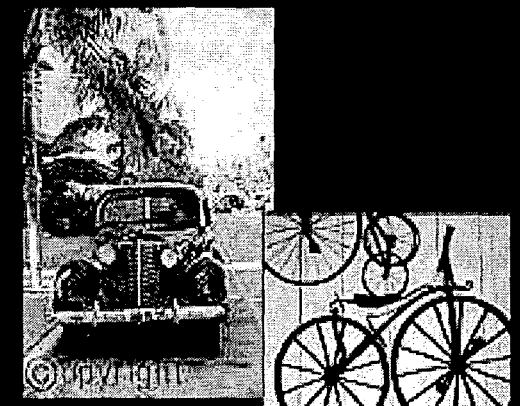
Roche Diagnostics in a world of change

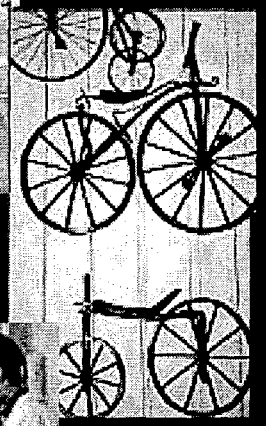
Change

Not a threat, but an opportunity

Roche

Diagnostics





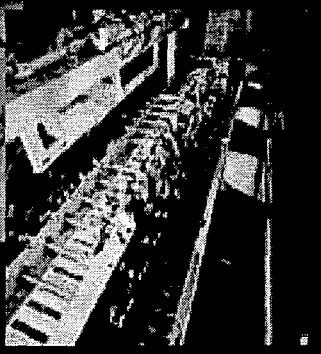












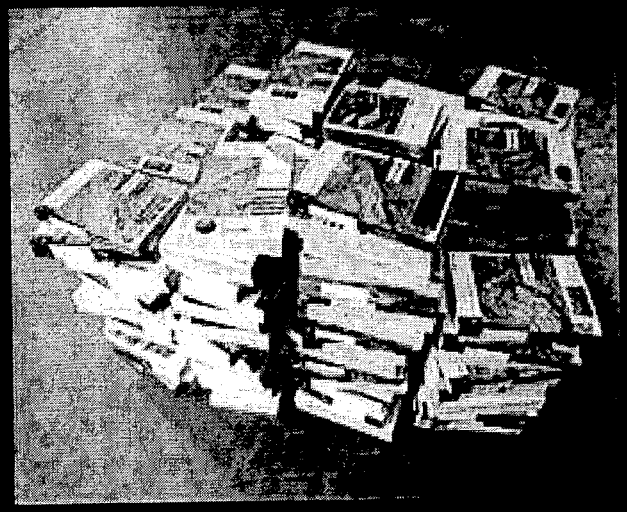
Sequence of the human genome

The beginning, not the end

Roche

Diagnostics

3.12 billion nucleotides



(cf. 200 telephone books worth of information)

Where does it all lead to?

Roche

Diagnostics

dramatic increase in data

information overload

→ need to filter and select data

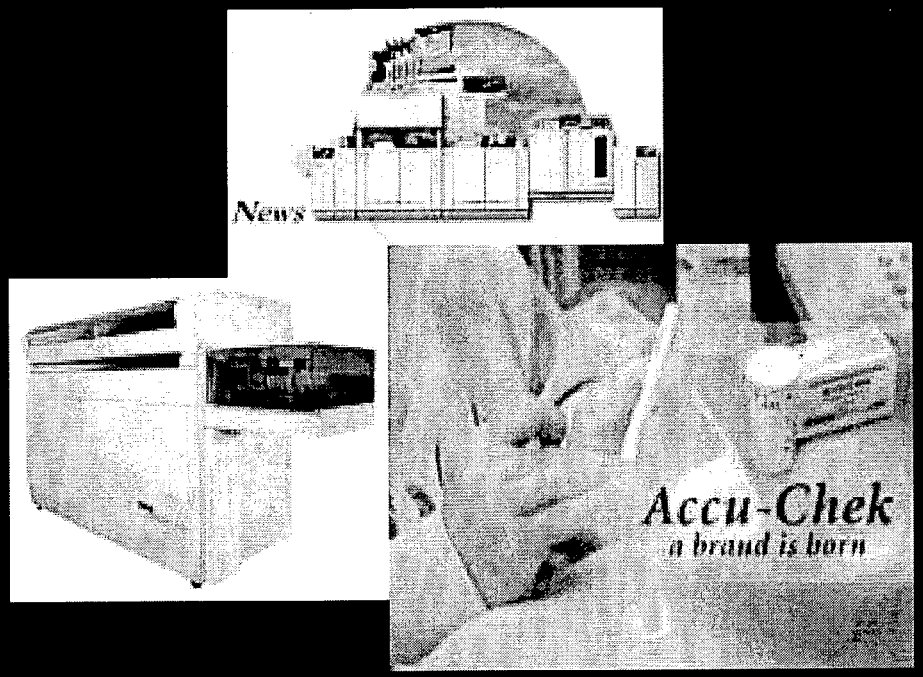
→ need to obtain meaningful information

→ need for health information

Roche Diagnostics accepts the challenge...
and shapes the future of its industry

Roche

Diagnostics



the diagnostics industry changes

- from analyzing biochemical parameters
- to providing actionable health information

Roche Diagnostics is well prepared for the challenge

Roche

Diagnostics

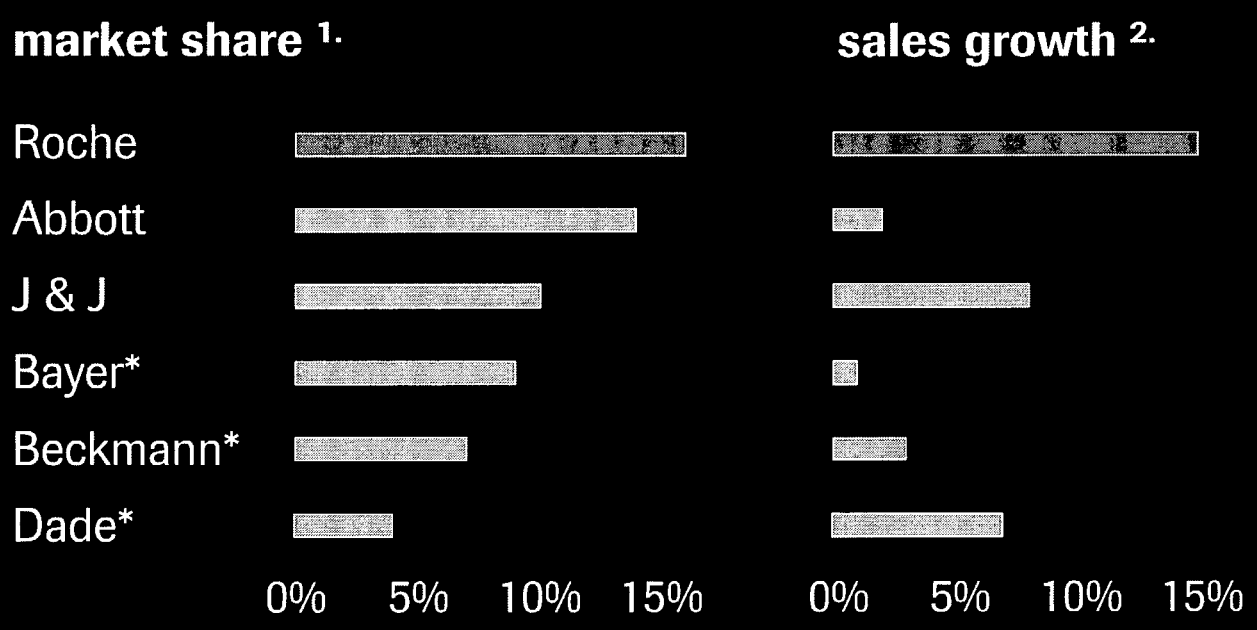
- Roche is the in-vitro diagnostics market leader
- Impressive sales in 2001
- Strong outlook going forward

Diagnostics sales in H1 2001

Increasing global IVD market leadership

Roche

Diagnostics



Company reports Q2/2001 and Q1/2001(*), Roche Analysis, Boston Biomedical Consultants

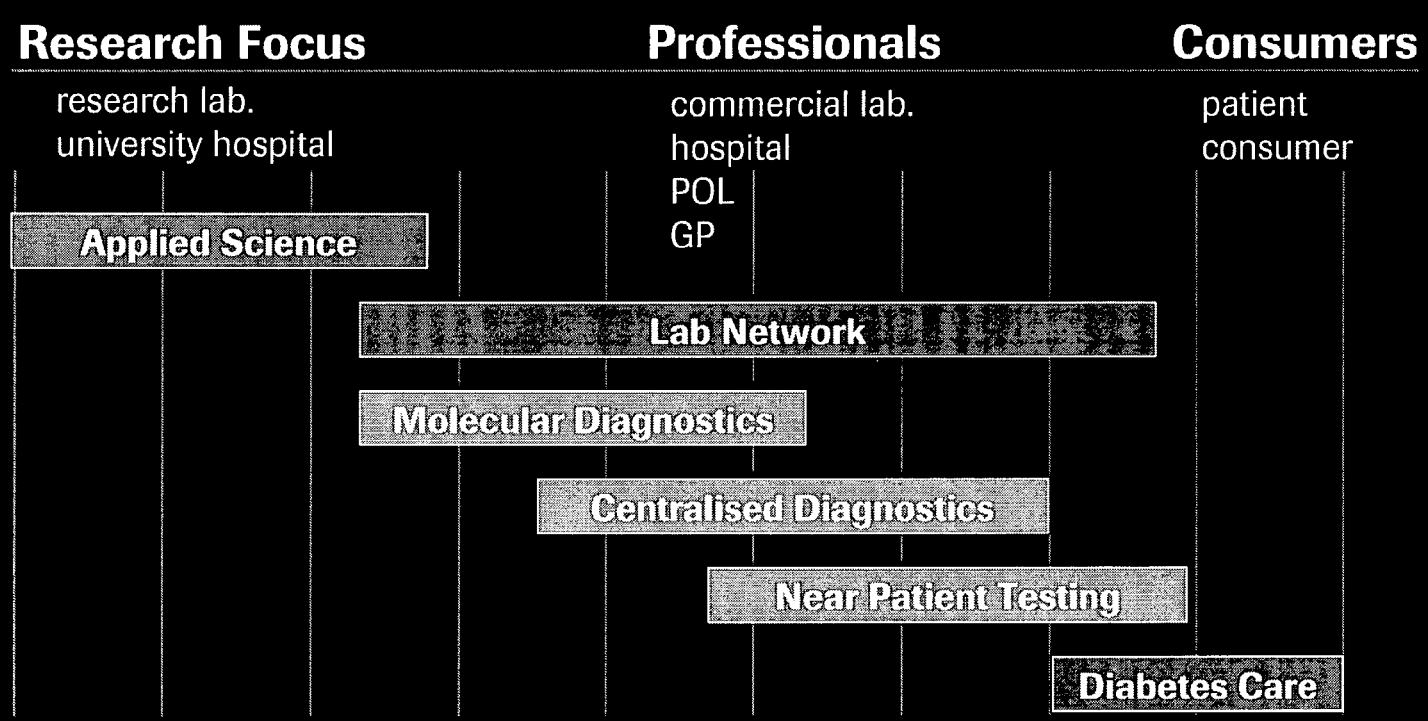
1. Excludes Applied Science
2. In local currencies

Roche Diagnostics

New organisation enhances customer focus

Roche

Diagnostics



Diagnostics sales in Q3 2001

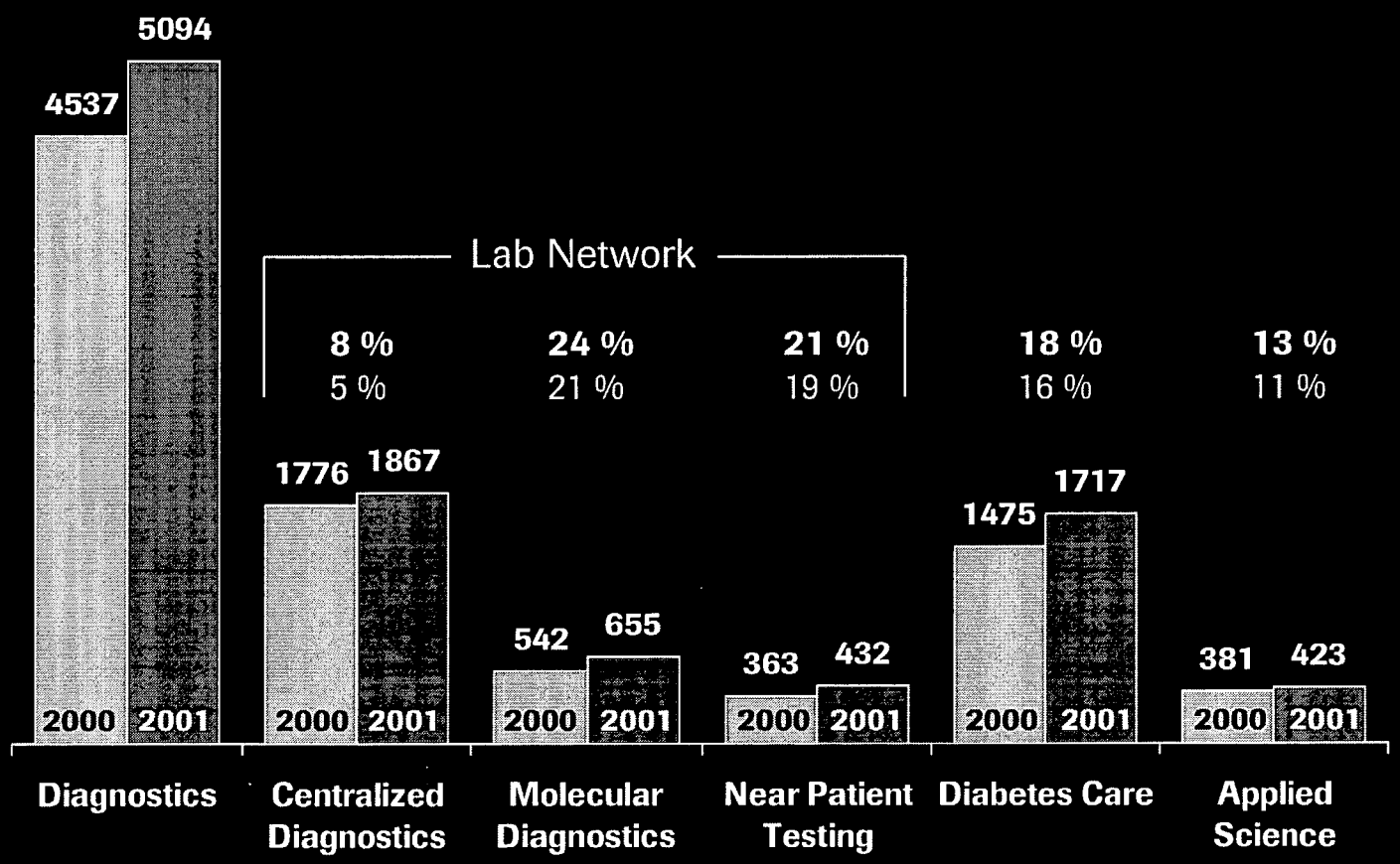
Double-digit growth in high margin businesses

Roche

Diagnostics

CHF m

14 % local currency growth
12 % CHF growth



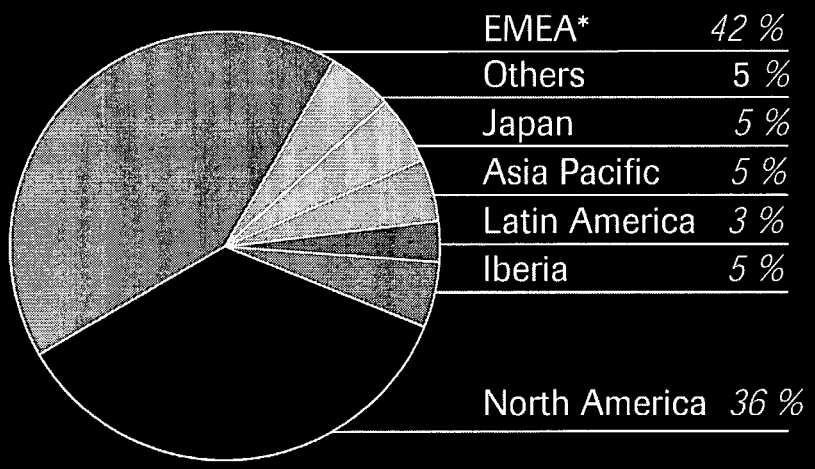
Diagnostics sales in H1 2001

Sales by region/market

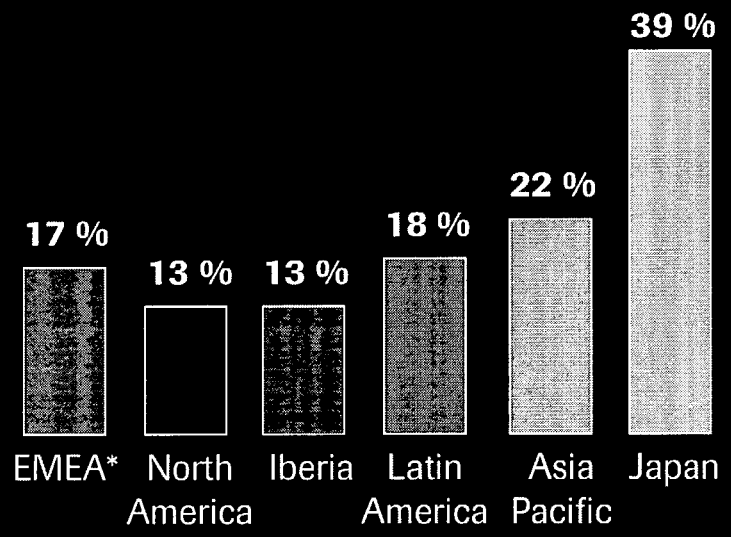
Roche

Diagnostics

CHF 3'374 m



local sales growth



* Europe and Middle East and Africa

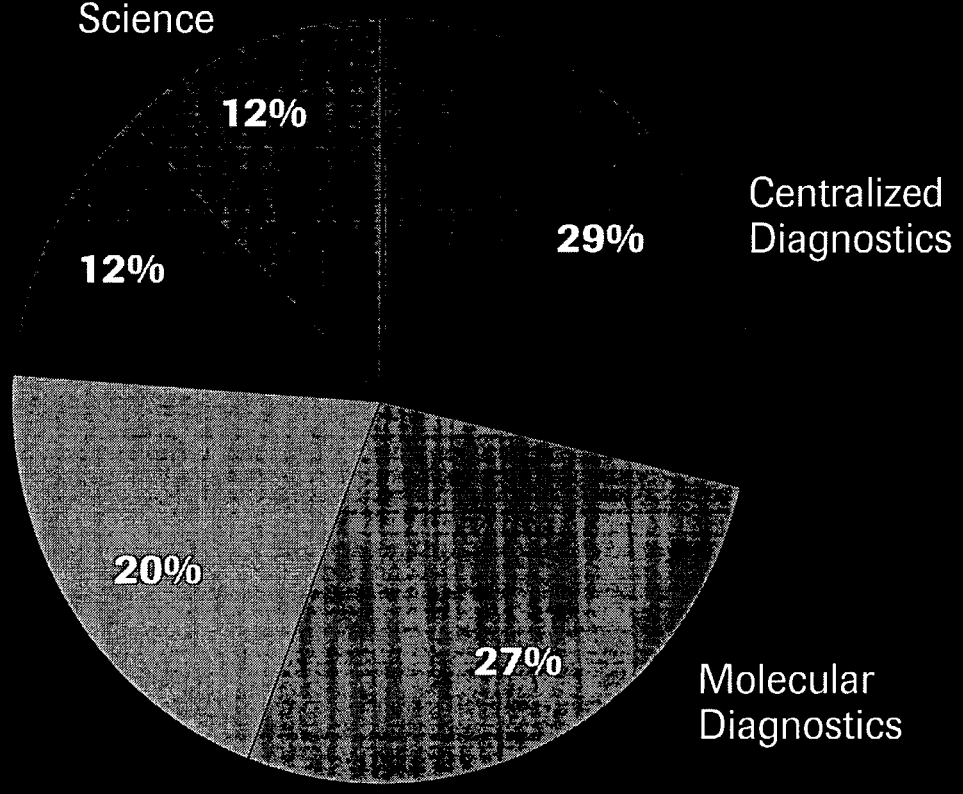
Investment in R&D

By business area, current year

Roche

Diagnostics

CHF 640 m

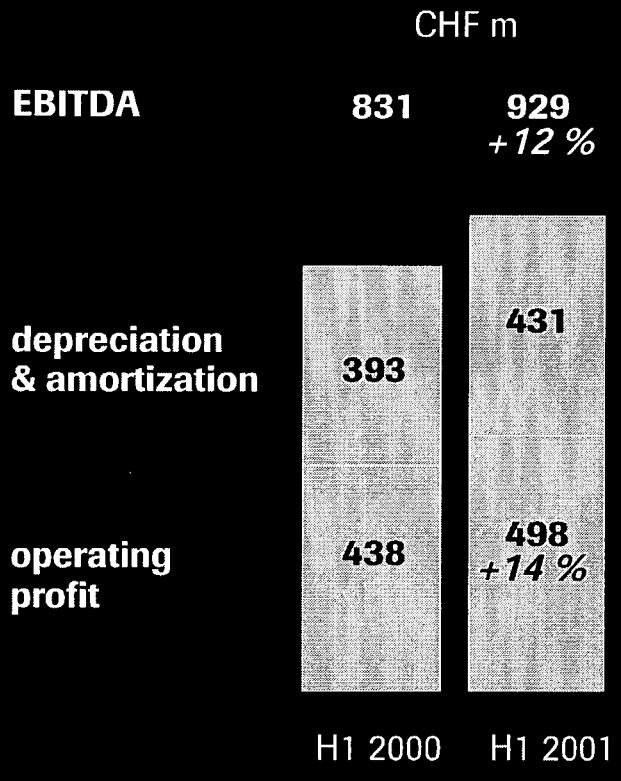


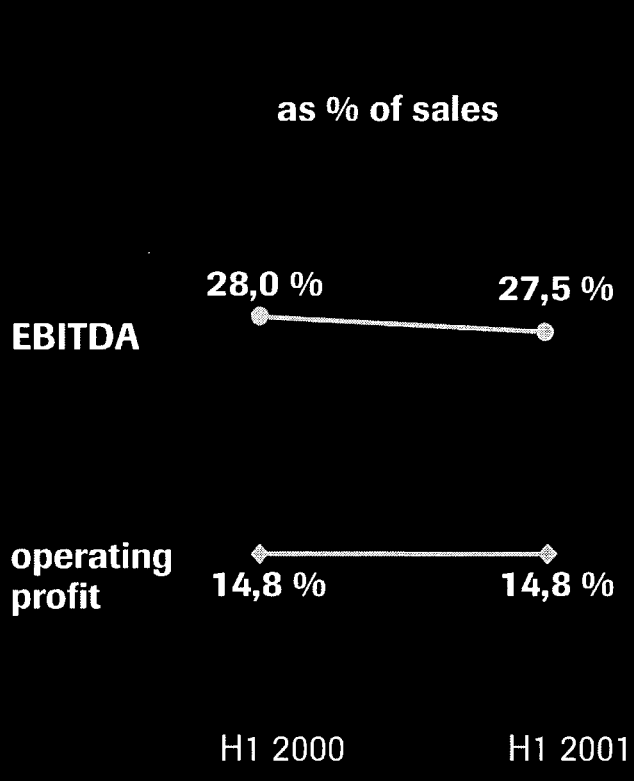
Profit development

Maintaining a high level of profitability

Roche

Diagnostics





Implementing innovation

Roche

Diagnostics

Integrated Health Care

Diagnostics is the critical link

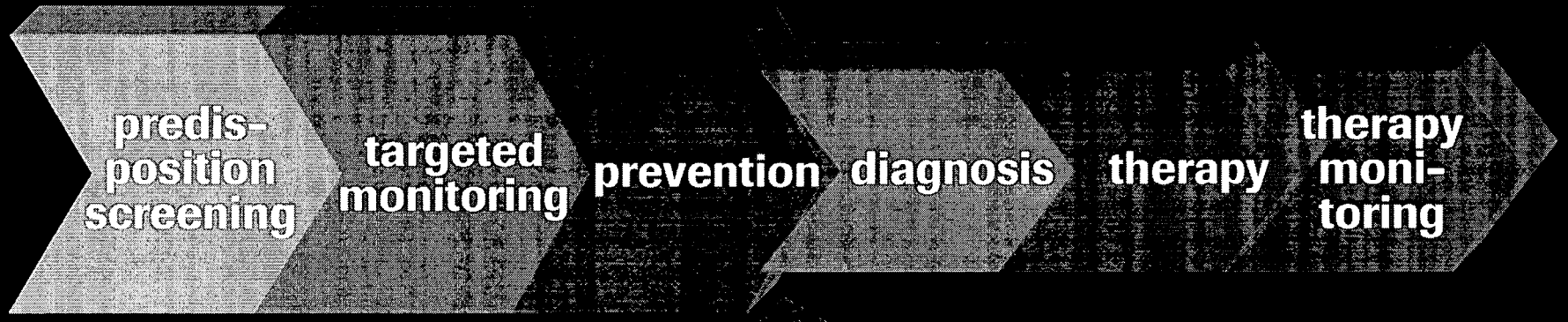
Roche

Diagnostics

from today...



...into the future



lifestyle

nutrition

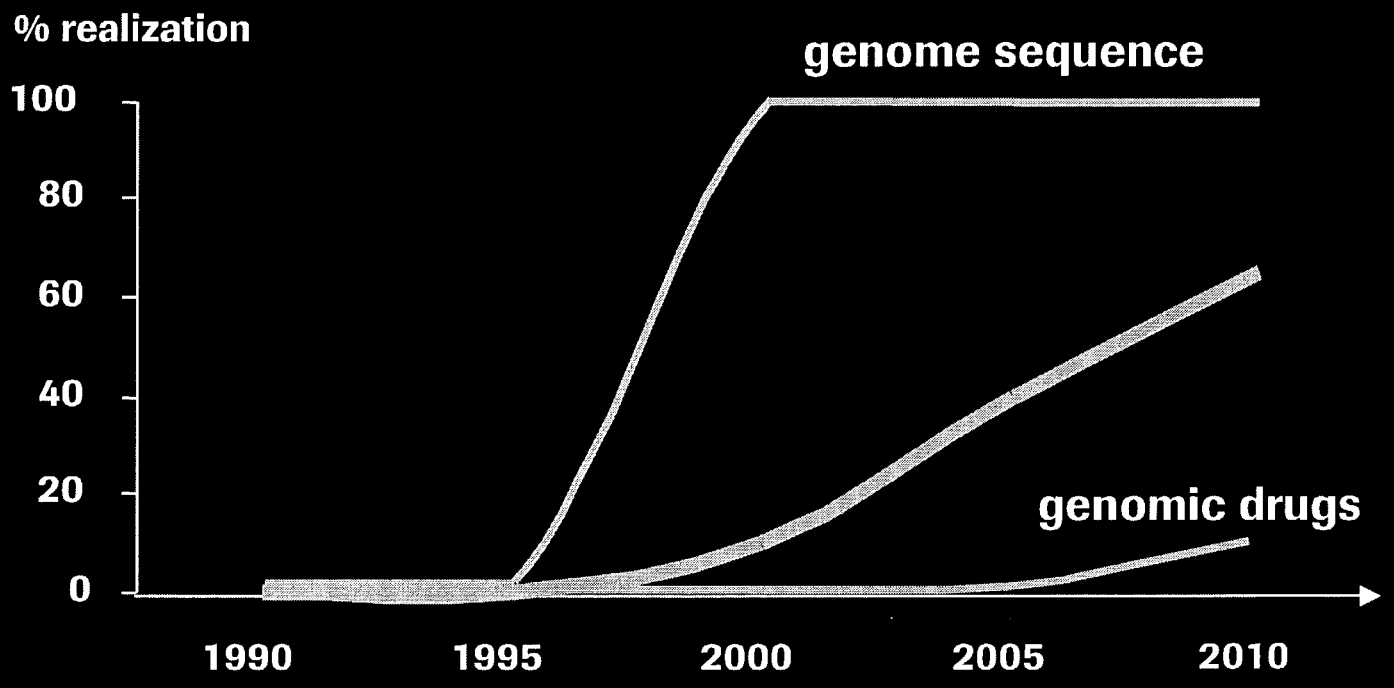
medicines

Drivers accelerating market growth

Genomics: diagnostics will precede drugs

Roche

Diagnostics

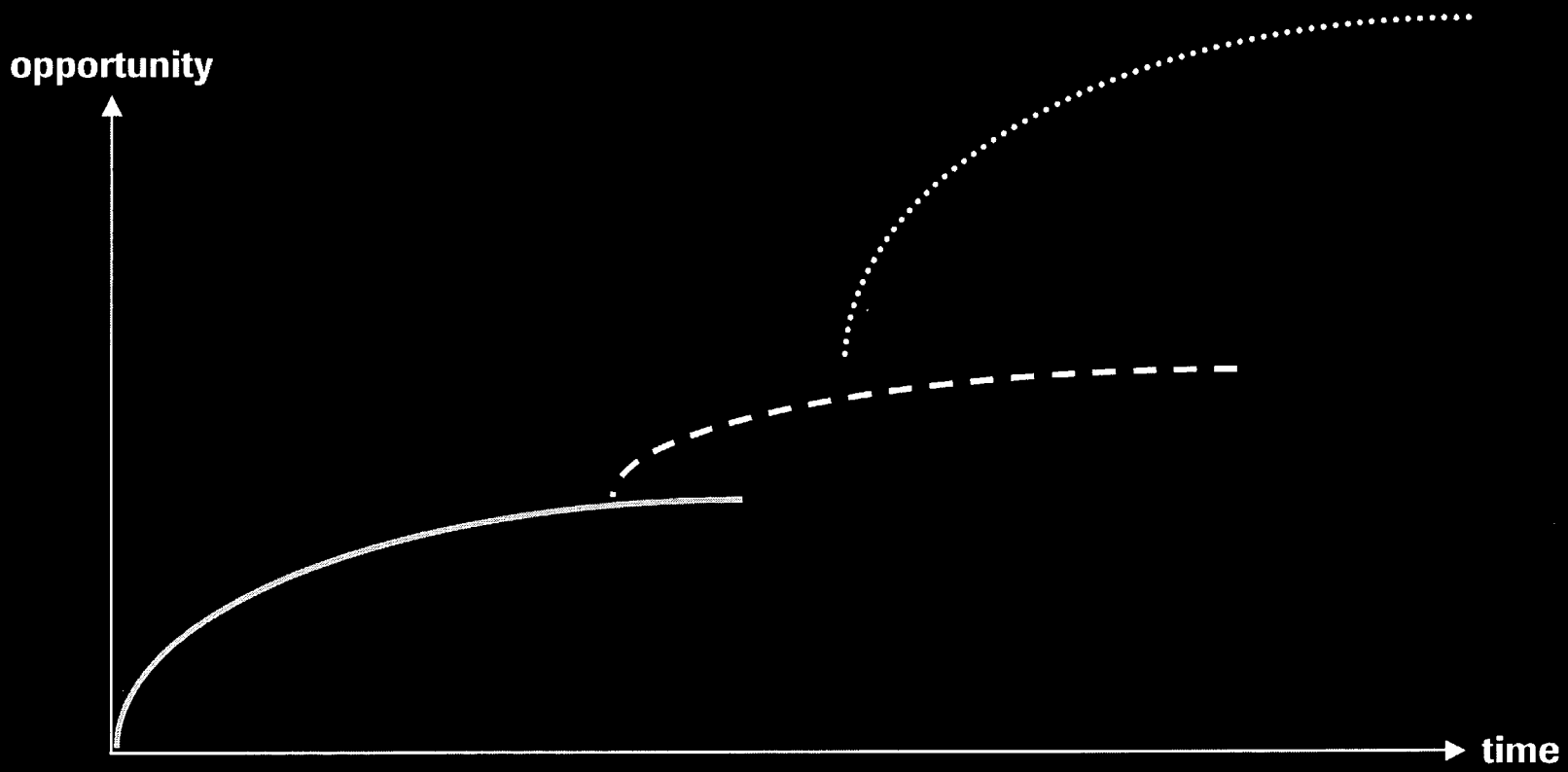


Drivers accelerating market growth

Nucleic acid testing set to create new markets

Roche

Diagnostics

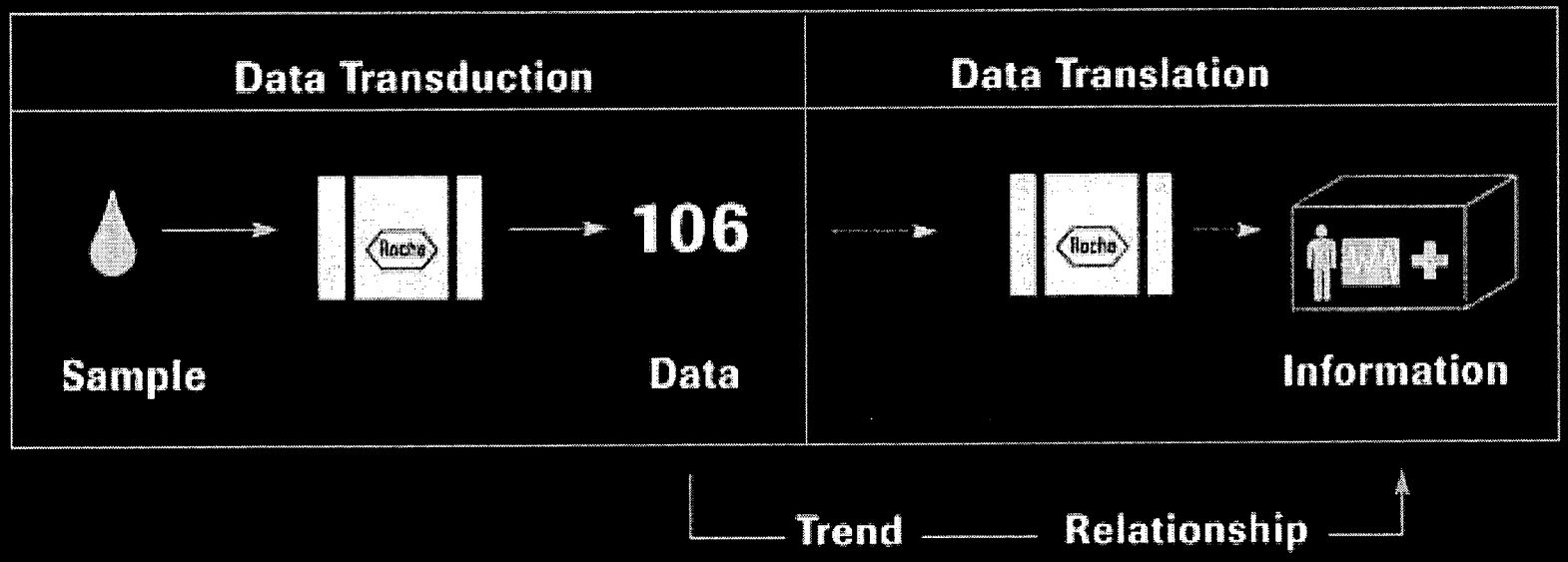


Actionable health information

Supplementing data transduction systems with data translation systems

Roche

Diagnostics

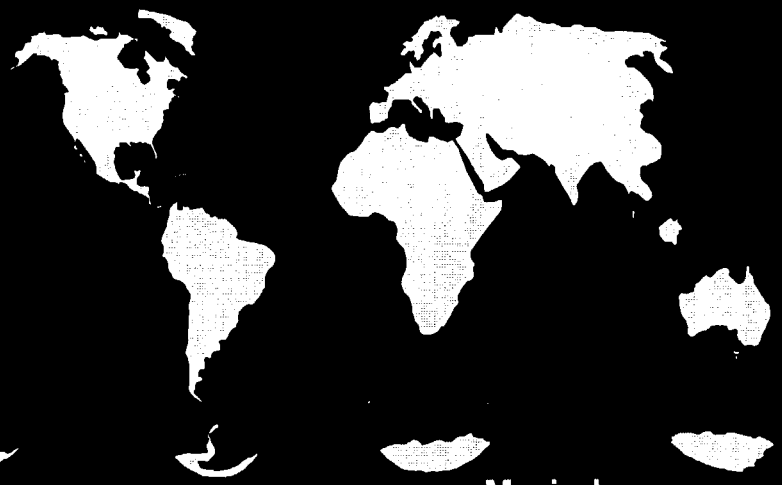


Global alliances portfolio*

Alliances contribute to new potential compounds and technologies

Roche

Diagnostics



Curagen
New Haven Conn

UO/IC
Oxford UK

DeNovo
Cambridge, UK

Karolinska
Stockholm Sweden

DeCode
Reykjavik Iceland

Combipure
Loughborough, UK

Partners Healthcare
Boston, MA

Wake Forest
Winston-Salem NC

Vernalis
Winnersh UK

UCL
London UK

Analyticon
Berlin Germany

Tularik
San Francisco CA

Incyte
Palo Alto CA

Max Planck
Munich Germany

Affymetrix
Santa Clara CA

Morphosys
Munich Germany

Agouron
La Jolla, CA

Amgen
Thousand Oaks, CA

GeneMab
Munich Germany

Genentech
San Francisco, CA

ETH
Zurich Switzerland

Gilead
Foster City, CA

ICN
San Diego CA

Trimeris
Durham NC

Myriad
Salt Lake City, UT

Pharmacopeia
Cranbury NJ

SNP
Boston Mass

Progenics
Terrytown NY

OSI
Long Island, NY

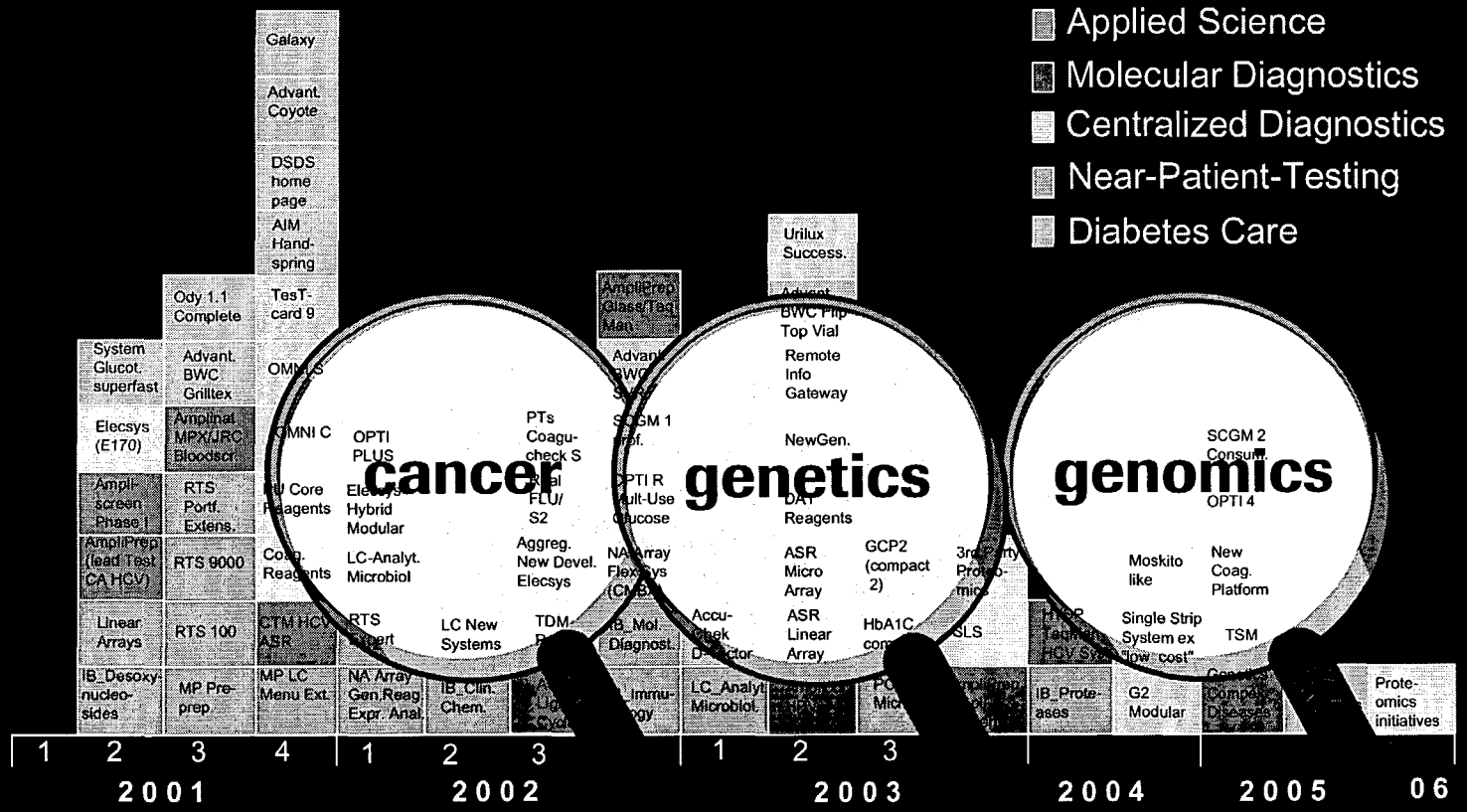
* alliances are either with Roche Diagnostics or with Roche Pharmaceuticals or with both

Expected launches of major products

Strong pipeline for future growth

Roche

Diagnostics

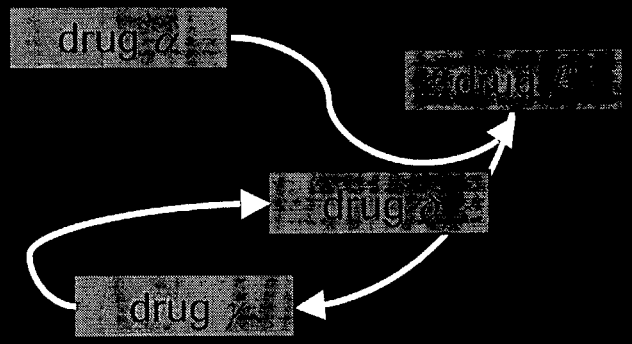


Targeted prescription of medicines

Roche

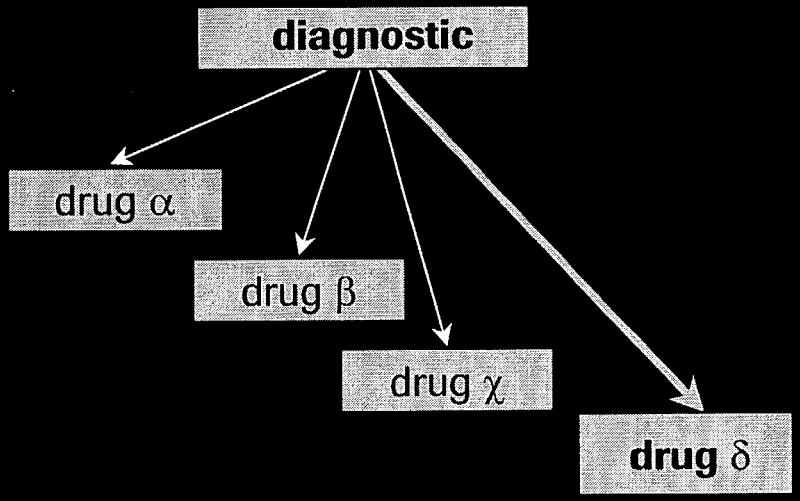
Diagnostics

empirical prescription "mass market"



individual physician experience
Cost: time, money & well-being

rational prescription "targeted"



informed physician diagnosis
Savings: time, money & illness

Cancer incidence, costs, market

Today and trends

Roche

Diagnostics

2000		2010
2,9 million	incidence population	3,6 million *
19,4 million	prevalence population	25,1 million *
50 %	fatality	60 % * * *
24 %	mortality	> 35 % * *
$ 200 billion	total cancer care costs	$ 300 billion
$ 20 billion	cancer drugs	$ 50-70 billion
$ 1,2 billion	diagnostics	> $ 20 billion?

* SRI , 2000; data for the seven major markets: USA, J, FRG, F, I, E, UK
* * leading cause of death
* * * if no progress in treatment

ICC – targeting of diagnostic gaps in cancer
Emerging trends

Roche

Diagnostics

early detection by screening
- for early intervention

molecular profiling of cancer
- for tailored treatment

monitoring of therapy response
- for precision of treatment

Roche

Diagnostics

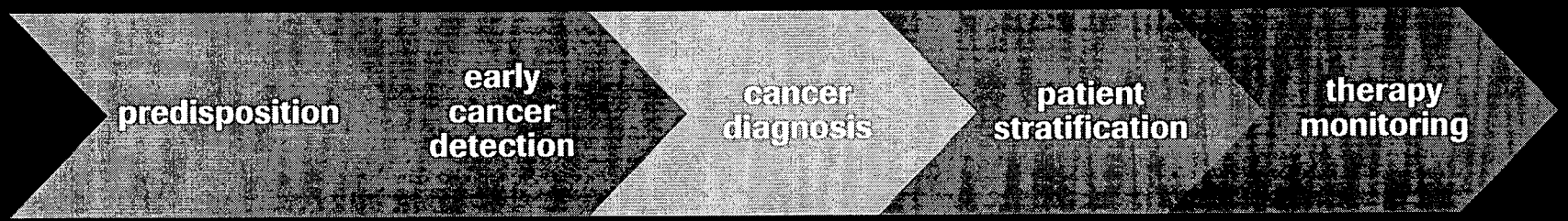
Evolution of Roche's cancer diagnostics portfolio



PSA

IHCS programs:
Her2: Herceptin
enzymes: Xeloda

tumormarker (n=12)
molecular markers of residual disease
(translocations)



where therapies do exist

screening with array platforms

predictive tests : patient management

- risk of metastasis
- drug response and toxicity
- contextual information for therapy guidance

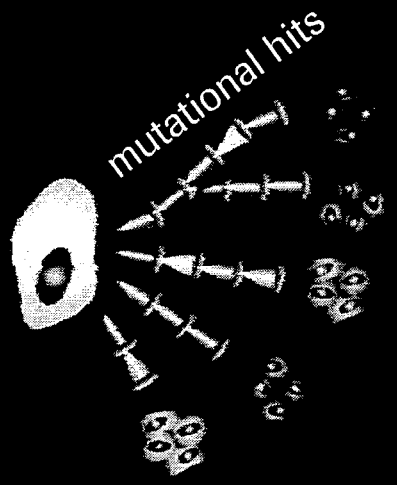
Cancer is a genetic disorder of somatic cells

Carcinogenesis is driven by mutations

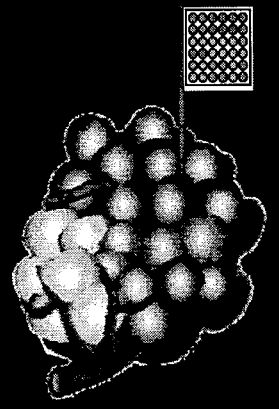
Roche

Diagnostics

normal precursor cell

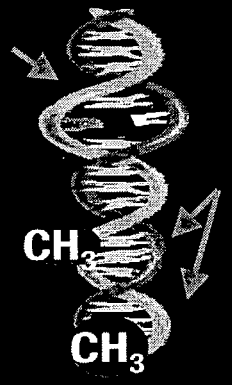


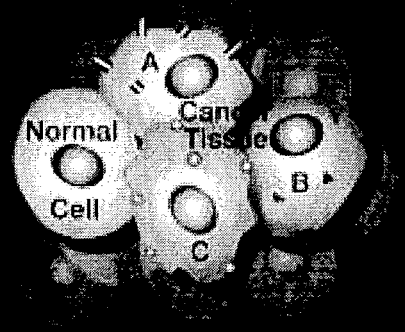
clonal diversity of cells



individual tumor characteristics

- accumulation of mutations in the genome
- genetic instability
- DNA methylation
-





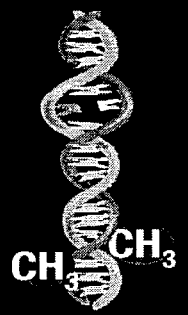
tumor tissue heterogeneity

Diagnostic opportunities in oncology

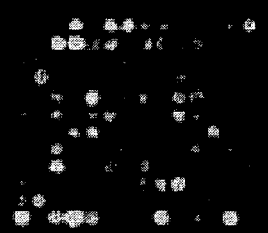
Analytes and technologies

Roche

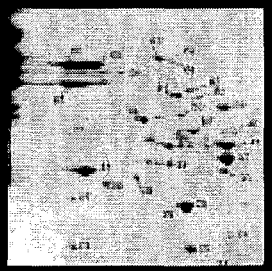
Diagnostics



alterations



altered gene transcription



and translation

diagnostic technologies

intact cells → **in- situ hybridization**

body fluids
cell lysates → **PCR**

A new era is dawning to manage cancer

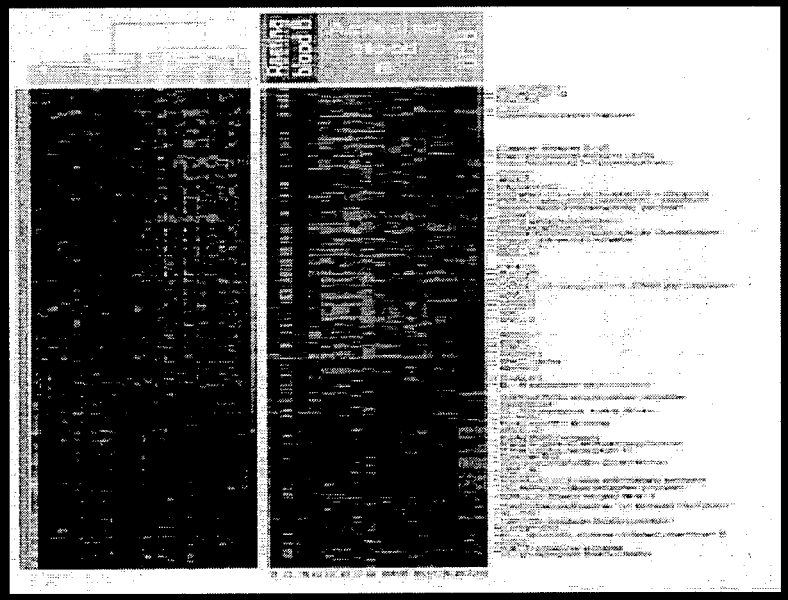
*Tailor-made to molecular tumor profiles**

Roche

Diagnostics

"cancer" is a catchall name for hundreds of different diseases

- same phenotypes vary widely in molecular pattern
- tumor properties correlate to clusters of molecular expression profiles
- hard to vanquish by uniform treatment



A.A. Alizadeh: Nature 2000/ 403/ 503

**Jean Marx, Science Sept.2000 / 289/ 1670*

Roche's diagnostic initiative in cancer

Roche

Diagnostics

marker identification

marker profiling of tumor tissues

DNA
mRNA
proteins
peptides

single markers
and
marker profiles

test platforms and complexity

low

Elecsys (ELISA)
PCR: LightCycler
Amplicor
Taqman
CBMX arrays

medium

linear arrays
CBMX arrays

high

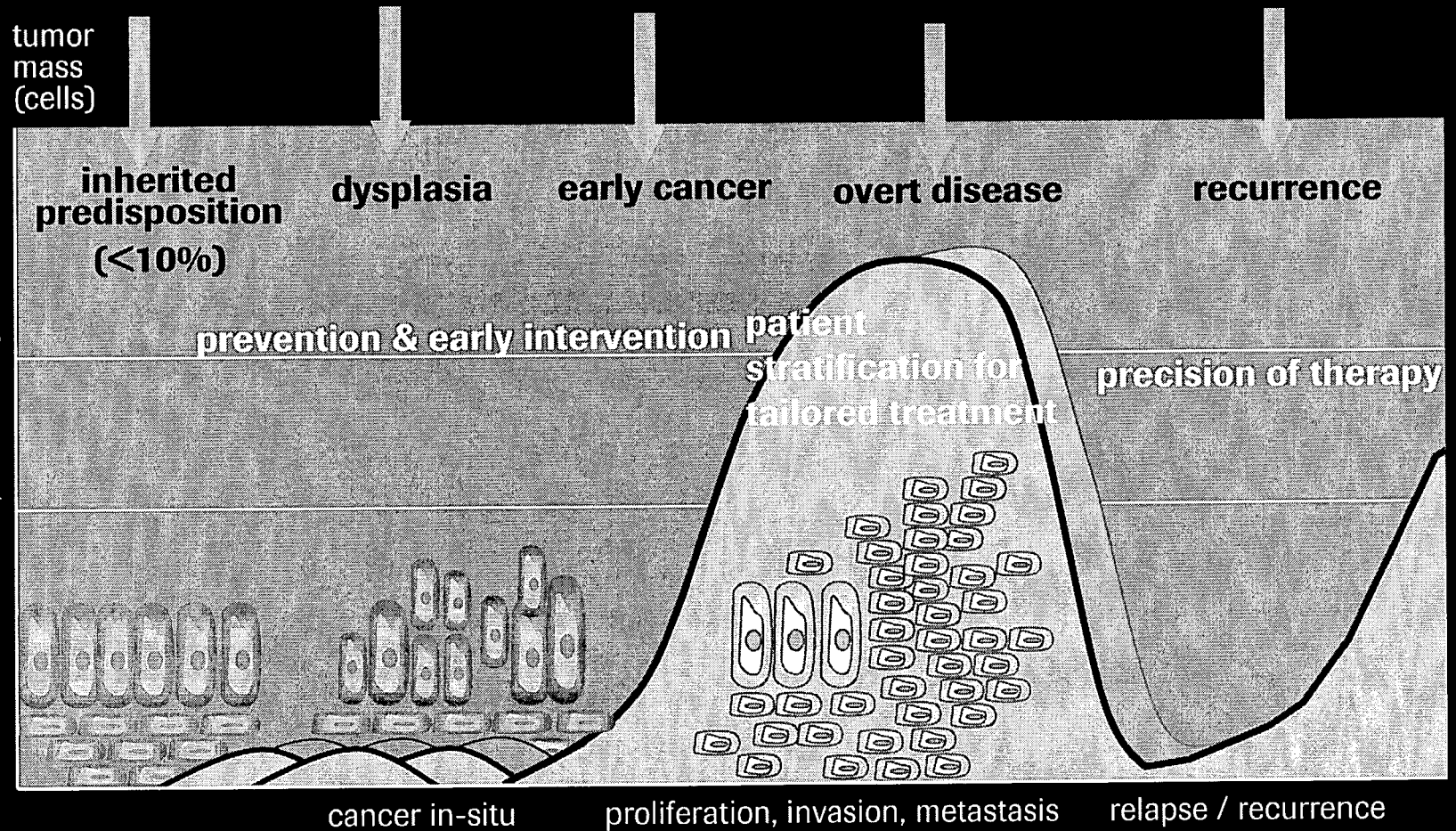
Affymetrix
arrays
Mass spec

time of test development

Carcinogenesis & indications of diagnostic tests

Roche

Diagnostics

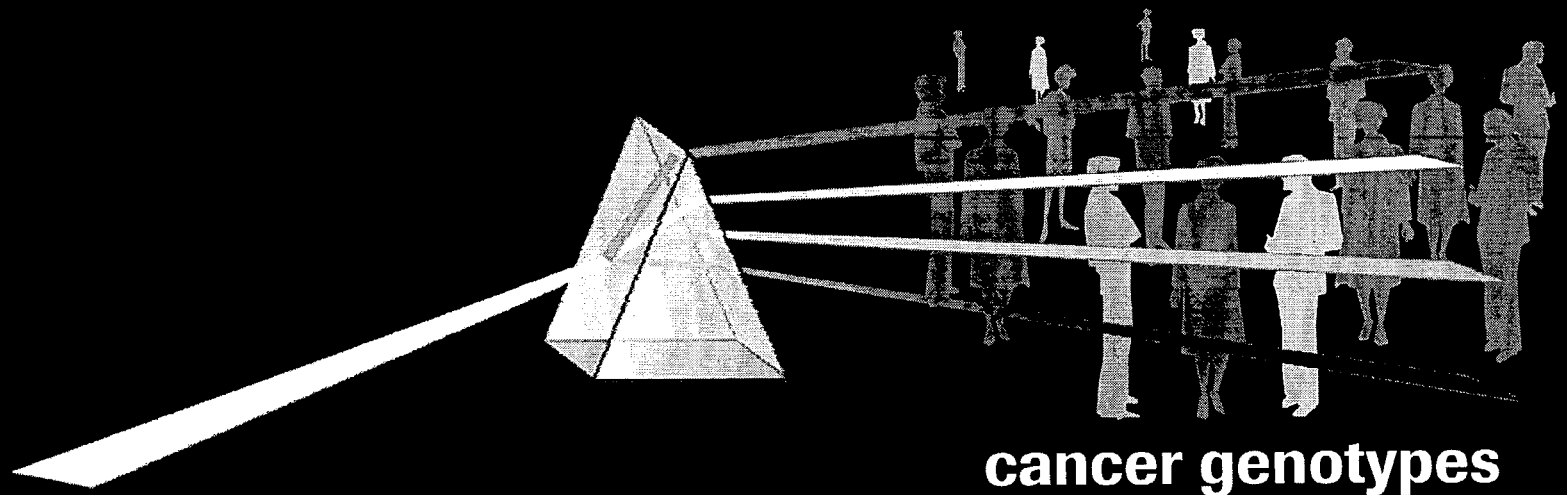


Cancer care

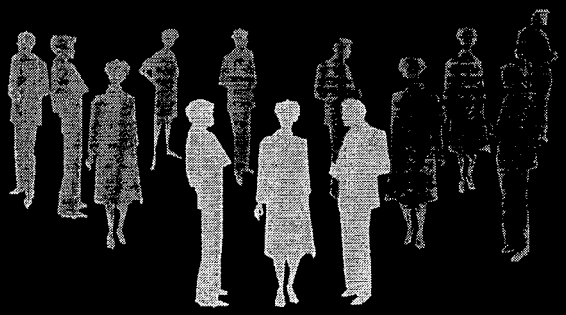
Patient stratification for customized treatment

Roche

Diagnostics



cancer genotypes



cancer phenotypes

Re-engineering of Patient Management by Predictive Diagnostics

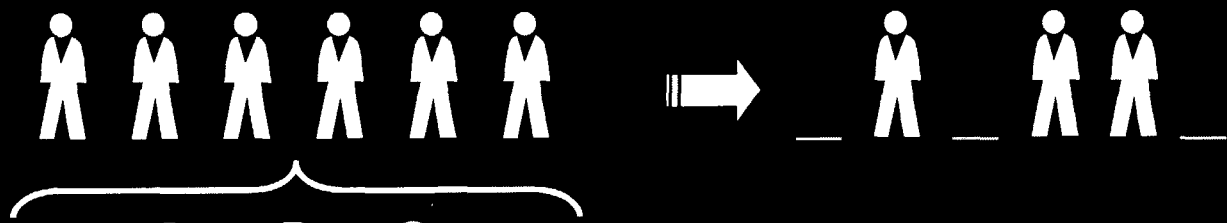
Roche

Diagnostics

From

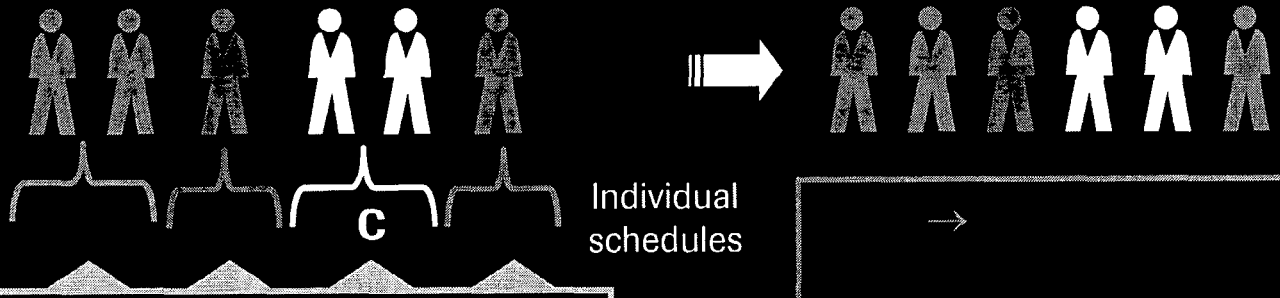
"Trial and error"

"One schedule fits all patients"

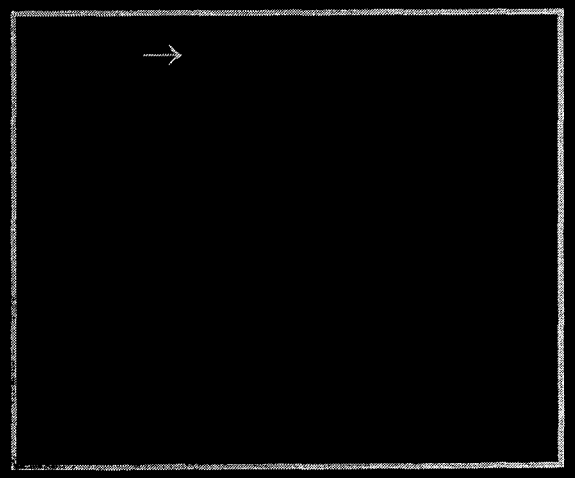


" State of the art " drug combination: same for all

Tailored therapy selection based on individual molecular response profiles of tumors



Individual schedules



Predictive testing

Bioinformatics and IT

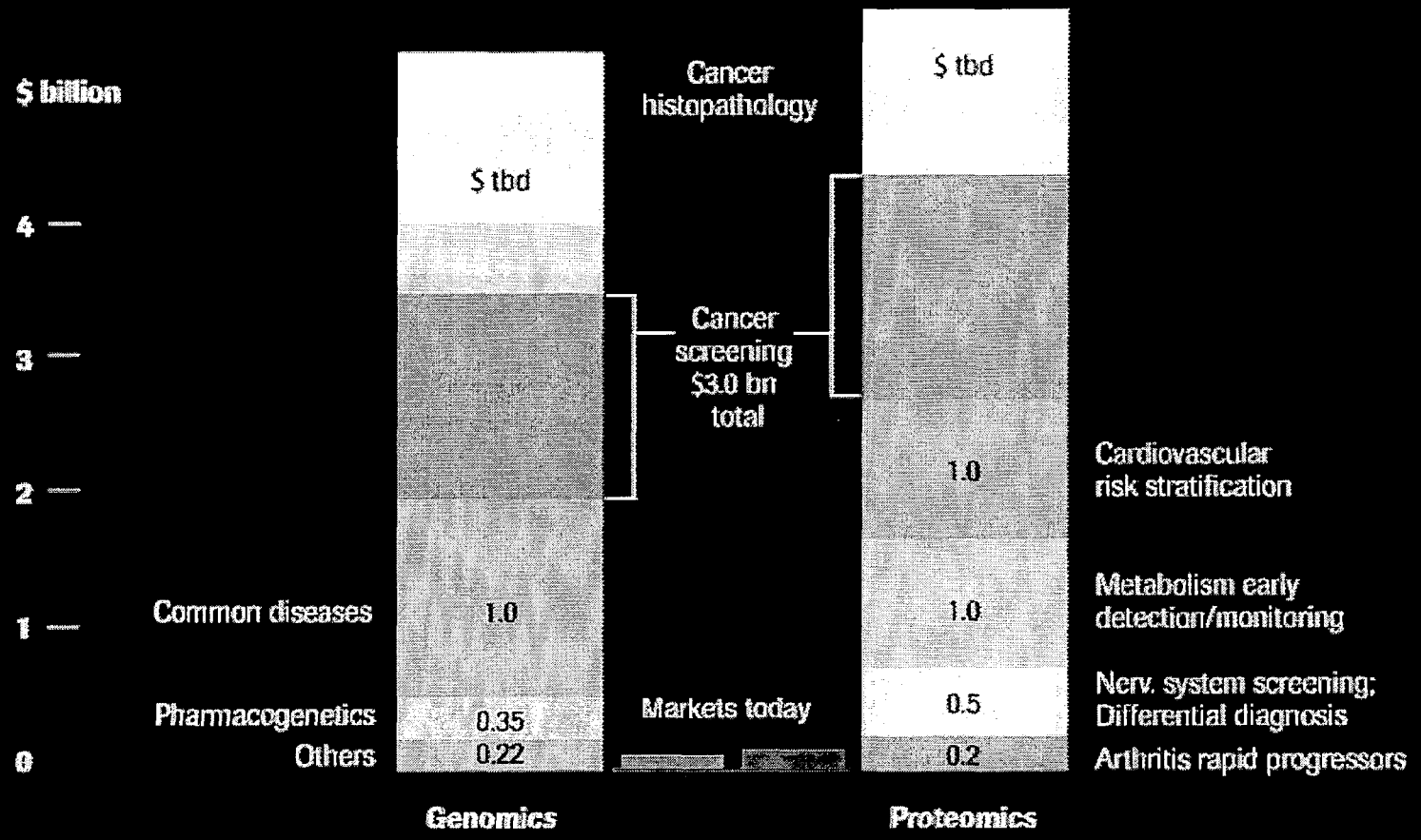
Support of patient management with actionable information

Genomics and proteomics markets in 2010

Explosion of revenues expected

Roche

Diagnostics



Subsegments: monogenetic diseases $100m
paternity $50m
forensic $45m
HLA $35m

Source: Roche estimates

Breast cancer epidemiology
Substantial market opportunity

Roche

Diagnostics

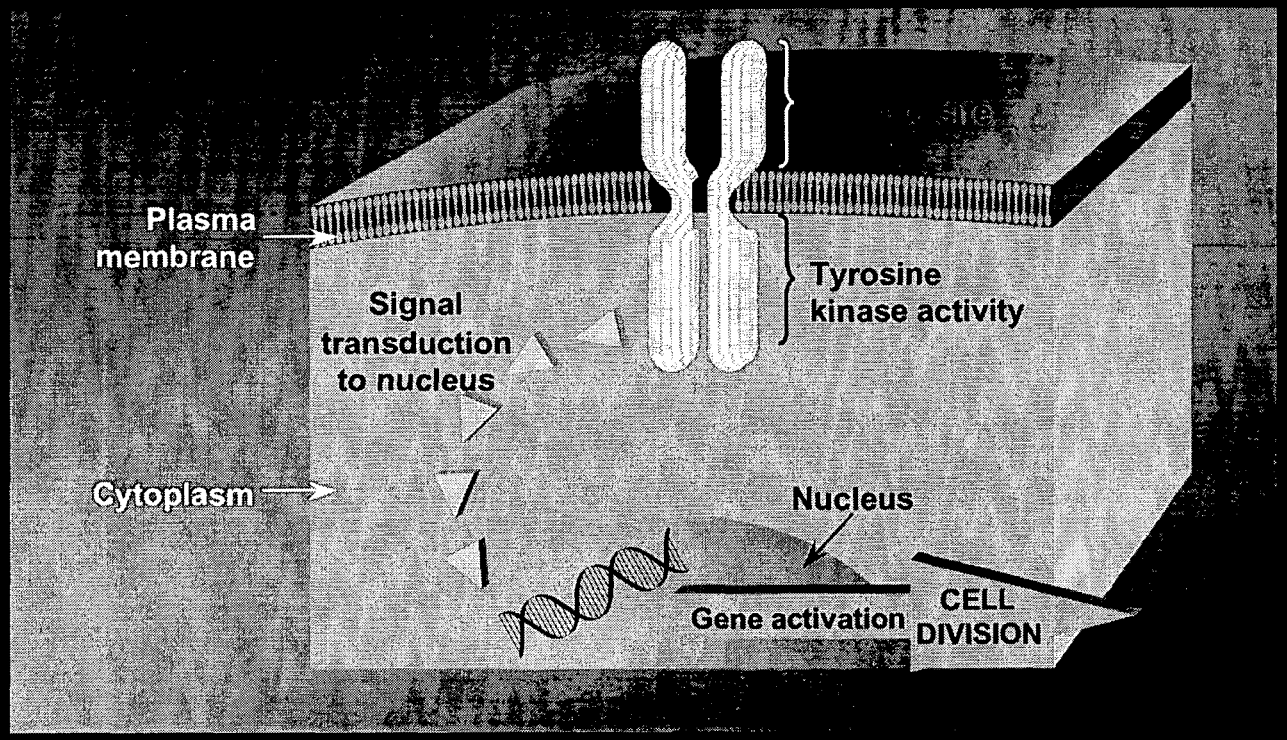
- + 250,000 cases diagnosed annually in Europe
- + 100,000 deaths per year in Europe -370,000 worldwide
- 1 in 10 women will develop breast cancer in her lifetime
- leading cause of death in women 35 to 55
- second leading cause of death in women

HER2 receptor

Provides an extra-cellular therapeutic target

Roche

Diagnostics

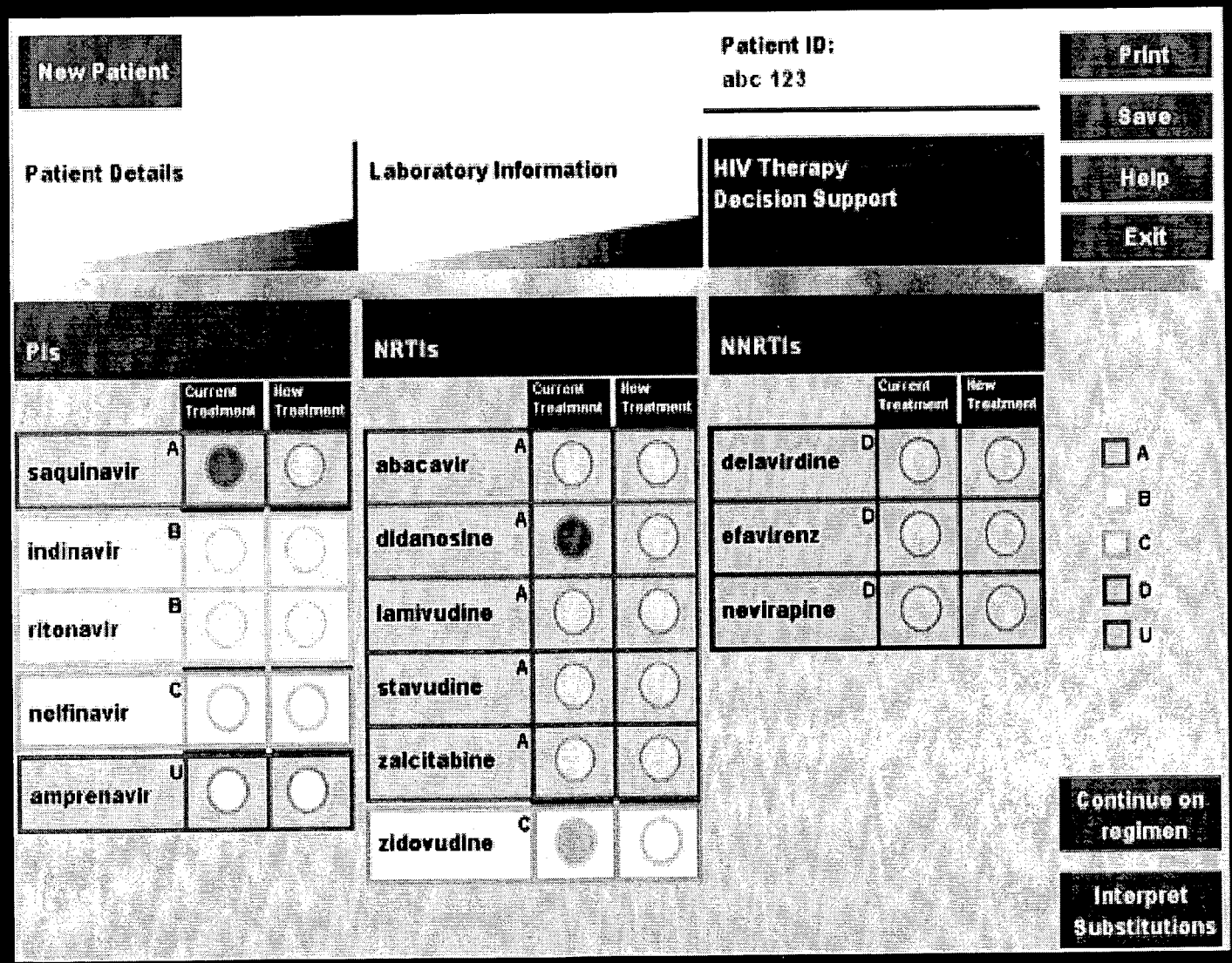


HER2 is

- 15 to 20 % of breast cancer tumors show high HER2 level
- higher incidence of metastases, drug resistance, shorter survival 3 vs. 7 years

HIV
An example

Roche Diagnostics



Synergy of pharma and diagnostics

Diagnostic label in pharmaceutical drug package inserts

Roche

Diagnostics

for pharma companies

- positioning of drugs in competitive environment
- high efficacy and safety of drugs
- lean and shorter trials, faster approval and time to market

for diagnostic companies

- systematic access to new diagnostic tests: drug targets and response profiles
- diagnostic test validation in pharma clinical trials
- faster market penetration of diagnostics: two sales forces promotion & push by the drug

for health care systems

- cost savings by reduced morbidity and mortality
- support of patient management with diagnostics and contextual information

Roche healthcare strategy

The foundation for stakeholder value

Roche

Diagnostics



Roche Holding Ltd

16 October 2001 - Investor Presentation (Q3 sales)

As Posted on Roche.com

Furnished Under Rule 12g3-2(b)
Roche Holding 82-3315

Roche

This presentation contains certain forward-looking statements. These forward-looking statements may be identified by words such as “believes”, “expects”, “anticipates”, “projects”, “intends”, “should”, “seeks”, “estimates”, “future” or similar expressions or by discussion of strategy, goals, plans or intentions. Various factors may cause actual results to differ materially in the future from those reflected in forward-looking statements contained in this presentation among others: (1) pricing and product initiatives of competitors; (2) legislative and regulatory developments and economic conditions; (3) delay or inability in obtaining regulatory approvals or bringing products to market; (4) fluctuations in currency exchange rates and general financial market conditions; (5) uncertainties in the discovery, development or marketing of new products or new uses of existing products; (6) increased government pricing pressures; (7) interruptions in production; (8) loss of or inability to obtain adequate protection for intellectual property rights; (9) litigation; (10) loss of key executives or other employees; and (11) adverse publicity or news coverage.

Roche

Group Financials at Q3 2001

Roche

Group profits

Financial statements v. adjusted

Group operating performance

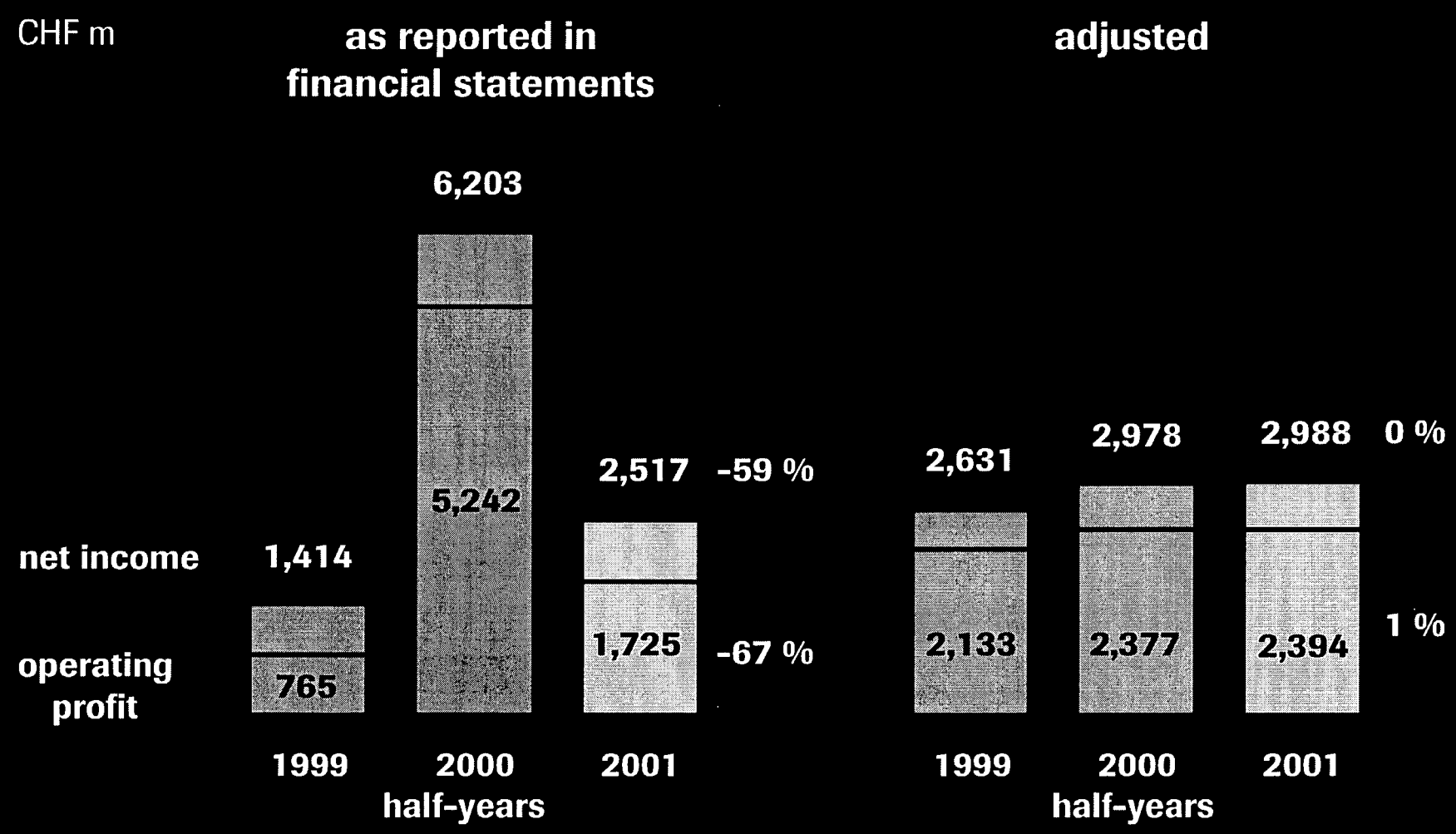
Reshaping Pharmaceuticals: costs and savings

Non-operating performance

Cash Flow and Balance Sheet

Group profits

Profits maintained on an adjusted basis



The adjusted result

Improving visibility of the underlying business

Adjusted results the following:

	CHF m net income effect
H1 2000	
• Givaudan spin-off	-108
• Accounting policy changes including impairments	-252
• Gain on sale of Genentech shares	-3,949
• Charges related to Genentech acquisition in 1999	124
• Income tax and minority interest effects	960
Total difference to financial statements	*-3,225*
H1 2001	
• Pharmaceuticals Division restructuring costs	669
• Income tax effect	-198
Total difference to financial statements	*471*

Group operating performance (adjusted)

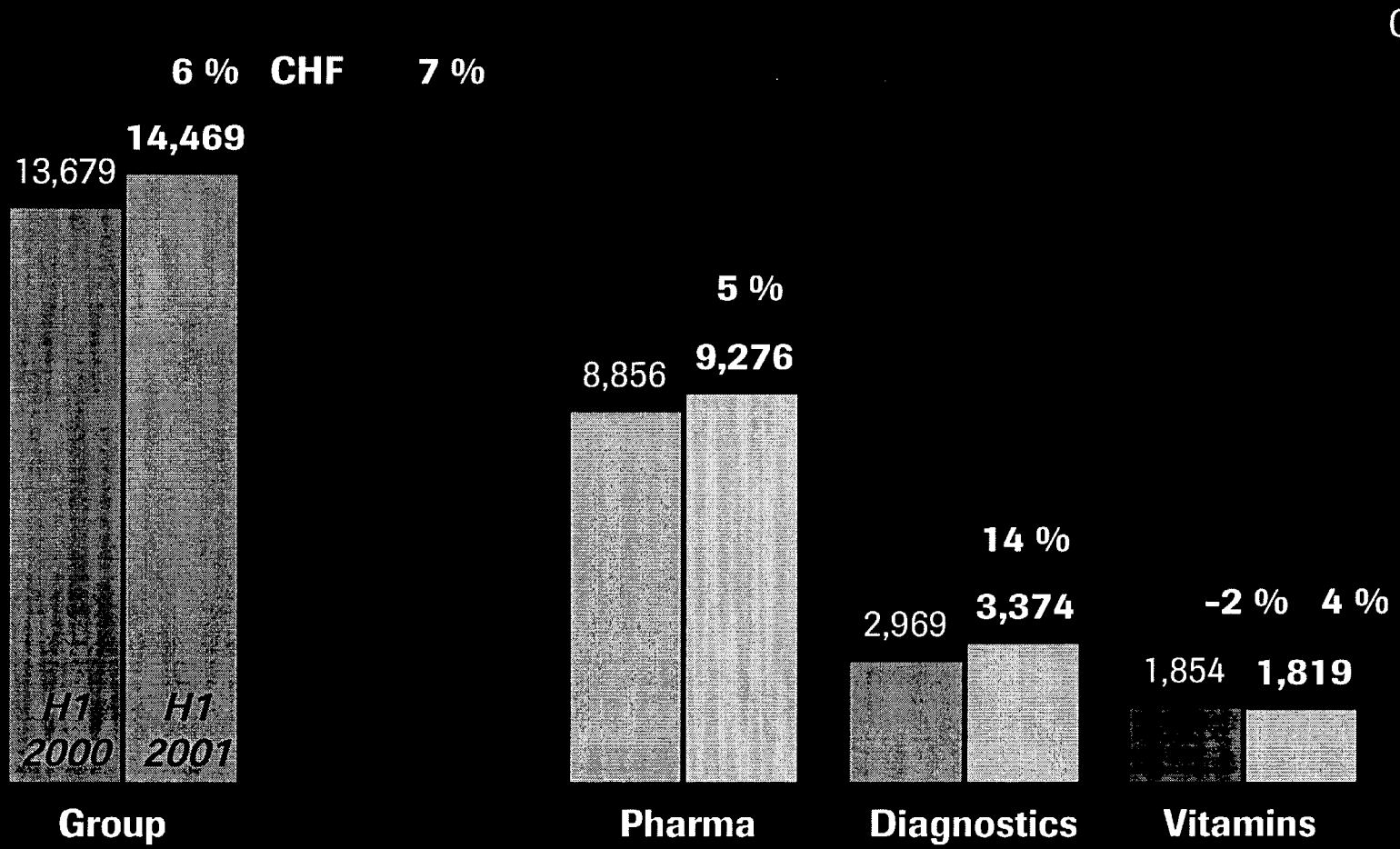
Improved cost structure

CHF m

	H1 2001	% sales	H1 2001 v. H1 2000	
sales	14,469	100	790	+ 6 %
cost of sales	-4,274	-30	-155	+ 4 %
M & D	-4,132	-29	-88	+ 2 %
R & D	-1,955	-14	-55	+ 3 %
administration	-606	-4	-30	+5 %
amortization	-779	-5	-54	+7 %
other operating expense, net	-329	-2	-391	n/a
operating profit	2,394	17	17	+1 %

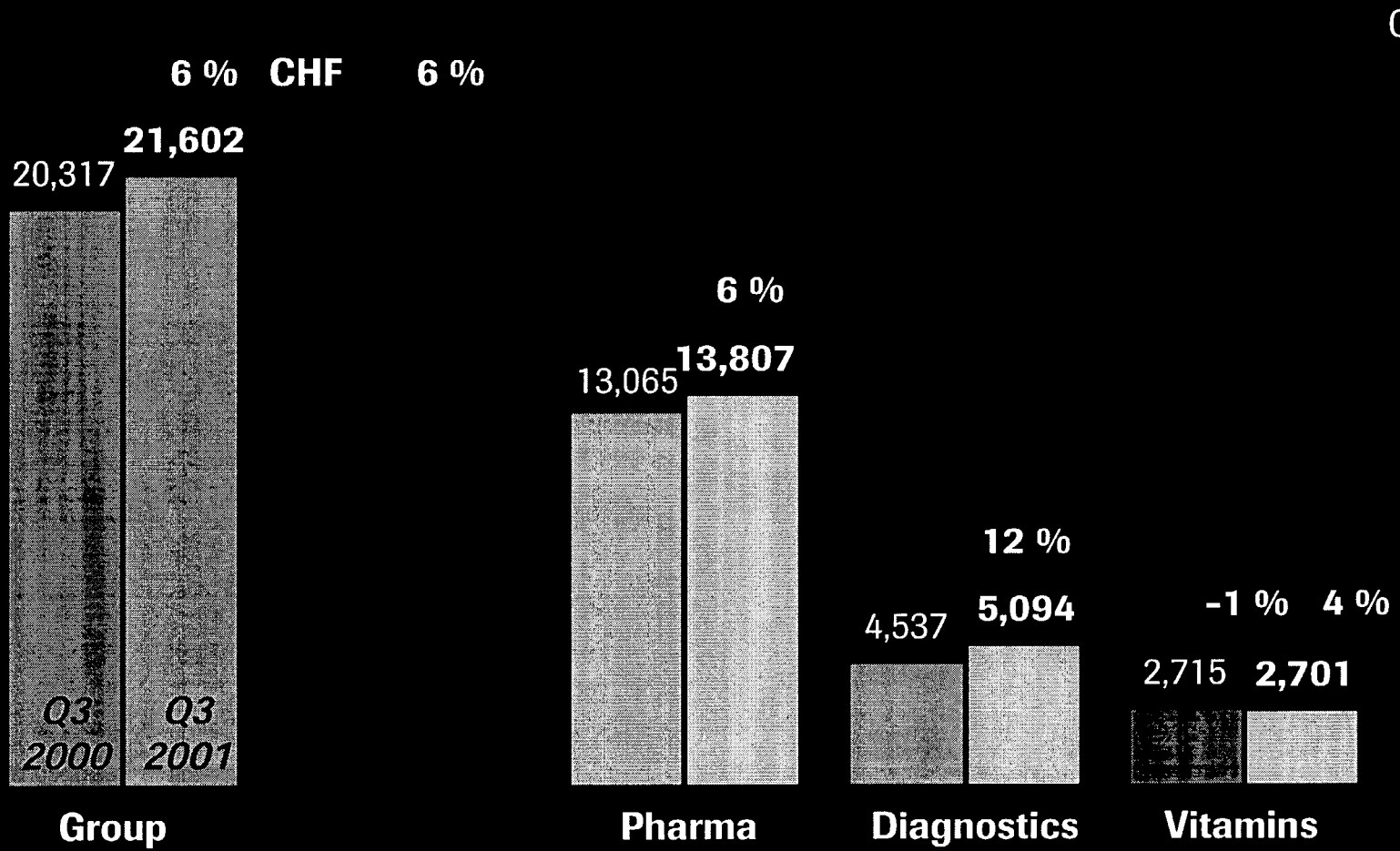
Sales at H1 2001 (adjusted)

Growth in all Divisions



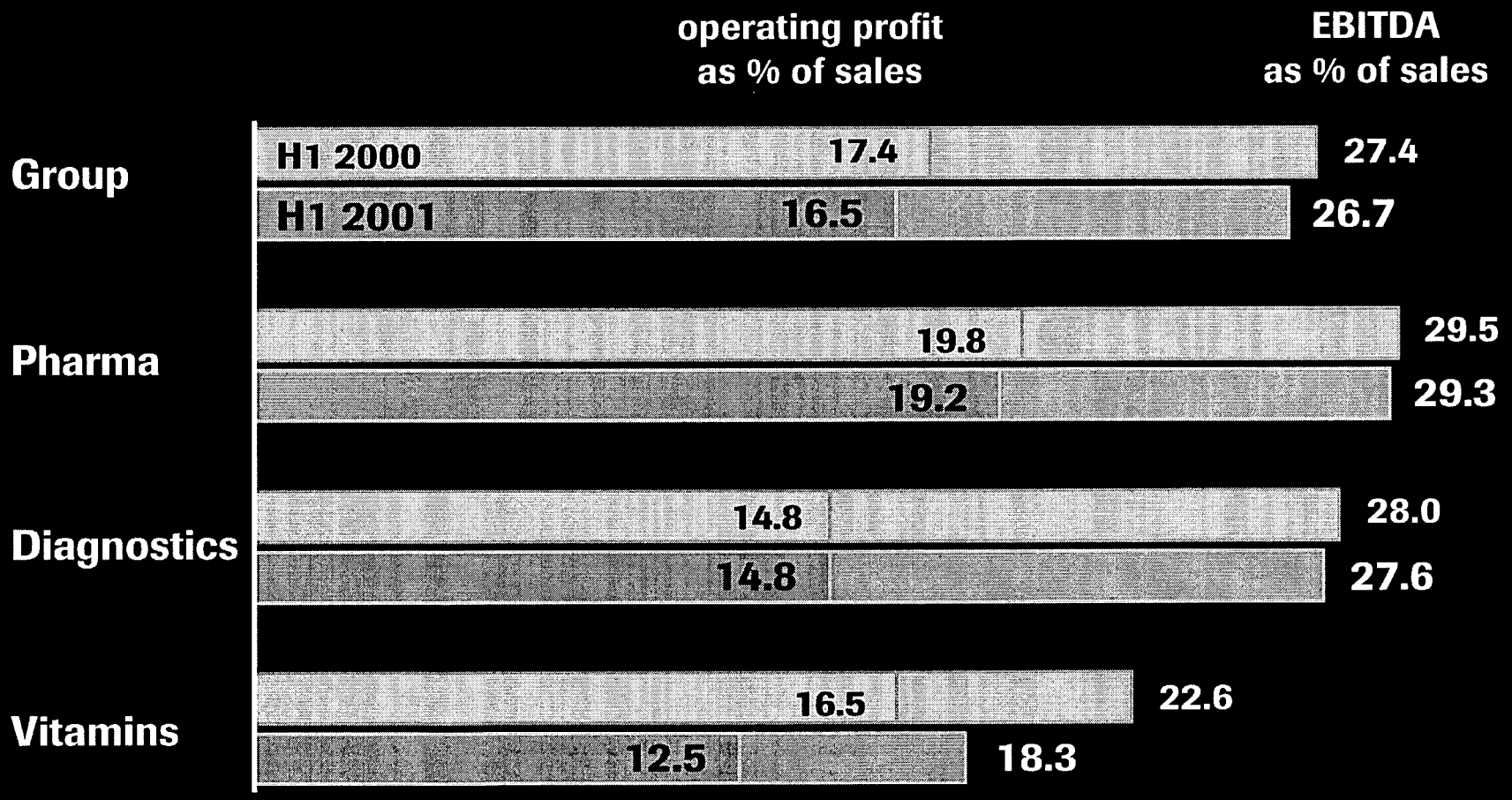
Sales at Q3 2001 (adjusted)

Growth in all Divisions



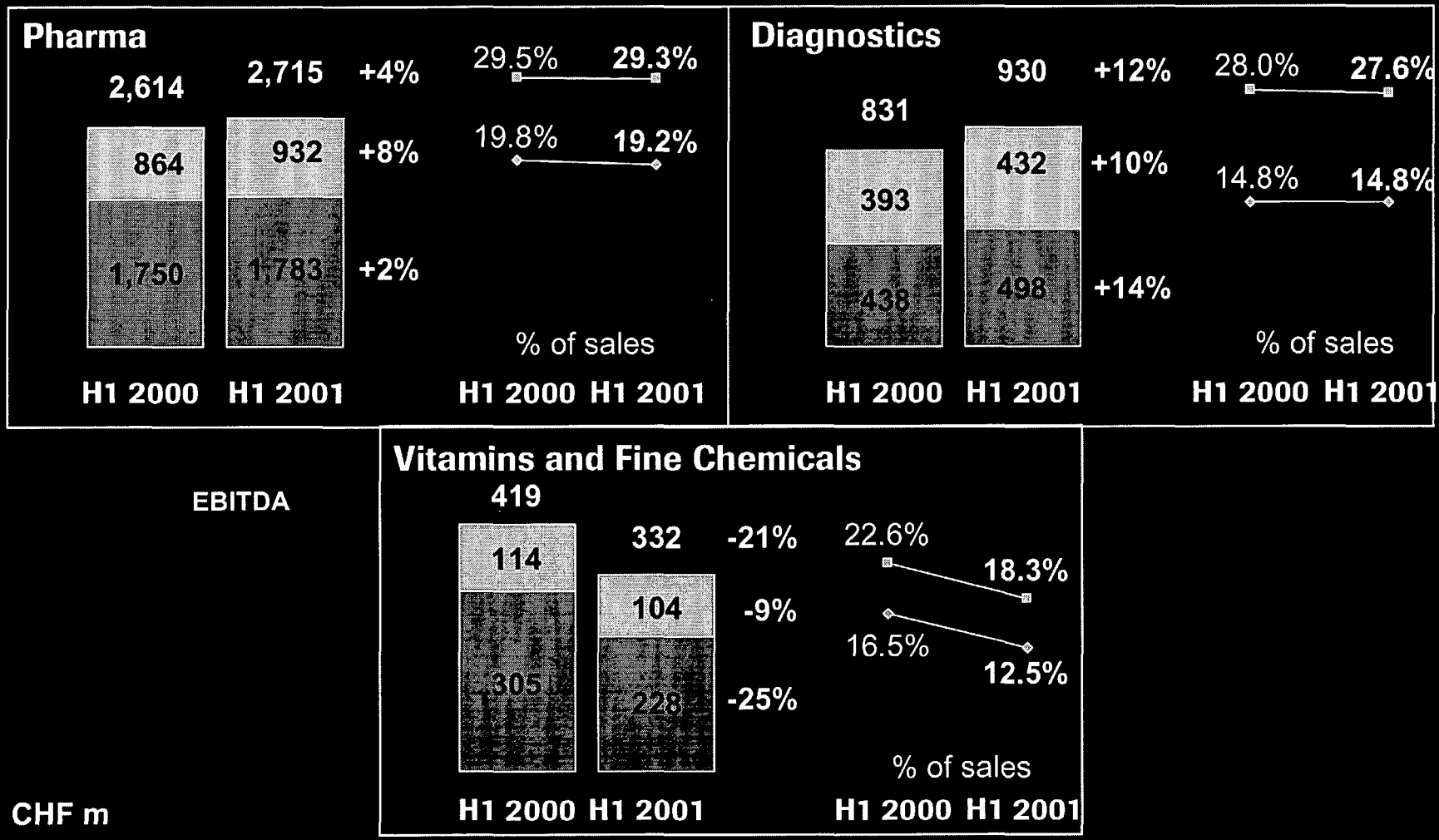
Profitability (adjusted)

Pharma and Diagnostics margins largely maintained



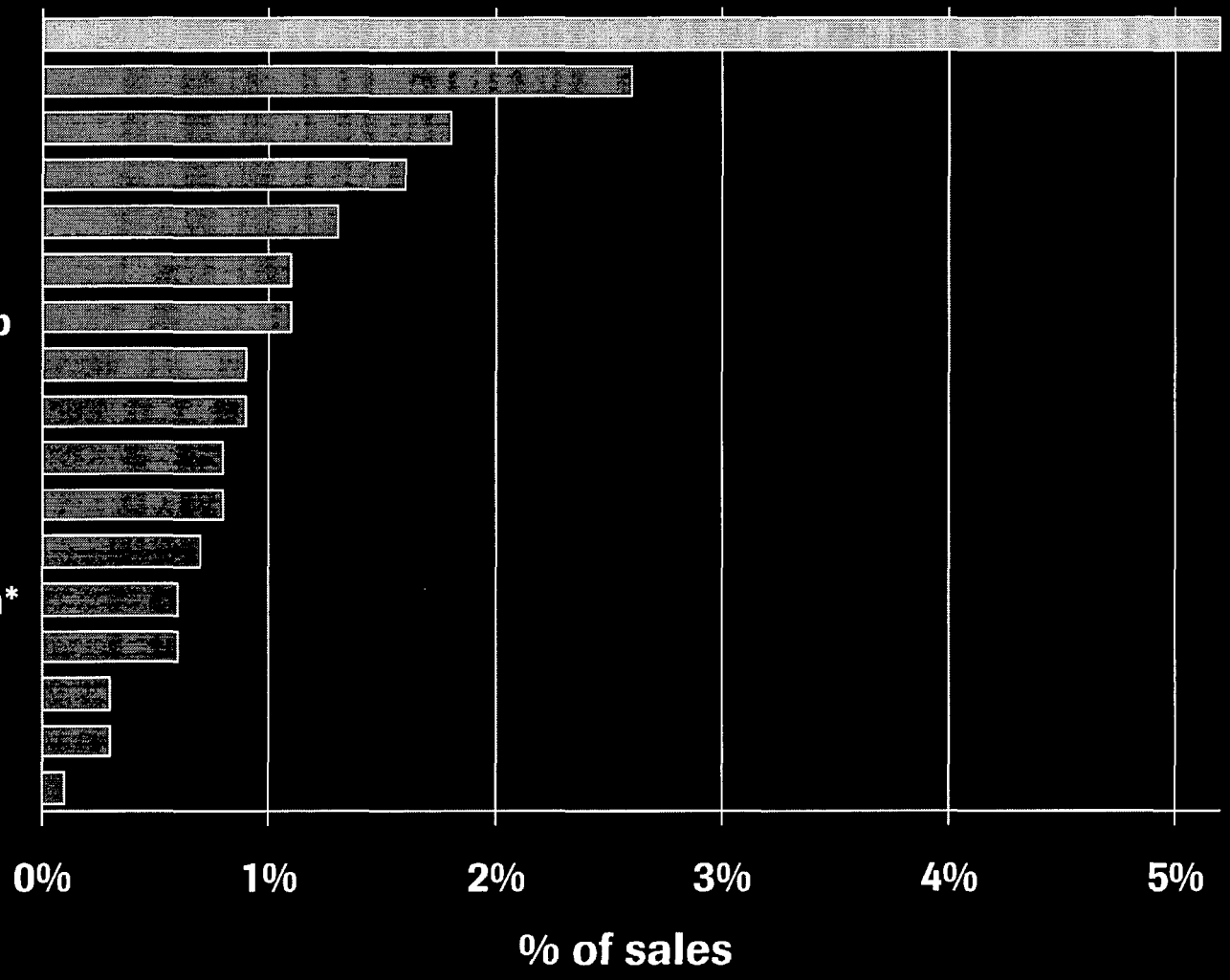
Divisional profitability (adjusted)

Pharma and Diagnostics margins largely maintained



Amortisation

A high charge from acquisition history & IAS policy



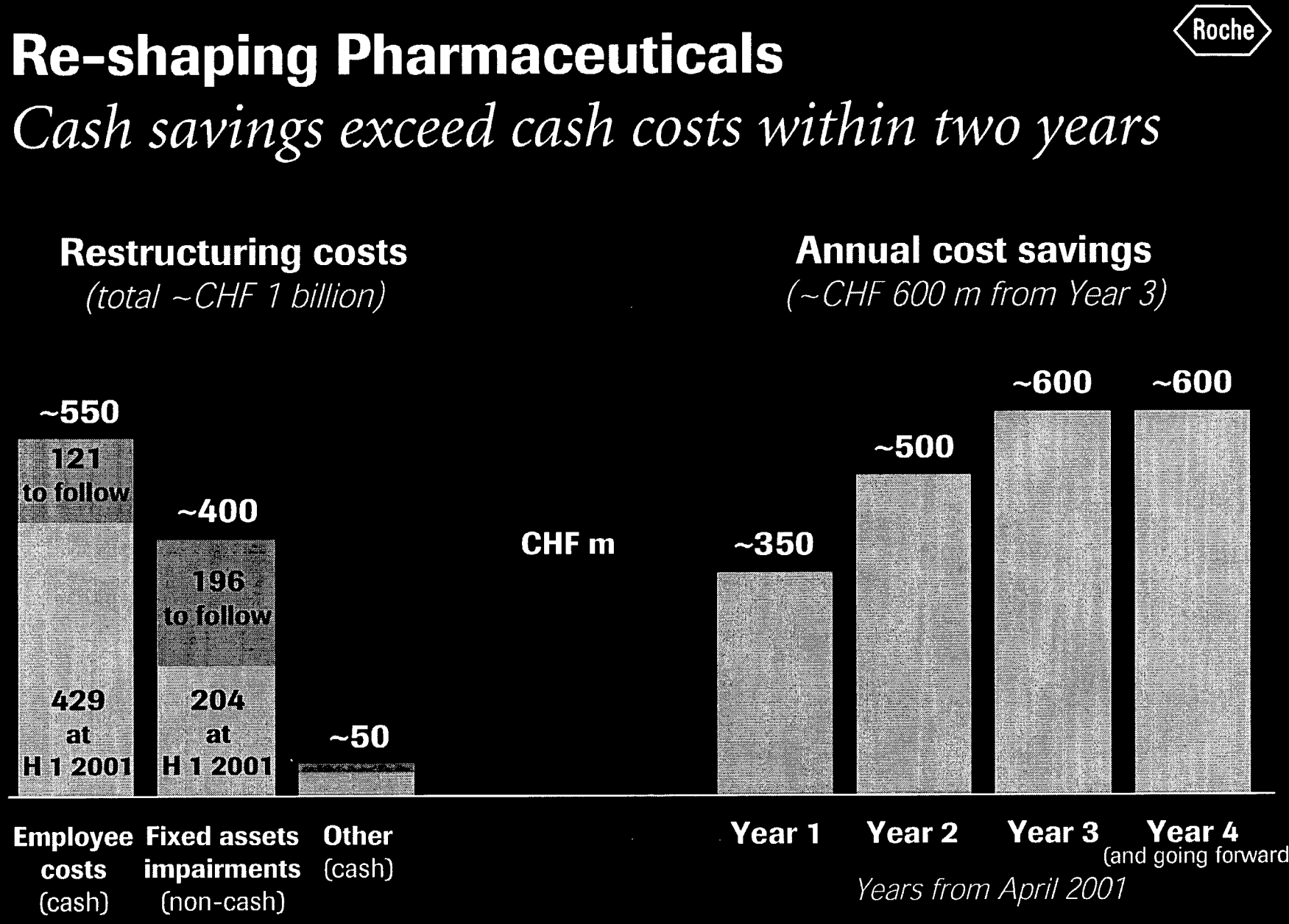
* H1 2000

** 1999

all others at full year 2000

Re-shaping Pharmaceuticals

Cash savings exceed cash costs within two years



Non-operating performance (adjusted)

Increased financial income and taxes

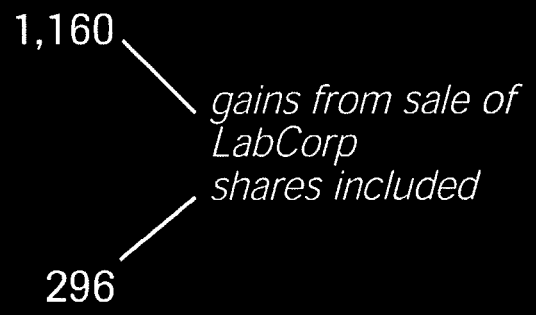
CHF m

	H1 2001	H1 2000	change CHF m	change %
operating profit	**2,394**	**2,377**	**17**	**1**
financial income, net	**1,472**	**1,229**	**243**	**20**
income taxes	**-890**	**-660**	**-230**	**35**
tax rate in %	*23*	*18*		
minority interests	**-24**	**29**	**-53**	**-**
associated companies	**36**	**3**	**33**	**-**
net income	**2,988**	**2,978**	**10**	**0**
% of sales	*21*	*22*		

Financial income, net

Higher income including gains on LabCorp shares

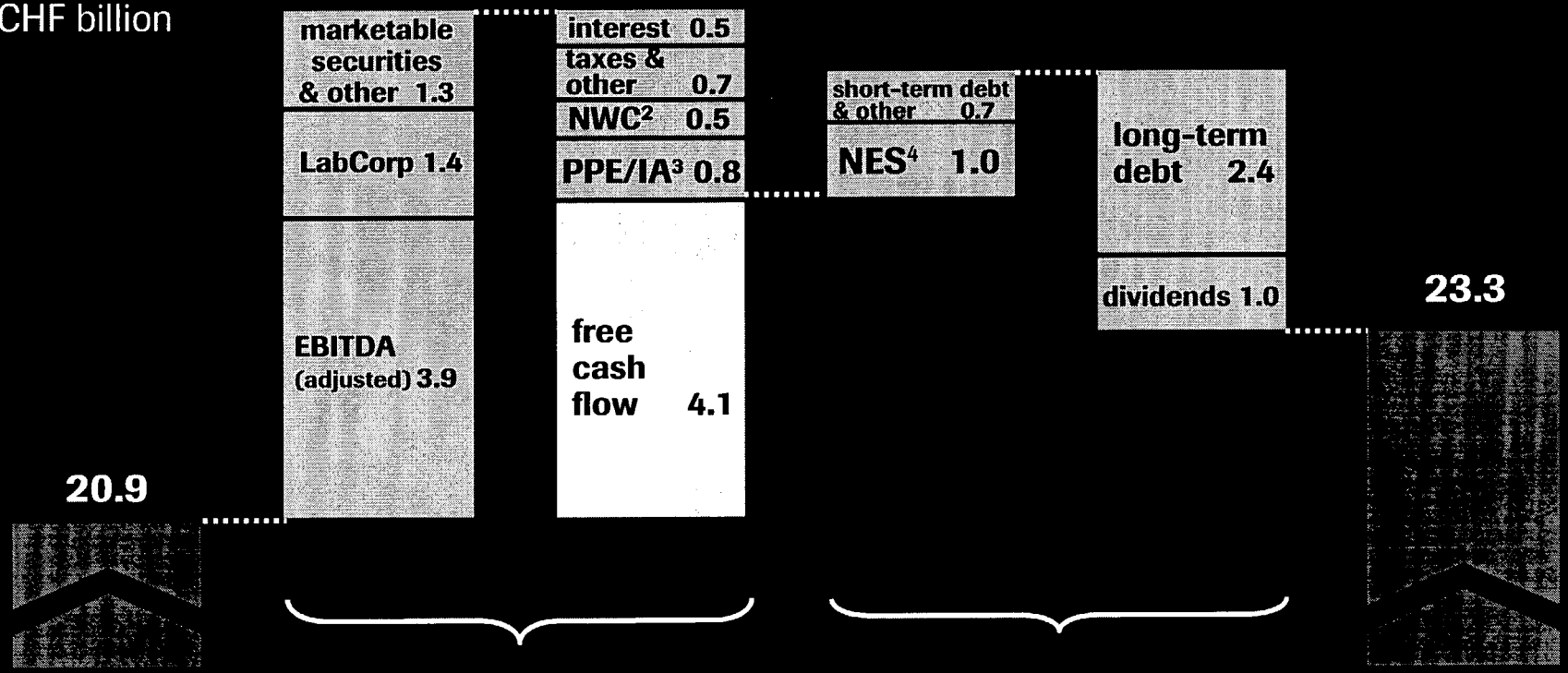
H1 2001	CHF m
net income on marketable securities and investments	2,459
interest expenses	-746
exchange gains (losses), net*	-241
financial income, net	**1,472** *+20 %*
H1 2000	
financial income, net	**1,229**



* exchange gains (losses) are unrealised

Cash flow

Free cash flow of over CHF 4 billion



[1] at market values in accordance with new accounting standard

[2] net working capital

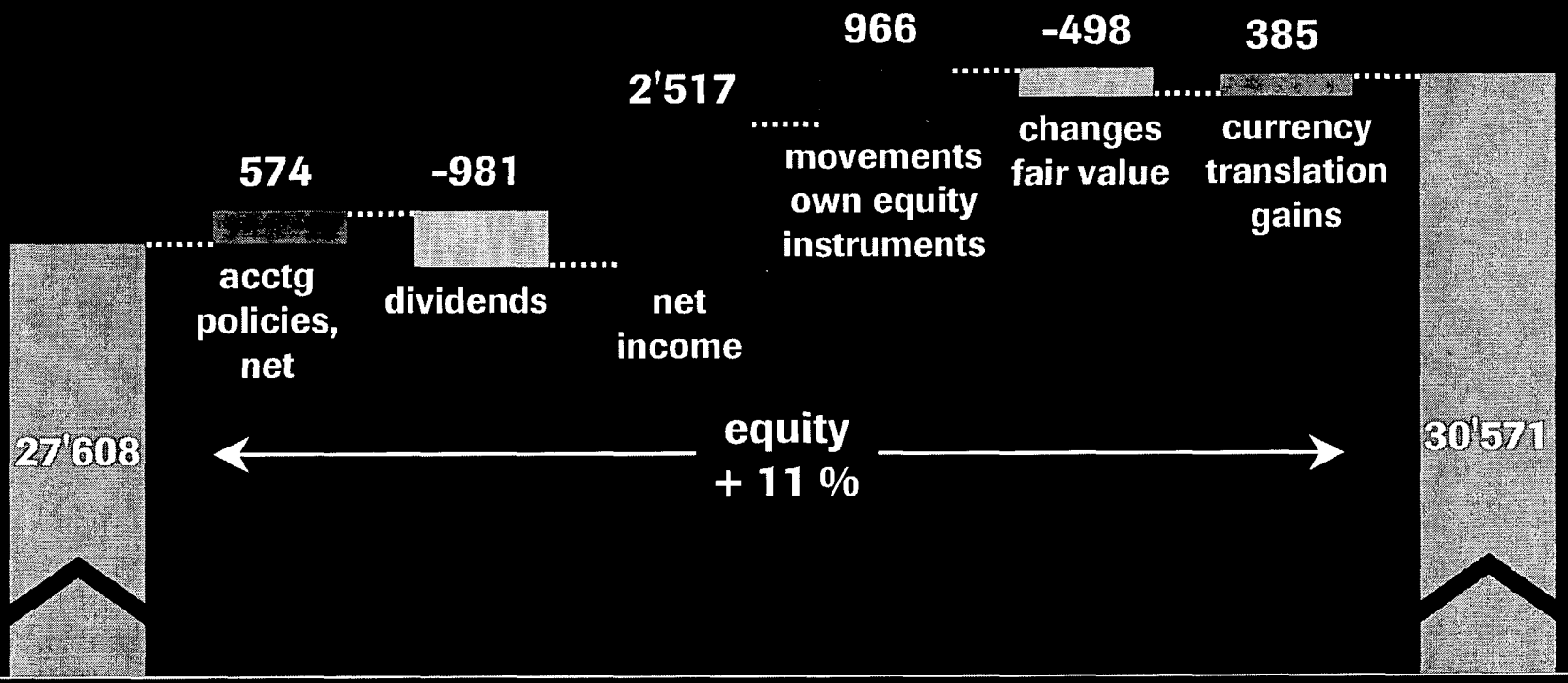
[3] property, plant and equipment; intangible assets

[4] non-voting equity securities ('Genussscheine')

Equity movement

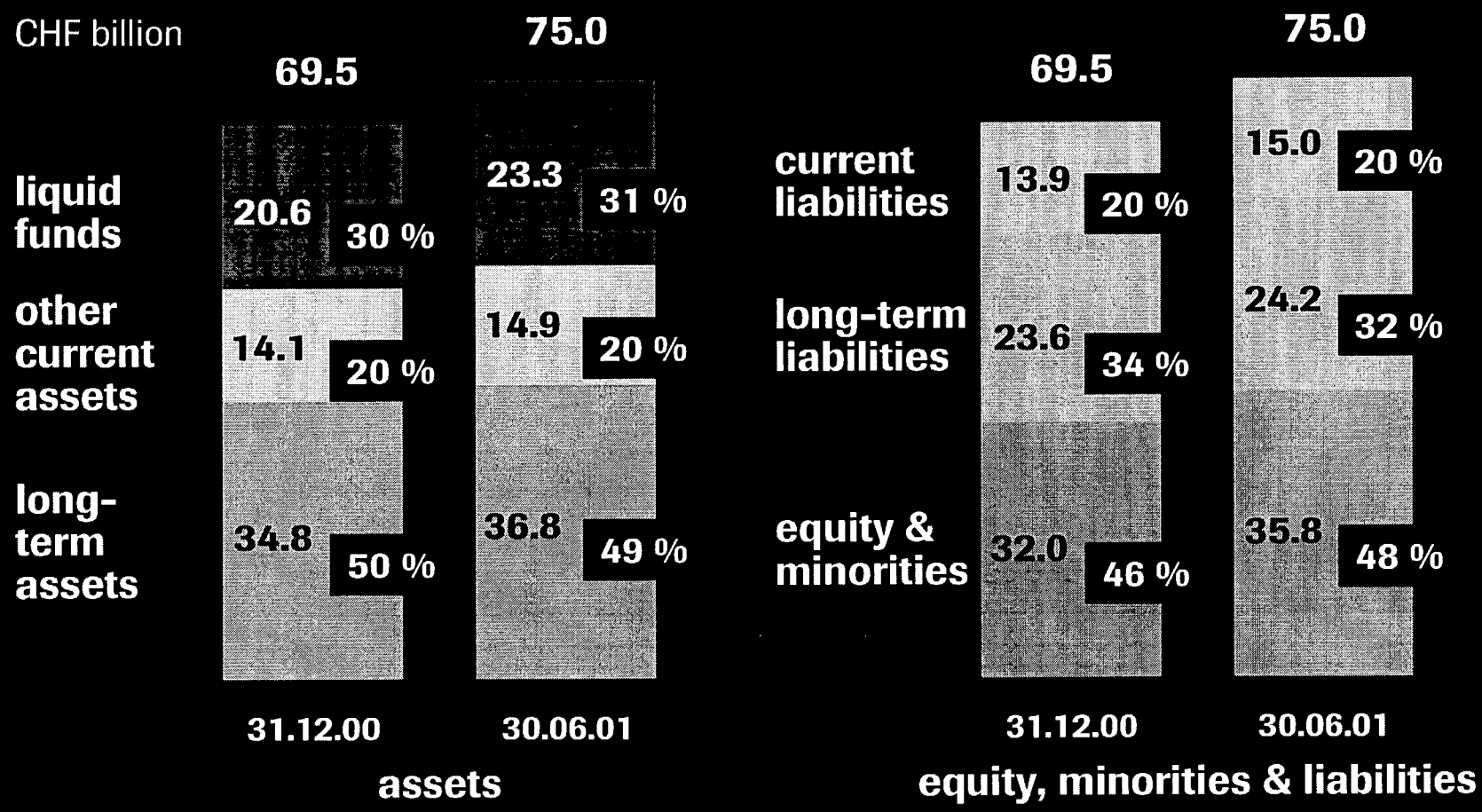
Increase driven by net income

CHF m



Balance sheet

Further strengthened



Group Financials at Q3 2001

Summary

- Profit levels maintained on an adjusted basis
- 6 % sales growth at H1 and an improved cost structure
  - except amortisation and other operating income/expenses
- 8 % sales growth at Q3
- Operating profit margin slightly reduced
- Substantial cost savings from Pharma reshaping initiative expected
  - payback of cash costs expected within 2 years
- Increase in net financial income including gains on LabCorp shares
- Liquidity and balance sheet strengthened

Roche

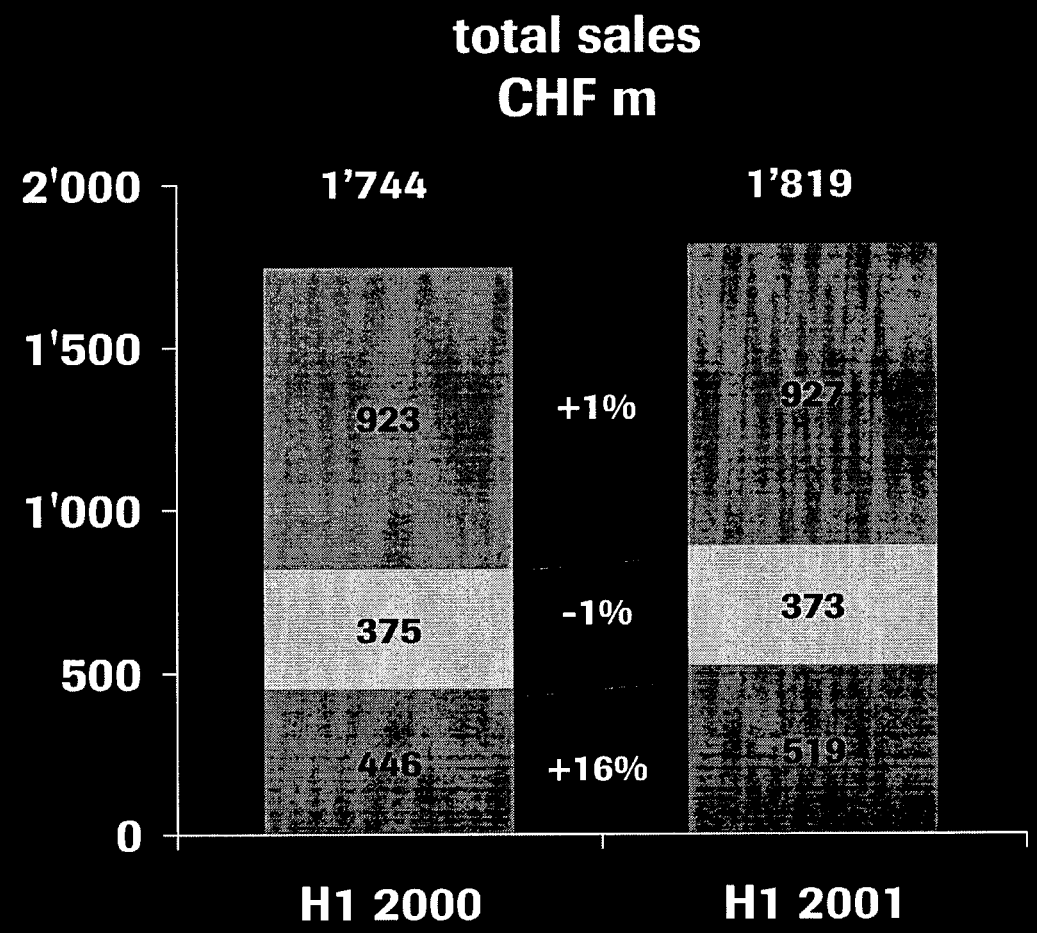
Vitamins and Fine Chemicals Division at Q3 2001

Sales in H1 2001

Back to top line growth

Roche

Vitamins



4 % local currency growth

4 % CHF growth

vitamins

carotenoids

fine chemicals
(excluding MFA)

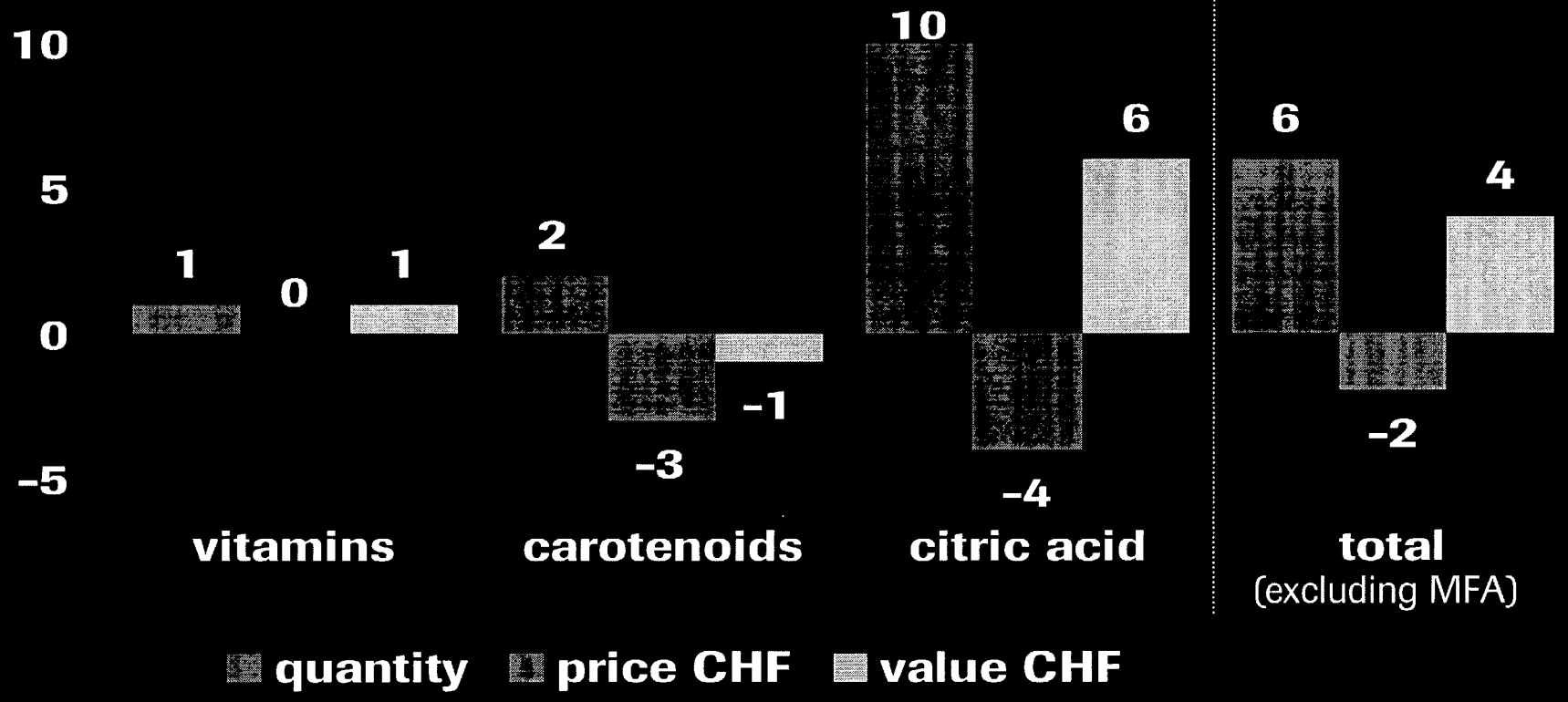
Sources of growth in H1 2001

Quantity driven growth

Roche

Vitamins

deviation from H1 2000 in %

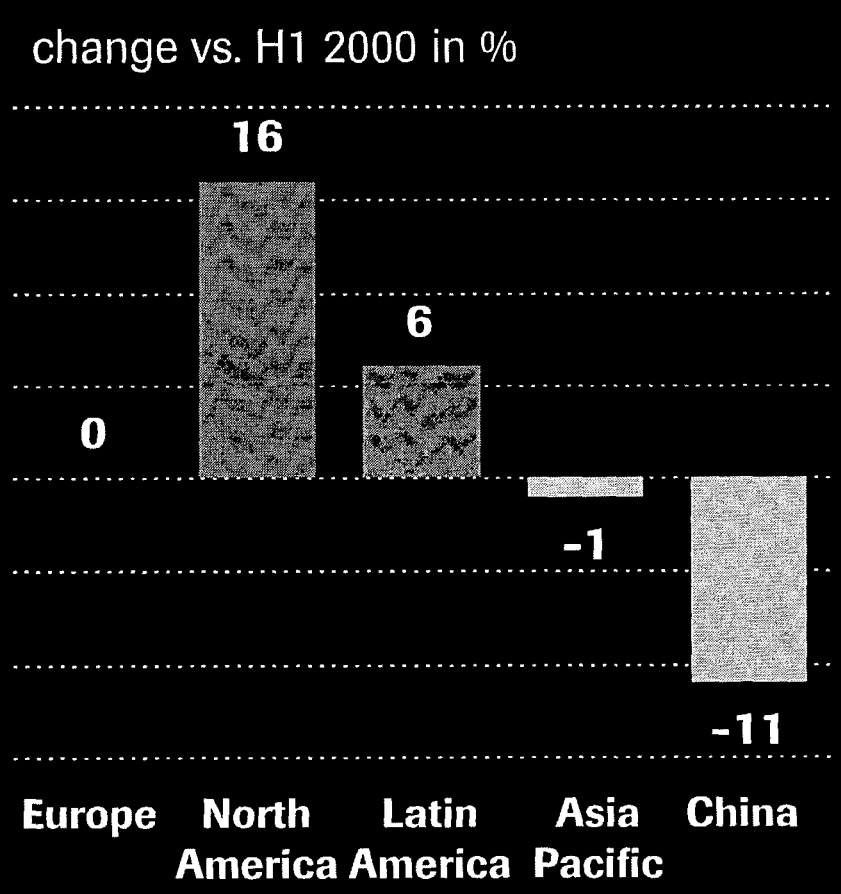


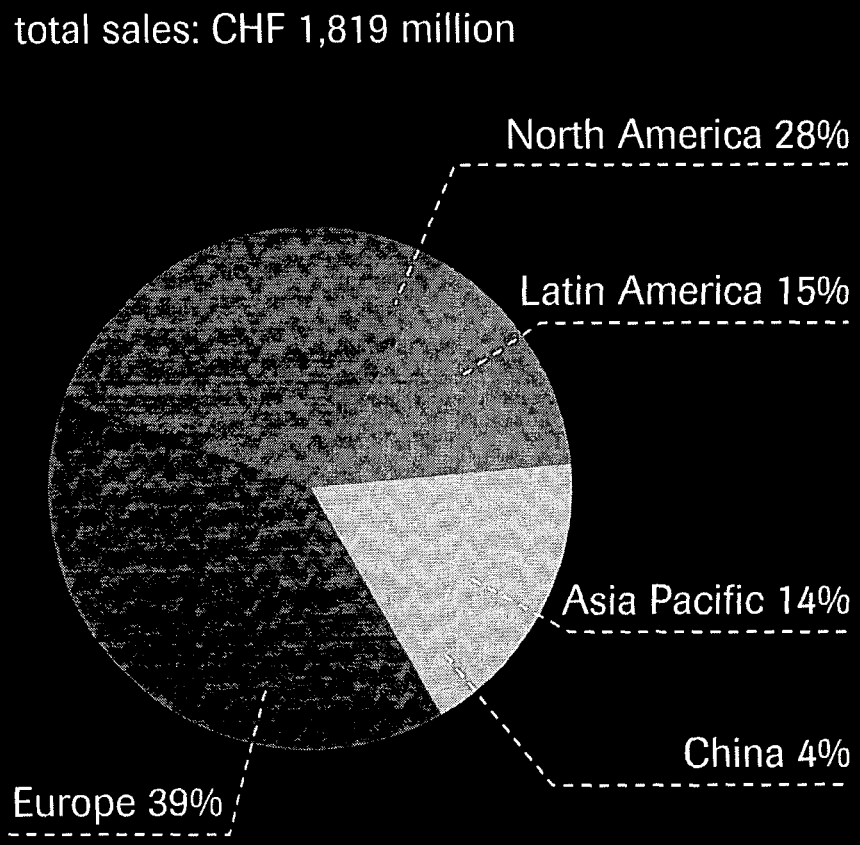
Sales by region H1 2001*

Strong comeback of North America

Roche

Vitamins





* excluding MFA sales in H1 2000

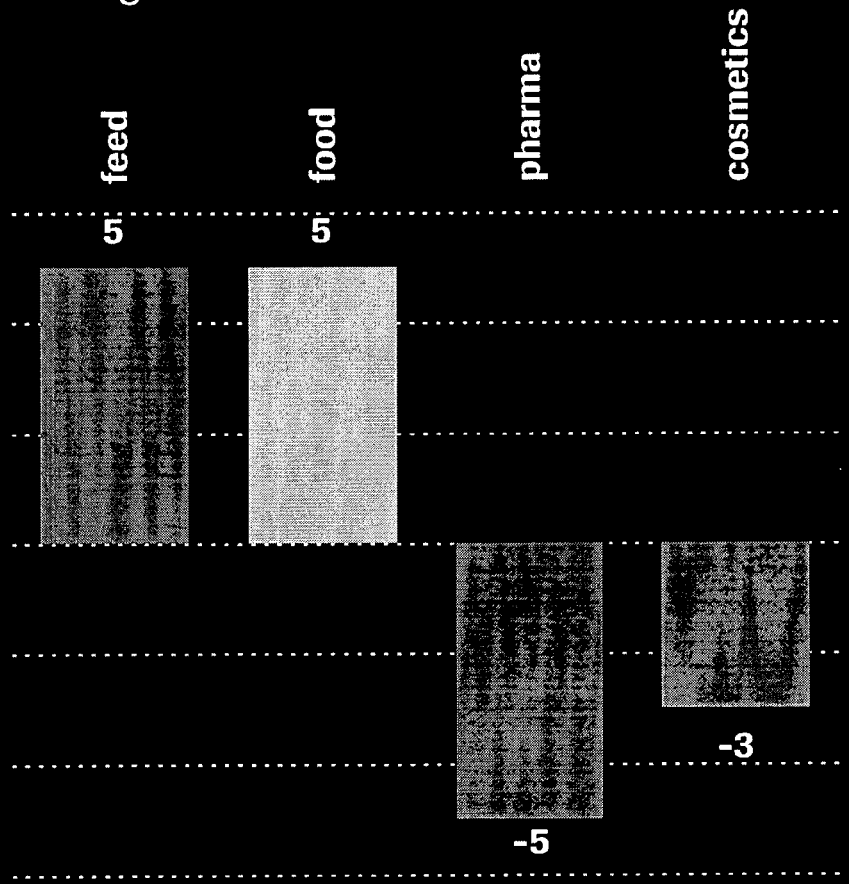
Sales by industry in H1 2001*

Good growth in human and animal nutrition

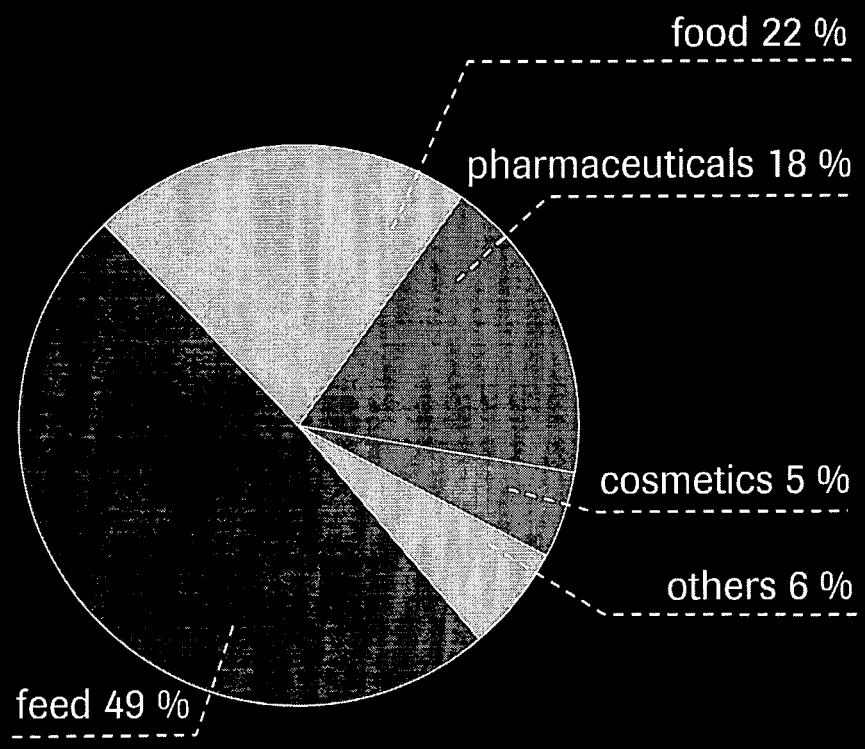
Roche

Vitamins

change vs. H1 2000 in %



total sales: CHF 1,819 million



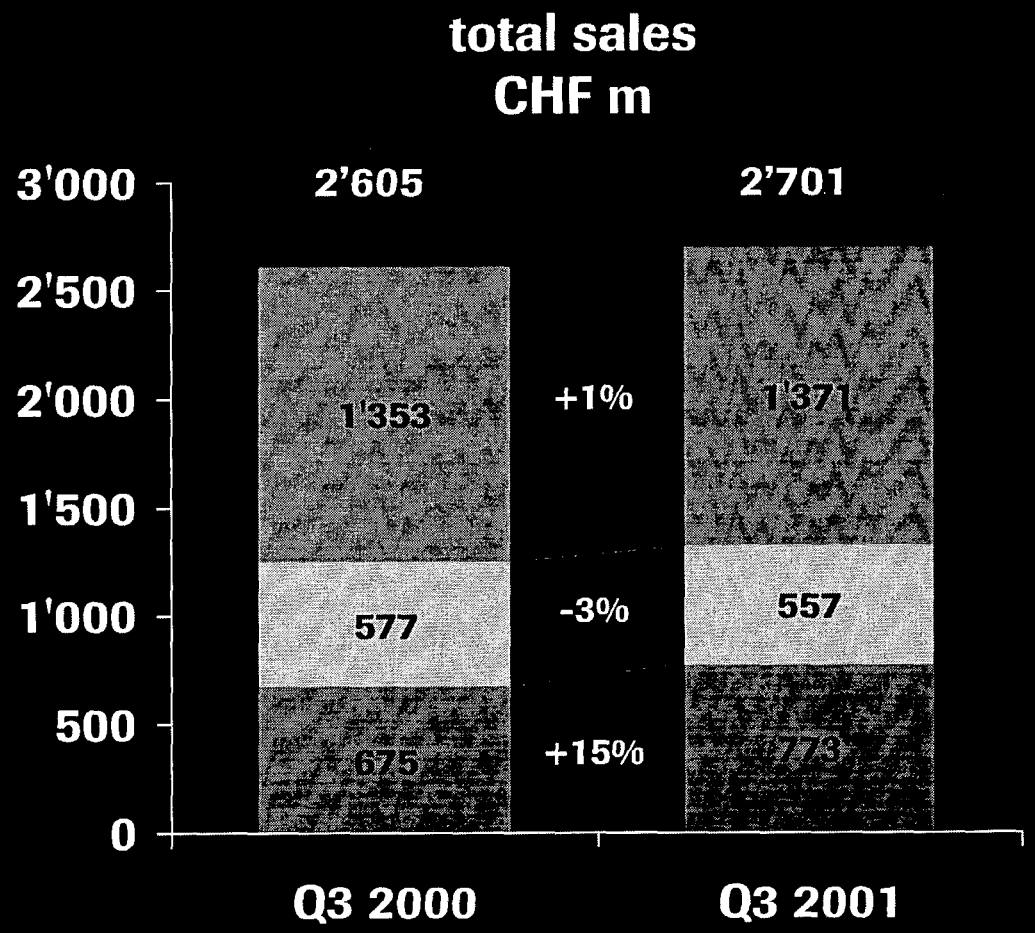
* excluding MFA sales in H1 2000

Sales at Q3 2001

Return to top line growth

Roche

Vitamins



4 % local currency growth

4 % CHF growth

vitamins

carotenoids

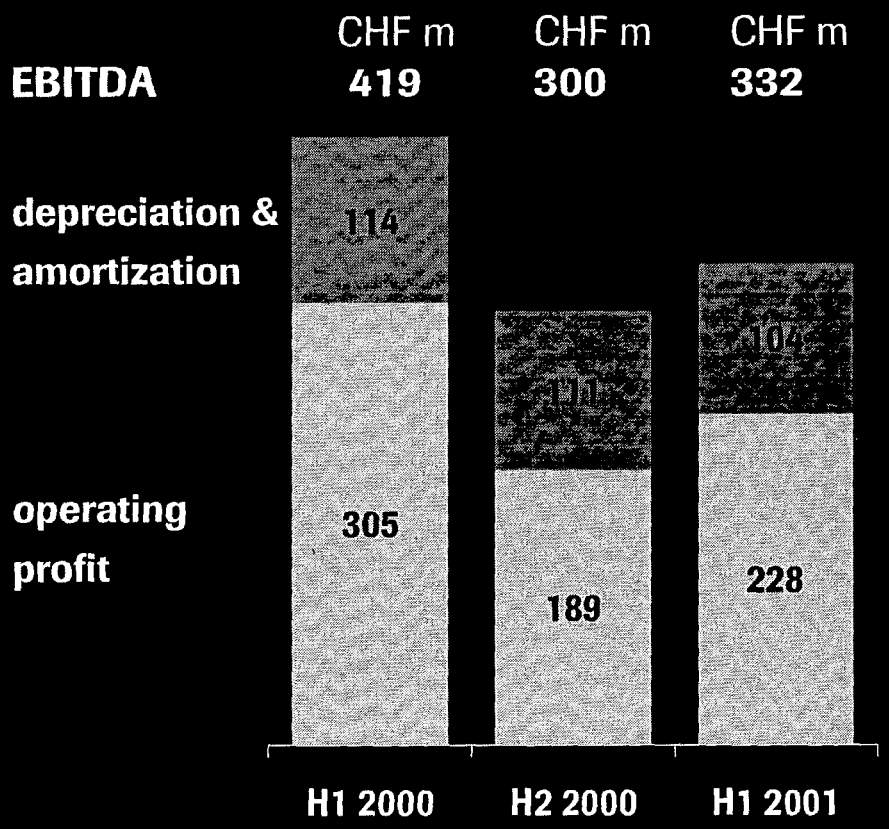
fine chemicals (excluding MFA)

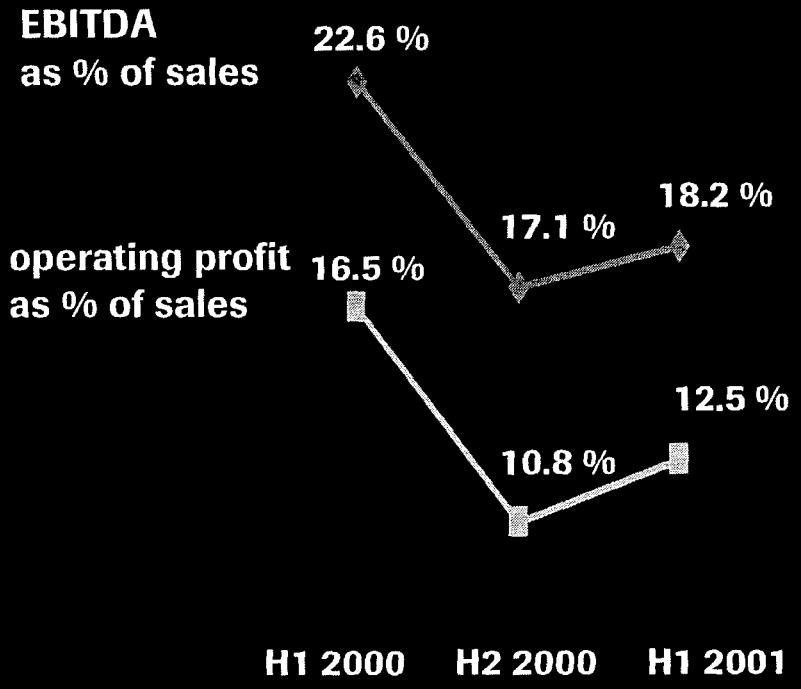
Profitability in H1 2001

Improving margins

Roche

Vitamins



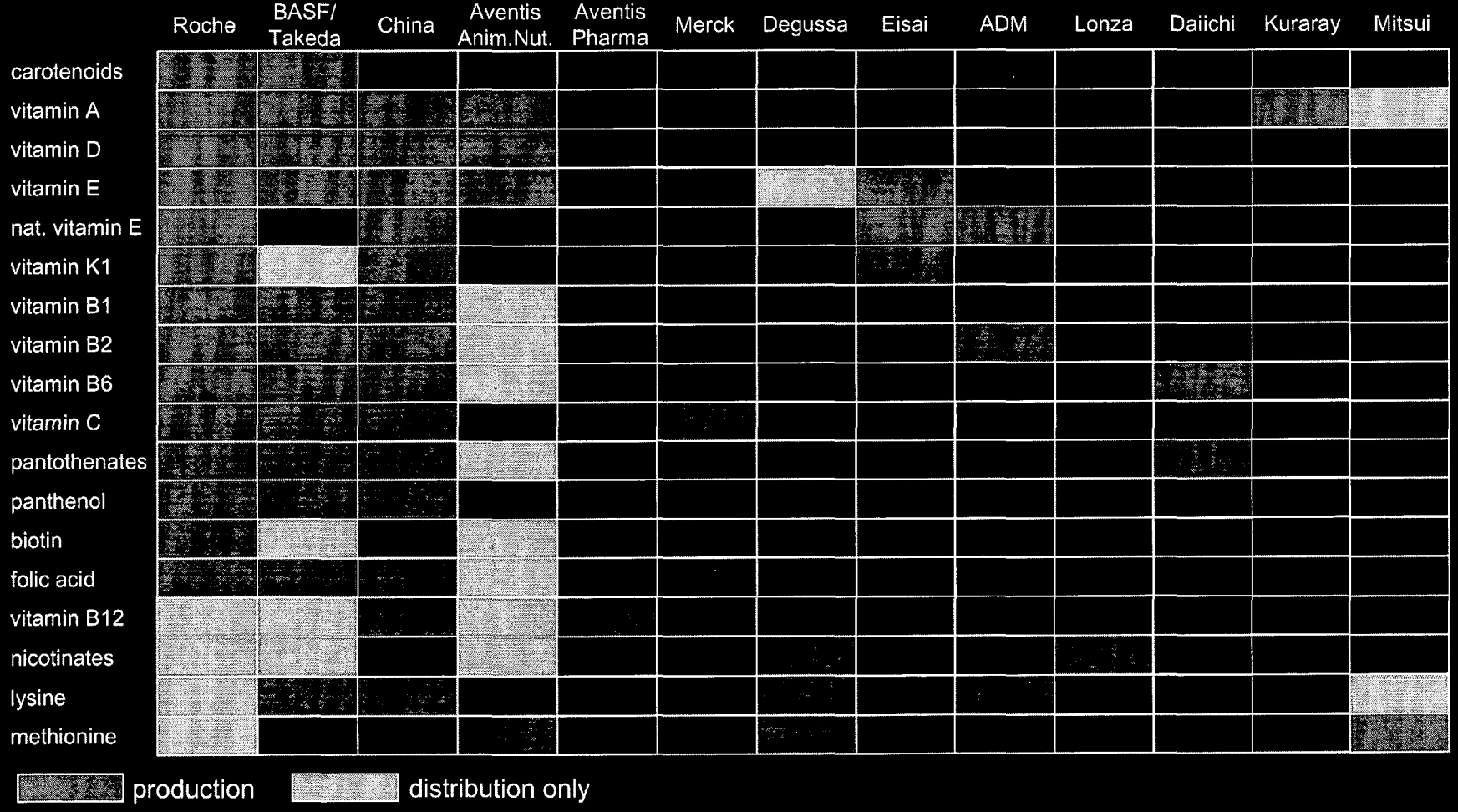


A changing business environment

Roche #1 with 34% market share

Roche

Vitamins



Trends in a CHF 11 billion market

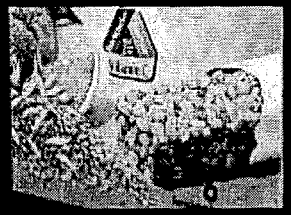
Expected market growth in the range of 3-5%

Roche

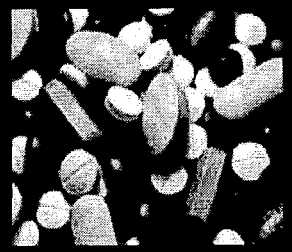
Vitamins

continued reliance on core vitamins; increased demand for natural health and performance enhancers:





changing life-styles trigger demand for health beneficials:



greater health awareness offers wide range of opportunities



high demand for innovative product concepts:

The way forward

Strengthening a leading position

Roche

Vitamins

goals

outperform market growth!

strategy for growth

strategy for growth and profitability

increase margins and remain the industry benchmark!

strategy for profitability

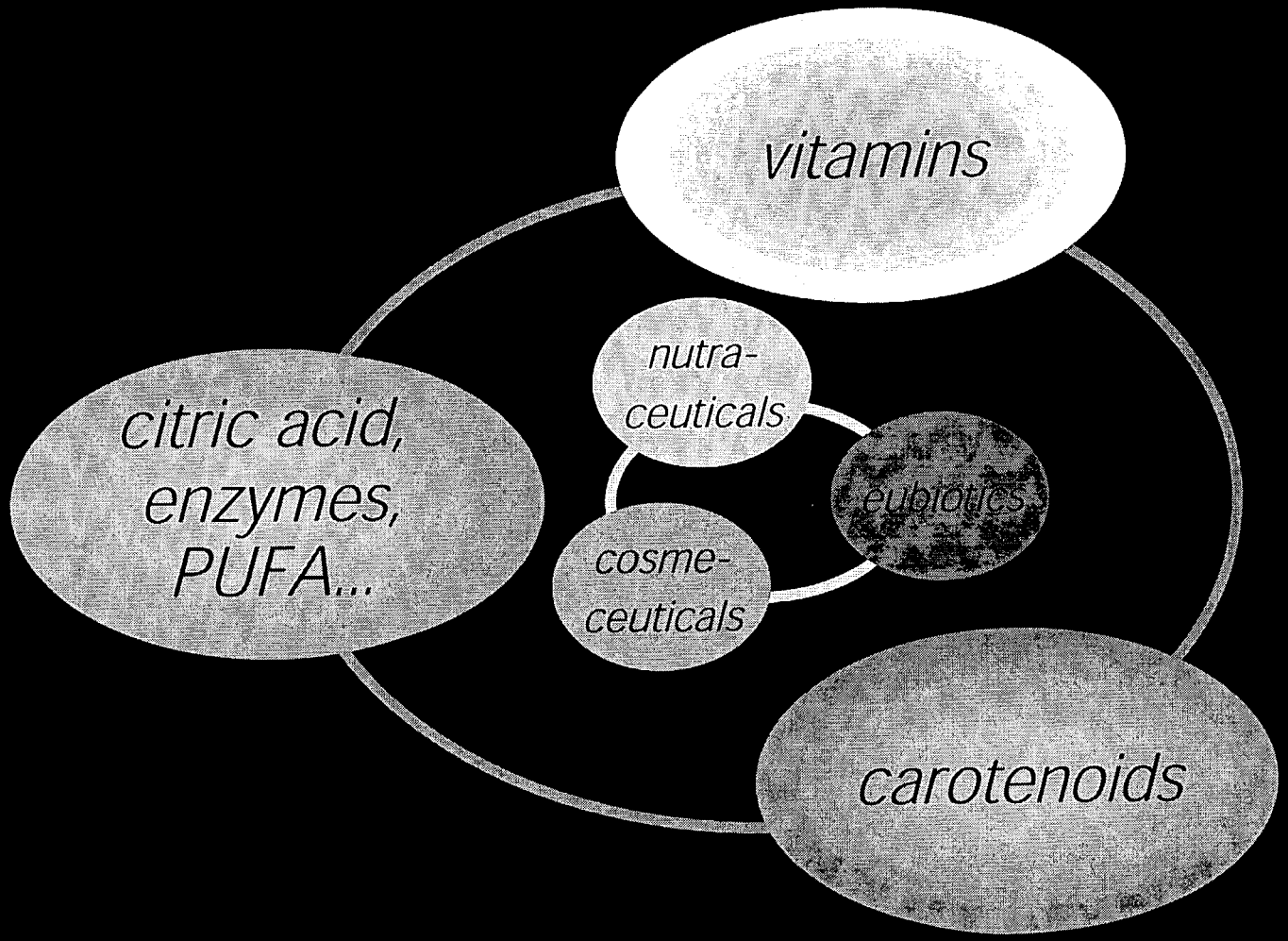
goals

Expand the core

Growth

Roche

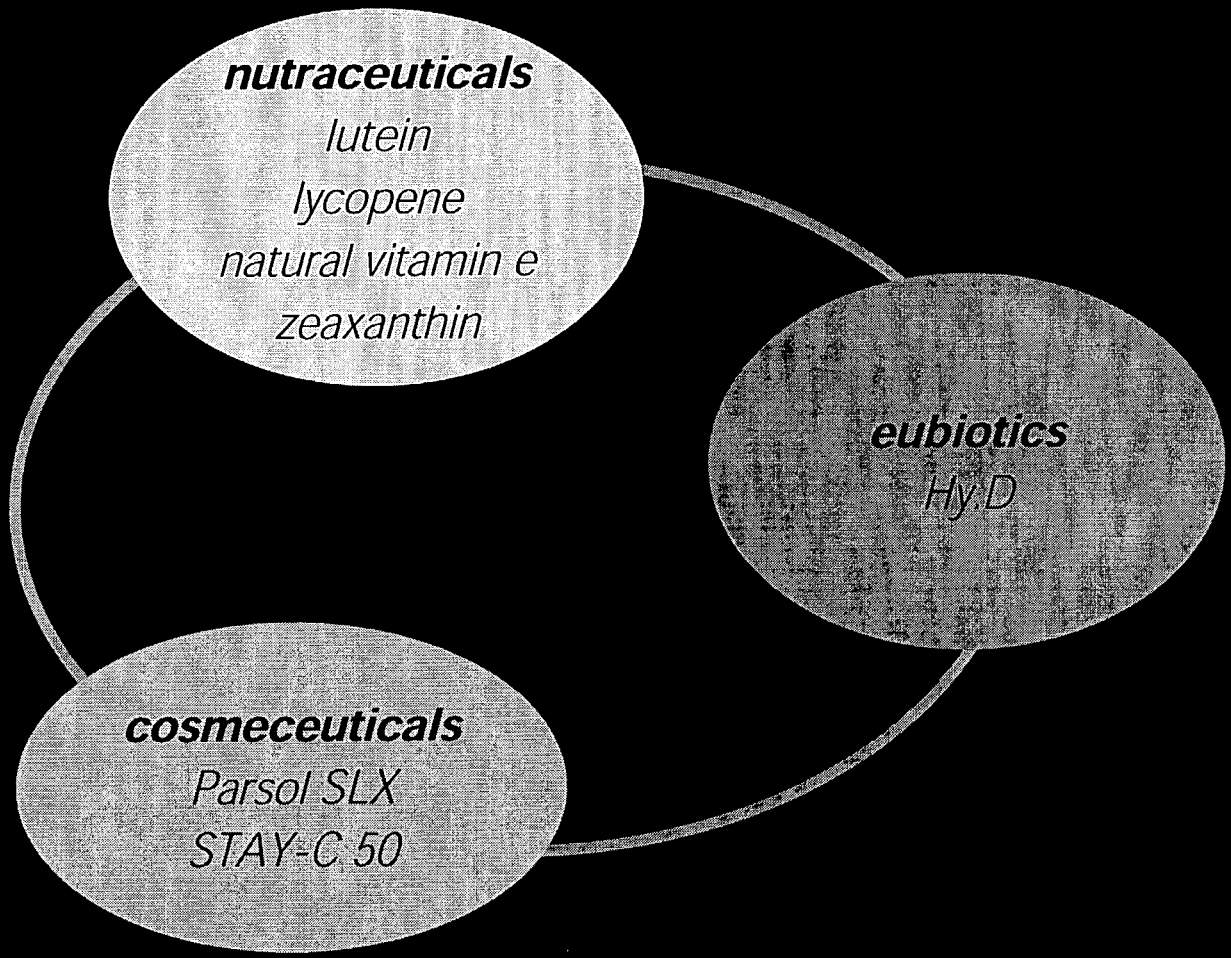
Vitamins



Roche

Vitamins

Growth



Profitability

Key drivers to achieve profitability targets

Roche

Vitamins

quantum leaps in process improvements

- Half of R&D resources committed to production innovation
  ⇨ 50 % cost reduction target for key vitamins in next 10 years

new plants for low cost production

- Invest only to pursue lowest cost position
  ⇨ key projects: vitamins E and C

operational excellence in all business processes

- Reduce production costs
  ⇨ plan 500
- Reduce operating costs
  ⇨ cost saving program in Europe and USA

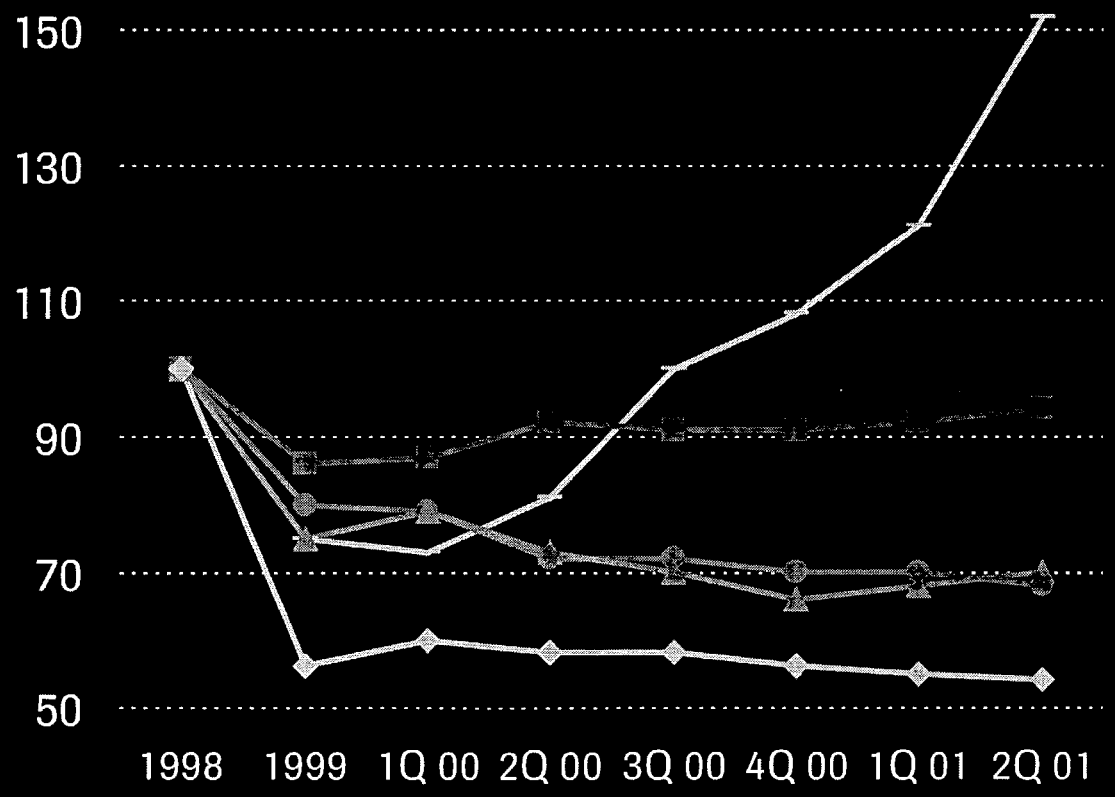
Profitability

Stabilisation of major vitamin prices

Roche

Vitamins

*price development index 1998-2001**



products represent
35 % of divisional sales
70 % of vitamins sales

* at constant USD/Euro

Vitamins and Fine Chemicals Division

Summary

Roche

Vitamins

- Prices remaining stable
- Efficiency gains and a rigorous focus on costs are off-setting pressure on profitability
- The way forward: growth and profitability
  ⇨ strengthening our #1 position
- Outlook 2001
  ⇨ continued single-digit sales growth

Roche

Diagnostics Division at Q3 2001

Performance

Roche

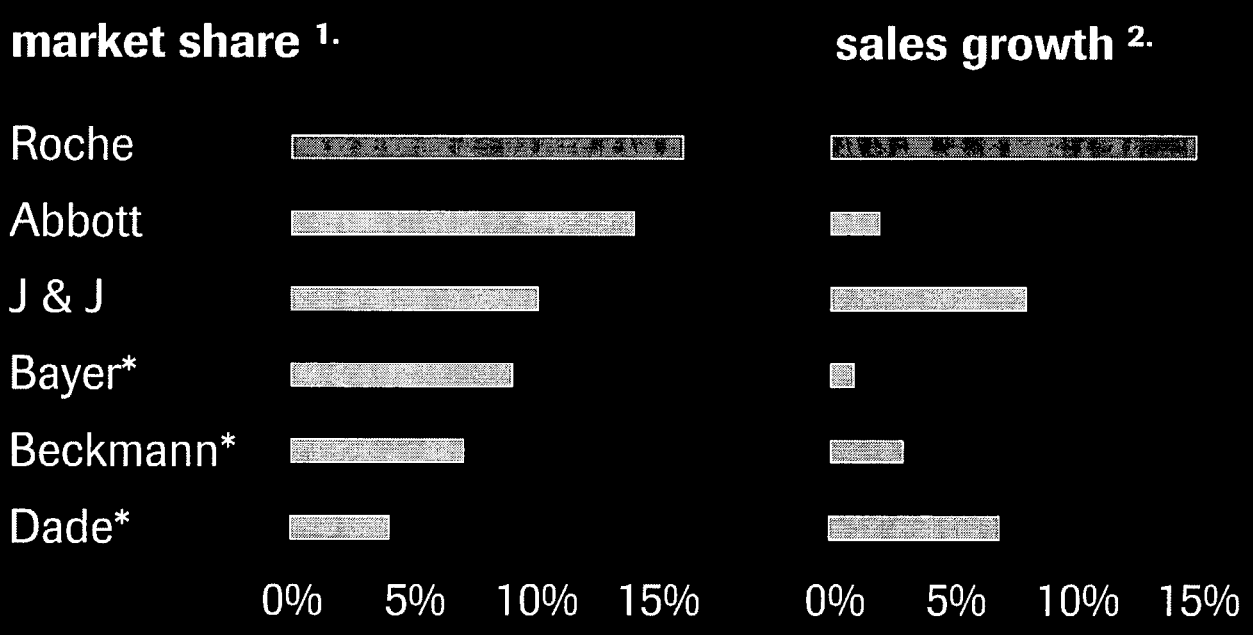
Diagnostics

Diagnostics sales in H1 2001

Increasing global IVD market leadership

Roche

Diagnostics



Company reports Q2/2001 and Q1/2001(*), Roche Analysis, Boston Biomedical Consultants

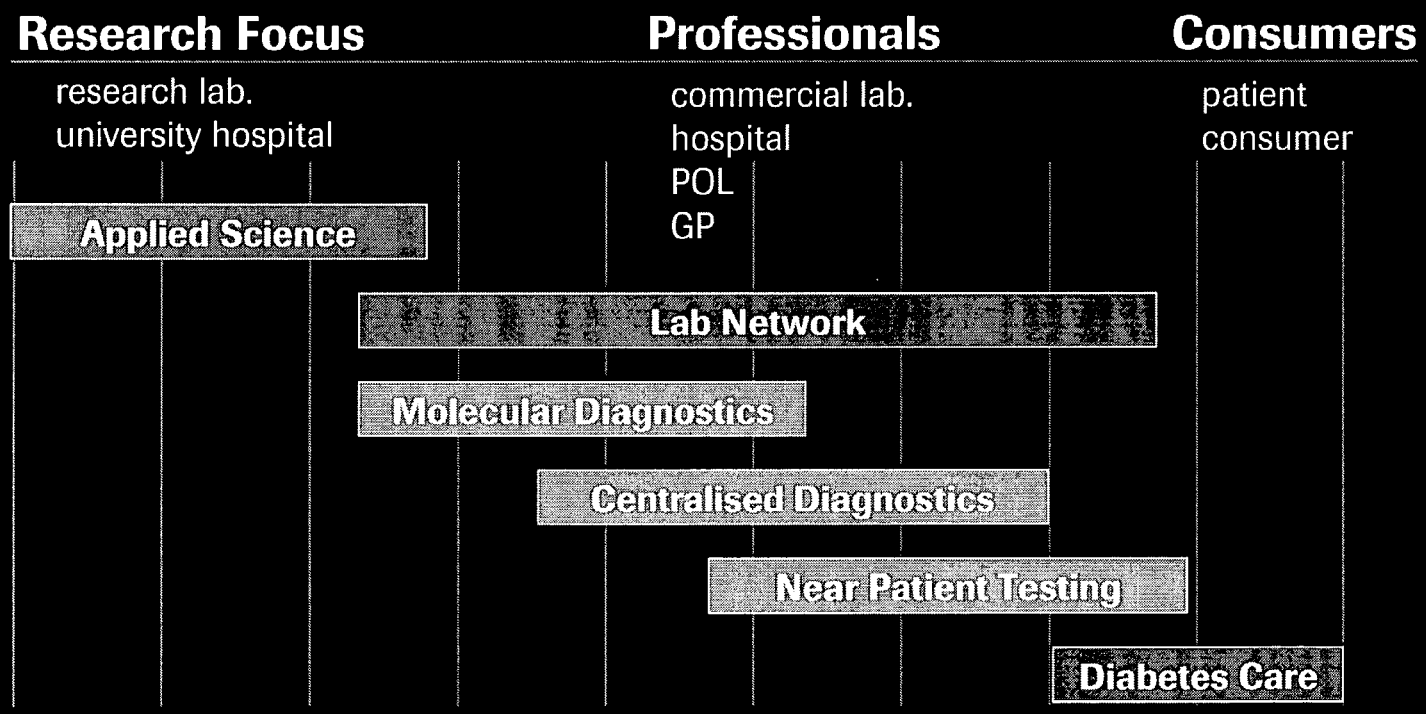
1. Excludes Applied Science
2. In local currencies

Roche Diagnostics

New organisation enhances customer focus

Roche

Diagnostics



Diagnostics sales in H1 2001

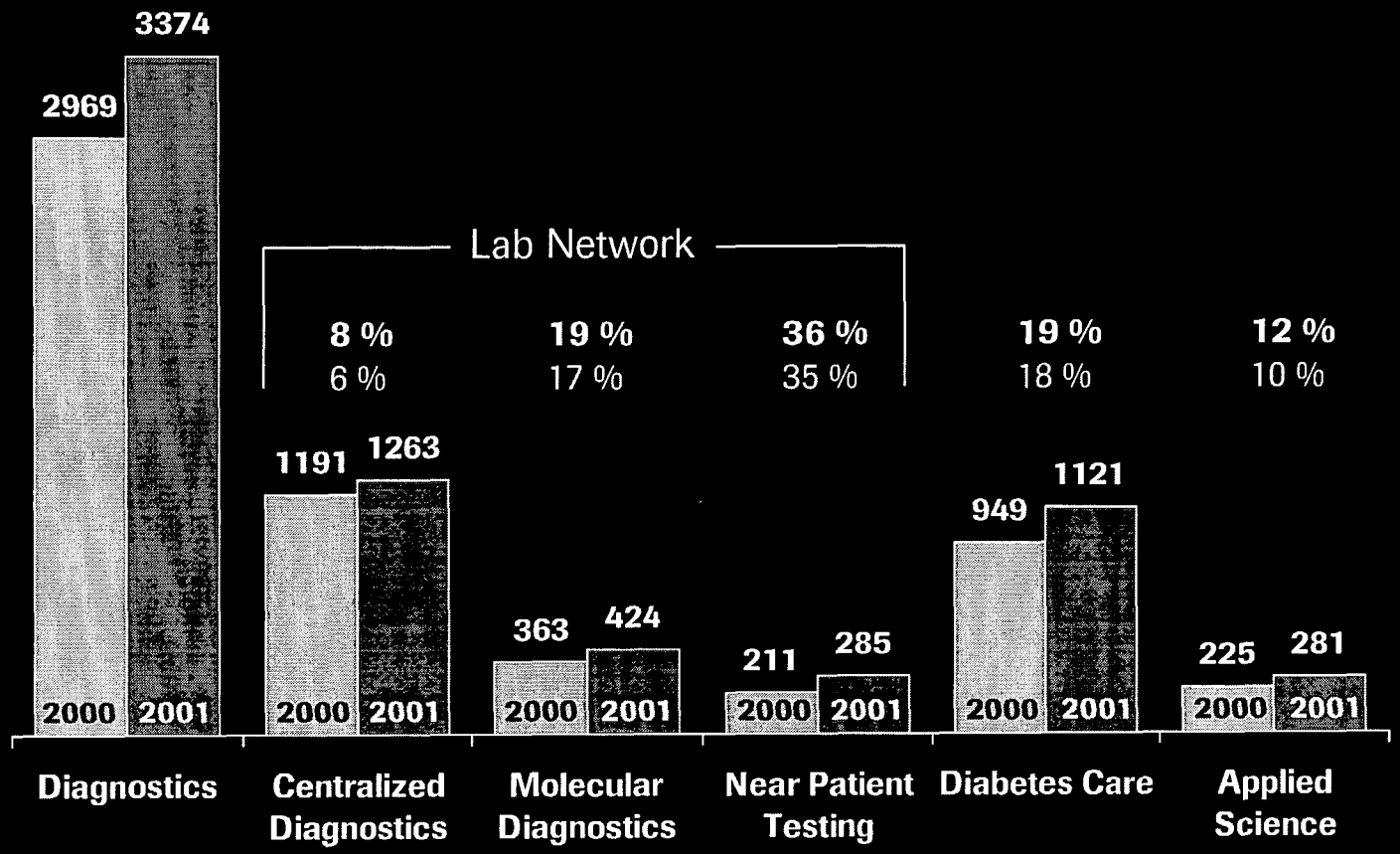
Double-digit growth in high margin businesses

Roche

Diagnostics

CHF m

15 % local currency growth
14 % CHF growth



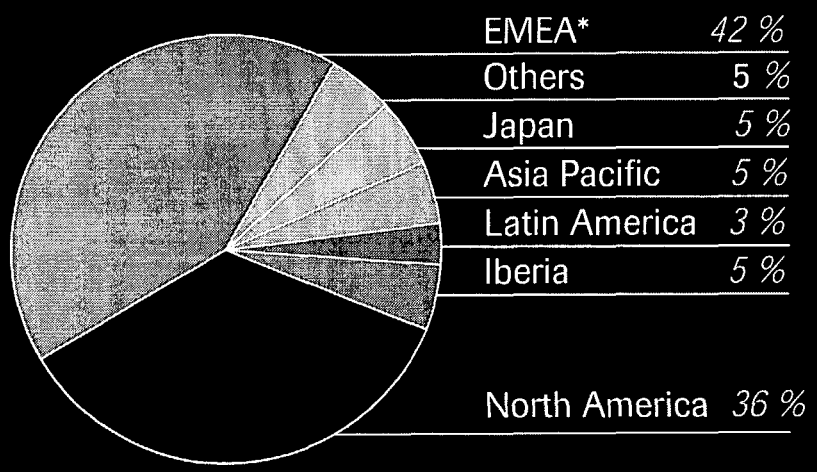
Diagnostics sales in H1 2001

Sales by region/market

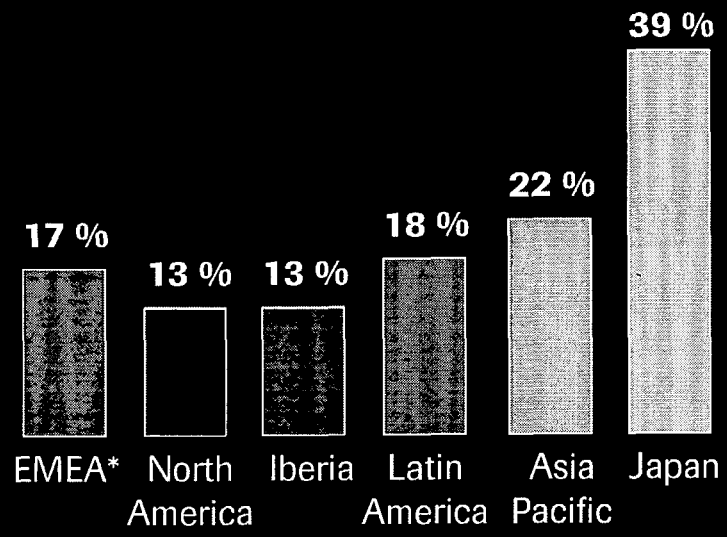
Roche

Diagnostics

CHF 3'374 m



local sales growth



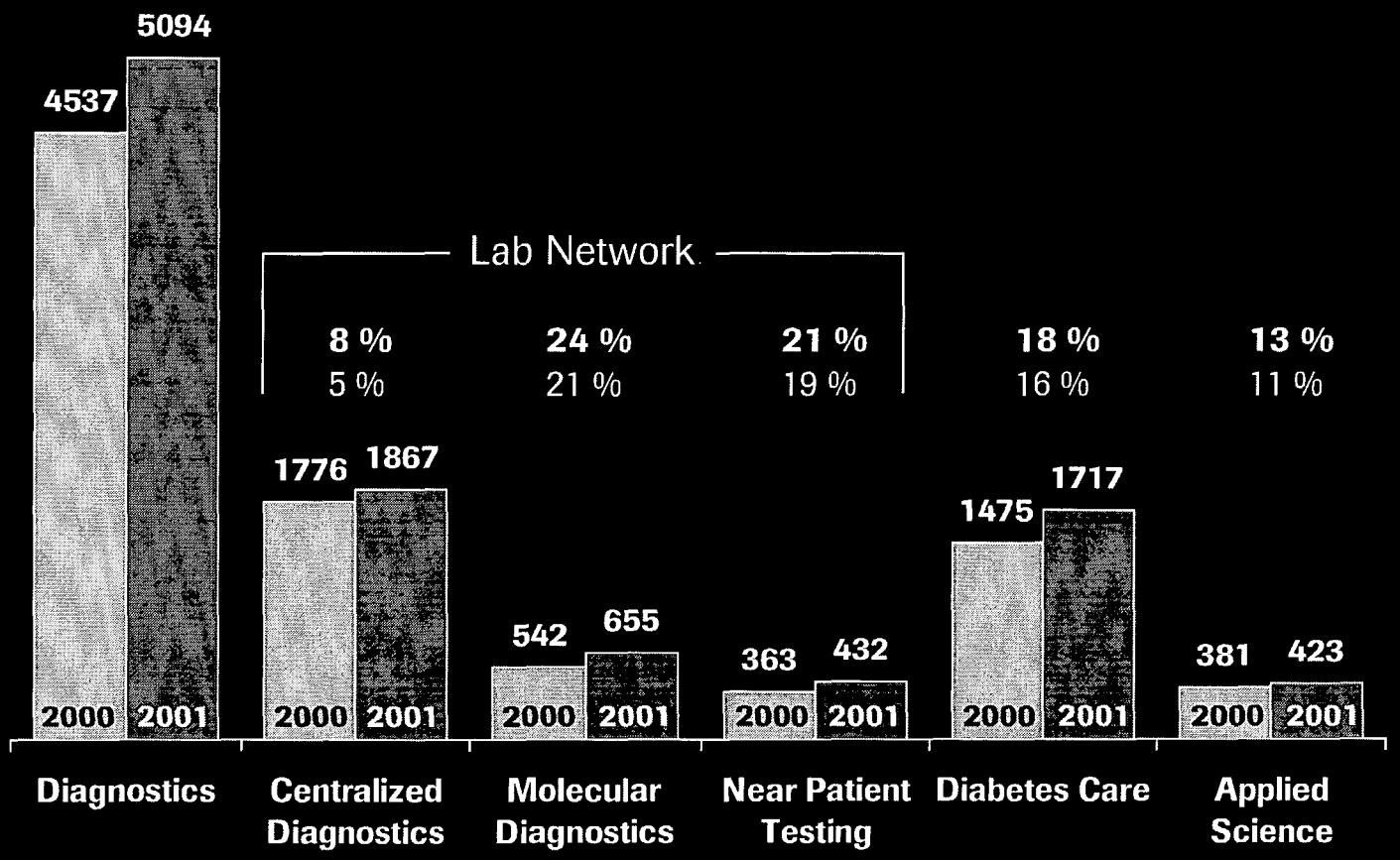
* Europe and Middle East and Africa

Diagnostics sales at Q3 2001

Double-digit growth in high margin businesses

Roche

Diagnostics

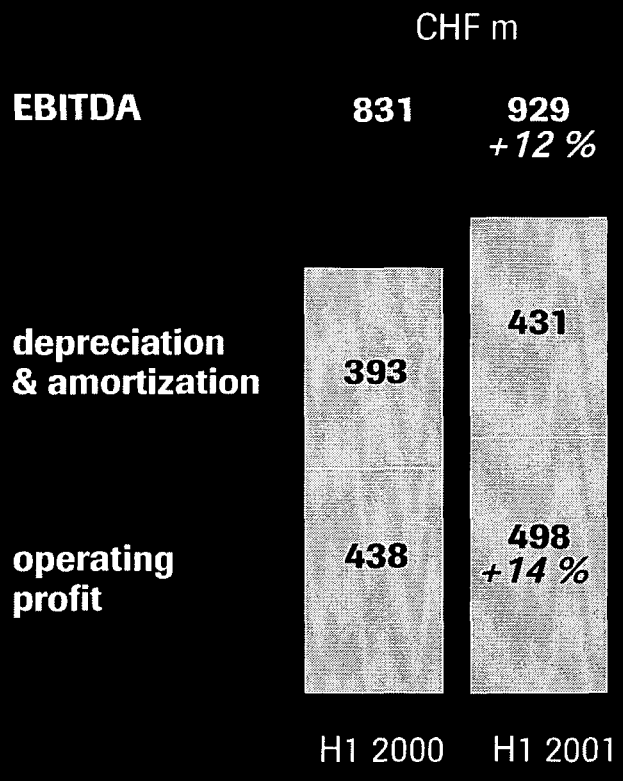


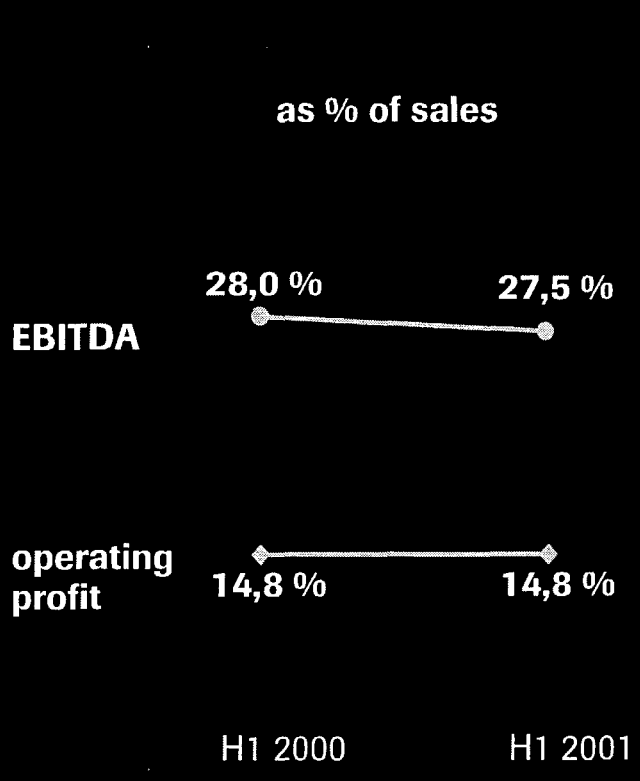
Profit development

Maintaining a high level of profitability

Roche

Diagnostics





Strategy

Roche

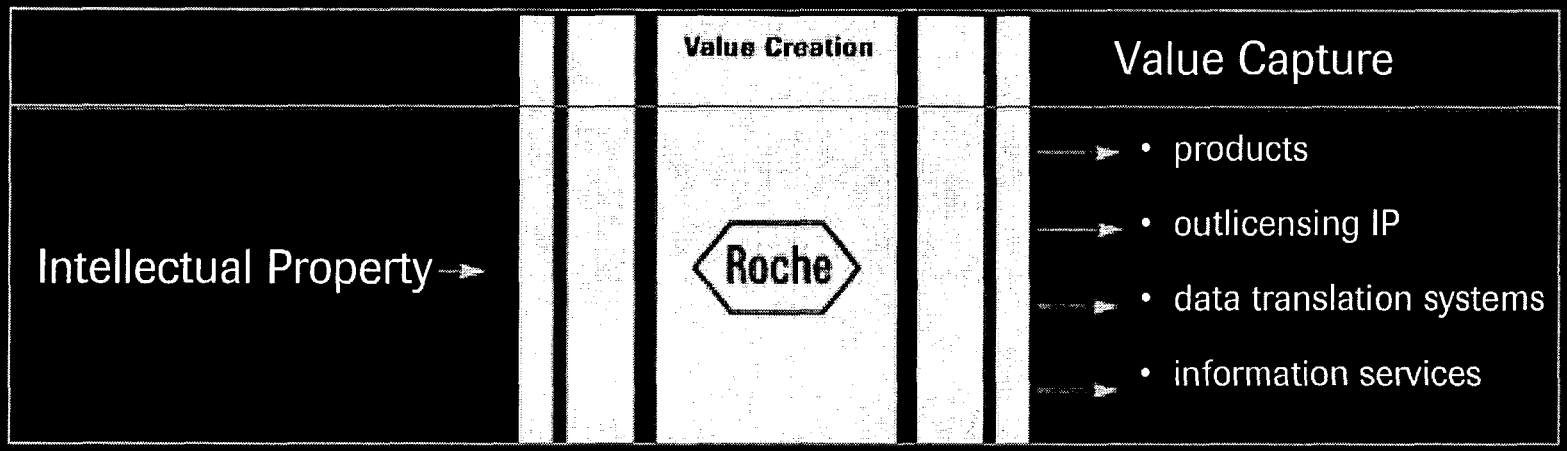
Diagnostics

Our strategy
Capturing future value

Roche

Diagnostics

Roche Diagnostics future business model

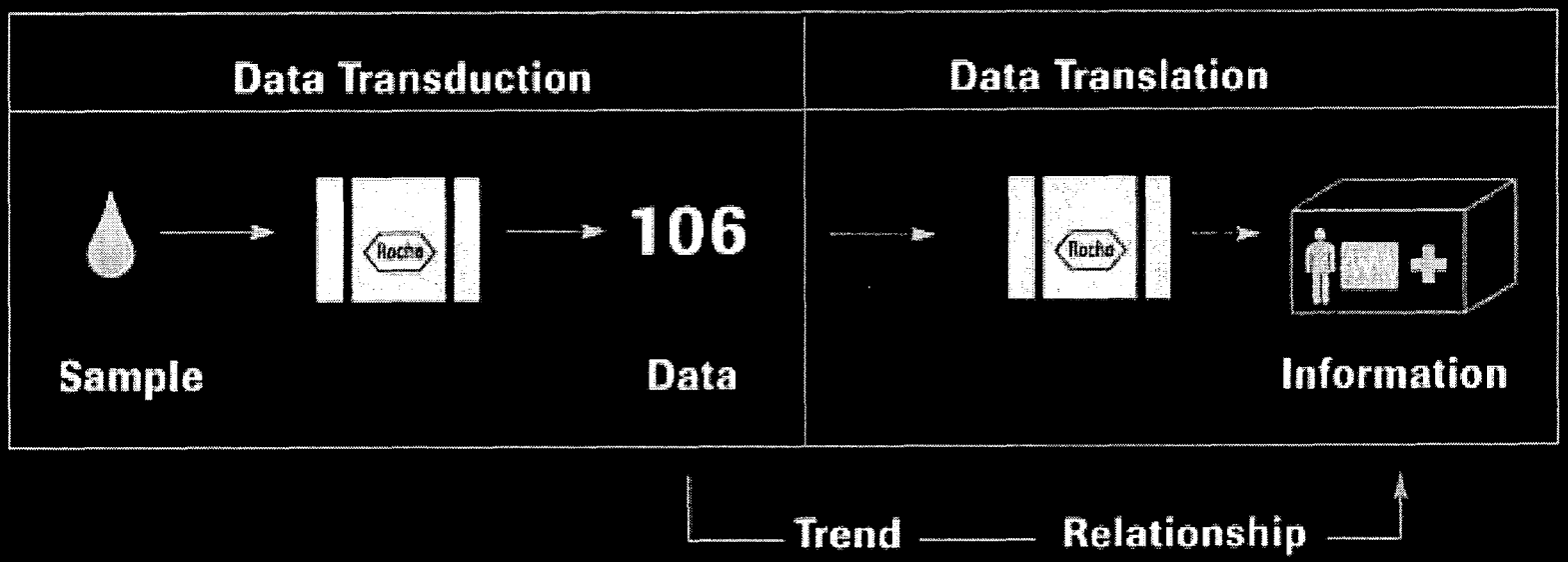


Actionable health information

Supplementing data transduction systems with data translation systems

Roche

Diagnostics

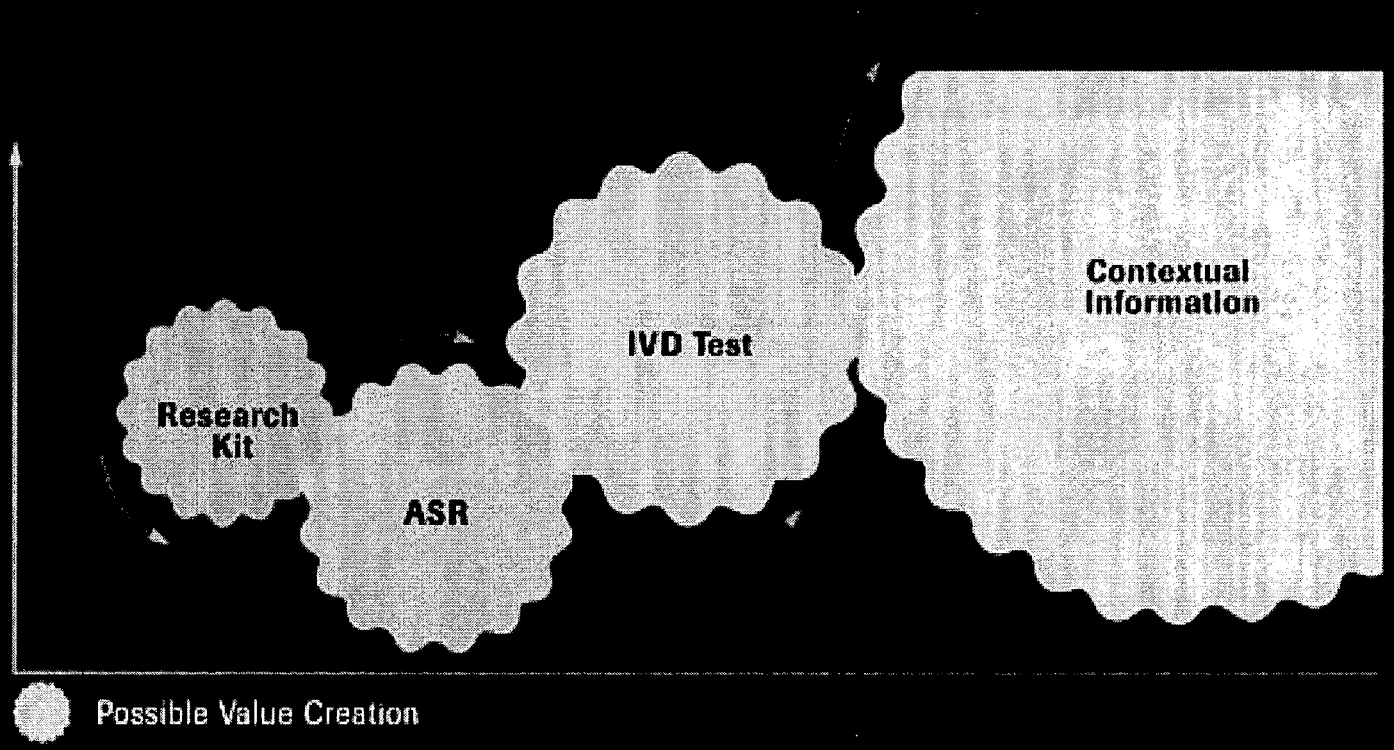


Actionable health information

Driving value creation

Roche

Diagnostics



ASR = analyte specific reagent
IVD = in vitro diagnostics

Business Area objectives
Market and segment leadership

Roche

Diagnostics

Applied Science	Pioneer platforms for genomics/proteomics research
Lab Network	Drive convergence in professional labs through platform harmonization, reagent standardization and IT connectivity
Molecular Diagnostics	Expand business beyond virology to clinically novel parameters with premium value
Centralized Diagnostics	Become supplier of choice for integrated solutions
Near Patient Testing	Realise the promise of decentralized testing
Diabetes Care	Be the leading provider of diabetes care technology, products and services

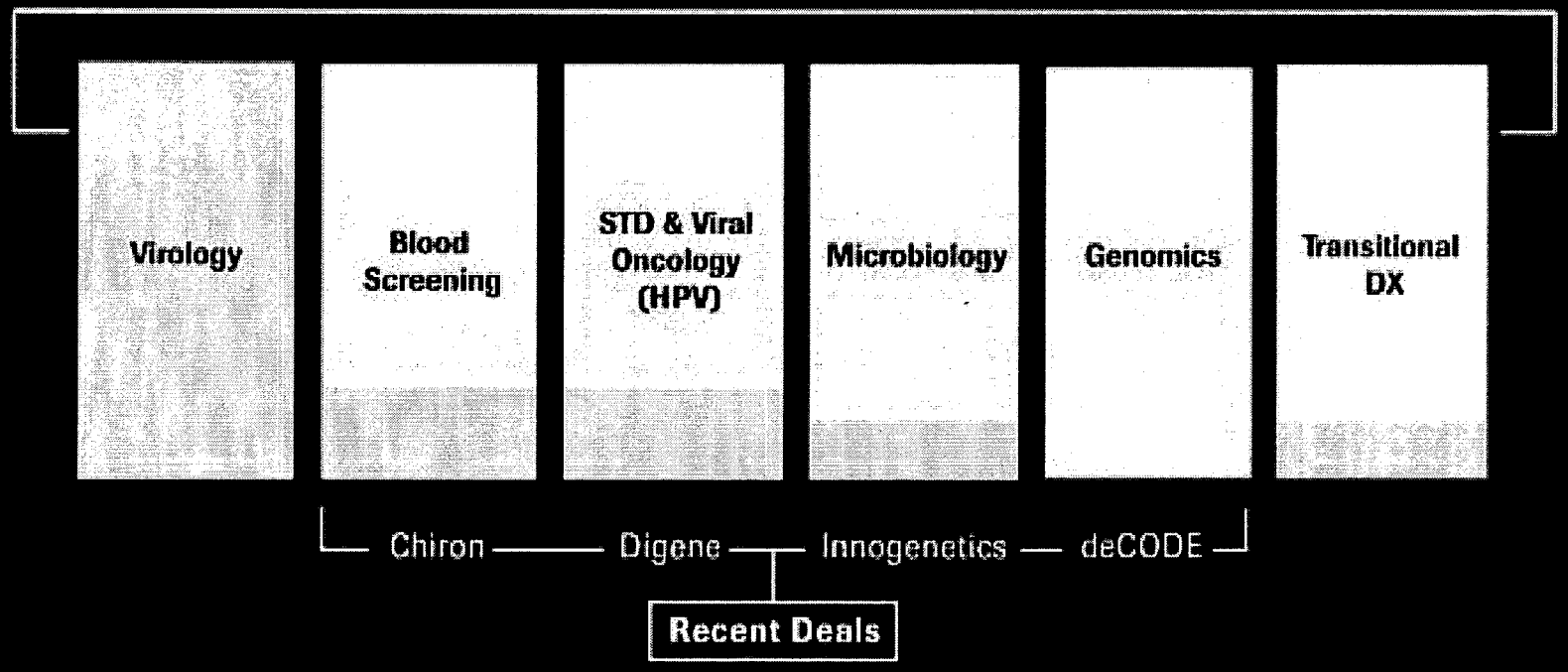
Molecular Diagnostics

Building a portfolio of unique PCR businesses

Roche

Diagnostics

Molecular Diagnostics portfolio



STD = sexually-transmitted diseases
HPV = human papilloma virus

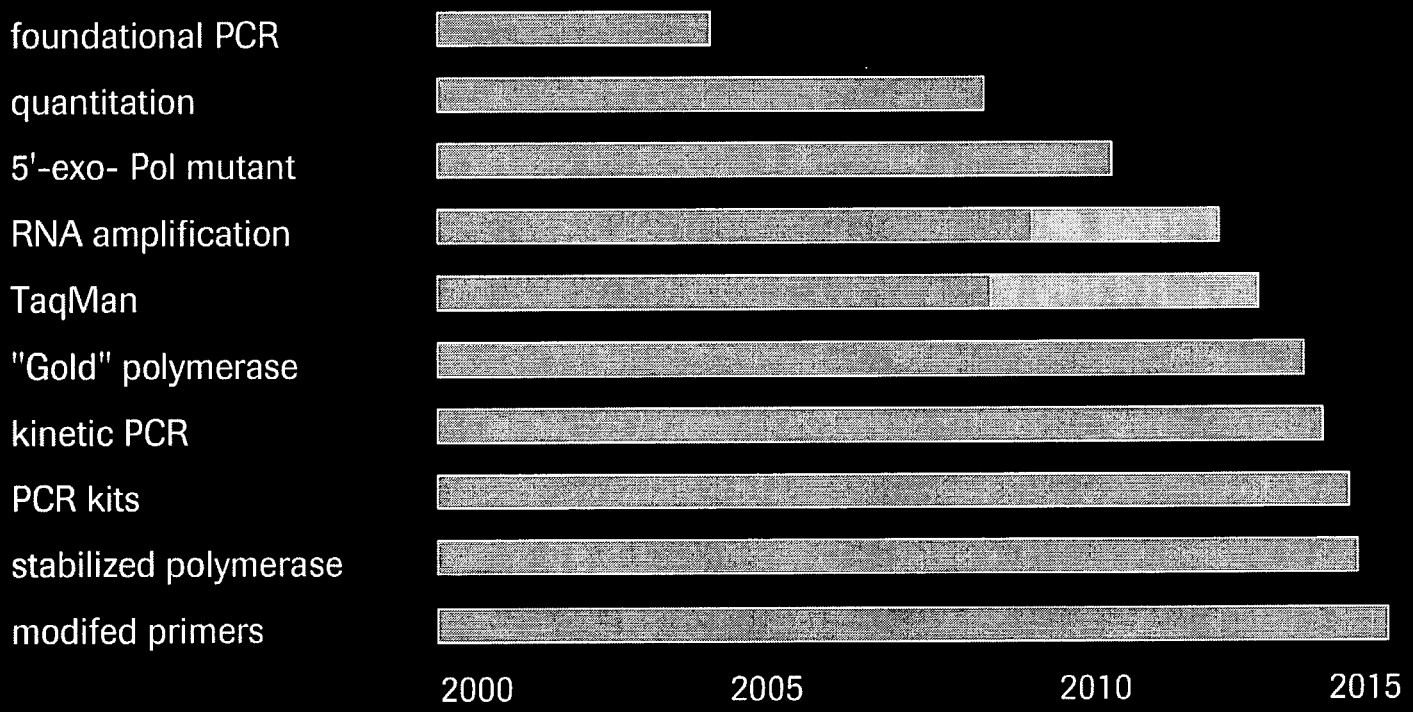
PCR intellectual property

Leading edge patents secure continued protection

Roche

Diagnostics

US patents for key technologies

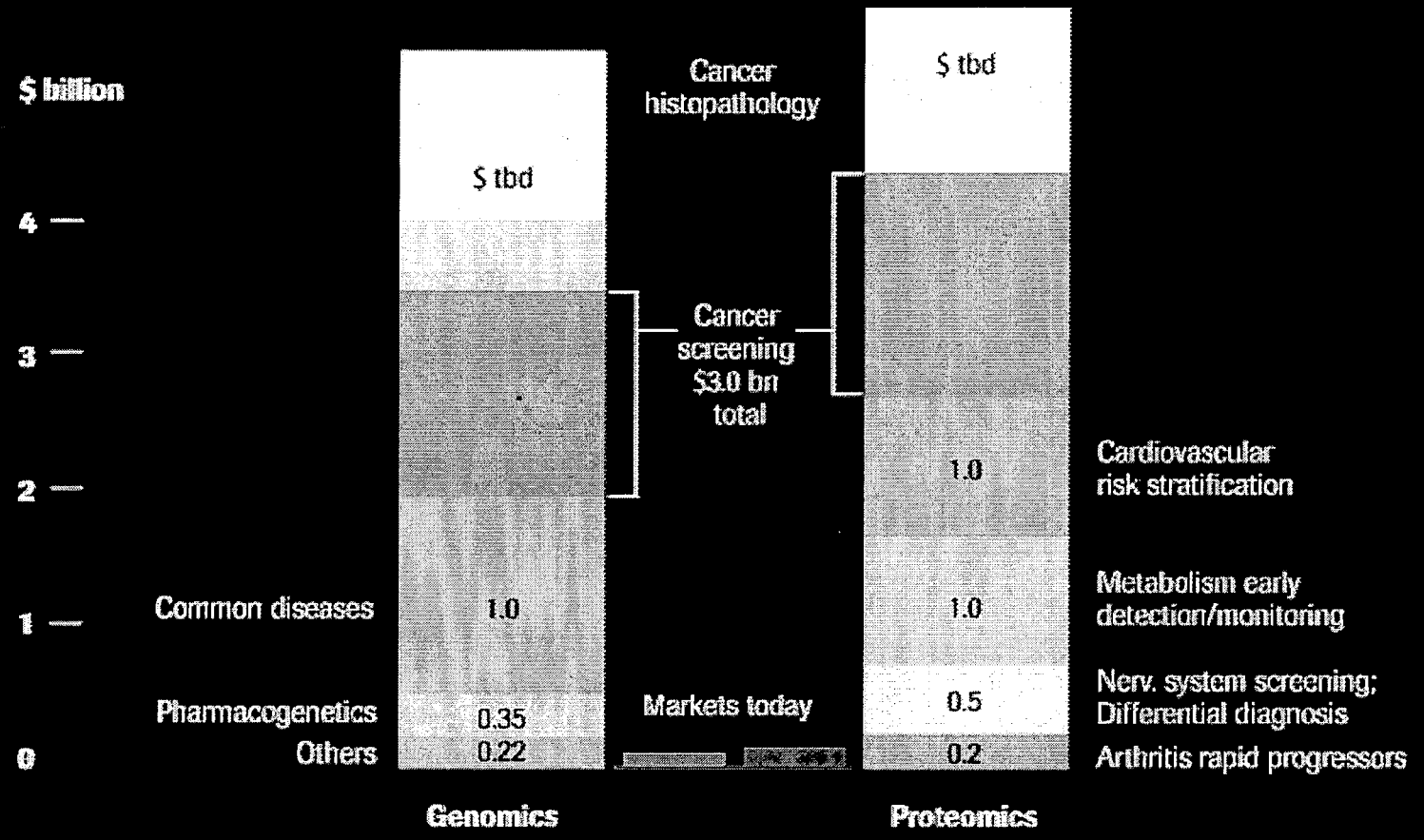


Genomics and proteomics markets in 2010

Explosion of revenues expected

Roche

Diagnostics



Subsegments: monogenetic diseases $100m
paternity $50m
forensic $45m
HLA $35m

Source: Roche estimates

Innovation

Roche

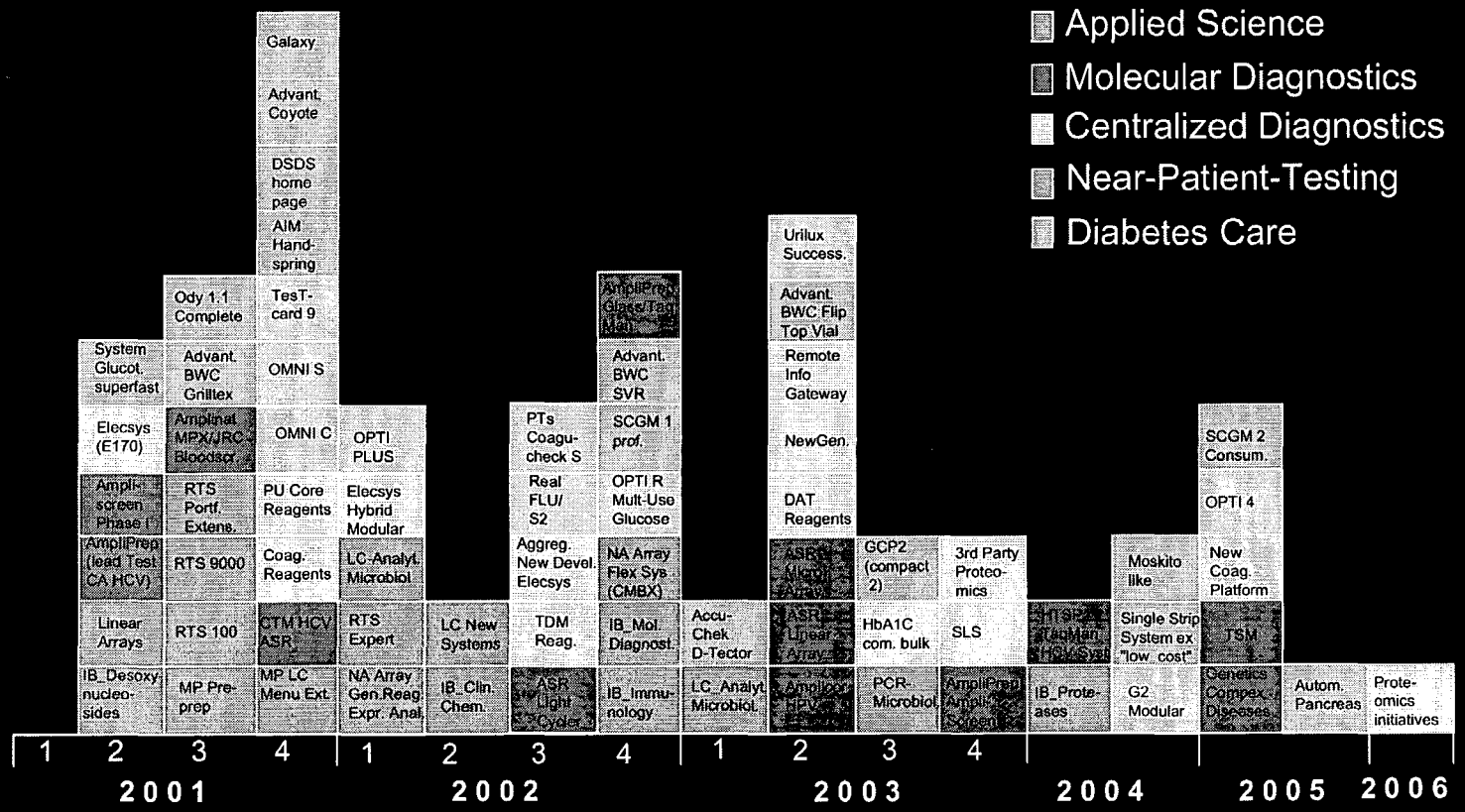
Diagnostics

Expected launches of major products

Strong pipeline for future growth

Roche

Diagnostics



Launches planned for 2001

On track so far

Roche

Diagnostics

launched	**Hitachi® MODULAR E 170**	Centralized Diagnostics
launched	**Cobas® Ampliprep®**	Molecular Diagnostics
launched	**Accu-Chek Inform®**	Diabetes Care
launched	**Accu-Chek Compact®**	Diabetes Care
launched	**Accu-Chek Active®**	Diabetes Care
on track	**RTS ProteoMaster® system**	Applied Science
on track	**OMNI® S, OMNI® C**	Near Patient Testing

PDA type diabetes monitoring device

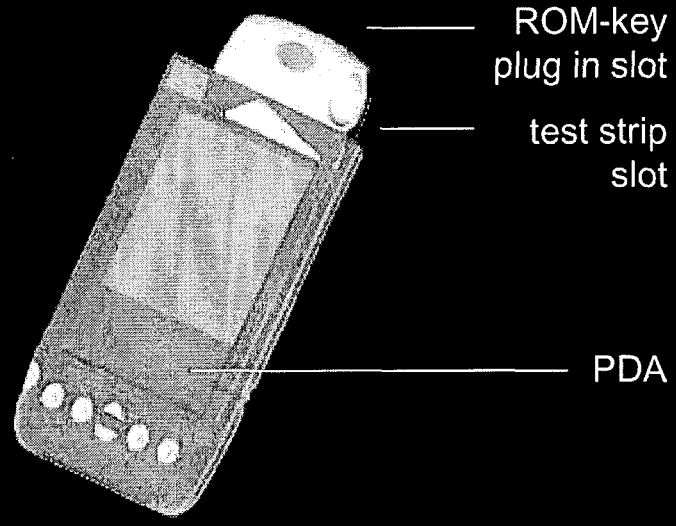
Allows direct consumer contact

Roche

Diagnostics

Features

- diabetes monitoring integrated into personal digital assistant (PDA) device
- open standard for any additional software solutions and tools
- opens up possibilities for wireless connection to new providers of value-adding services in the future (bi-directional)



Expected launch Q4 2001

Accu Chek-D-Tector

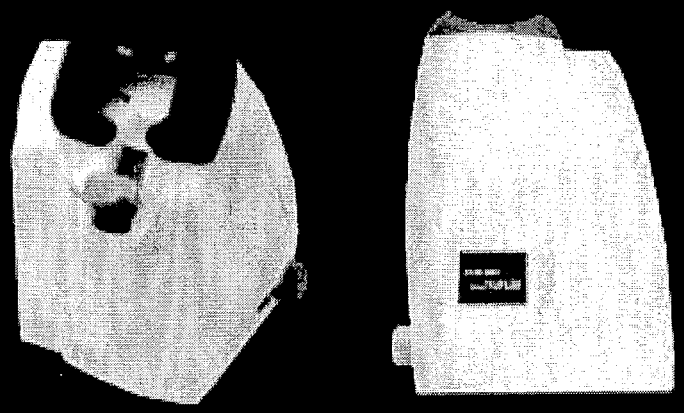
The only non-invasive diabetic screening technology

Roche

Diagnostics

Features

- non-invasive eye examination device to detect undiagnosed type 2 diabetes
- detection of fluorescent compounds (AGES) in the lens of the eye caused by elevated glucose levels
- short (15 seconds) and safe procedure
- positive response from optometrist and diabetologists



Expected launch Q4 2001

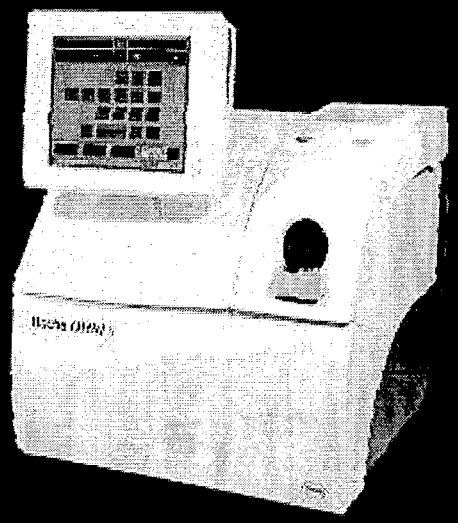
OMNI® S

High-throughput blood gas/electrolyte analyser

Roche Diagnostics

Features

- top of the line parameter panel
- powerful software
- modular analyzer configuration
- easy to use
- full connectivity



Target segments

- medium to large hospitals
  - laboratory
  - point of care

Expected launch Q4 2001

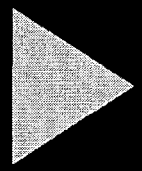
ProBNP test

Important marker for chronic heart failure

Roche

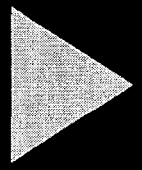
Diagnostics

ischemic heart disease
- stable/unstable angina pectoris
- myocardial infarction



markers of myocardial damage (necrosis)
- Troponin T ✓
- Myoglobin ✓
- CK-MB ✓

heart failure
- obvious chronic left-ventricular dysfunction and preclinical status of heart failure (diagnosis, monitoring)



markers of continuous intraventricular pressure (ventricular overload)
- ProBNP Q4 2001

Roche Diagnostics

Summary

Roche

Diagnostics

- Continued double-digit sales and profit growth in H1 2001
- Continued double-digit sales growth at Q3 2001
- IVD market leadership increased in all segments
- Organisation realigned
  - three Business Areas focused on five customer groups
- New product launches and roll-out's on track
- Strategic direction pursued through several new alliances
- Outlook for 2001
  - continued double-digit sales growth
  - strong sales growth in high margin Business Areas to drive operating margin improvement

Pharmaceuticals Division at Q3 2001

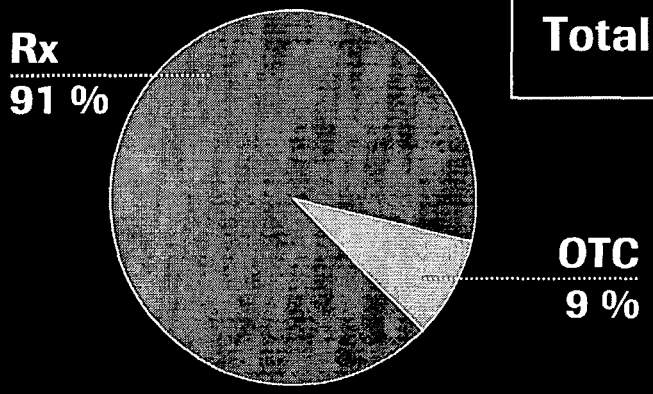
Pharmaceuticals sales in H1 2001

Stronger second quarter produces improving performance

Roche

Pharmaceuticals

	H1 2001 CHF m	H1 2000 CHF m	growth in local currencies
prescription medicines *	8,442	8,027	6 %
'over the counter' medicines	834	829	2 %
Total	9,276	8,856	5 %



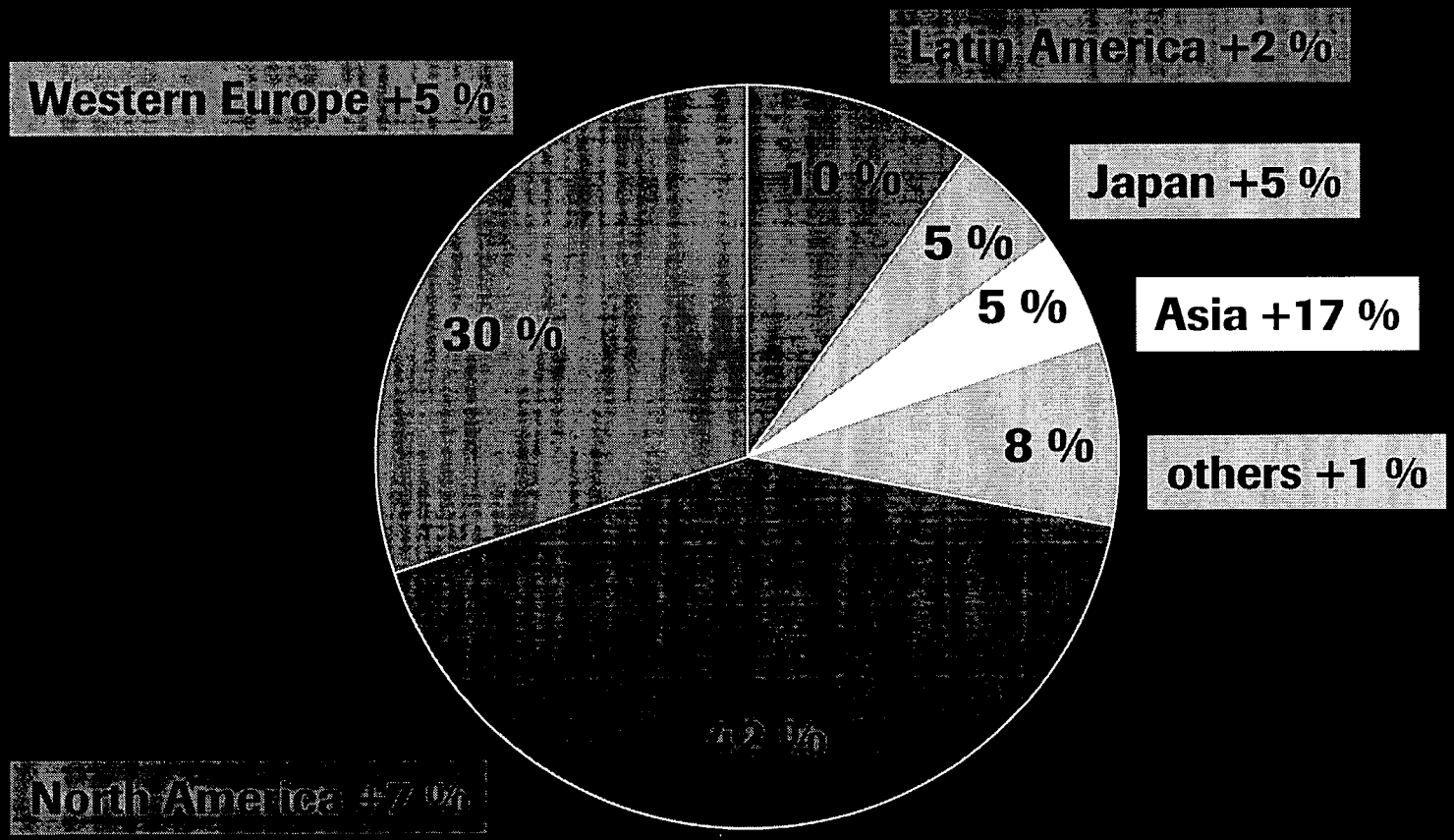
* Roche and Genentech combined

Prescription medicines sales by region* in H1 2001

North America returns to growth

Roche

Pharmaceuticals



* Roche and Genentech combined

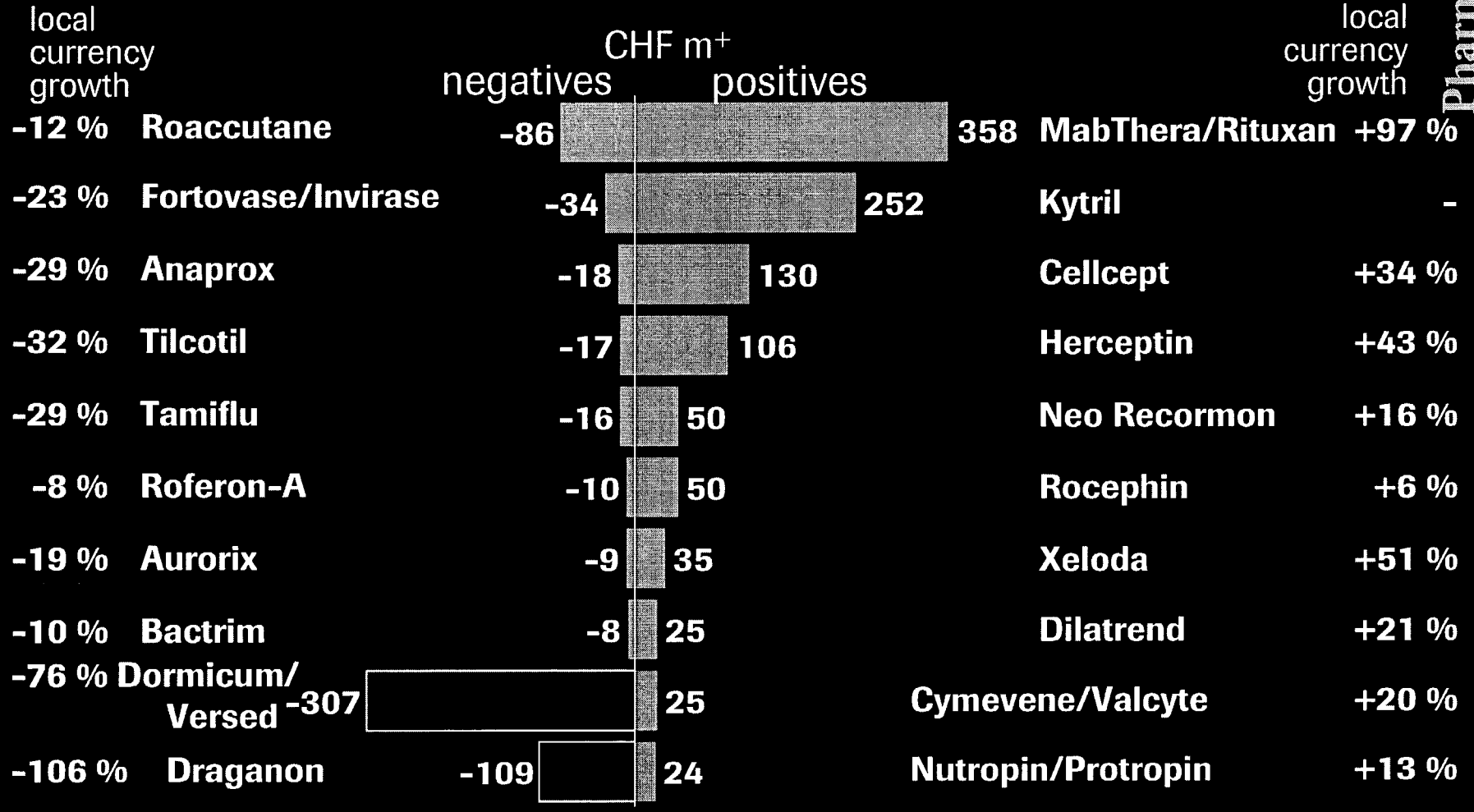
all growth rates in local currencies

Prescription medicines sales* in H1 2001

Positives and negatives

Roche

Pharmaceuticals



* Roche and Genentech combined

\+ at constant exchange rates

Prescription medicines sales* in H1 2001

Five products with annual sales >CHF 1 billion

Roche

Pharmaceuticals

Rocephin	895	6 %	6 %
Mabthera/Rituxan	742	101 %	97 %
Roaccutane	614	-11 %	-12 %
Xenical	521	3 %	4 %
CellCept	514	35 %	34 %
Herceptin	356	45 %	43 %
NeoRecormon	354	12 %	16 %
Kytril	252	-	-
Viracept	221	3 %	5 %
Nutropin/Protropin	207	17 %	13 %
Neupogen	156	4 %	5 %
Pulmozyme	153	7 %	6 %
Furtulon	145	-7 %	2 %
Lexotan	139	-5 %	-3 %
Cymevene	138	14 %	12 %
Dilatrend	137	17 %	21 %
Rocaltrol	133	-4 %	-2 %
Activase	123	-27 %	-29 %
Madopar	121	0 %	3 %
Roferon-A	117	-10%	-8 %

* Roche and Genentech combined

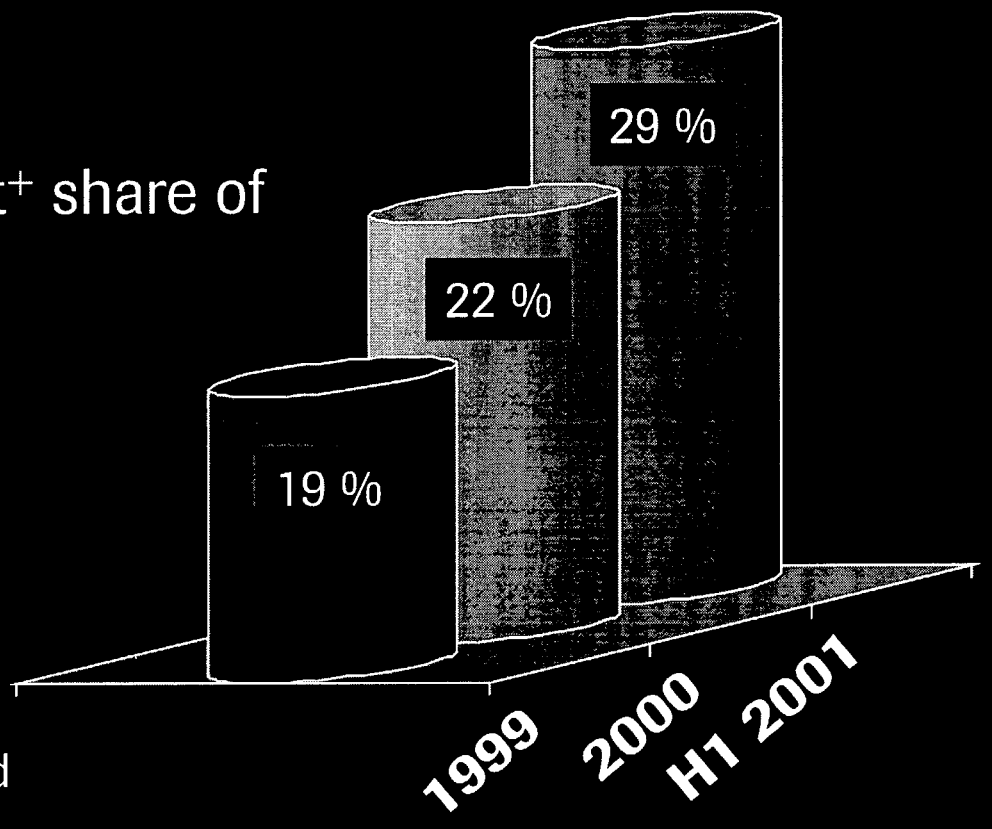
Prescription medicines sales* in H1 2001

Growing importance of new products+

Roche

Pharmaceuticals

new product+ share of total sales



* Roche and Genentech combined

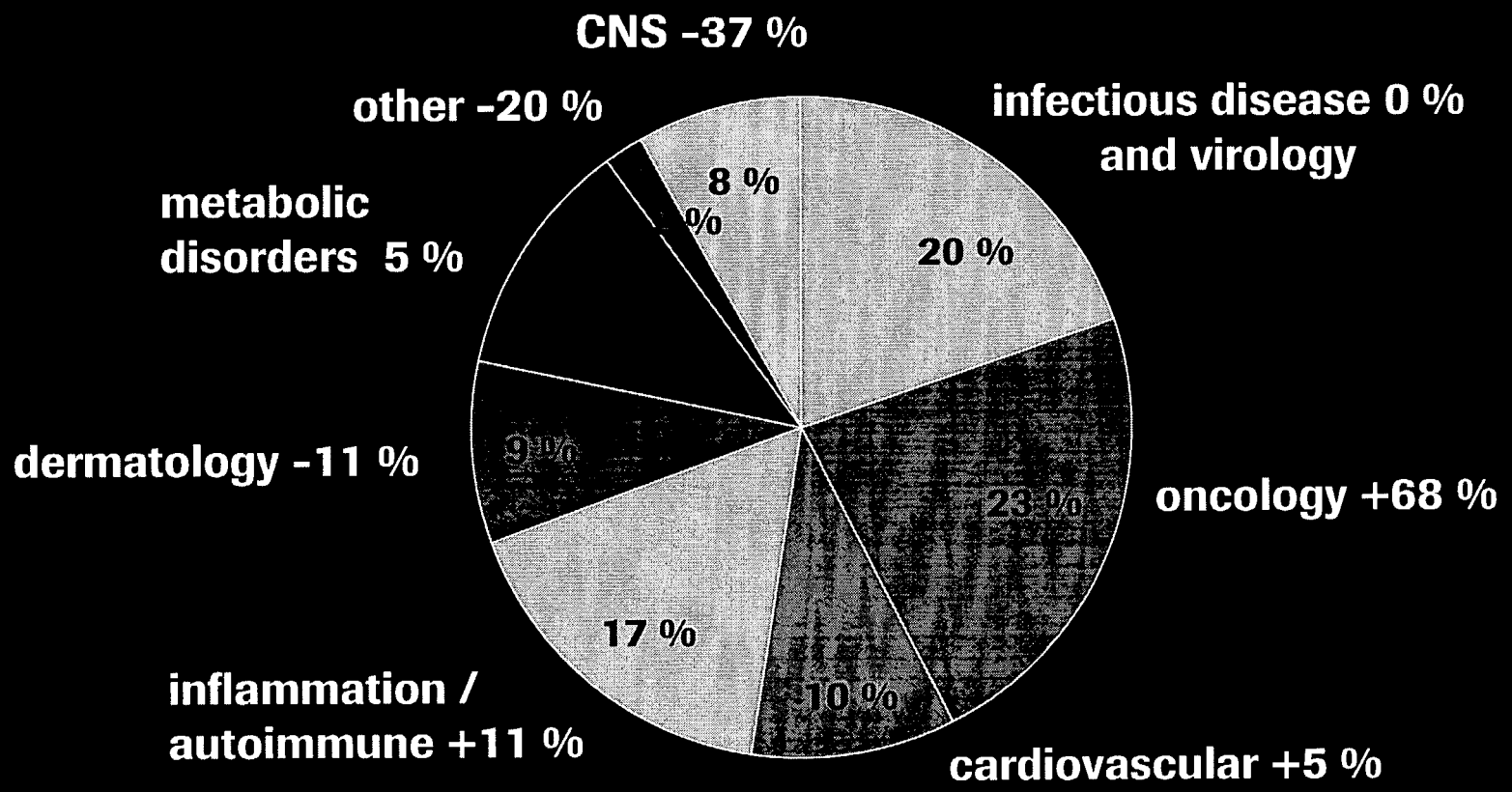
\+ launched in last five years

Prescription medicines sales by therapy area* in H1 2001

Future growth areas: oncology, virology, metabolic disorders, inflammation/autoimmune

Roche

Pharmaceuticals



* Roche and Genentech combined

all growth figures are in local currencies

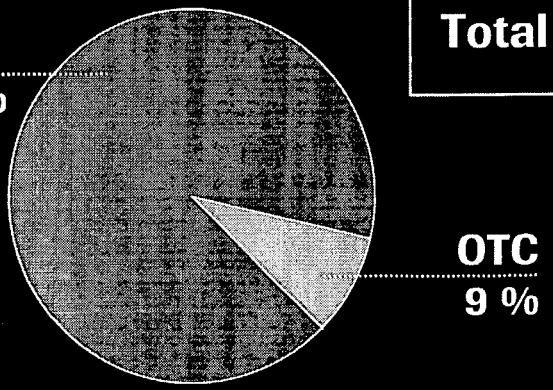
Pharmaceuticals sales at Q3 2001

Stronger performance continues

Roche

Pharmaceuticals

	Q3 2001 CHF m	Q3 2000 CHF m	growth in local currencies
prescription medicines *	12,577	11,825	8 %
'over the counter' medicines	1,230	1,240	1 %
Total	13,807	13,065	7 %



* Roche and Genentech combined

Prescription medicines sales* at Q3 2001

Five products with annual sales ≥CHF 1 billion

Roche

Pharmaceuticals

Rocephin	1,281	3 %	4 %
Mabthera/Rituxan	1,185	93 %	91 %
Roaccutane	846	-10 %	-10 %
CellCept	784	35 %	35 %
Xenical	747	4 %	6 %
Herceptin	560	46 %	46 %
NeoRecormon	545	13 %	16 %
Kytril	343	-	-
Viracept	333	-5 %	-3 %
Nutropin/Protropin	325	14 %	12 %
Activase/TNKase	284	-1 %	-2 %
Pulmozyme	238	9 %	9 %
Neupogen	234	3 %	4 %
Cymevene/Valcyte	222	23 %	23 %
Furtulon	218	-10 %	0 %
Dilatrend	212	20 %	24 %
Lexotan	206	-5 %	-3 %
Xeloda	184	74 %	74 %
Madopar	184	0 %	3 %
Rocaltrol	182	-13 %	-9 %

* Roche and Genentech combined

Business milestones in H1 2001

Roche

Pharmaceuticals

- **MabThera/Rituxan** - initial treatment duration doubled from 4 to 8 weeks (US)
  - filed for aggressive NHL (EU)
  - approved in Japan
- **Herceptin** launched in Japan
- **NeoRecormon** approval for anemia associated with hematological tumors (EU)
- **Kytril** Roche initiates global marketing
- **Avastin** (anti-VEGF) in combination with Xeloda receives fast track NDA review status for metastatic breast cancer (US)
- **Tarceva** (OSI 774) for various solid tumors in-licensed from OSI

Business milestones in H1 2001

Roche

Pharmaceuticals

- **Dilatrend (carvedilol)** produces landmark data in severe CHF (COPERNICUS study) and in post-MI patients (CAPRICORN study)
- **TNKase/Activase** to be co-promoted by Genentech, Schering Plough and Cor (US)

- **Valcyte** approved for treatment of CMV retinitis (US)
- **Tamiflu** launched in Japan
- **Pegasys and ribavirin** phase 3 study reveals highest efficacy rates ever seen in chronic hepatitis C
- **levovirin** in-licensed from ICN

- **Xenical** filed for type 2 diabetes (US, EU)

'Reshaping For Future Growth'

Roche

Pharmaceuticals

- align resources to attain/retain leadership in priority disease areas
- realise organic growth potential, together with potential strategic moves, to return Division's sales growth to market growth rates or above
- re-shape cost structure to improve operating profit margin to 20-25 % of sales

'Reshaping For Future Growth'

Leaner and fitter

Roche

Pharmaceuticals

	Roche Pharma 2000	Roche Pharma 2004	pharma industry average
cost of goods/sales	21 %	19 %	22.5 %
marketing and distribution/sales	35 %	32 %	33 %
research and development/sales	18 %	17 %	15 %

'Reshaping For Future Growth'

Roche

Pharmaceuticals

Production rationalize site network to reduce over-capacity
- ↳ manufacturing to be phased out in Welwyn (UK) and chemical production to be reduced in Basel (CH)

Marketing align resources to current product portfolio, particularly in the USA, and greater emphasis on cost-effectiveness
- ↳ sales force reduced by 500 people to around 2000 representatives in USA

Research concentrate research operations in fewer sites
- ↳ research at Welwyn (UK) to be closed and projects transferred to Palo Alto

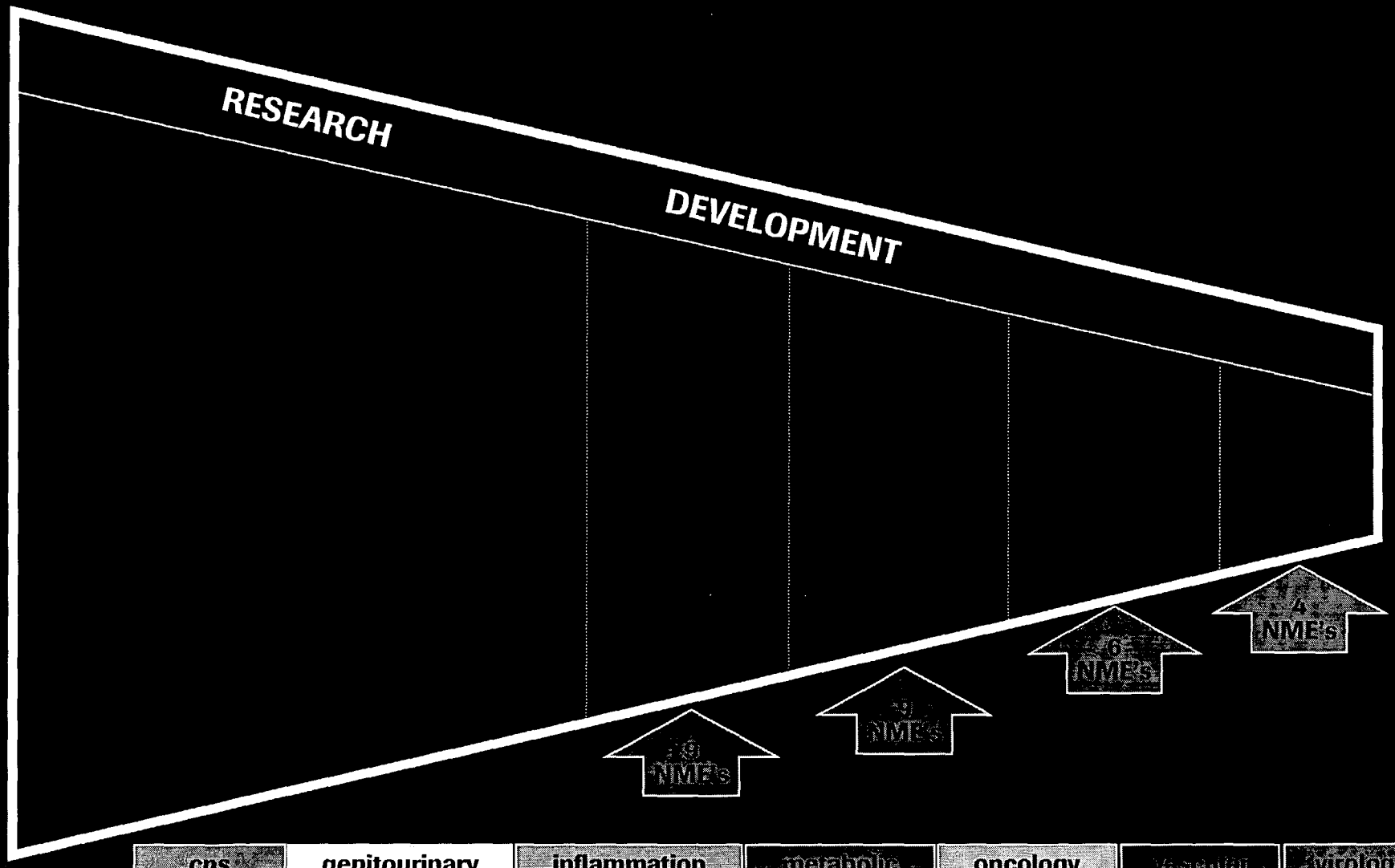
Clinical Development concentrate development operations in fewer number of sites
- ↳ development at Palo Alto (USA) to be closed and projects transferred to other sites

Business Development business development, licensing and alliance activities across Roche Rx pharmaceuticals brought together into one new strengthened function

Fueling the R&D pipeline at Roche

Roche

Pharmaceuticals



Roche managed pipeline status at September 2001

* in preparation for phase I

** in preparation for phase II

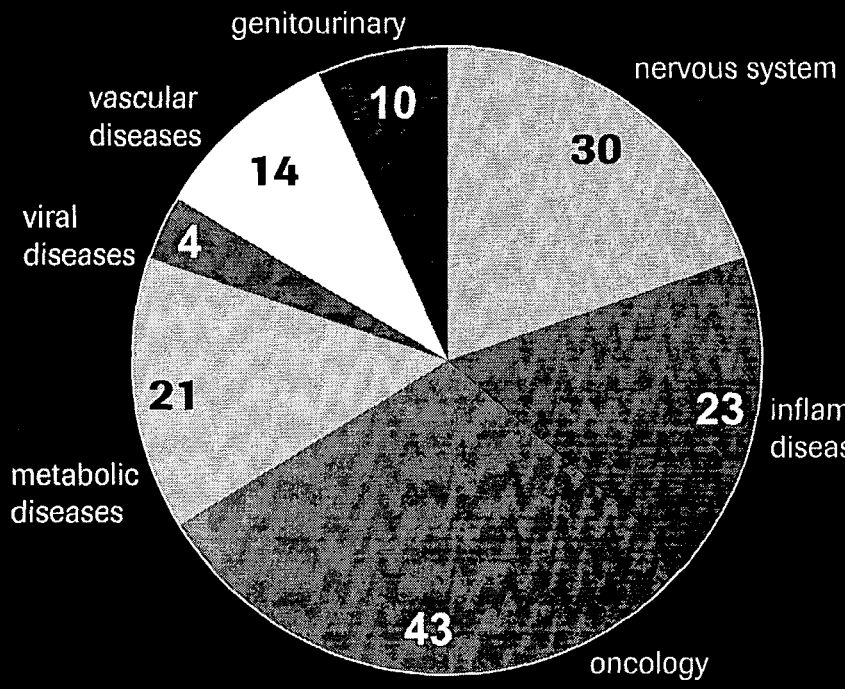
Roche-managed R&D pipeline

NMEs and line extensions

Roche

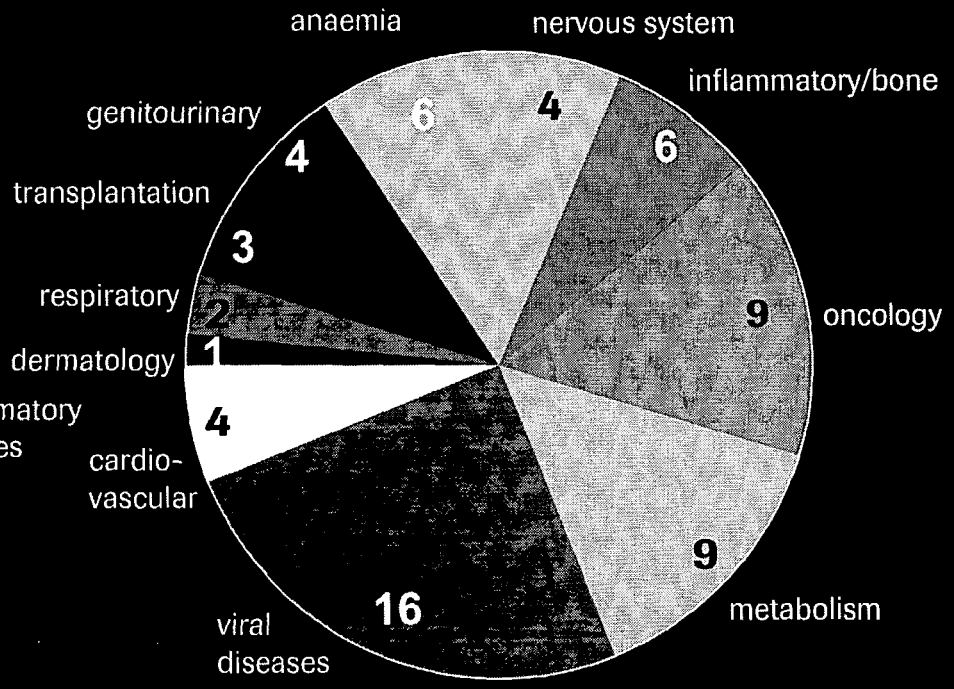
Pharmaceuticals

Research



145 projects

Development



64 projects including 28 NME's*

*** New Molecular Entities prior to regulatory approval**

pipeline status at September 2001

Roche R&D pipeline

28 NME's in development at Roche

Roche

Pharmaceuticals

R944 HIV	R411 asthma	R440 (CCI) solid tumors	R420 (Pegasys) HCV
R1067 depression	R545 overactive bladder	R450 (alpha 1 agonist) stress incontinence	R484 (Bonviva)osteoporosis
R1124 emesis	R594 rheumatoid arthritis	R483** (insulin sensitizer) type 2 diabetes	R698 (T-20) HIV
R1204 depression /anxiety	R667 emphysema	R673** (NK1) depression /anxiety	R1415 (Tarceva) oncology
R1487 rheumatoid arthritis	R701 overactive bladder	R744 (new generation EPO) anemia	
R1437 benign prostatic hyperplasia	R765 type 2 diabetes	R724 (T-1249) HIV	
R1458 type 2 diabetes	R1164* osteoporosis		
R1065 (5HT2c) obesity	R1270 (levovirin) HCV		
R1435 deep vein thrombosis	R1273* solid tumors		

collaborations

11 projects or planned for in past 12 months

R1125 stroke	R449 alzheimer's	R404 (G) vascular
R1068 depression /anxiety	R665 COPD	R453 osteoporosis
R640 stroke	R672 leukemia	R643 overactive bladder
R1395 solid tumors	R804 cancer	

* in preparation for phase I

** in preparation for phase II

pipeline status at Septermber 2001

Roche R&D pipeline

..plus 13 'opt-in' projects gives 41 NME's

Roche

Pharmaceuticals

R944 HIV	R411 asthma	R440 (CCI) solid tumors	R420 (Pegasys) HCV
R1067 depression	R545 overactive bladder	R450 (alpha 1 agonist) stress incontinence	R484 (Bonviva)osteoporosis
R1124 emesis	R594 rheumatoid arthritis	R483** (insulin sensitizer) type 2 diabetes	R698 (T-20) HIV
R1204 depression /anxiety	R667 emphysema	R673** (NK1) depression /anxiety	R1415 (Tarceva) oncology
R1487 rheumatoid arthritis	R701 overactive bladder	R744 (new generation EPO) anemia	Oncology (anti-VEGF) (G)
R1437 benign prostatic hyperplasia	R765 type 2 diabetes	R724 (T-1249) HIV	
R1458 type 2 diabetes	R1164* osteoporosis	cephalosporin (B)	
R1065 (5HT2c) obesity	R1270 (levovirin) HCV	eczema (B)	
R1435 deep vein thrombosis	R1273* solid tumors	SCLC (N)	
antifungal (B)	antibiotic (B)	inflamm. bowel disease (G)	
	psoriasis (B)		
	migraine (P)		
	cardiovascular disease (S)		
	macular degeneration (G)		
	antitumor* (G)		
	acute coronary syndrome* (G)		

..... collaborations

opt-in opportunities

Basilea (B)
Genentech (G)
Novus (N)
Pozen (P)
Speedel (S)

* in preparation for phase I
** in preparation for phase II

pipeline status at September 2001

Roche R&D pipeline

..plus 6 Genentech NMEs which Genentech will commercialise alone gives 47 NMEs

Roche

Pharmaceuticals

- R944 HIV
- R1067 depression
- R1124 emesis
- R1204 depression /anxiety
- R1487 rheumatoid arthritis
- R1437 benign prostatic hyperplasia
- R1458 type 2 diabetes
- R1065 (5HT2c) obesity
- R1435 deep vein thrombosis
- antifungal (B)

- R411 asthma
- R545 overactive bladder
- R594 rheumatoid arthritis
- R667 emphysema
- R701 overactive bladder
- R765 type 2 diabetes
- R1164* osteoporosis
- R1270 (levovirin) HCV
- R1273* solid tumors
- antibiotic (B)
- psoriasis (B)
- migraine (P)
- cardiovascular disease (S)
- macular degeneration (G)
- antitumor* (G)
- acute coronary syndrome* (G)

- R440 (CCI) solid tumors
- R450 (alpha 1 agonist) stress incontinence
- R483** (insulin sensitizer) type 2 diabetes
- R673** (NK1) depression /anxiety
- R744 (new generation EPO) anemia
- R724 (T-1249) HIV
- cephalosporin (B)
- eczema (B)
- SCLC (N)
- Inflamm. bowel disease (G)
- E-26** (G)

- R420 (Pegasys) HCV
- R484 (Bonviva)osteoporosis
- R698 (T-20) HIV
- R1415 (Tarceva) oncology
- Oncology (anti-VEGF) (G)
- Xanelim (G)
- Xolair (G)
- Tracleer (G)
- TNKase (G)
- Thrombopoietin (G)

..... collaborations

opt-in opportunities

- Basilea (B)
- Genentech (G)
- Novus (N)
- Pozen (P)
- Speedel (S)

Genentech (without Roche opt-in but Roche benefits financially)

* in preparation for phase I
** in preparation for phase II

pipeline status at September 2001

Expected first NDA filing dates

14 NME's over next five years

Roche

Pharmaceuticals

2001	2002	2003	2004	2005
MabThera/Rituxan *int/high grade NHL*	**Bondronat** *bone metastases in breast cancer*	**Xenical** *paediatric obesity*	**R450** (alpha1a agonist) *stress incontinence*	**R483** (insulin sensitizer) *type 2 diabetes*
NeoRecormon *anemia (once weekly)*	**Bonviva** *treat/prevent osteoporosis*		**R744** (next generation EPO) *anemia*	**R440** (CCI) *solid tumors*
Pegasys *chronic hepatitis C (EU)*	**R698** (T-20) *HIV/AIDS*		**R673** (NK1 modulator) *anxiety/depression*	**R545** *overactive bladder*
Pegasys + ribavirin *chronic hepatitis C*	**Valcyte** *prevention of CMV*		**Pegasys** *chronic hepatitis B*	**R724** (T-1249) *HIV/AIDS*
Tamiflu *treat/prevent influenza (EU)*	**Xanelim** *psoriasis*		**R1415** Tarceva (OSI-774) *non small cell lung cancer*	**R1124** (NK1 modulator) *emesis*
Xeloda / docetaxel *breast cancer (EU)*	**Tracleer** *chronic heart failure*			
Xenical *type II diabetes*				

Genentech projects

NMEs

line extensions

NME = new molecular entity

NDA filings

Roche

Pharmaceuticals

Bondronat

Bonviva

NeoRecormon

Pegasys

Pegasys + ribavirin

Tamiflu

Xenical

Launch roll-out

Roche

Pharmaceuticals

CellCept

NeoRecormon

Tamiflu

Valcyte

Viracept

Xeloda + docetaxel

Xenical

Roche oncology going forward

Roche

Pharmaceuticals

Herceptin®
Trastuzumab
anti-HER2 monoclonal antibody

- continued launch roll-out in Europe and Japan
- expand market through increased HER2 testing
- initiate adjuvant breast cancer study

MABTHERA®
RITUXIMAB

- continued launch roll-out in Europe
- Japan launched in September 2001
- pursue first line position for intermediate / high grade NHL in combination with CHOP
- pursue first line position for low grade NHL in combination with CVP

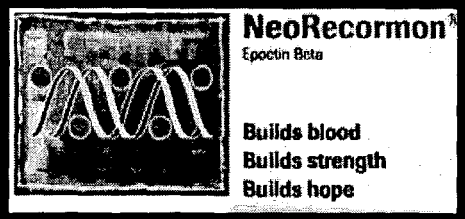
Xeloda®
(capecitabine)

- roll-out of first line indication in metastatic colorectal cancer in Europe and USA
- approval of Xeloda / docetaxel combination in first / second line therapy for metastatic breast cancer achieved in H2 2001 in USA, and expected in 2002 in Europe

Roche oncology going forward

Roche

Pharmaceuticals



- roll-out of new oncology indication (anemia associated with haematological tumours) throughout Europe and smaller markets
- approval for once weekly administration in September 2001 in Europe
- strengthened patent situation after agreement reached between Roche, Genetics Institute, J&J and Amgen
- next generation EPO expected to progress to phase II



- re-launch in major markets ongoing
- marketing support justified by superior profile
- NDA filing in USA for post-operative nausea and vomiting (PONV) in H2 2001



- phase III results in bone metastases in breast cancer to be discussed with US and EU authorities, with aim of filing NDA in 2002

pegylated GCSF

- in phase III for neutropenia with Amgen
- Roche to co-promote

Tarceva (OSI 774)

- positive phase II data in ovarian cancer, NSLC, head and neck cancer presented at ASCO
- now in phase III

CellCept®

Building the next cornerstone of immuno-suppressive therapy

Roche

Pharmaceuticals

- launch roll-out of liver transplant indication
- launch roll-out of paediatric renal transplant indication
- launch roll-out of renal rejection prevention indication in Japan
- data supporting CellCept as cornerstone of immuno-suppressive regimens
- further demonstration of improved long term patient and graft survival

XENICAL®
orlistat
Lose Weight. Gain Life

Returning to growth
A unique marketing challenge

Roche

Pharmaceuticals

- minority of doctors active in weight management
- more interested in long-term health risks than in today's "well-being"

- key demand drivers
- unrealistic expectations
- more interested in today's problems than tomorrow's health risks
- they need support

- important player in the system
- under-utilised

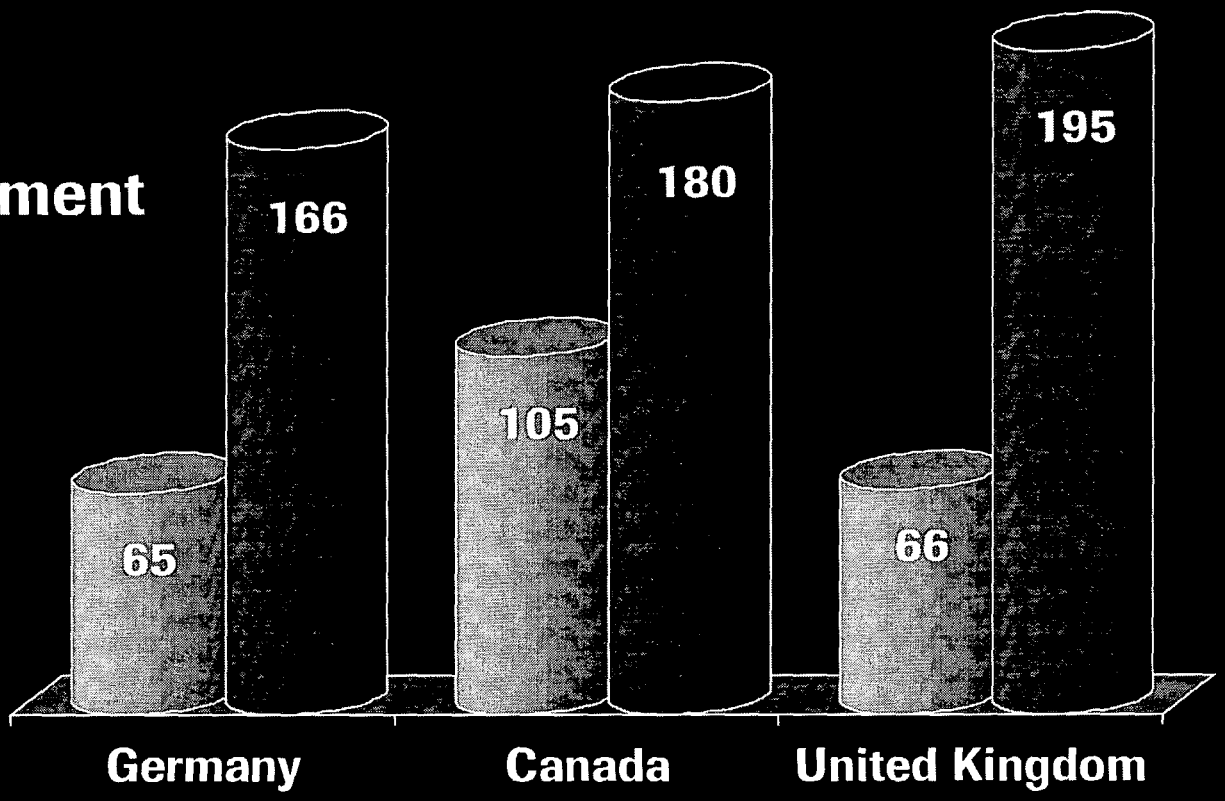
XENICAL®
orlistat
Lose Weight. Gain Life

Returning to growth

Quality support increases duration of therapy, drug performance, and patient satisfaction

Roche

Pharmaceuticals



XENICAL® orlistat
Lose Weight. Gain Life

Returning to growth
Compelling data in type 2 diabetes

Roche

Pharmaceuticals

- currently 140 million people worldwide (300 million by 2025)
- 4 out of 5 people with type 2 diabetes are overweight or obese
- most anti-diabetic medications cause weight gain
- weight loss and maintenance difficult to achieve by diet and exercise alone

- weight loss is 3-4 times greater that through diet alone
- significant improvements in blood sugar control (↓ fasting blood glucose, ↓ HBA_{1c})
- improved lipid (LDL cholesterol) profile
- reduction in anti-diabetic medication use

XENICAL® orlistat
Lose Weight. Gain Life

Returning to growth

Roche

Pharmaceuticals

Strategy

- focus activities on target doctors
- increase duration of therapy and patient satisfaction
- launch type 2 diabetes indication

Sales beginning to respond

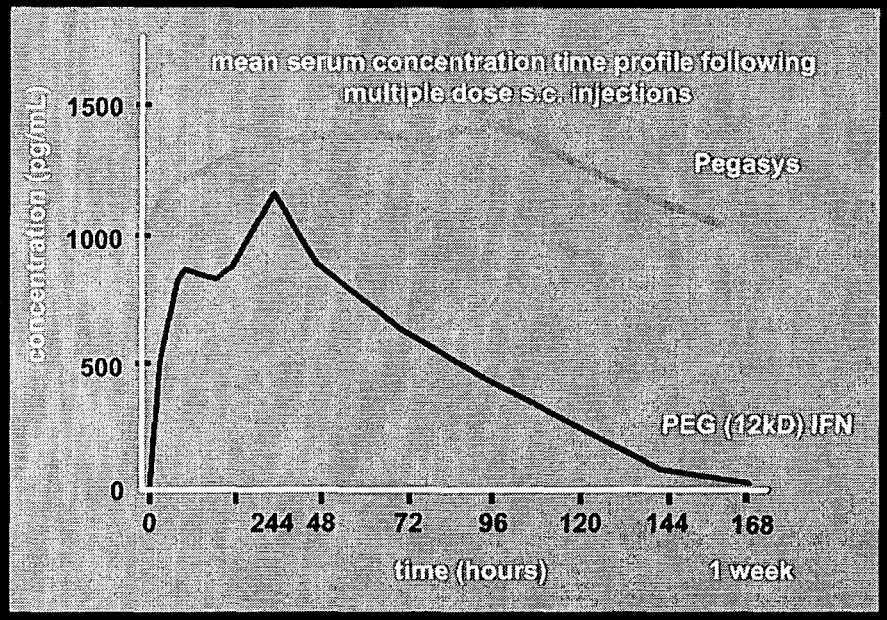
- sales growth: +4 % in H1 2001 v. -4 % in 2000

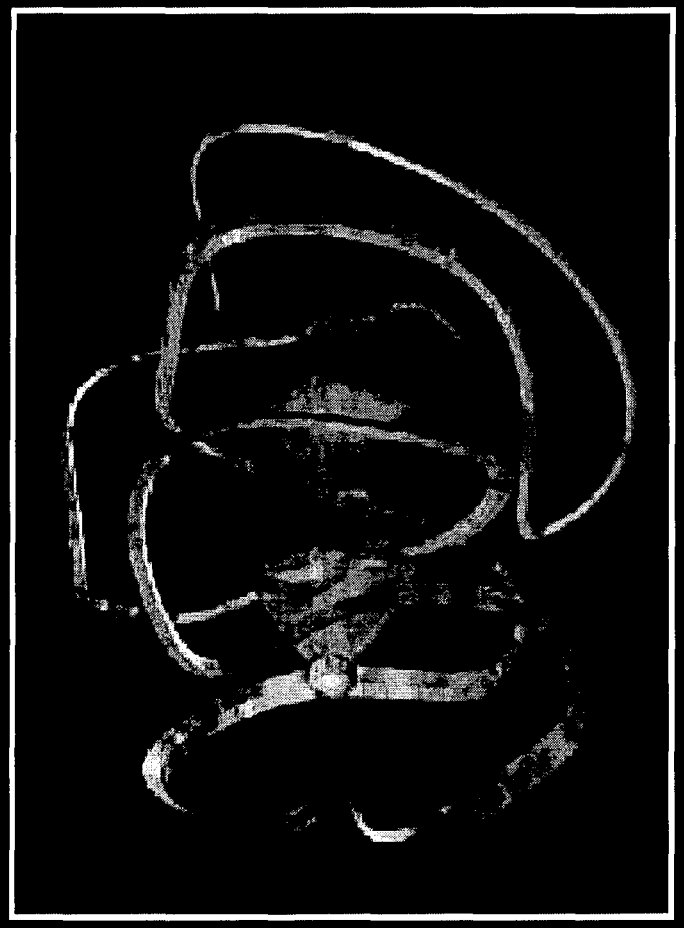
PEGASYS

Superior kinetics suggest superior efficacy

Roche

Pharmaceuticals



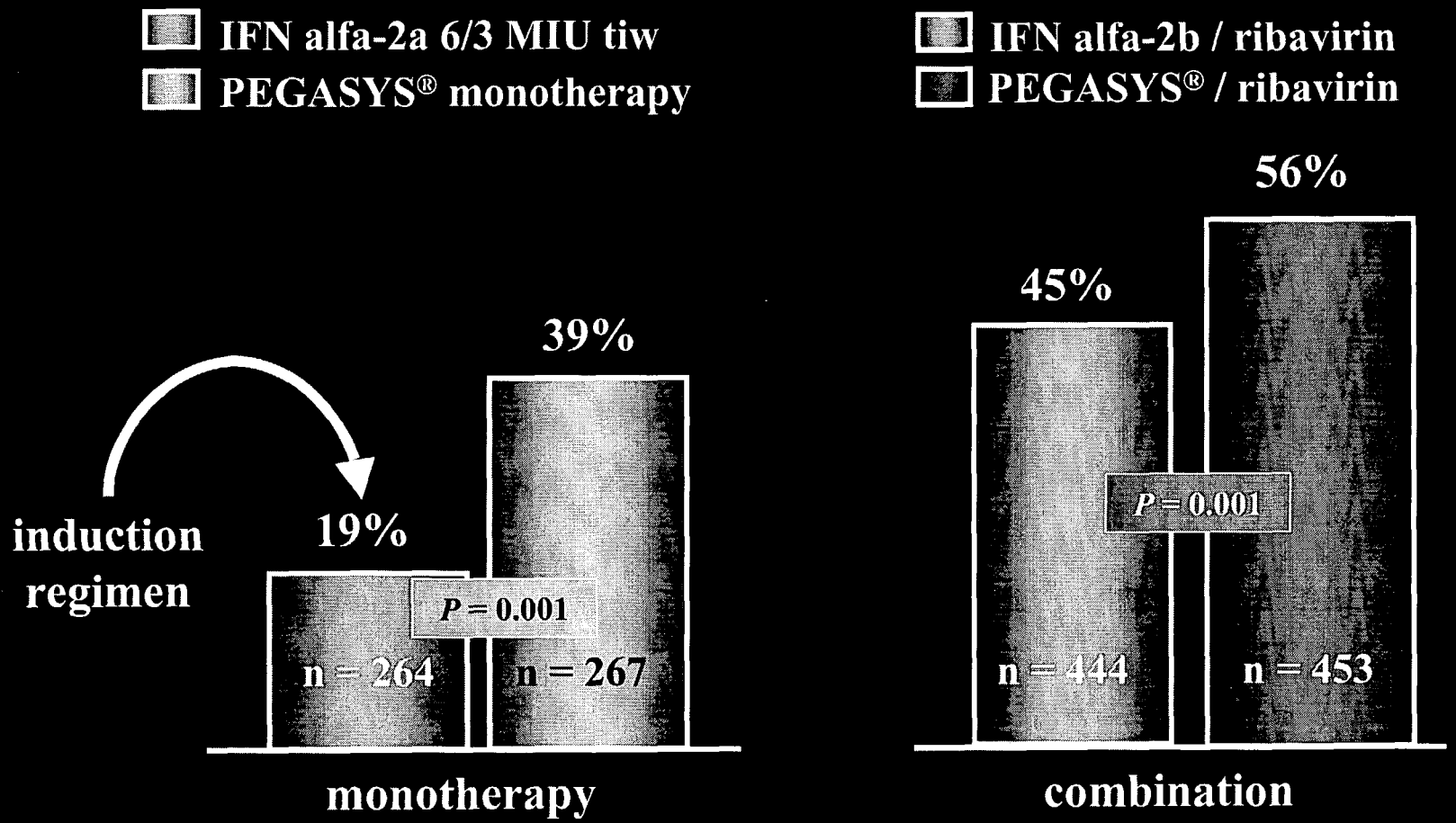


PEGASYS

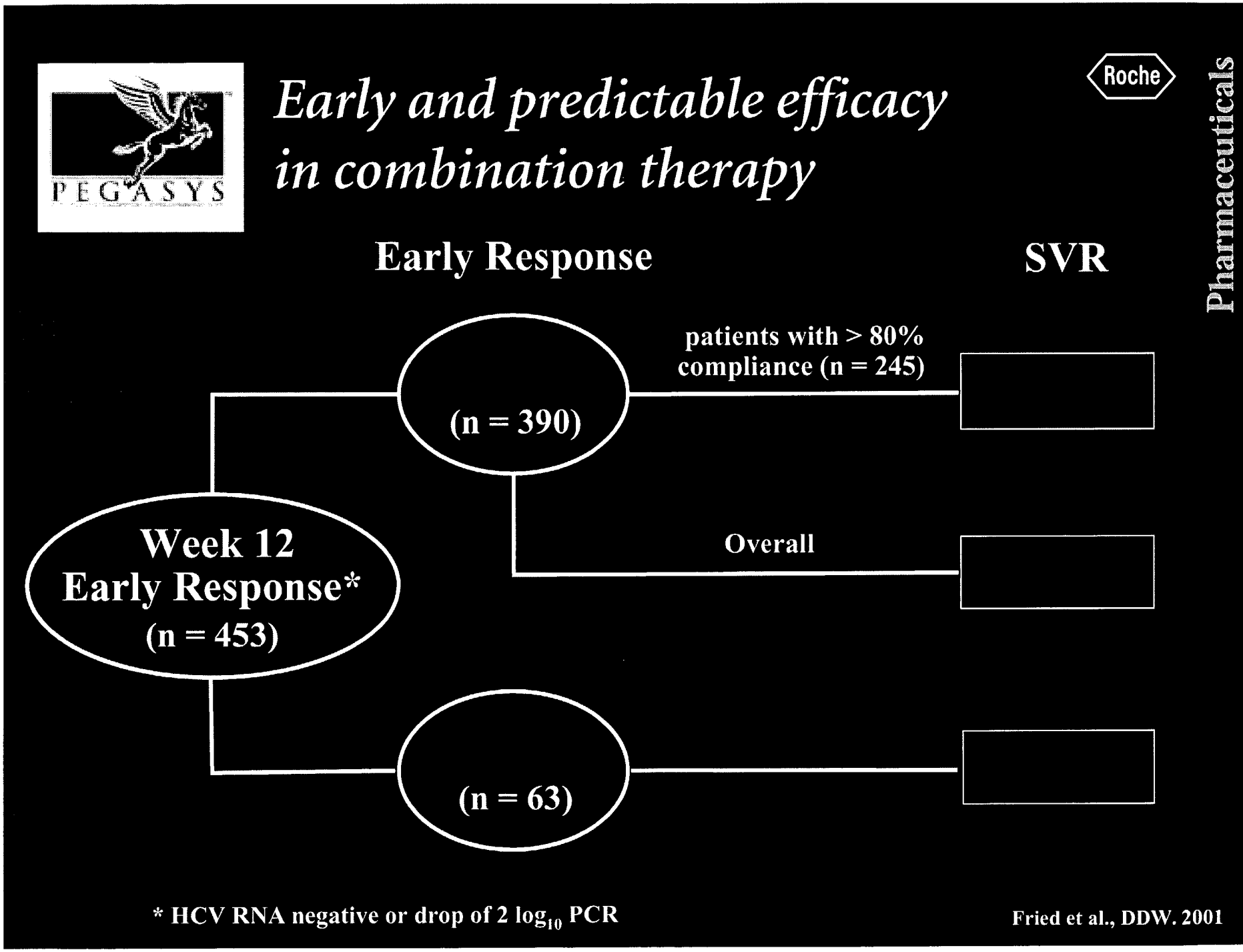
Unsurpassed efficacy in mono- and combination therapy

Roche

Pharmaceuticals



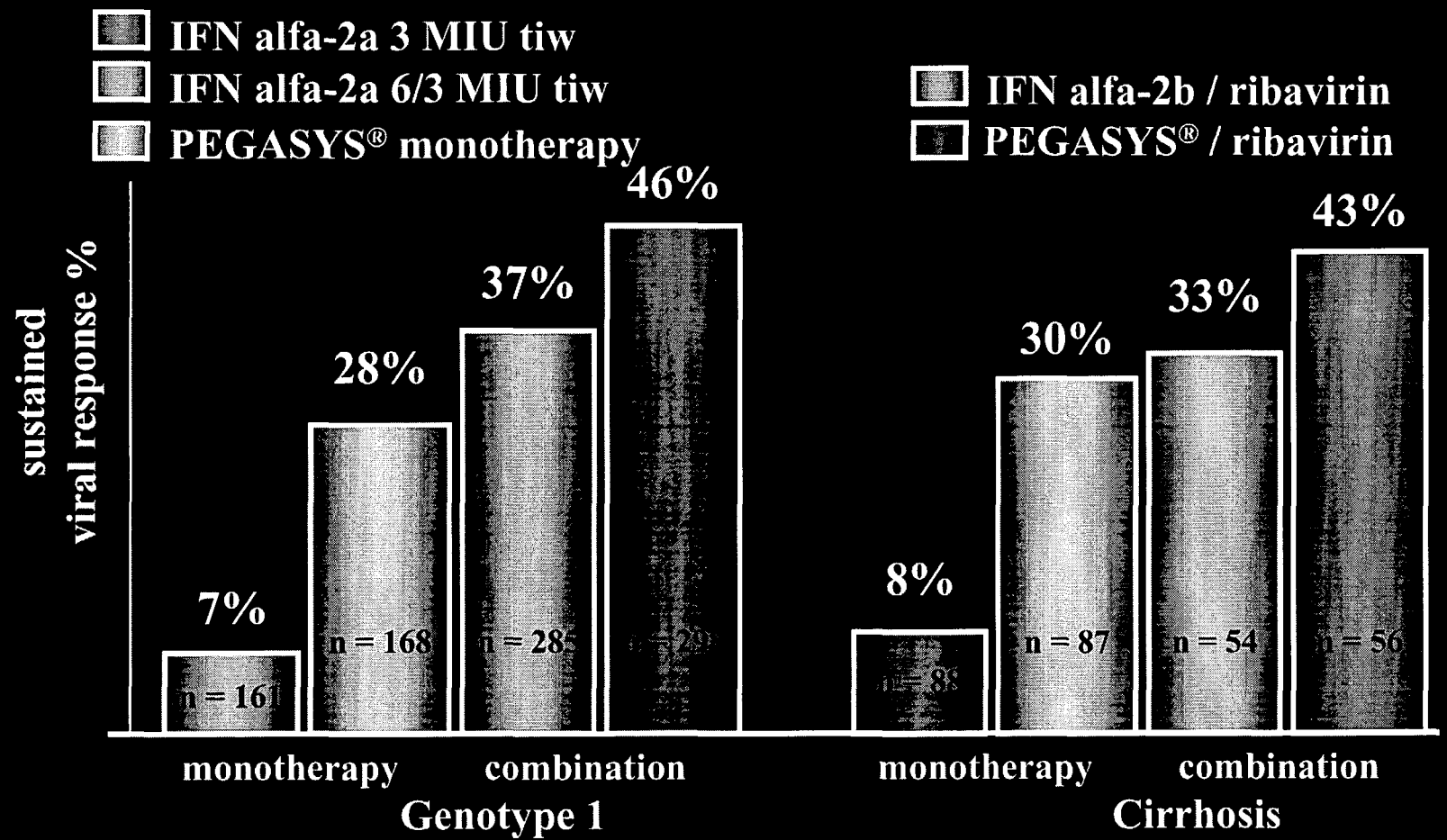
Zeuzem S et al., *N Engl J Med.* 2000;343:1666-1672
Fried et al., DDW. 2001


PEGASYS
Early and predictable efficacy in combination therapy
Roche
Pharmaceuticals
Early Response
SVR
patients with > 80% compliance (n = 245)
(n = 390)
Overall
Week 12 Early Response*
(n = 453)
(n = 63)
* HCV RNA negative or drop of 2 log10 PCR
Fried et al., DDW. 2001

High efficacy rates in difficult-to-treat patients

Roche

Pharmaceuticals



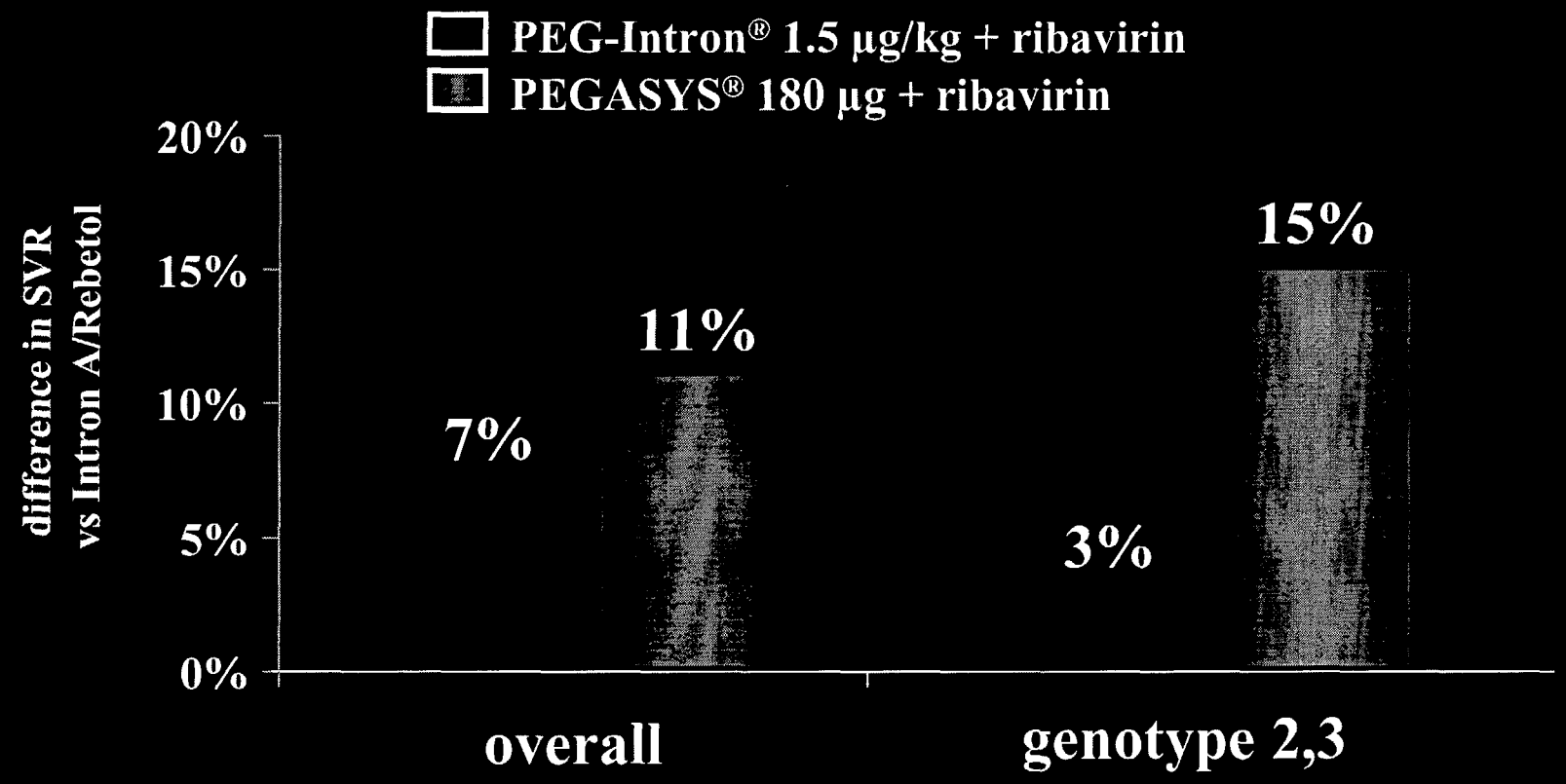
Zeuzem S et al., *N Engl J Med.* 2000;343:1666-1672
Heathcote EJ et al. *N Engl J Med.* 2000;343:1673-1680
Fried et al., DDW. 2001

PEGASYS

Superior improvement over current standard therapy

Roche

Pharmaceuticals



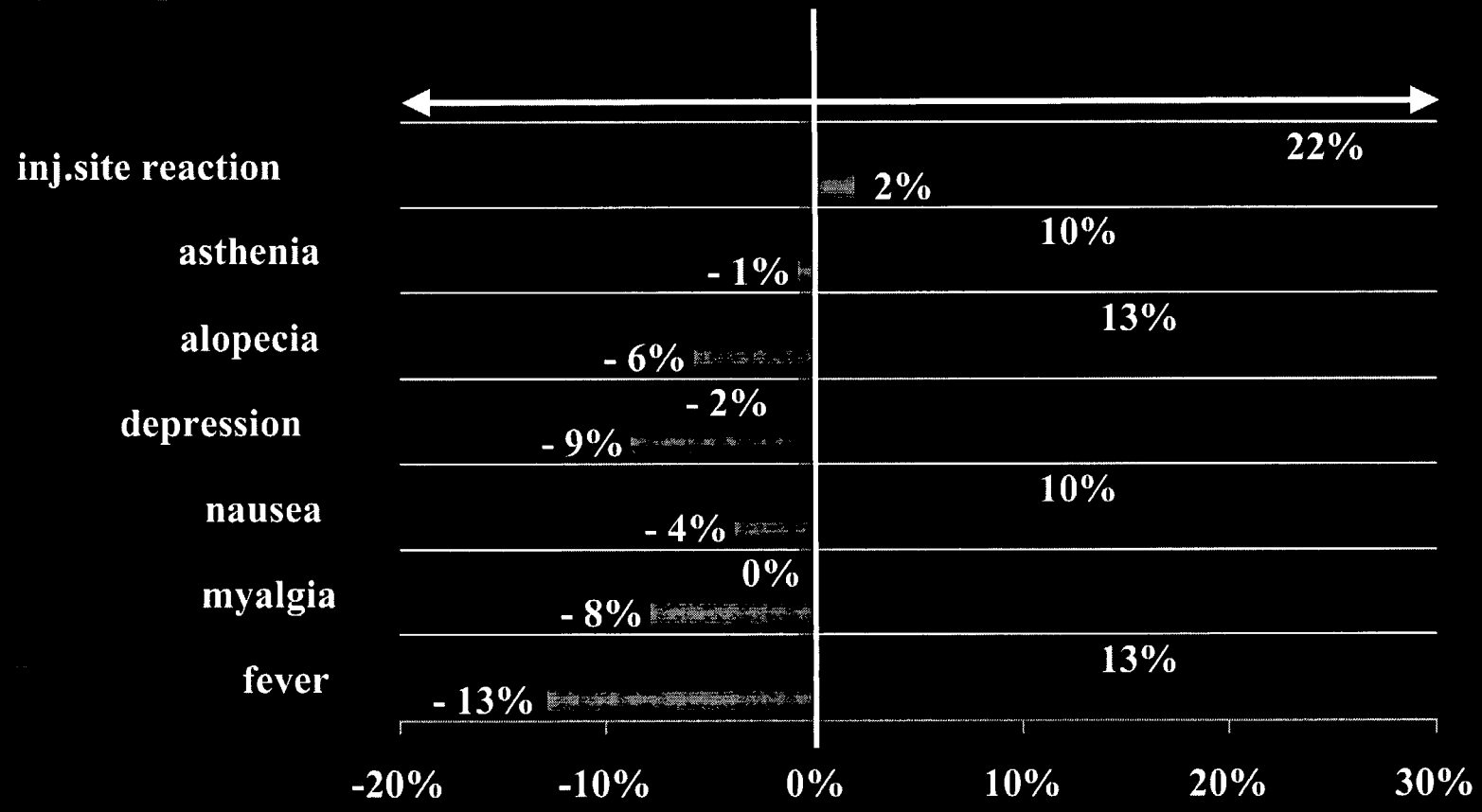
The comparator was <u>the same</u> in both studies:
Rebetron (3 MIU Intron-A tiw + Rebetol 1-1,2g)

Fried et al., *DDW* 2001
Manns et al., *AASLD* 2000

Better tolerated than PEG-Intron®

Roche

Pharmaceuticals



PEG-Intron® 0.5 µg/kg + ribavirin

PEGASYS® 180 µg + ribavirin

Fried et al., *DDW* 2001

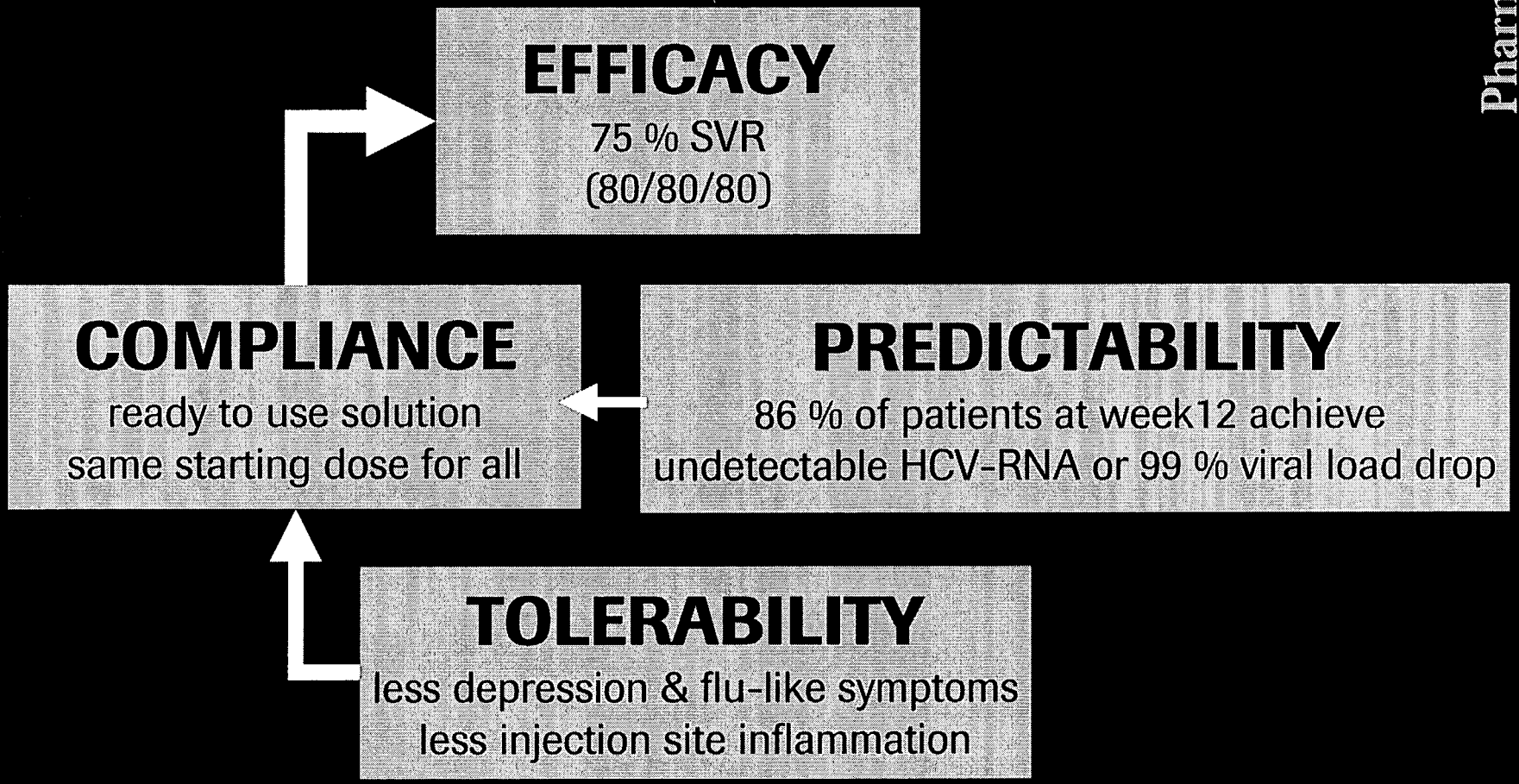
Manns et al., *AASLD* 2000

Pegasys and ribavirin combination[1].

A success cycle

Roche

Pharmaceuticals



[1] Pegasys + ribavirin combination data (phase 3) in chronic hepatitis C presented at Digestive Disease Week, 22 May 2001

Bonviva

Strong evidence from new osteoporosis data

Roche

Pharmaceuticals

- Major phase 3 treatment trial recently completed: promising results with both daily and intermittent oral regimens. Data to be presented in 2002
- High potency of ibandronate and new data provides foundation for development of innovative oral and intravenous intermittent regimens
- Regulatory strategy and complementary programmes currently being discussed with health authorities
- NDA filing of oral formulation for treatment and prevention of post menopausal osteoporosis planned for early 2002
- Further development of oral and iv formulations to address unmet needs in osteoporosis planned

HIV fusion inhibitors

A revolutionary approach to HIV infection

Roche

Pharmaceuticals

- first agent clinically developed to act by stopping virus entering the human cell
- good safety profile demonstrated and anti-viral activity confirmed (phase 2 data)
- good activity demonstrated in drug-resistant viruses
- phase 3 studies now recruiting → study completion expected H1 2002

- highly potent antiviral activity demonstrated
- phase 2 to run through 2002

Clinical news expected

Roche

Pharmaceuticals

2001

September

FIT study (influenza prophylaxis in families) at ICAAC

October

Xeloda/docetaxel phase III survival data in breast cancer,
Xeloda/oxaliplatin and Xeloda/irinotecan phase II data, at ECCO

November

phase 3 data (48 weeks therapy) at AASLD
'Creeping Creatinine' trial (interim results) at ESOT

December

first line therapy in aggressive NHL in combination with CHOP at ASH

2002

phase 3 results of oral formulation in metastatic bone disease
phase 3 results of oral formulation in osteoporosis
effects of adrenergic blockade on CHF at ACC
once weekly dosing in oncology
phase 3 results

Prescription medicines strategy

Focus for growth

Roche

Pharmaceuticals

Roche

- oncology
- metabolic diseases
- virology
- inflammatory diseases
- genito-urinary diseases
- central nervous system
- peripheral vascular diseases

Genentech, Inc. 25 YEARS IN BUSINESS FOR LIFE

- oncology
- cardiovascular
- opportunistic

Business Development, Licensing and Alliances

Building on a base of experience ...

Roche

Pharmaceuticals

Curagen
New Haven Conn

Myriad
Salt Lake City UT

UO/IC
Oxford UK

Max Planck
Munich Germany

Karolinska
Stockholm Sweden

Vernalis
Winnersh UK

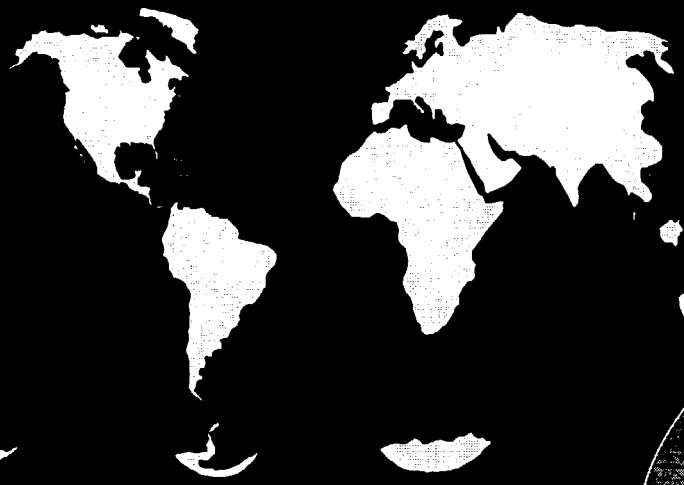
Incyte
Palo Alto CA

DeCode
Reykjavik Iceland

UCL
London UK

Tularik
San Francisco CA

Analyticon
Berlin Germany



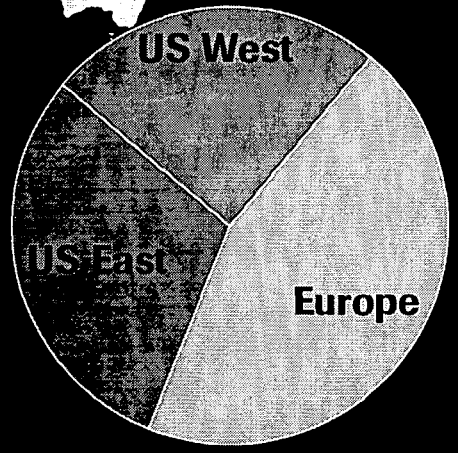
ETH
Zurich Switzerland

Wake Forest
Winston-Salem NC

Affymetrix
Santa Clara CA

Morphosys
Munich Germany

Immunogenex
San Diego CA



SNP
Boston Mass

Pharmacopeia
Cranbury NJ

Trimeris
Durham NC

Atugen
Boulder CO

Progenics
Terrytown NY

Business Development, Licensing and Alliances

... and capability

Roche

Pharmaceuticals

PriceWaterhouseCoopers Research Alliance Partners Survey 2000

- Competence of 25 major pharmaceutical companies as a research alliance partner measured by 17 criteria

- Roche and Genentech ranked 5th

Global Business Development, Licensing and Alliances

One organisation, four processes

Roche

Pharmaceuticals

- one global structure to encompass entire range of deals

- want, find, get, manage

Pharmaceuticals Division outlook

Near term expectations

Roche

Pharmaceuticals

- good single-digit sales growth in 2001
- continued double-digit sales growth for: Mabthera/Rituxan, Herceptin, Xeloda, CellCept, Dilatrend
- single-digit sales growth for Xenical, NeoRecormon
- slow decline: Roaccutane
- flu-dependent: Tamiflu
- operating margin to improve to 20-25 % of sales in next two to three years

Pharmaceuticals Division

Summary (1)

Roche

Pharmaceuticals

- Stronger second and third quarters produce improving sales performance
  - five prescription medicines with annual sales of more than CHF 1 billion
  - North America sales return to growth
  - Xenical returns to growth

- 'Reshaping for the Future' is rolling out
  - aligning resources to maximise growth and achieve leadership in priority areas
  - improving the operating margin to 20-25 % of sales
  - business development, licensing and alliances capability strengthened
  - principal actions identified and many already implemented

- In USA
  - Roche Rx is restructured and focused for growth
  - Genentech continues to grow strongly

Pharmaceuticals Division

Summary (2)

Roche

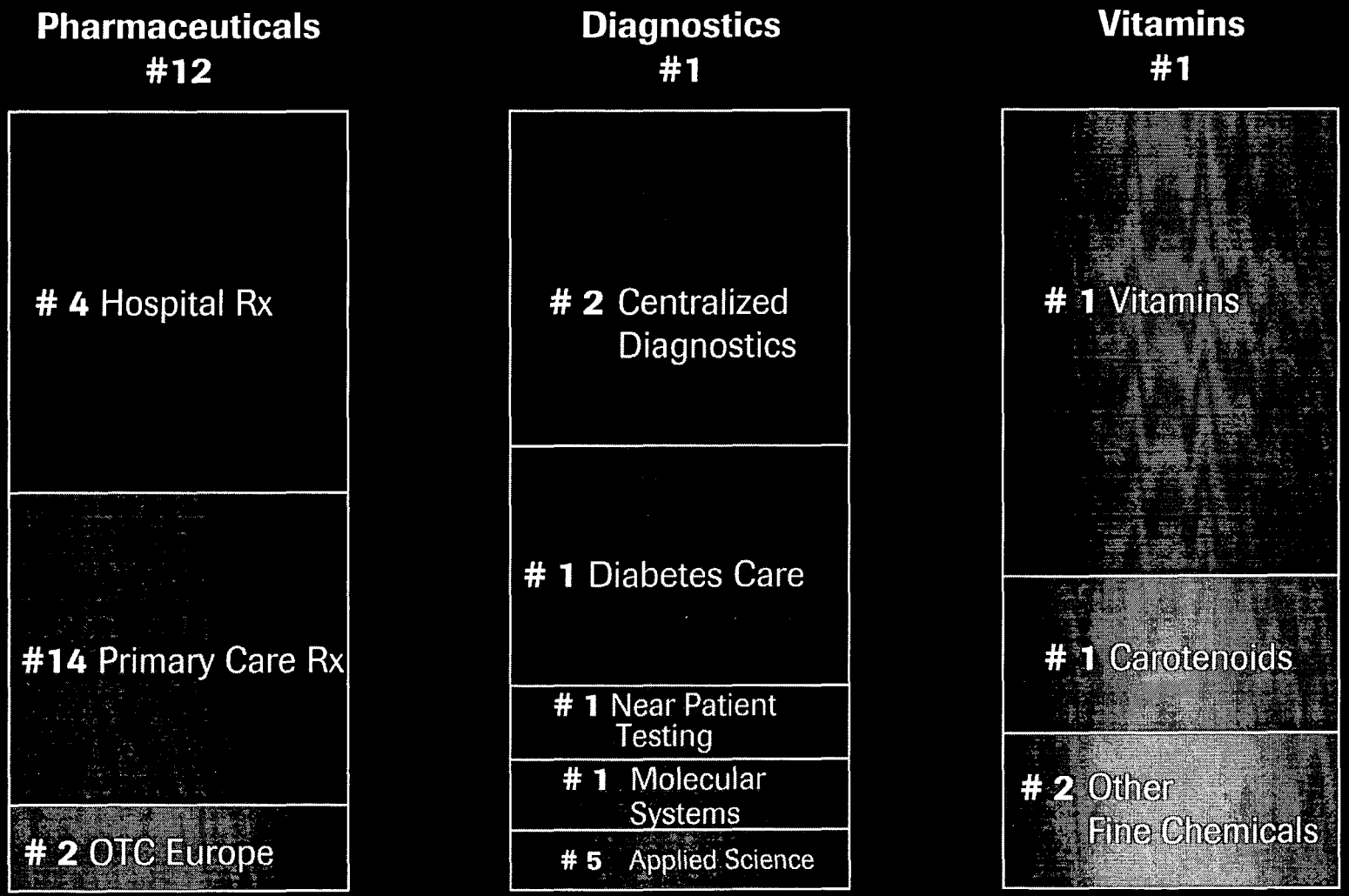
Pharmaceuticals

- World class capability in research and development
- Strengthening pipeline
  - 47 NME's focused on 7 therapy areas
  - 14 NME's expected to be filed over next five years
- Near-term growth expected from oncology, virology, metabolic disorders, inflammation/autoimmune

Roche Group Outlook

Global sector leadership

Our strategic goal



Integrated Health Care

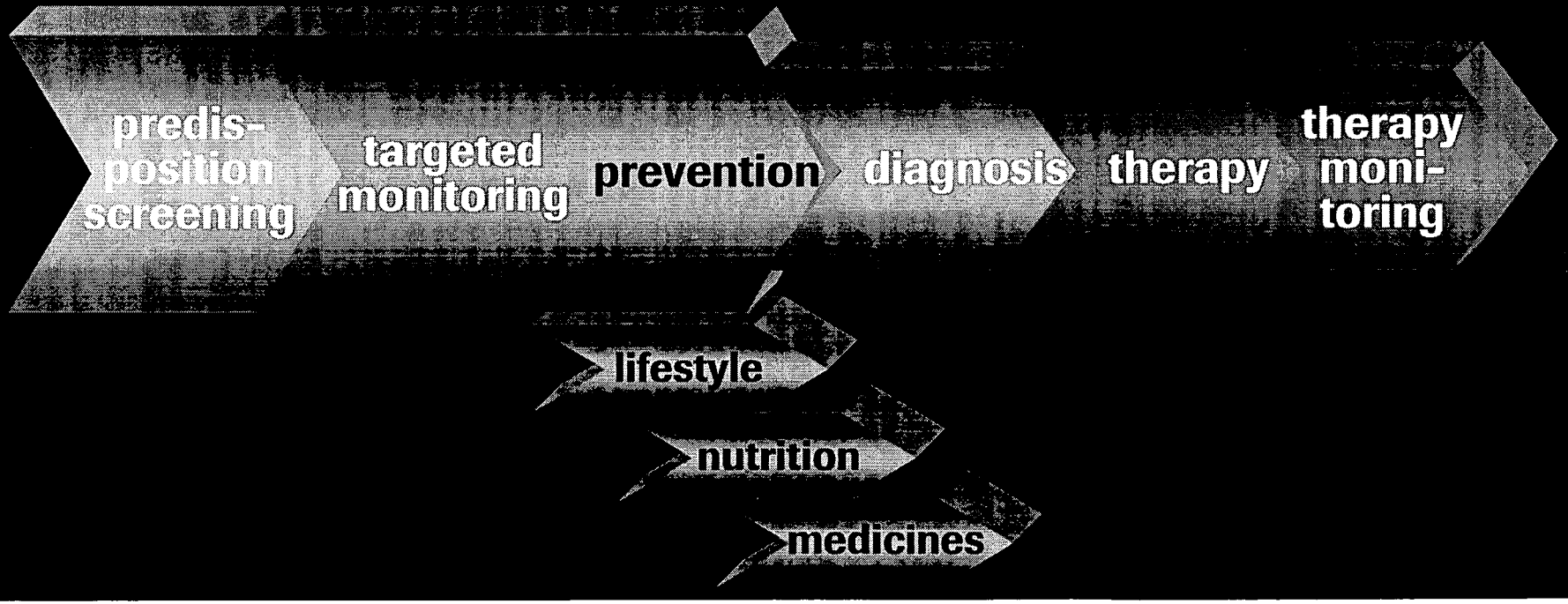
Diagnostics is the critical link

Roche

from today...

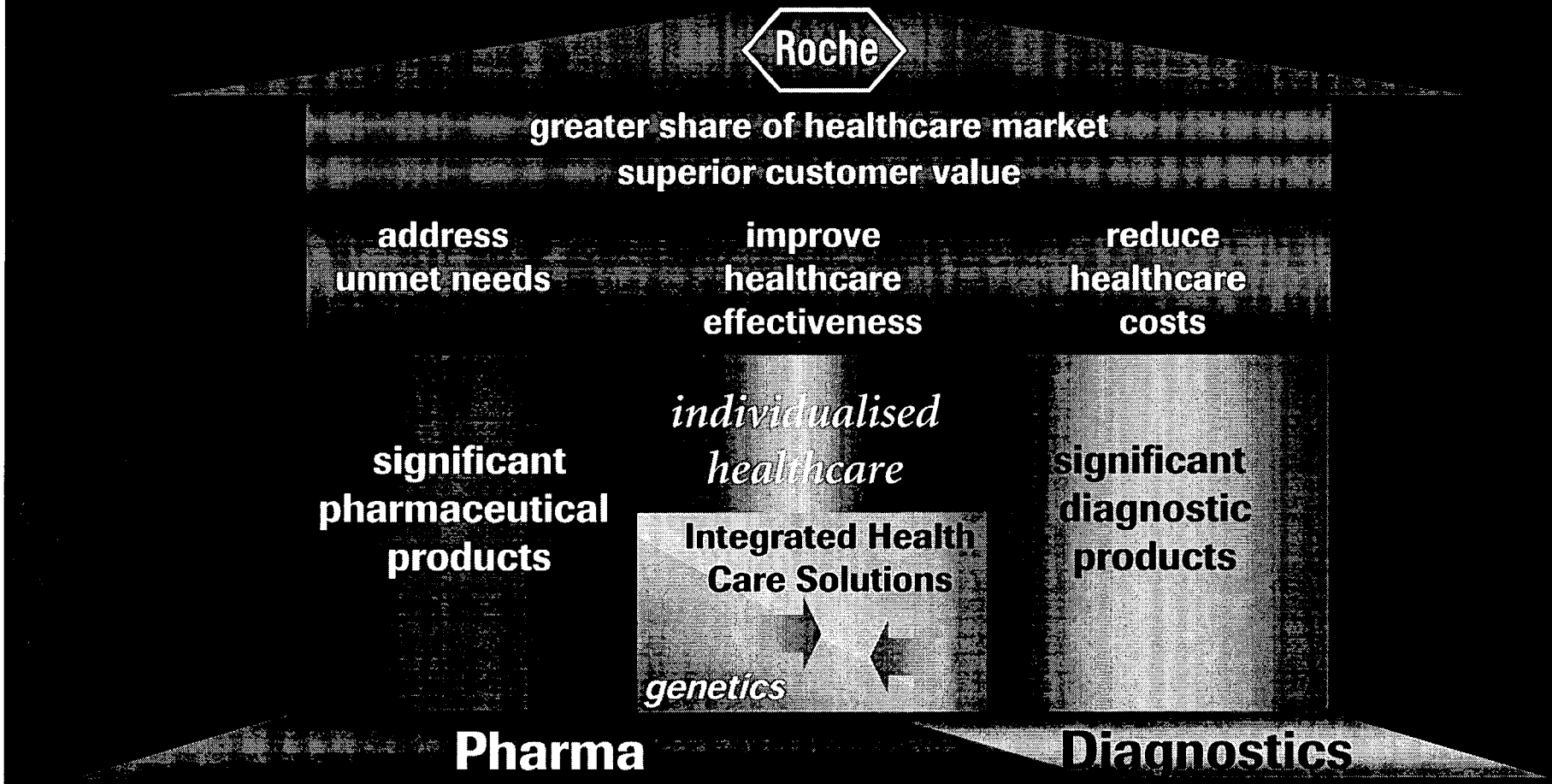


...into the future



Roche healthcare strategy

The foundation for stakeholder value



Roche at Half Year 2001

- Good results in a difficult year have exceeded expectations
  - sales growth in all Divisions
  - accelerating sales growth in Pharmaceuticals
  - operating profit and net income levels maintained
- Pharmaceuticals reshaping for future growth
- Diagnostics delivering double-digit sales and profit growth
- Vitamins and Fine Chemicals returning to top-line growth

Roche Group Outlook

- Pharmaceutical sales to achieve good single-digit sales growth in 2001
- Pharmaceuticals operating margin to improve to 20 - 25 % of sales over the next two to three years
- Group operating profit in 2001 to be similar to that in 2000
- Group operating margin to improve to over 20 % of sales in the medium term
- Financial income in full year 2001 to be similar to financial income at half year 2001

Roche Holding Ltd

7 September 2001 - Roche at
Morgan Stanley Pan European Healthcare Conference, Munich

As Posted on Roche.com

Furnished Under Rule 12g3-2(b)
Roche Holding 82-3315

This presentation contains certain forward-looking statements. These forward-looking statements may be identified by words such as "believes", "expects", "anticipates", "projects", "intends", "should", "seeks", "estimates", "future" or similar expressions or by discussion of strategy, goals, plans or intentions. Various factors may cause actual results to differ materially in the future from those reflected in forward-looking statements contained in this presentation among others: (1) pricing and product initiatives of competitors; (2) legislative and regulatory developments and economic conditions; (3) delay or inability in obtaining regulatory approvals or bringing products to market; (4) fluctuations in currency exchange rates and general financial market conditions; (5) uncertainties in the discovery, development or marketing of new products or new uses of existing products; (6) increased government pricing pressures; (7) interruptions in production; (8) loss of or inability to obtain adequate protection for intellectual property rights; (9) litigation; (10) loss of key executives or other employees; and (11) adverse publicity or news coverage.

Capturing Value from Genetics and Genomics: joining Diagnostics and Therapeutics in Integrated Health Care

Klaus Lindpaintner, MD, MPH

Director, Roche *Genetics*

Introduction

- increasingly important role of and reliance on *in-vitro* diagnostics
- further developments of specific medicines targeting the molecular cause of disease
- the historic disconnect between and ***integrated health care approach*** will be closed by an –

Roche is uniquely placed to capitalize on the Health Care Revolution

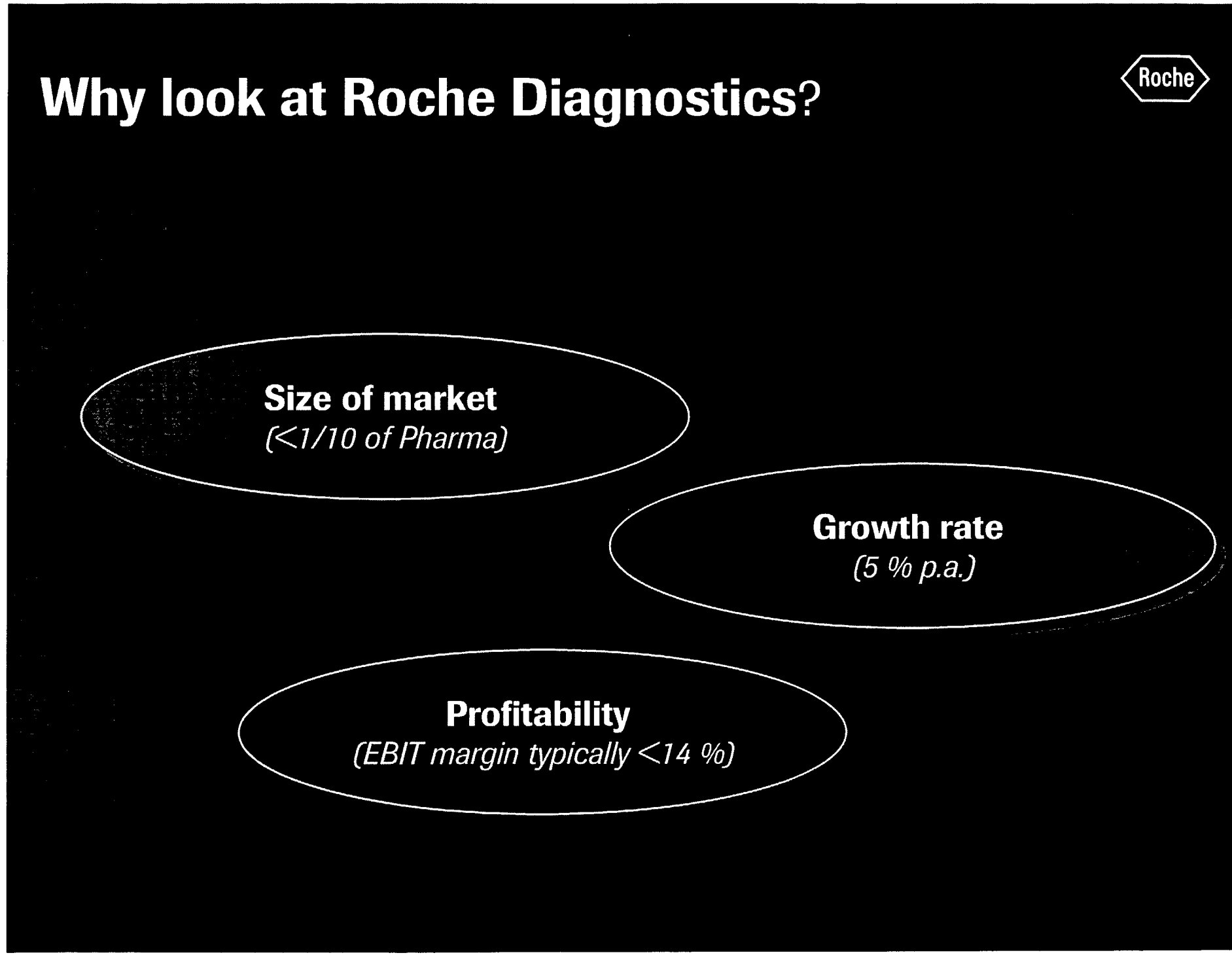
Roche

Diagnostics – innovation and the business case

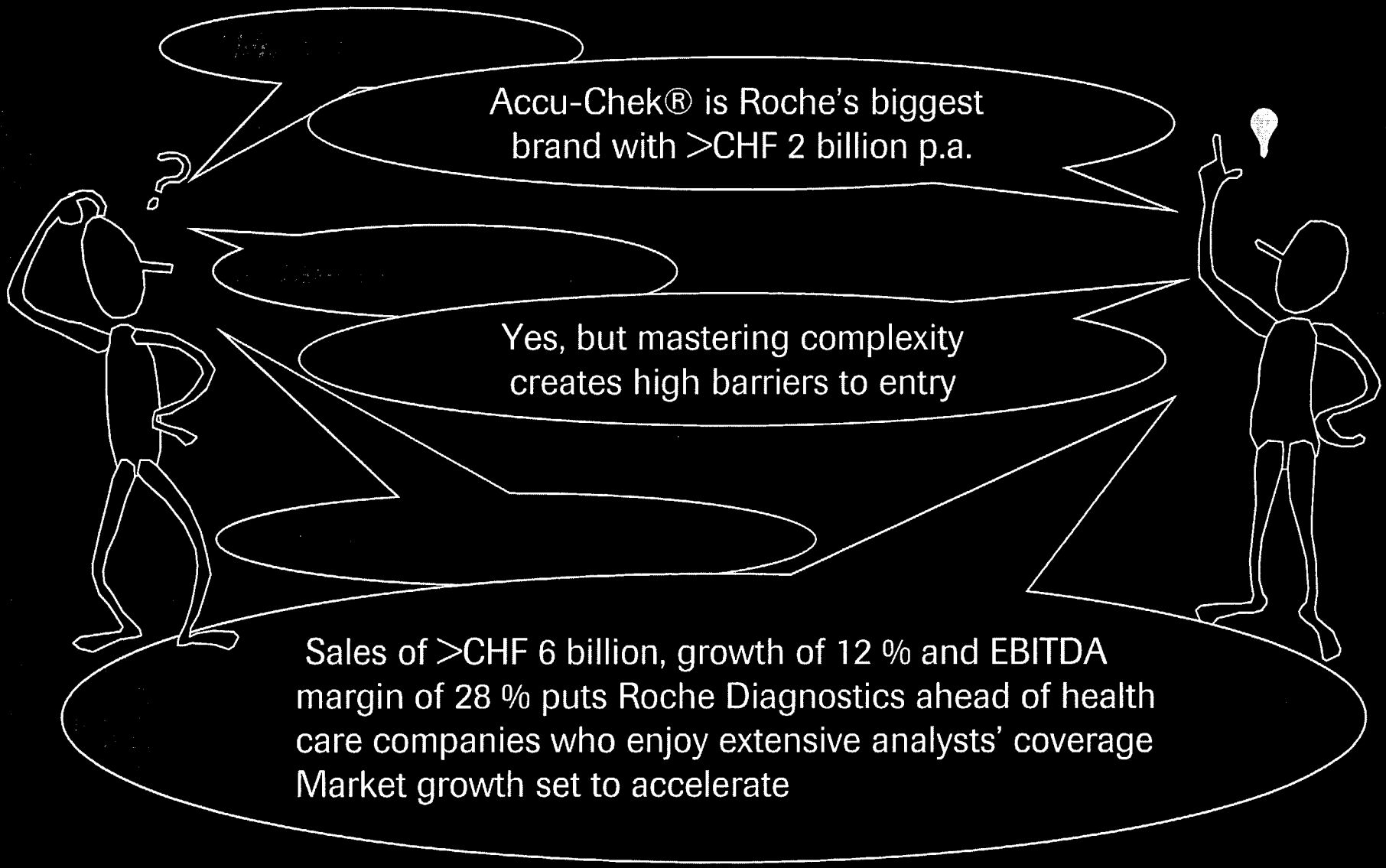
Pharmaceuticals – custom-tailored treatment

Integrating Health Care – others talk, Roche does it today

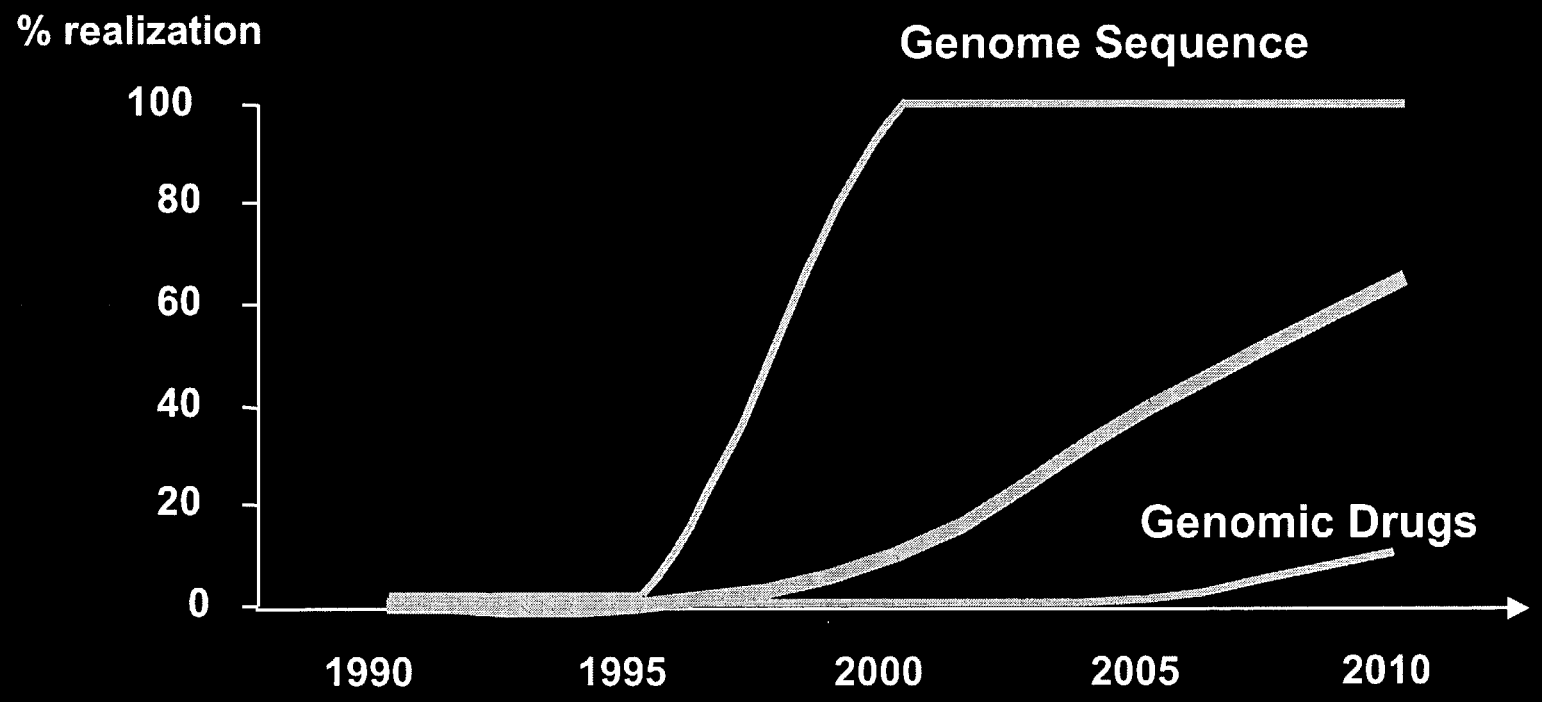
Why look at Roche Diagnostics?



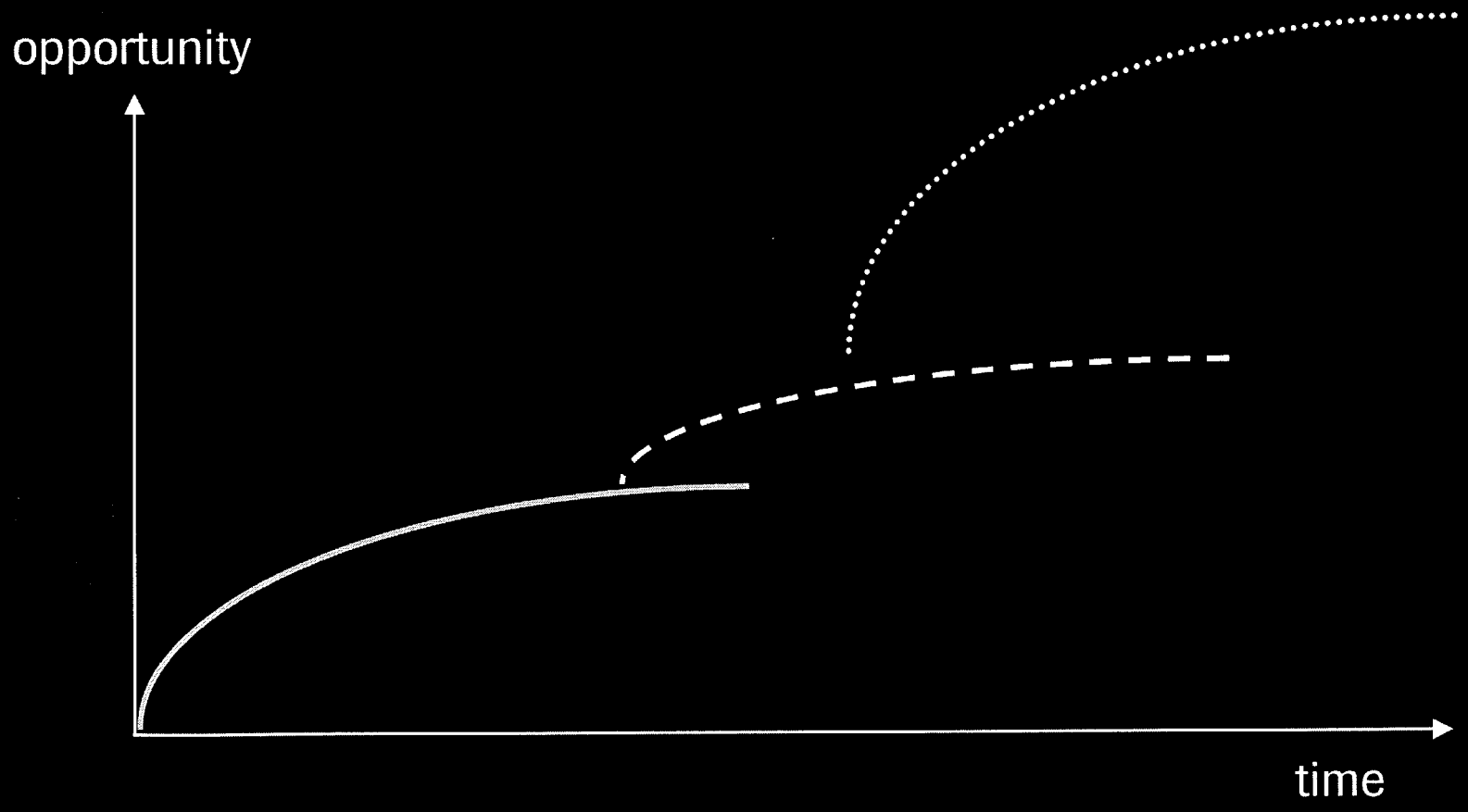
Why look at Roche Diagnostics?



Drivers accelerating market growth

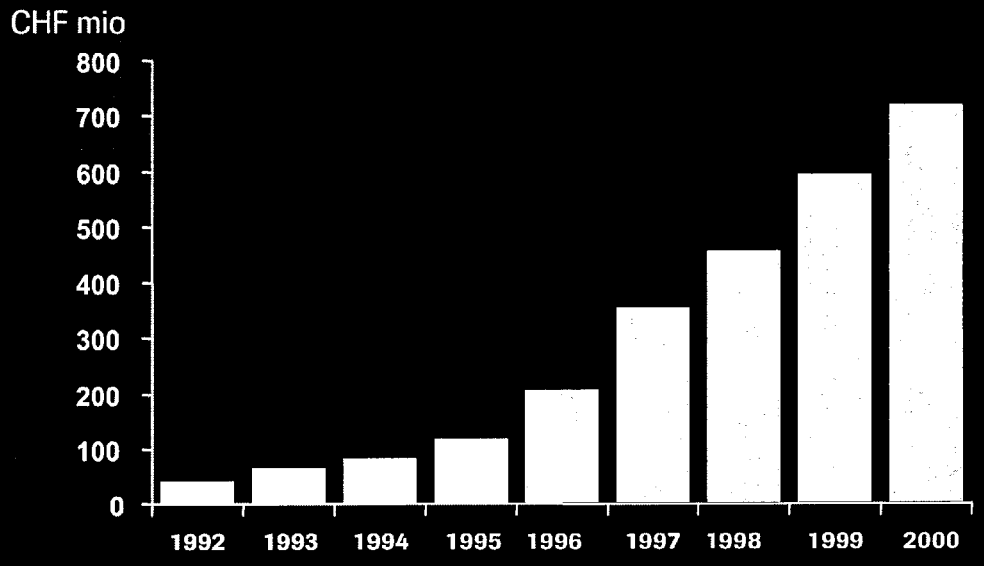


Drivers accelerating market growth

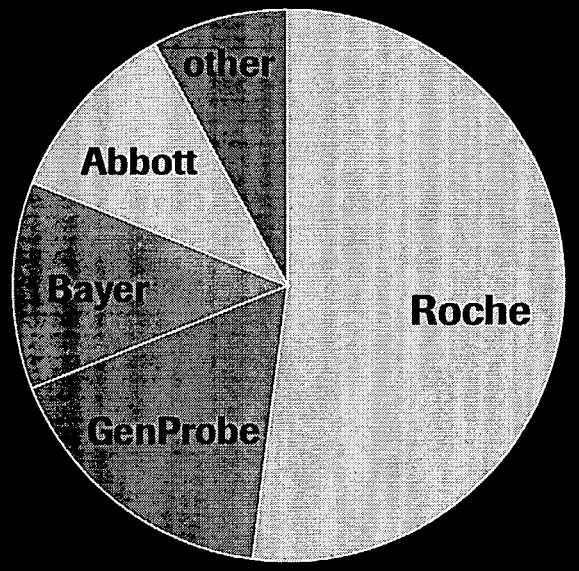


Roche PCR sales and market share

sales



in-vitro diagnostics market share



CHF 1.5 bn

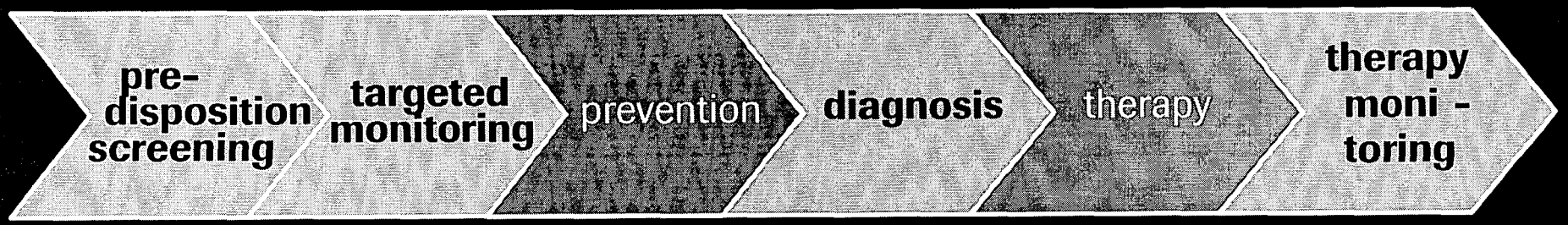
- 9 years since Roche acquired PCR technology
- Routine tool for the research and diagnostic labs
- PCR business continues to grow 20 % annually

Diagnostics success

- **Superior technology**
  - carryover control
  - internal control to detect inhibition
  - quantitative standard: accuracy
  - ultrasensitivity
  - international units
  - continual upgrades of performance
- **Automation of in-vitro diagnostics**
  - COBAS AMPLICOR - 1995
  - COBAS AMPLIPREP - 2000

Drivers accelerating market growth

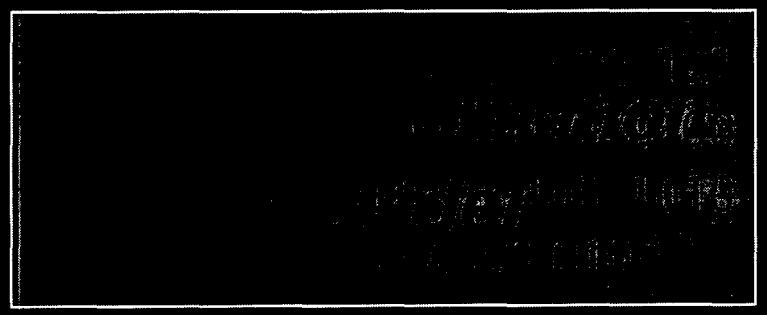
The scope of diagnostic products is ...



Roche Diagnostics

Roche

seller of instruments and reagents

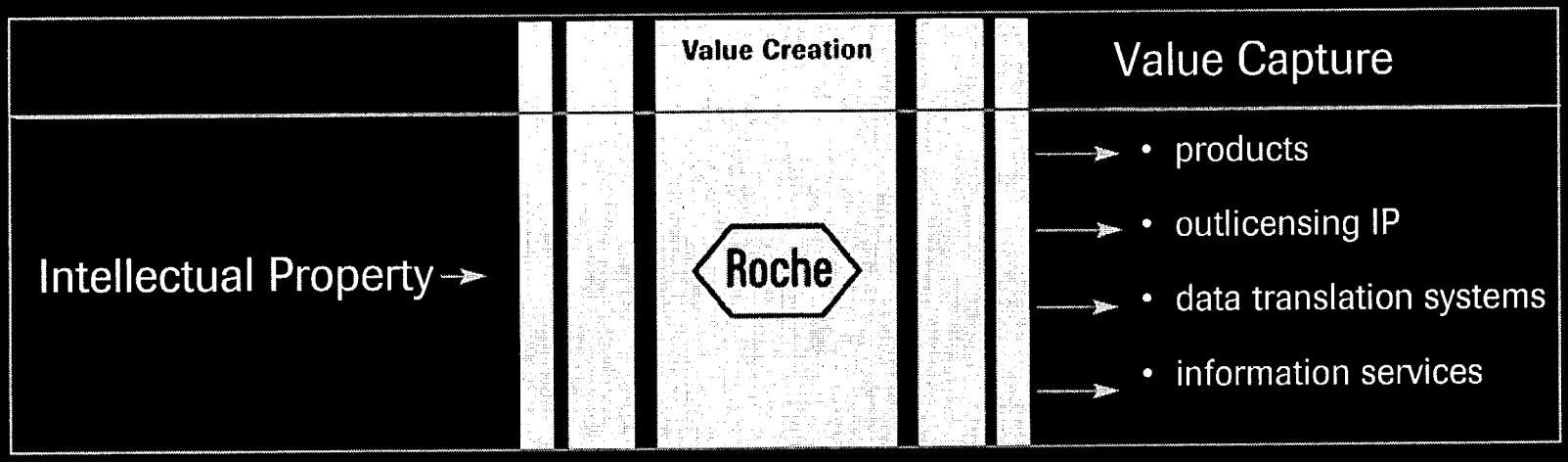


industrial age model

information age paradigm

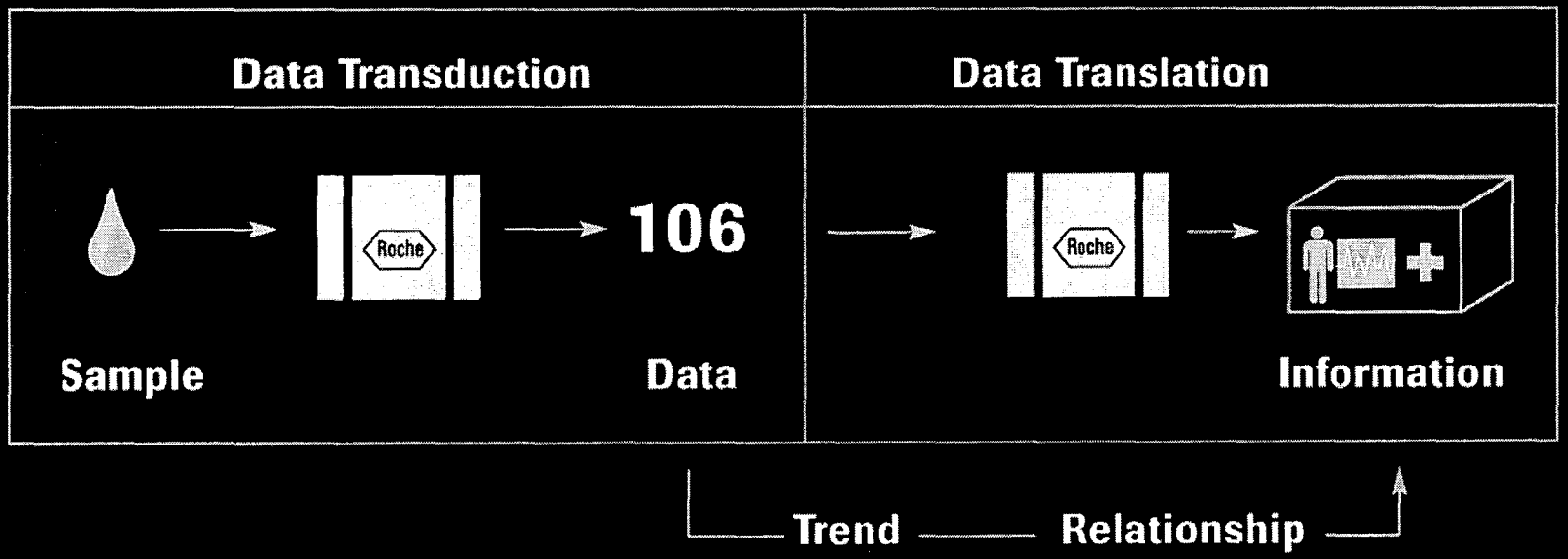
Our strategy
Capturing future value

Roche Diagnostics future business model



Actionable health information

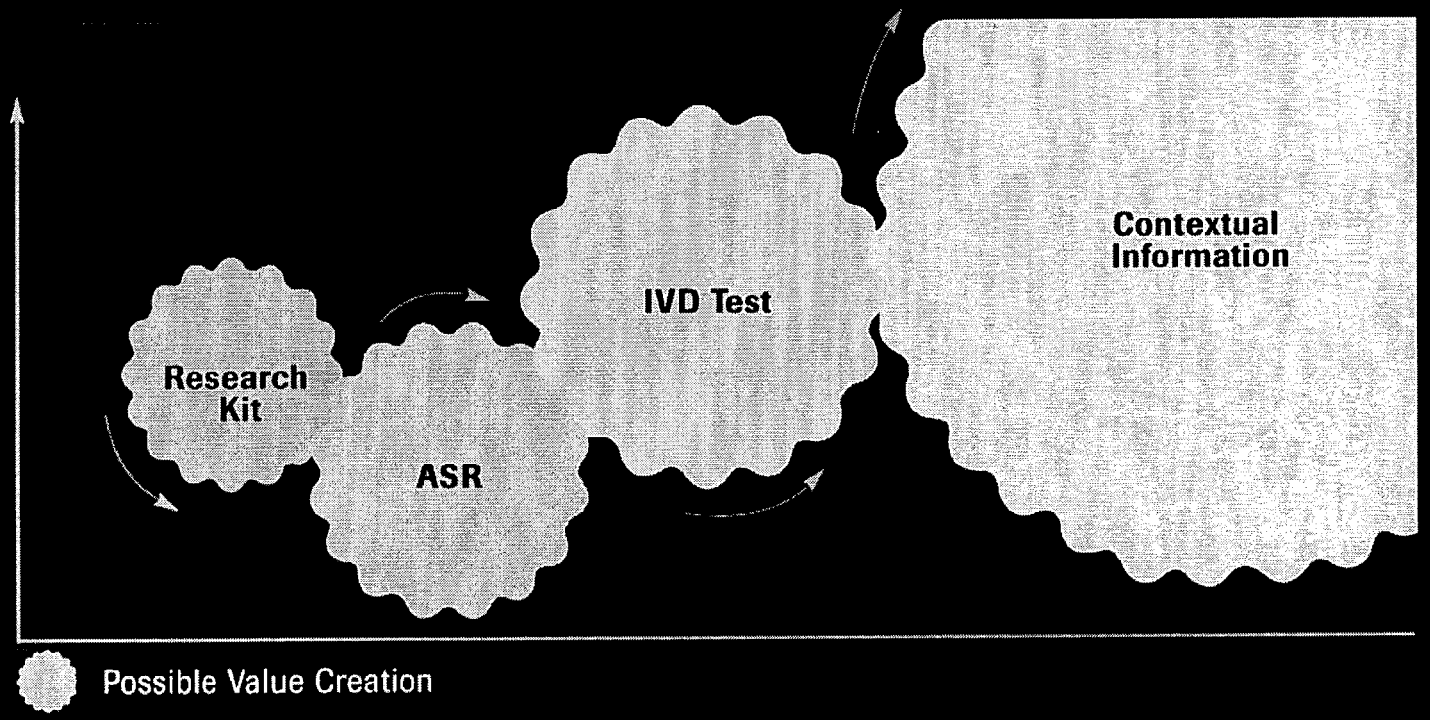
Supplementing data transduction systems with data translation systems



Strategy

Actionable health information

Driving value creation

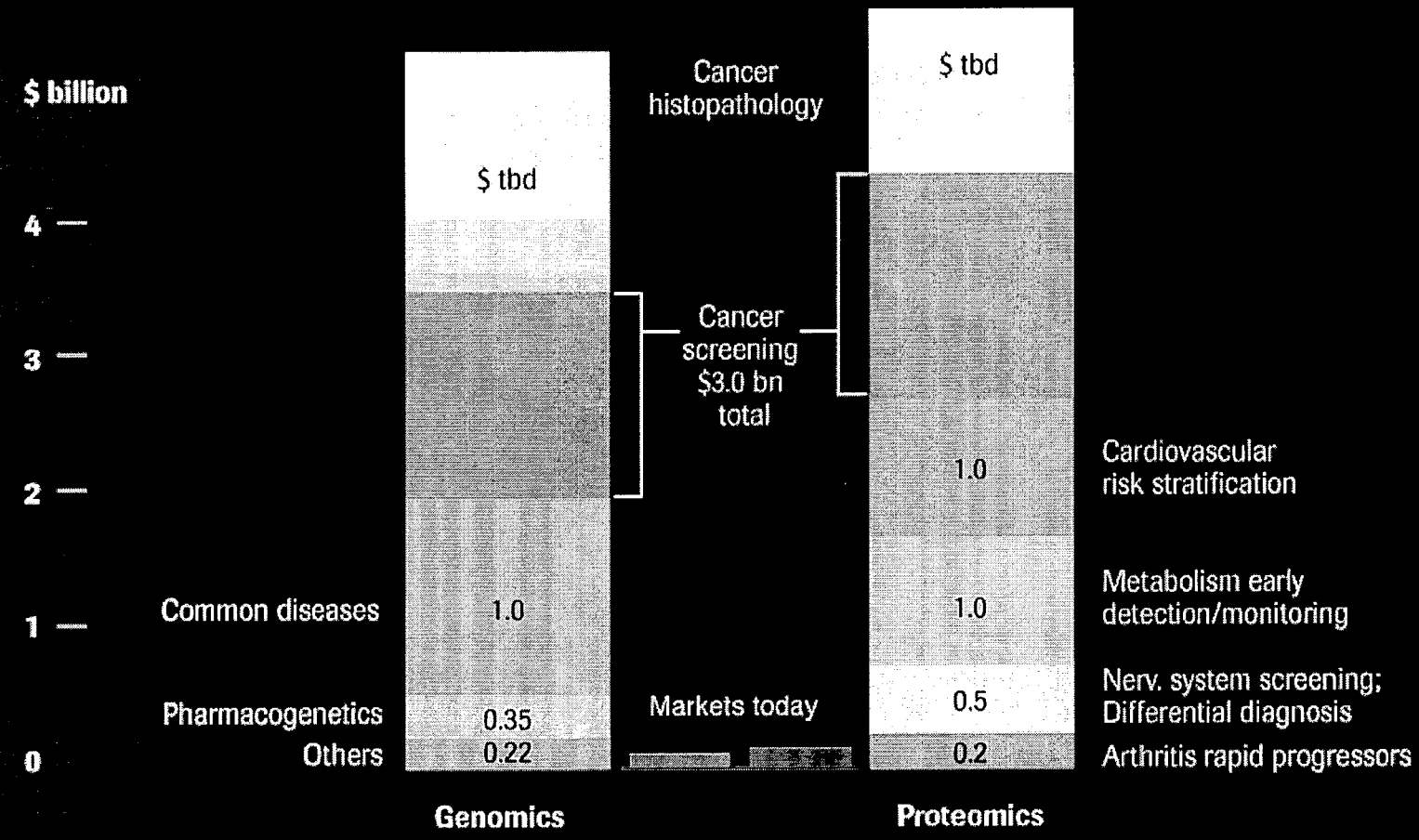


Possible Value Creation

ASR = analyte specific reagent
IVD = in vitro diagnostics

Genomics and proteomics markets in 2010

Explosion of revenues expected



Subsegments: monogenetic diseases $100m
paternity $50m
forensic $45m
HLA $35m

Source: Roche estimates

Roche

Diagnostics – innovation and the business case

Integrating Health Care – others talk, Roche does it today

Roche *Genetics* (& Genomics)

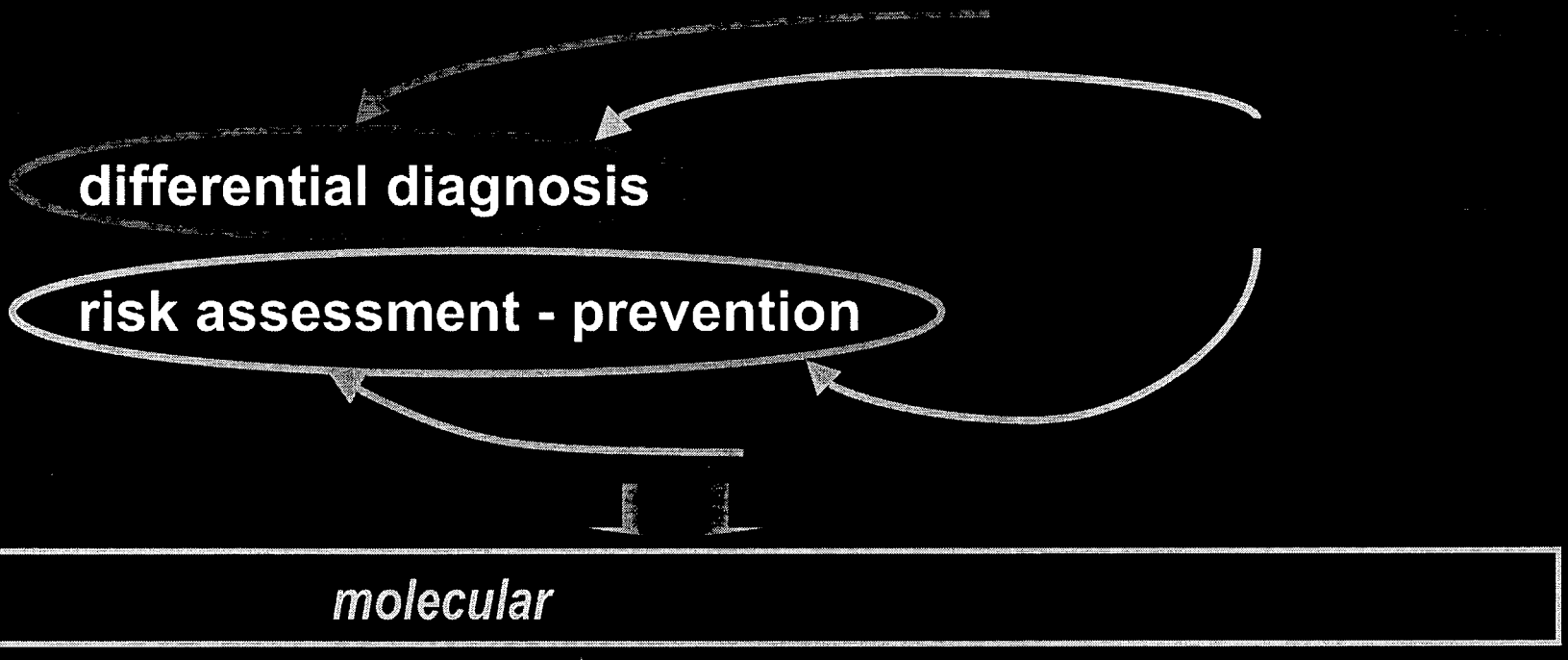
GOALS

- Short/mid-term: pharmacogenetics
- Mid-term: pharmaco-/toxicogenomics
- Long-term: new causative drug target/pathway discovery

Impact of genetics on medicine

Roche

historical drivers of medical progress:



clinical disease definition
clinical diagnosis

imaging: 1980-2000

→

Pharmacogenetics: malignant melanoma

α-interferon is a mainstay of MM therapy, but

- just 20-30% of MM population respond to α-interferon (INF- α) R_x
- currently only high-risk MM patients receive INF-α therapy

  - increase effectiveness and cost-efficacy of treatment
  - improve quality-of-life for non-responders (no risk of side effects)
  - **increase market by making use of INF-α compelling and standard practice at earlier stages of disease**

Interferons in malignant melanoma

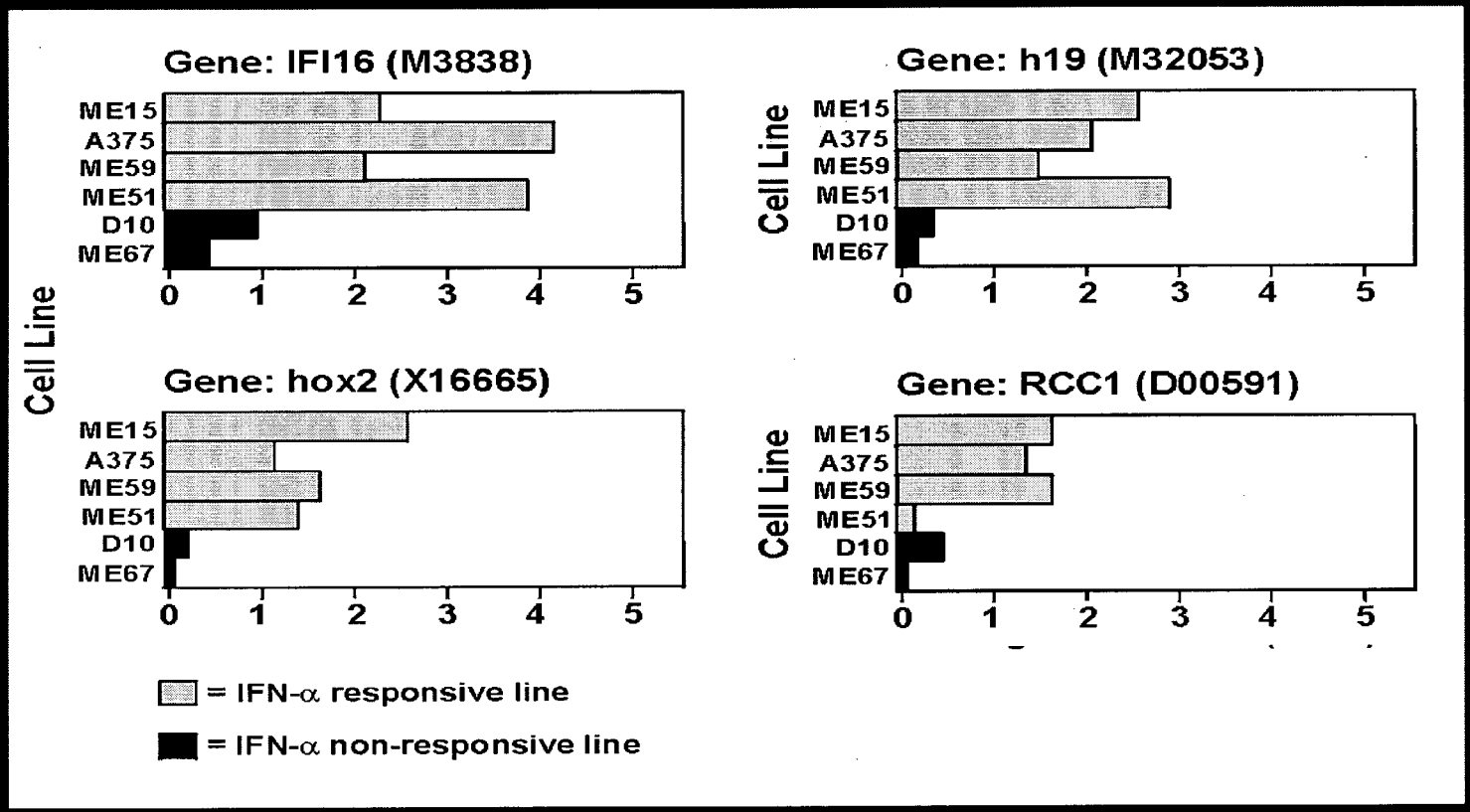
Roche

α

HOW IT'S DONE

- Cultured cell lines from 4 responders' and 2 non-responders' tumors
- Measured comparative gene expression of ~10,000 genes using gene chip technology
- Analyzed for patterns of differential gene expression characteristic for the two sets of cell lines

Interferons in malignant melanoma



Among 10.000 genes:

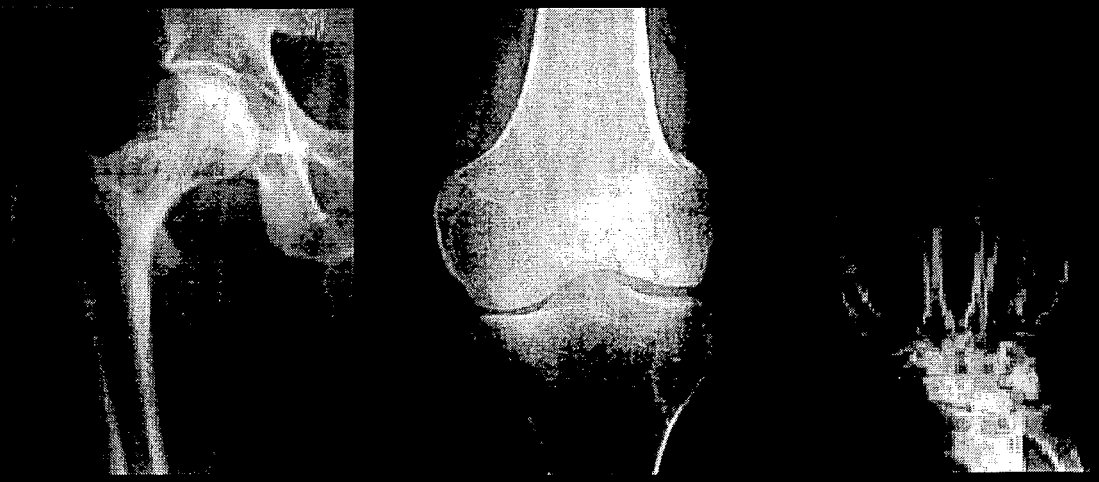
Responders' cell lines with 4 over-expressed genes

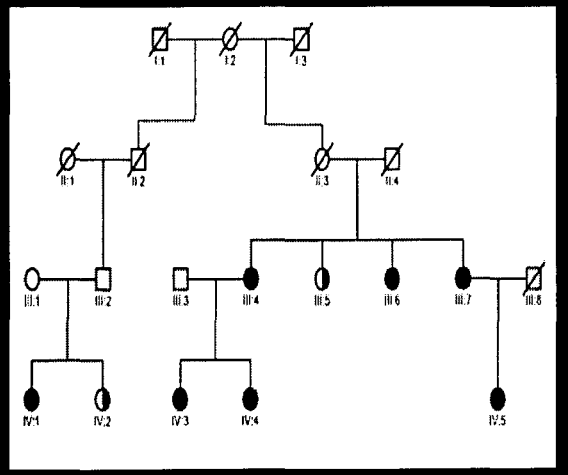
- consistently
- significant differences

Roche - deCODE Alliance

- 12 diseases, 4 indication areas:
  - cardiovascular diseases
  - inflammatory diseases
  - metabolic diseases
  - CNS-psychiatric diseases
- Commitment to rapidly integrating discoveries into Roche projects
- Results to date
  - 6 milestones announced, 1999-2001: osteoarthritis, stroke, Alzheimer's disease, osteoporosis, type 2 diabetes, COAD
  - several additional milestones still to be announced

deCODE - Roche discoveries



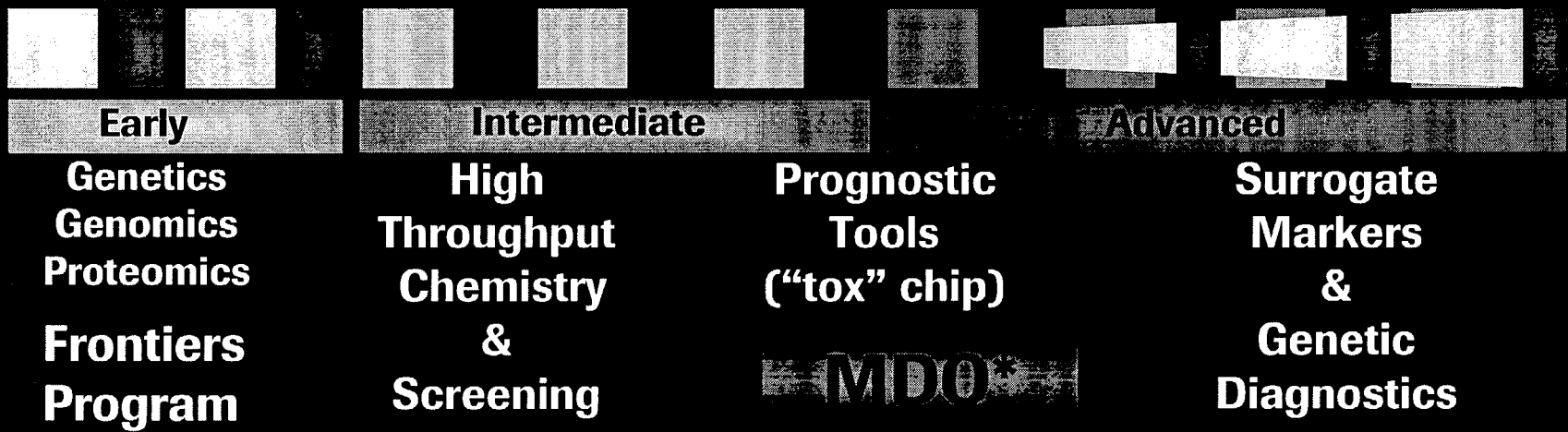


- Hip-, knee-, wrist-OA: one disease or separate diseases?
- deCODE studies found 3 gene locations linked to OA
  - 1 each specific for hip and wrist OA in some families;
  - 3rd that appears to contribute to all 3 entities equally
- Molecular diagnostic, not imaging, critical for development

Genetics, Genomics, and the Portfolio

	Pharmacogenetics	More patient-specific, more effective drug Rising importance of *in-vitro* diagnostics Integrated Health Care Products
	Pharmacogenomics **Toxicogenomics** **New Target Discovery**	**Earlier, better compound selection** **Earlier attrition of future failures** **New targets for diagnostics & therapeutics**
	New Target Discovery	**New targets for diagnostics & therapeutics** **Integrated Health Care Products**
	New Target Functional Assessment HGP data mining	"Validated" new targets for diagnostics & therapeutics for rapid portfolio entry

Optimizing research



Advanced Global Informatics

Strategic Research Alliances and Collaborations

*Multi-dimensional drug optimization

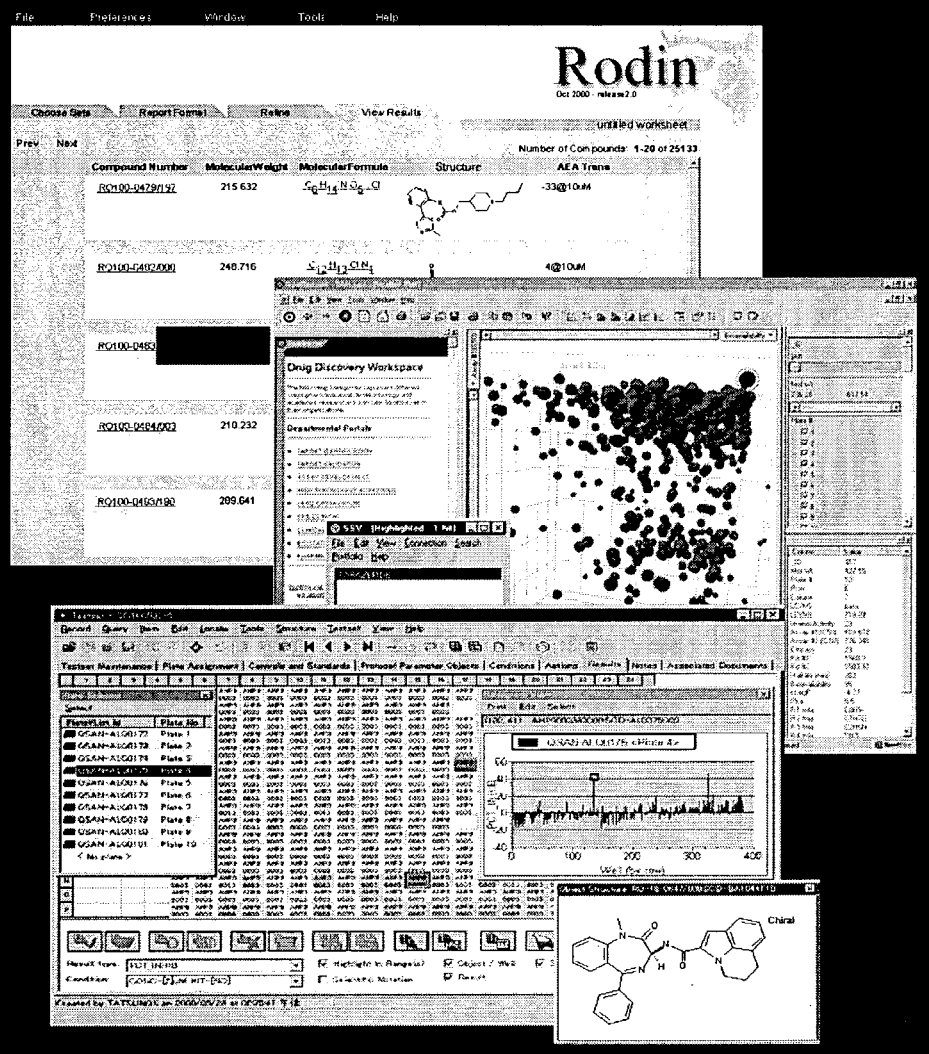
More effective tools

Roche

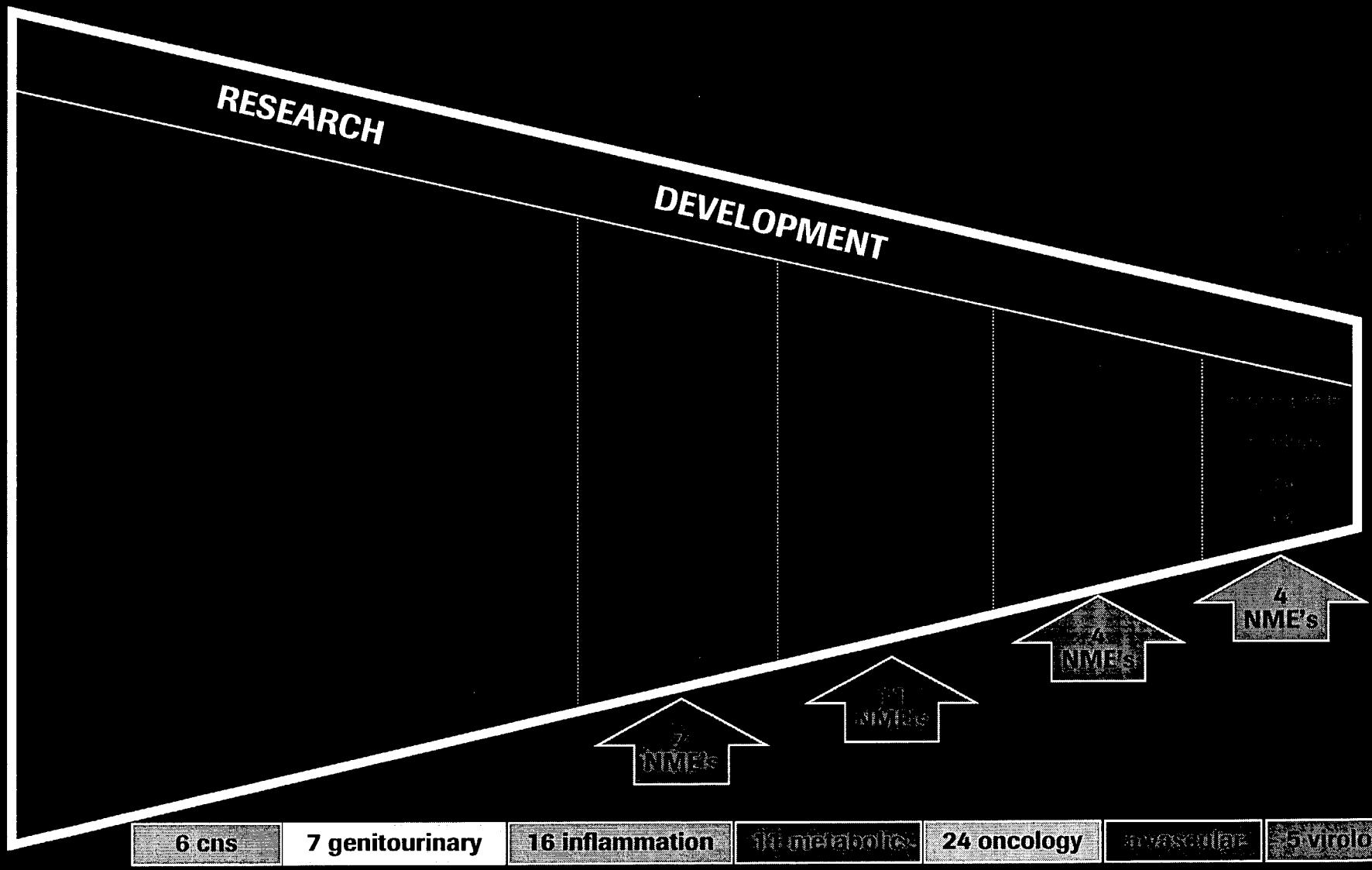
- **Description**
  - high-throughput testing earlier in the discovery process to select compounds with low likelihood for toxicity or pharmaco-kinetic problems
- **Impact**
  - higher success rate with regard to SAFETY
- **Expectation**
  - doubling number of launches in the mid-term
  - shift in portfolio shape

Advanced global informatics

- New information systems supporting new discovery technologies and processes
- Global installation & networks
- Information sharing across all Research Centers
- Generation of critical new knowledge



Fueling the R&D pipeline at Roche



Roche managed pipeline status at June 2001

* in preparation for phase I
** in preparation for phase II

Roche R&D pipeline

46 NME's focused primarily in 7 therapy areas

- R1124 emesis
- R1164 osteoporosis
- R1395 solid tumors
- R1458 type 2 diabetes
- R1065 (5HT2c) obesity
- R1273 solid tumors
- R1435 deep vein thrombosis
- antitumor (G)
- TF mab (G)
- antifungal (B)

- R411 asthma
- R545 overactive bladder
- R594 rheumatoid arthritis
- R665 COPD
- R667 emphysema
- R673(NK1) depression /anxiety
- R701 overactive bladder
- R804 oncology
- R765* type 2 diabetes
- R1270* (levovirin) HCV
- R724 (T-1249) HIV
- antibiotic (B)
- psoriasis (B)
- migraine (P)
- endothelin antagonist (S)
- macular degeneration (G
- Anti-CD11a AB (G)

- R440 (CCI) solid tumors
- R450 (alpha 1 agonist) stress incontinence
- R483** (insulin sensitizer) type 2 diabetes
- R744 (new generation epo) anemia
- cephalosporin (B)
- eczema (B)
- SCLC (N)
- inflamm. bowel disease (G)
- E-26** (G)

- R420 (Pegasys) HCV
- R484 (Bonviva)osteoporosis
- R698 (T-20) HIV
- R1415 (Tarceva) oncology
- oncology (G)
- Xanelim (G)
- Xolair (G)
- Tracleer (G)
- TNKase (G)
- Thrombopoietin (G)

..... collaborations

opt-in opportunities

- Basilea (B)
- Genentech (G)
- Novus (N)
- Pozen (P)
- Speedel (S)

Genentech (without Roche opt-in but Roche benefits financially)

* in preparation for phase I

** in preparation for phase II

pipeline status at June 2001

Roche

Diagnostics – innovation and the business case

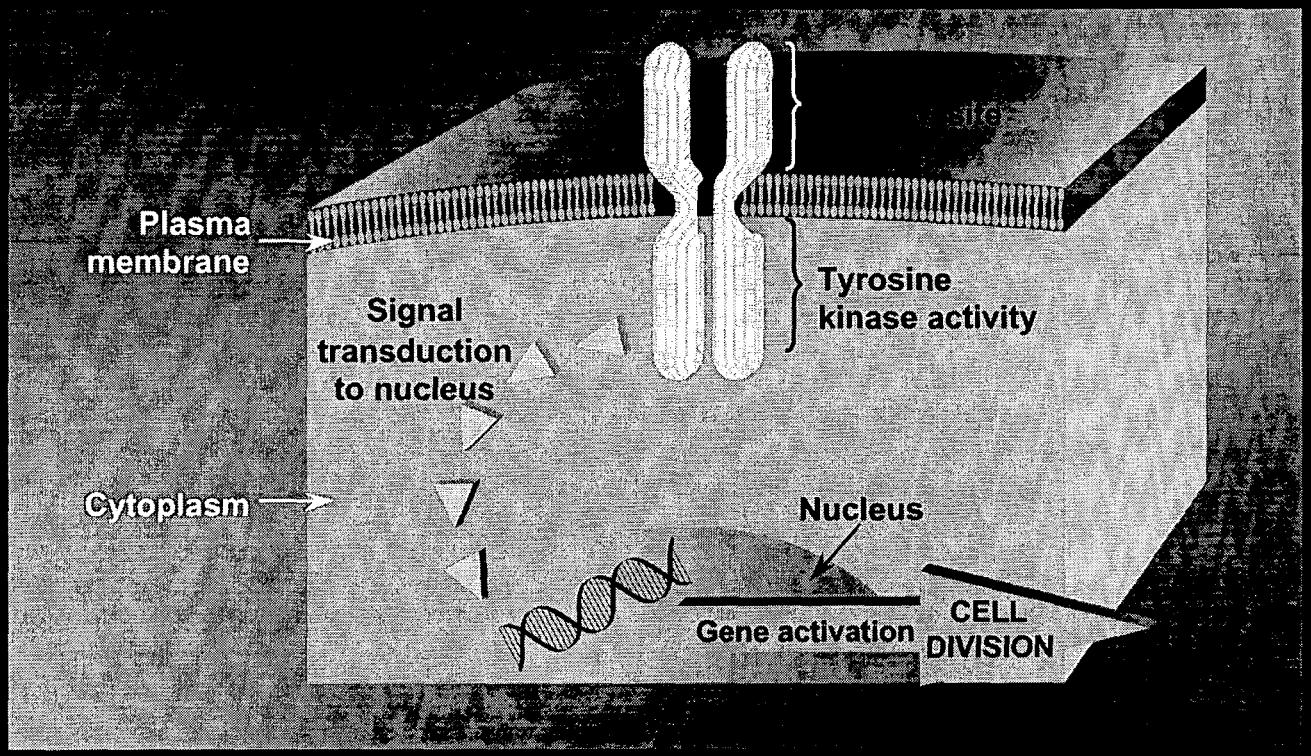
Pharmaceuticals – custom-tailored treatment

Breast cancer epidemiology

Breast Cancer - the facts:

- + 250,000 cases diagnosed annually in Europe
- + 100,000 deaths per year in Europe -370,000 worldwide
- 1 in 10 women will develop breast cancer in her lifetime
- leading cause of death in women 35 to 55
- second leading cause of death in women

HER2 receptor



HER2 is :

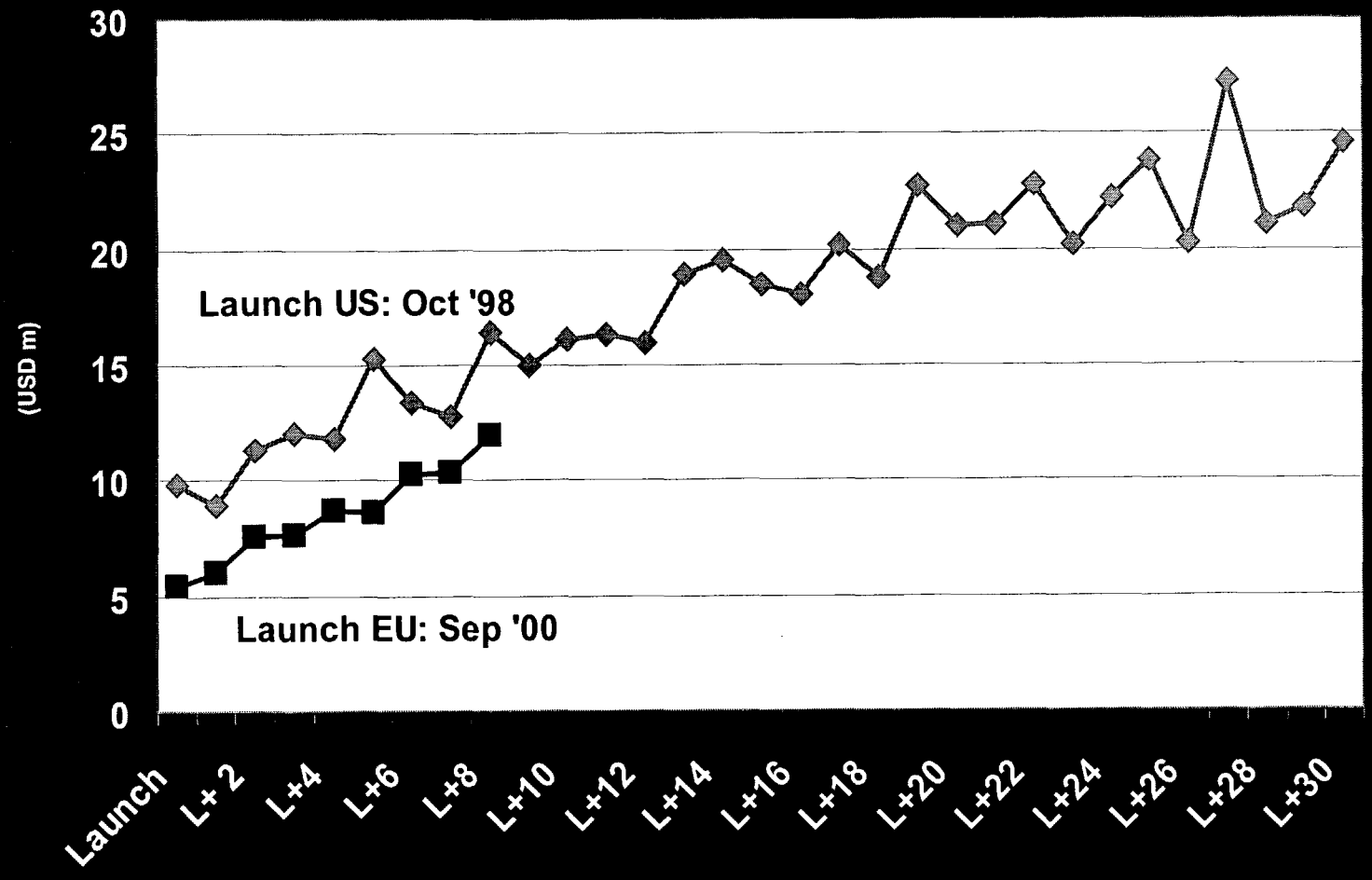
- 15 to 20 % of breast cancer tumors show high HER2 level
- higher incidence of metastases, drug resistance, shorter survival 3 vs. 7 yrs

HERCEPTIN®

Roche

- Herceptin selectively binds to the overproduced receptors:
  - blocking the mechanism by which the cancer cells grow ( ), and
  - inducing cell killing by the immune system ( ).
- Herceptin
  - Improves survival and time to disease progression
  - Improves response rate and duration
  - Fewer side effects than traditional chemotherapy
- "Hurdles" in Herceptin's way:
  - Only 15-20 % of all BC patients eligible
  - Use of in-vitro diagnostic test necessary

HERCEPTIN®


30
25
20
15
10
5
0
(USD m)
Launch US: Oct '98
Launch EU: Sep '00
Launch
L+2
L+4
L+6
L+8
L+10
L+12
L+14
L+16
L+18
L+20
L+22
L+24
L+26
L+28
L+30

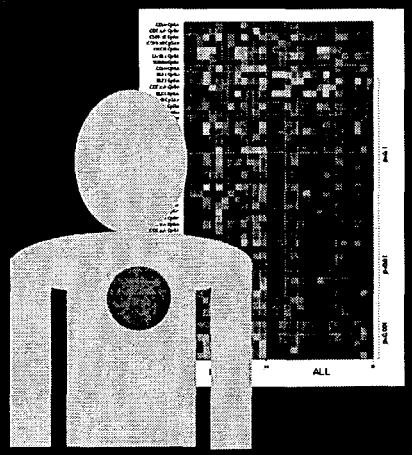
Herceptin®
Trastuzumab
anti-HER2 monoclonal antibody

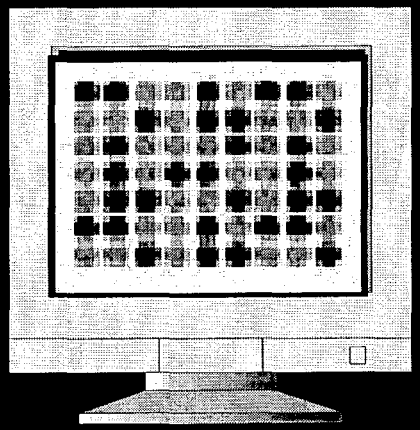
Lifecycle Management

Roche

- Approved in over 60 countries
- Increasing penetration in metastatic breast cancer therapy
  - combination with other anticancer agents, e.g. hormonal therapy
  - treatment beyond progression
- Adjuvant breast cancer (ABC): largest line extension opportunity
  - Three large ABC studies ongoing
  - First approval expected 2006

Integrated Cancer Care Unit (ICC)



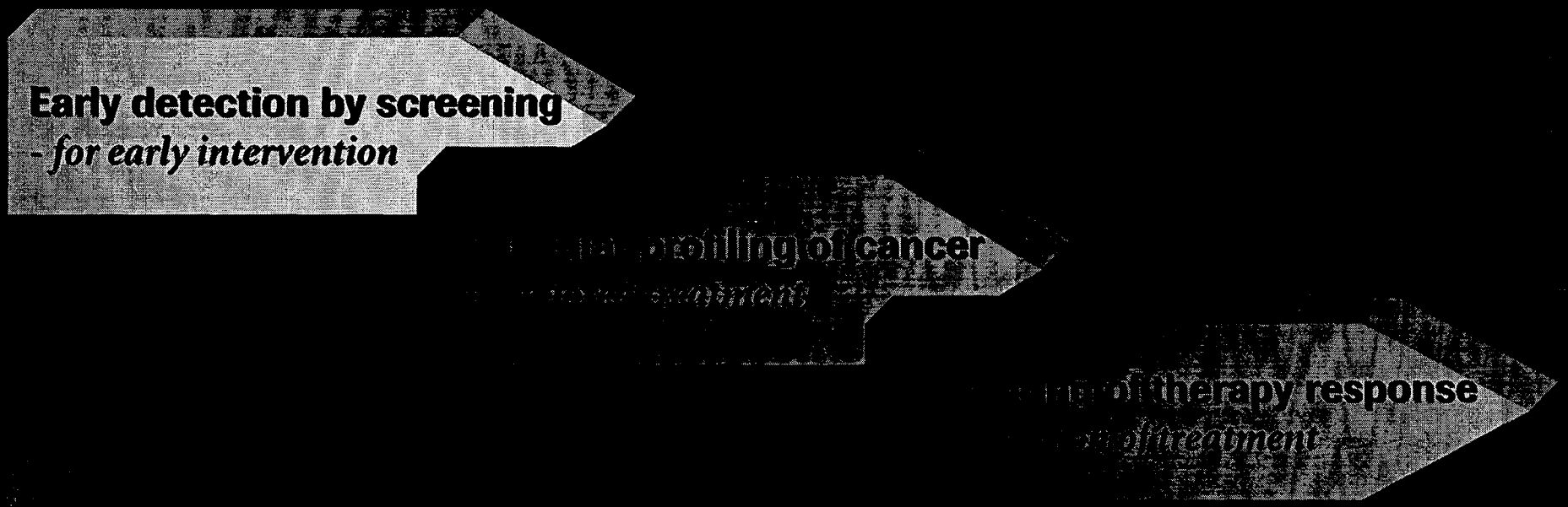


Contextual Diagnostic Information

↓

Treatment Algorithms

ICC - Targeting of Diagnostic Gaps in Cancer



Evolution of Roche's cancer diagnostics portfolio



PSA

IHCS programs:
Her2: Herceptin
enzymes: Xeloda

tumormarker (n=12)
molecular markers of residual disease
(translocations)

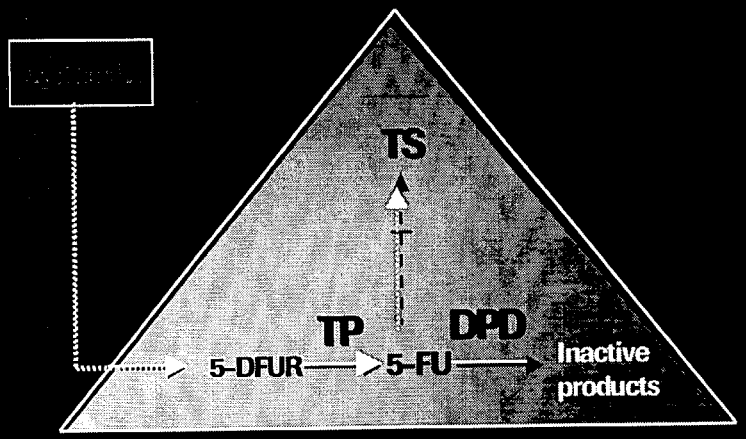


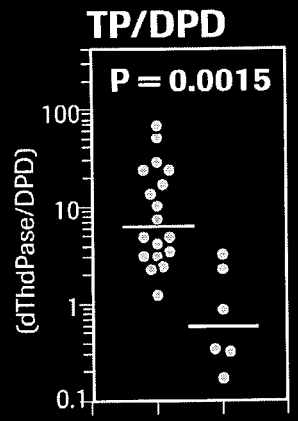
where therapies do exist

screening with array platforms

predictive tests : patient management
- risk of metastasis
- drug response and toxicity
- contextual information for therapy guidance

IHCS program on Xeloda





impact on business: faster/higher market shares (better response rates)
extention of indication („molecular responder profiles“)

Integrated Health Care:
Diagnostics is the critical link

Roche

from today...

diagnosis → therapy → therapy monitoring

...into the future

predisposition screening → targeted monitoring → prevention → diagnosis → therapy → therapy monitoring

Conclusion

- increasingly important role of and reliance on *in-vitro* diagnostics
- further developments of specific medicines targeting the molecular cause of disease
- the historic disconnect between
  and
  integrated health care approach
  will be closed by an

Roche

Roche is uniquely placed to capitalize on the Health Care Revolution

Roche Holding Ltd

15 August 2001 - Half-Year Presentation to Investors

As Posted on Roche.com

Furnished Under Rule 12g3-2(b)
Roche Holding 82-3315

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Pharmaceuticals

This presentation contains certain forward-looking statements. These forward-looking statements may be identified by words such as "believes", "expects", "anticipates", "projects", "intends", "should", "seeks", "estimates", "future" or similar expressions or by discussion of strategy, goals, plans or intentions. Various factors may cause actual results to differ materially in the future from those reflected in forward-looking statements contained in this presentation among others: (1) pricing and product initiatives of competitors; (2) legislative and regulatory developments and economic conditions; (3) delay or inability in obtaining regulatory approvals or bringing products to market; (4) fluctuations in currency exchange rates and general financial market conditions; (5) uncertainties in the discovery, development or marketing of new products or new uses of existing products; (6) increased government pricing pressures; (7) interruptions in production; (8) loss of or inability to obtain adequate protection for intellectual property rights; (9) litigation; (10) loss of key executives or other employees; and (11) adverse publicity or news coverage.

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Group Financials at H1 2001

Roche

Group profits

Financial statements v. adjusted

Group operating performance

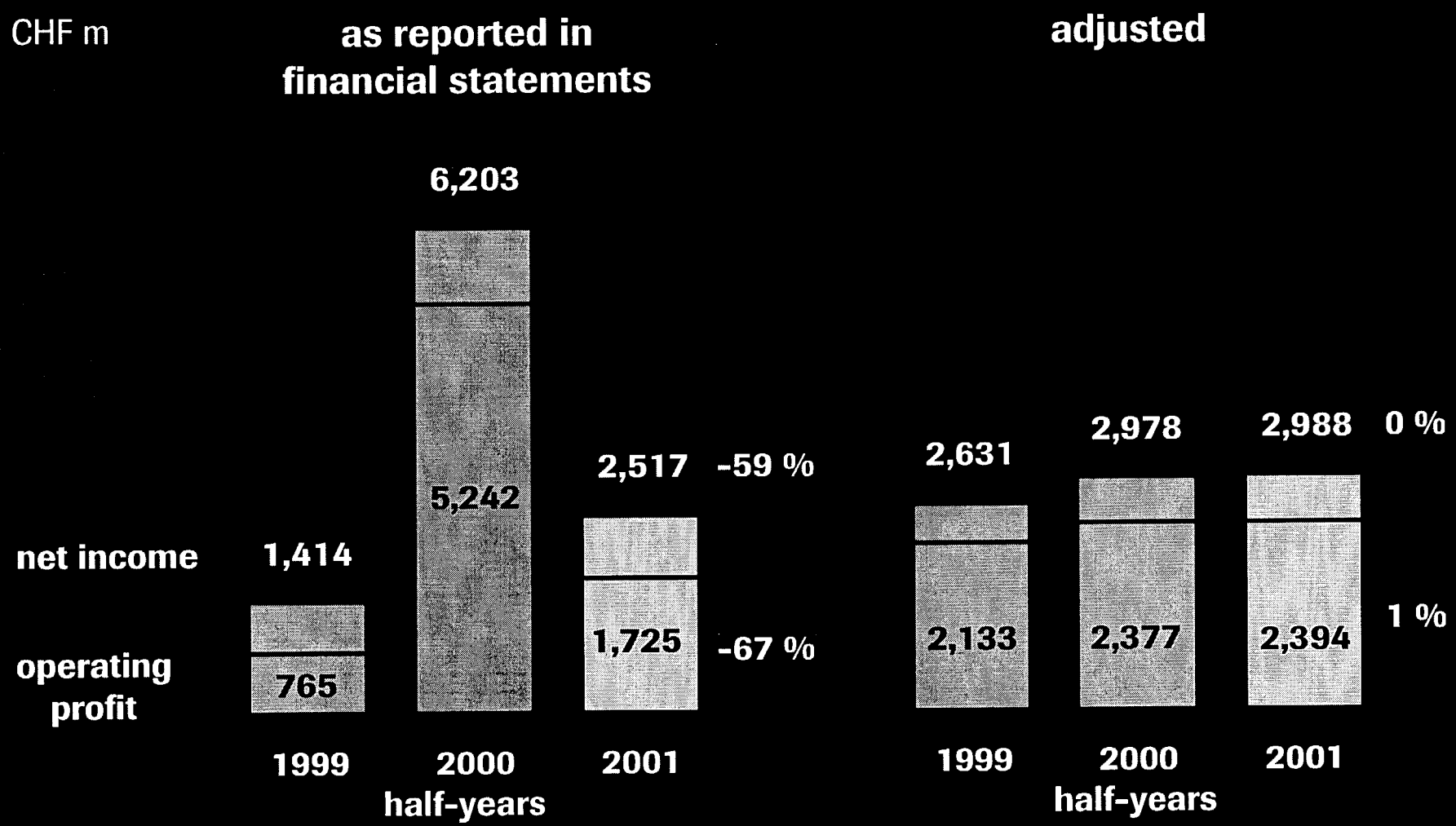
Reshaping Pharmaceuticals: costs and savings

Non-operating performance

Cash Flow and Balance Sheet

Group profits

Profits maintained on an adjusted basis



The adjusted result

Improving visibility of the underlying business

Adjusted results **the following:**

	CHF m
	net income effect
H1 2000	
• Givaudan spin-off	-108
• Accounting policy changes including impairments	-252
• Gain on sale of Genentech shares	-3,949
• Charges related to Genentech acquisition in 1999	124
• Income tax and minority interest effects	960
Total difference to financial statements	*-3,225*
H1 2001	
• Pharmaceuticals Division restructuring costs	669
• Income tax effect	-198
Total difference to financial statements	*471*

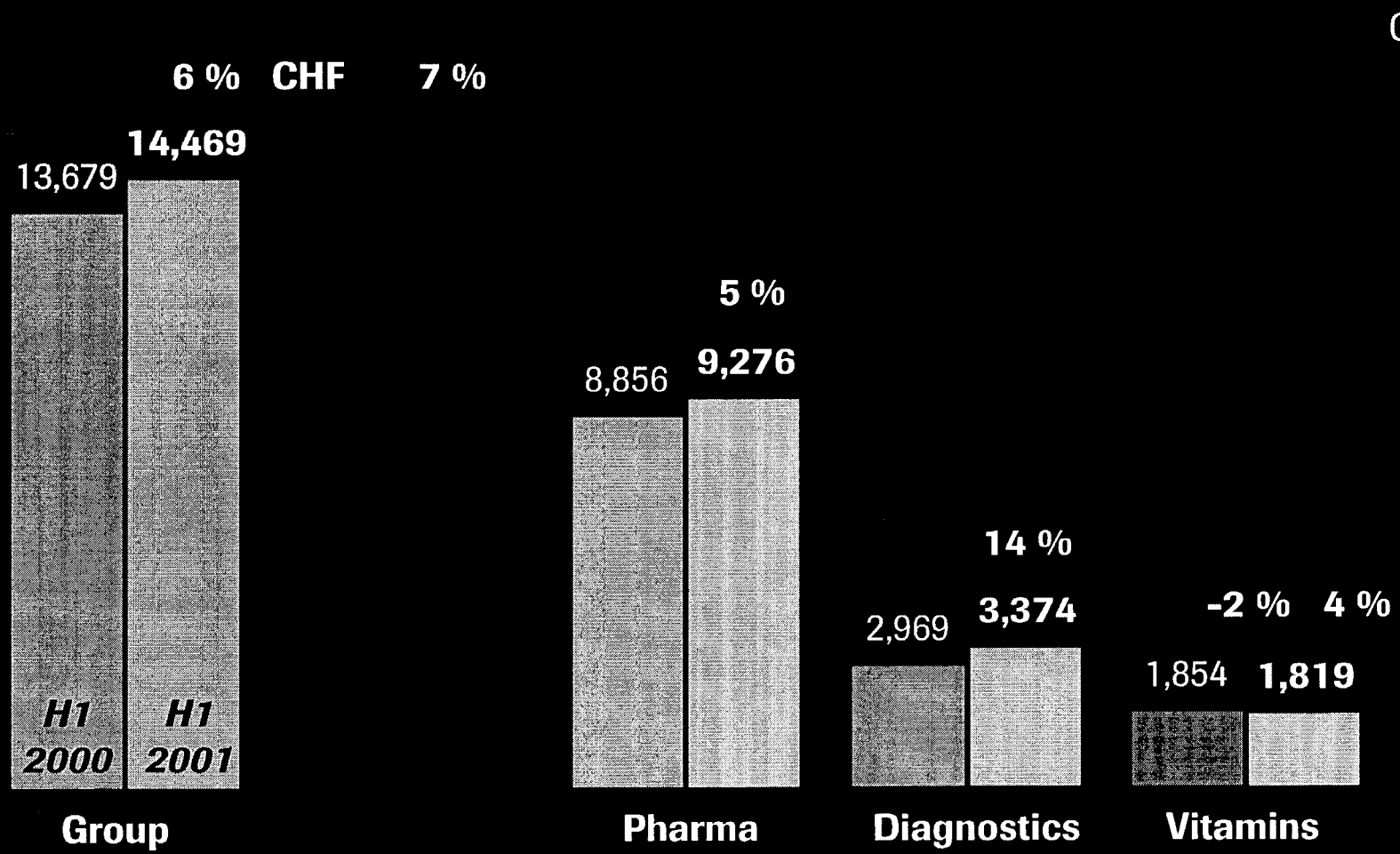
Group operating performance (adjusted)

Improved cost structure

CHF m

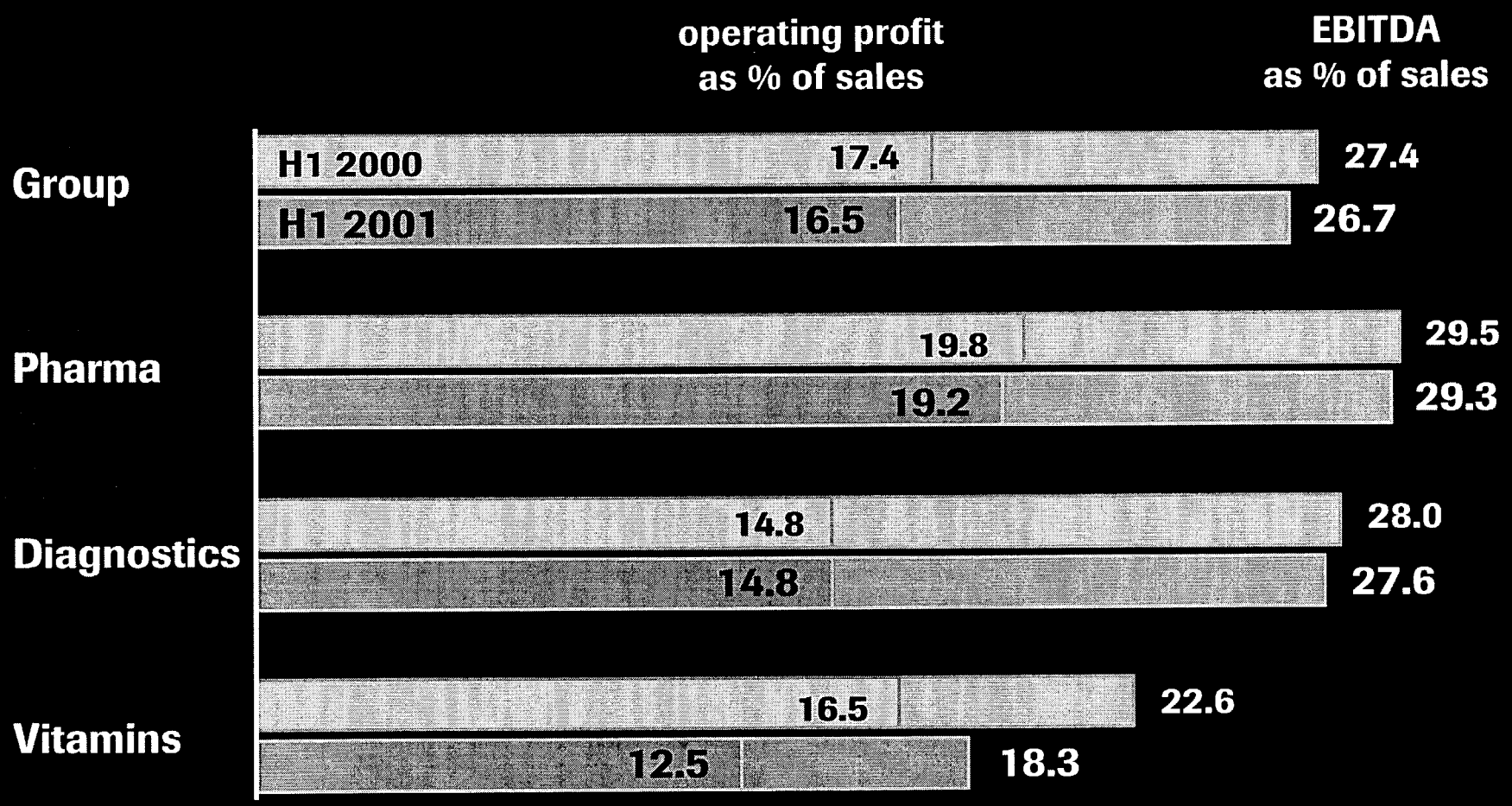
	H1 2001	% sales	H1 2001 v. H1 2000	
sales	14,469	100	790	+ 6 %
cost of sales	-4,274	-30	-155	+ 4 %
M & D	-4,132	-29	-88	+ 2 %
R & D	-1,955	-14	-55	+ 3 %
administration	-606	-4	-30	+5 %
amortization	-779	-5	-54	+7 %
other operating expense, net	-329	-2	-391	n/a
operating profit	2,394	17	17	+1 %

Sales (adjusted)
Growth in all Divisions



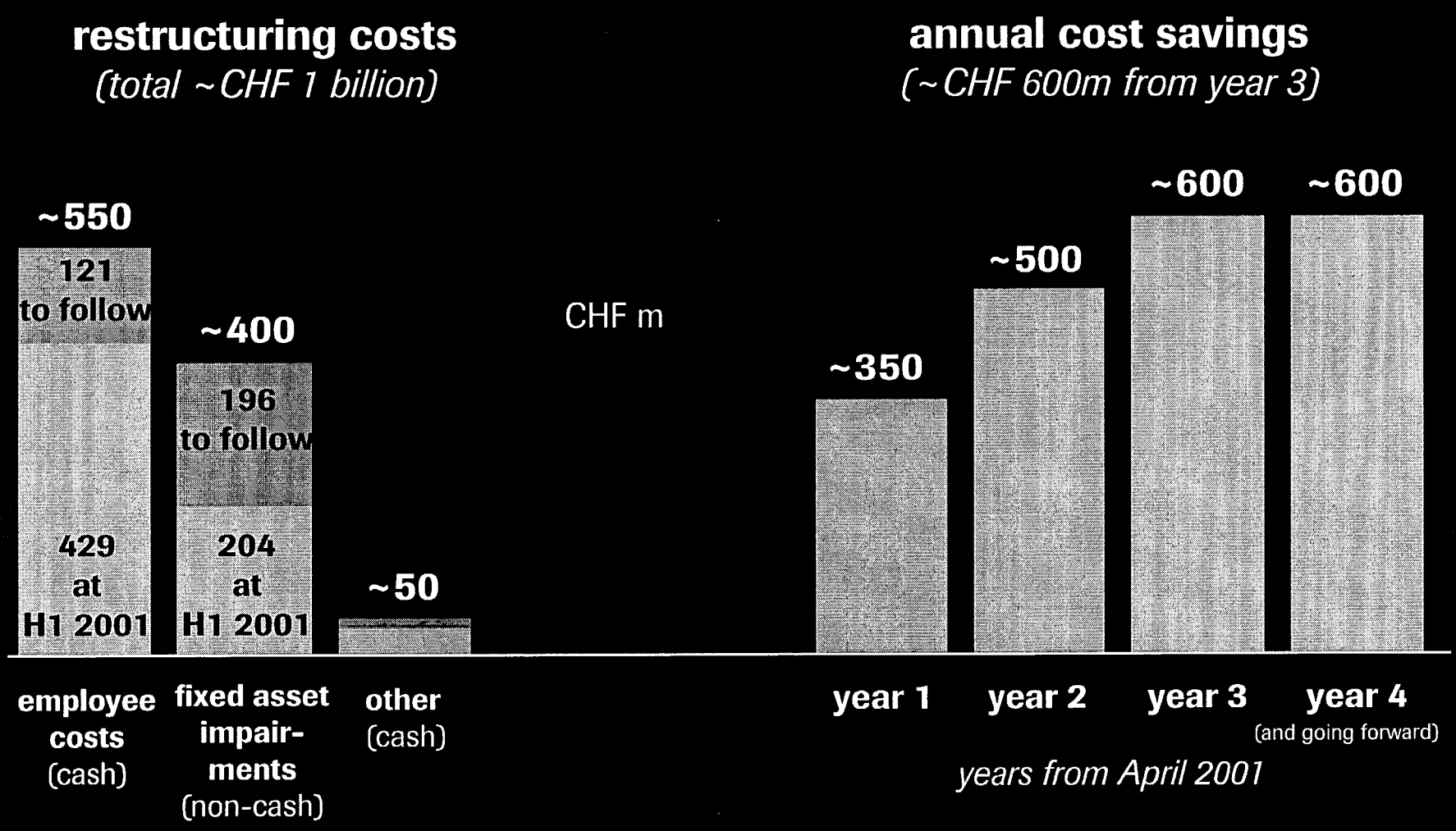
Profitability (adjusted)

Pharma and Diagnostics margins largely maintained



Reshaping Pharmaceuticals

Cash savings exceed cash costs within two years



Non-operating performance (adjusted)

Increased financial income and taxes

CHF m

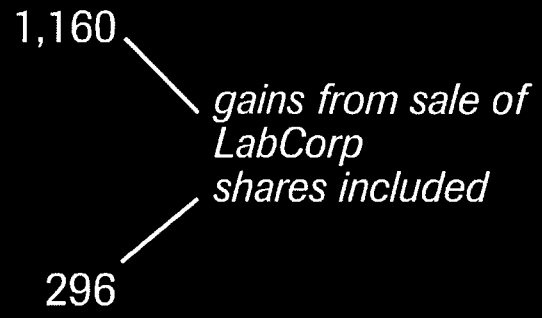
	H1 2001	H1 2000	change CHF m	change %
operating profit	**2,394**	**2,377**	**17**	**1**
financial income, net	1,472	1,229	243	20
income taxes	-890	-660	-230	35
tax rate in %	*23*	*18*		
minority interests	-24	29	-53	-
associated companies	36	3	33	-
net income	**2,988**	**2,978**	**10**	**0**
% of sales	*21*	*22*		

Financial income, net

Higher income including gains on LabCorp shares

H1 2001	CHF m
net income on marketable securities and investments	2,459
interest expenses	-746
exchange gains (losses), net*	-241
financial income, net	**1,472**
	+20 %

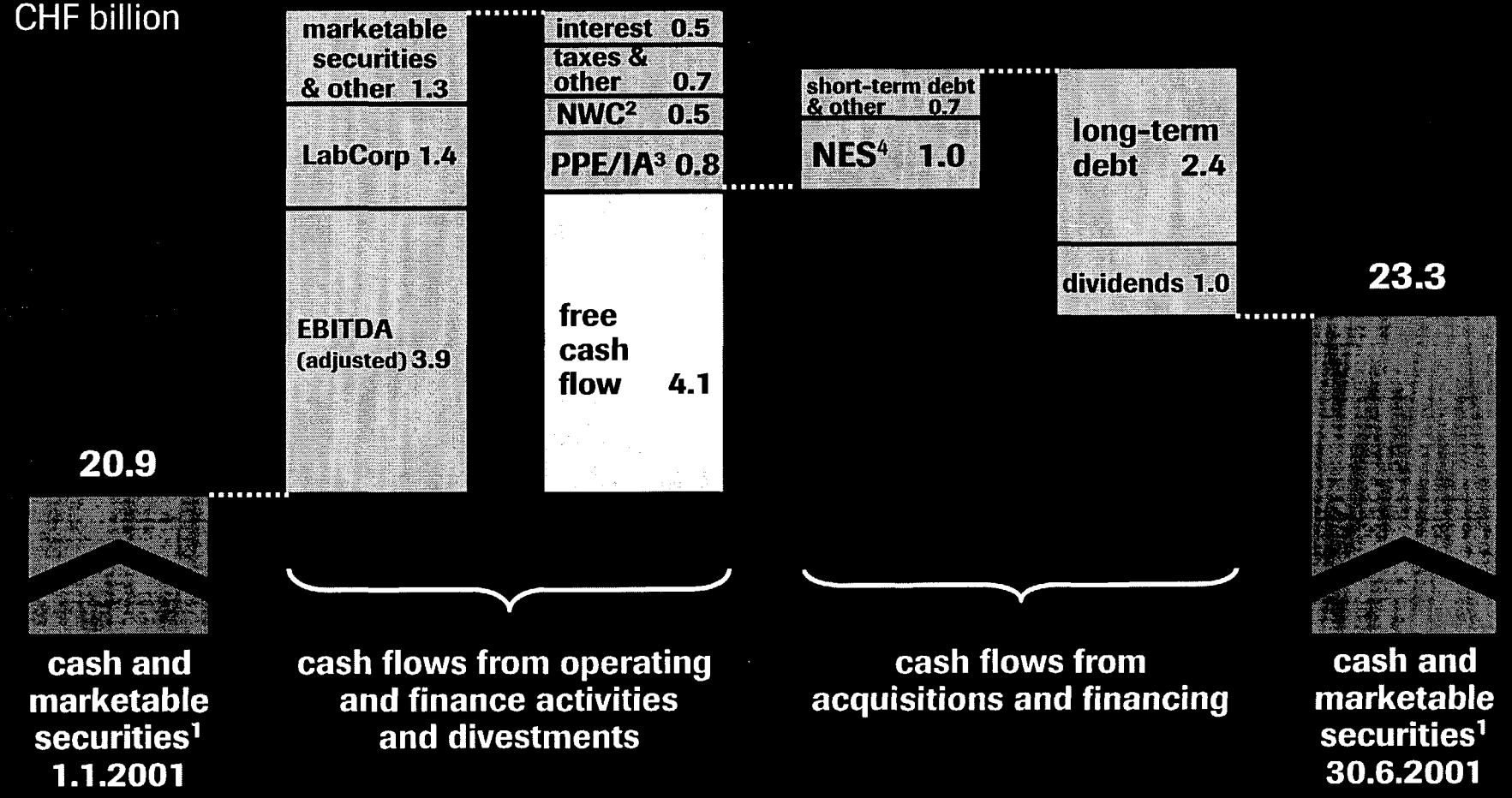
H1 2000	
financial income, net	1,229



* exchange gains (losses) are unrealised

Cash flow

Free cash flow of over CHF 4 billion



[1] at market values in accordance with new accounting standard

[2] net working capital

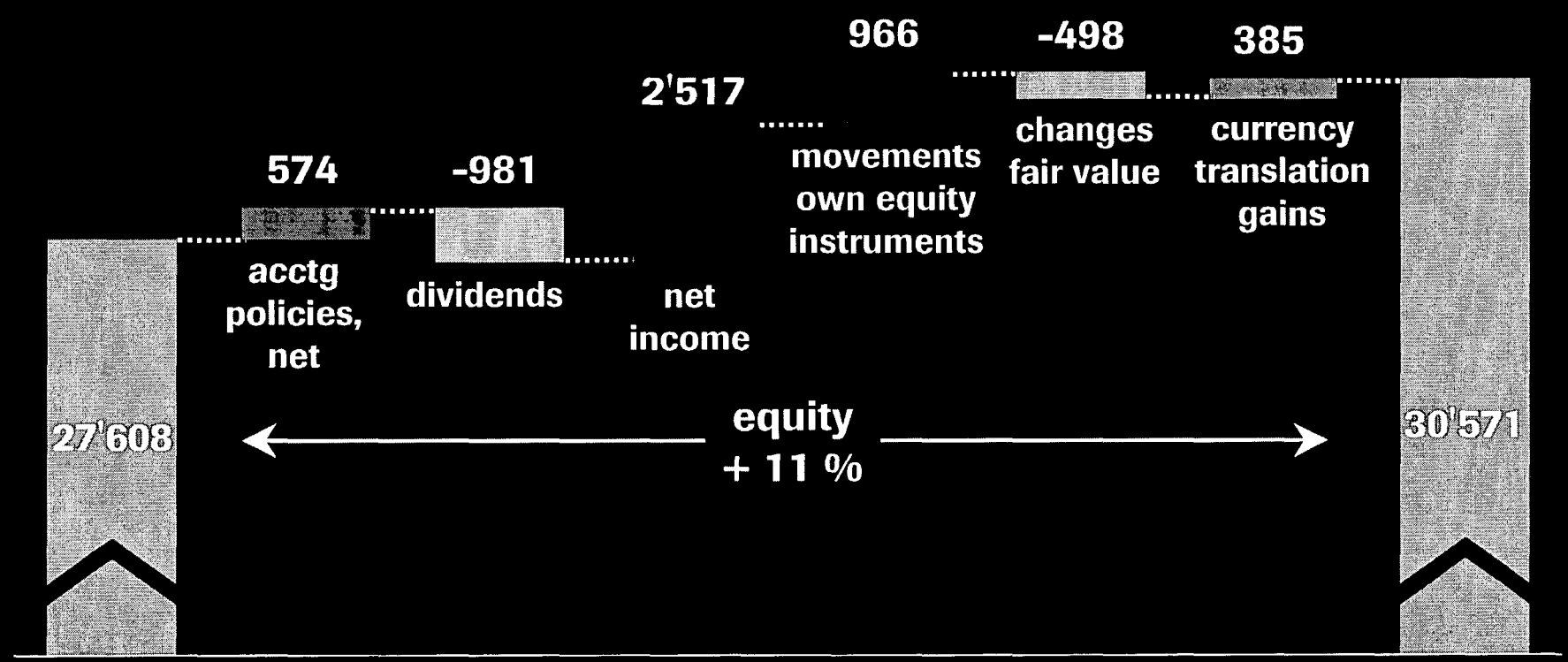
[3] property, plant and equipment; intangible assets

[4] non-voting equity securities ('Genussscheine')

Equity movement

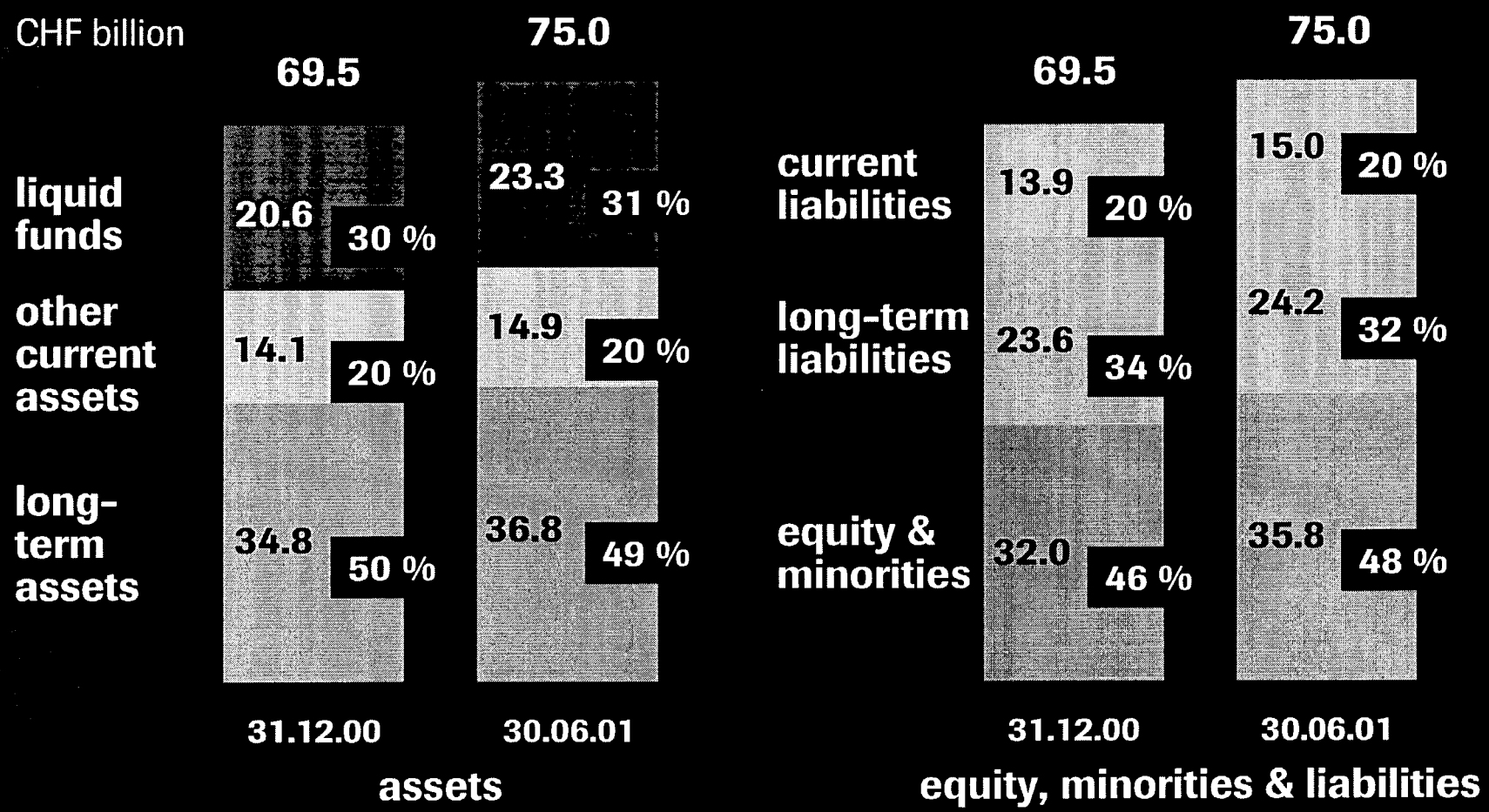
Increase driven by net income

CHF m



Balance sheet

Further strengthened



Group Financials at H1 2001

Summary

- Profit levels maintained on an adjusted basis
- 6 % sales growth and an improved cost structure
  - except amortisation and other operating income/expenses
- Operating profit margin slightly reduced
- Substantial cost savings from Pharma reshaping initiative expected
  - payback of cash costs expected within 2 years
- Increase in net financial income including gains on LabCorp shares
- Liquidity and balance sheet strengthened

Roche

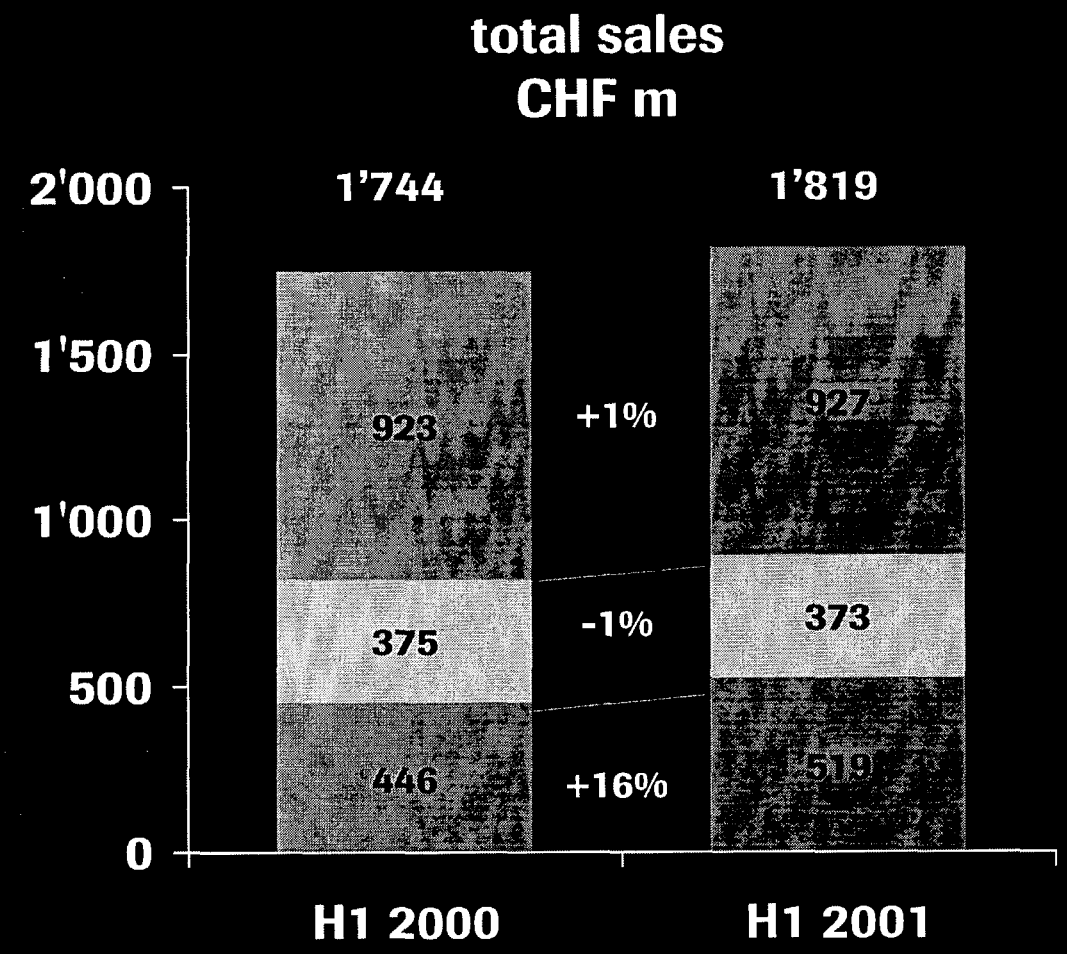
Vitamins and Fine Chemicals Division at H1 2001

Sales in H1 2001

Back to top line growth

Roche

Vitamins



4 % local currency growth

4 % CHF growth

vitamins

carotenoids

fine chemicals
(excluding MFA)

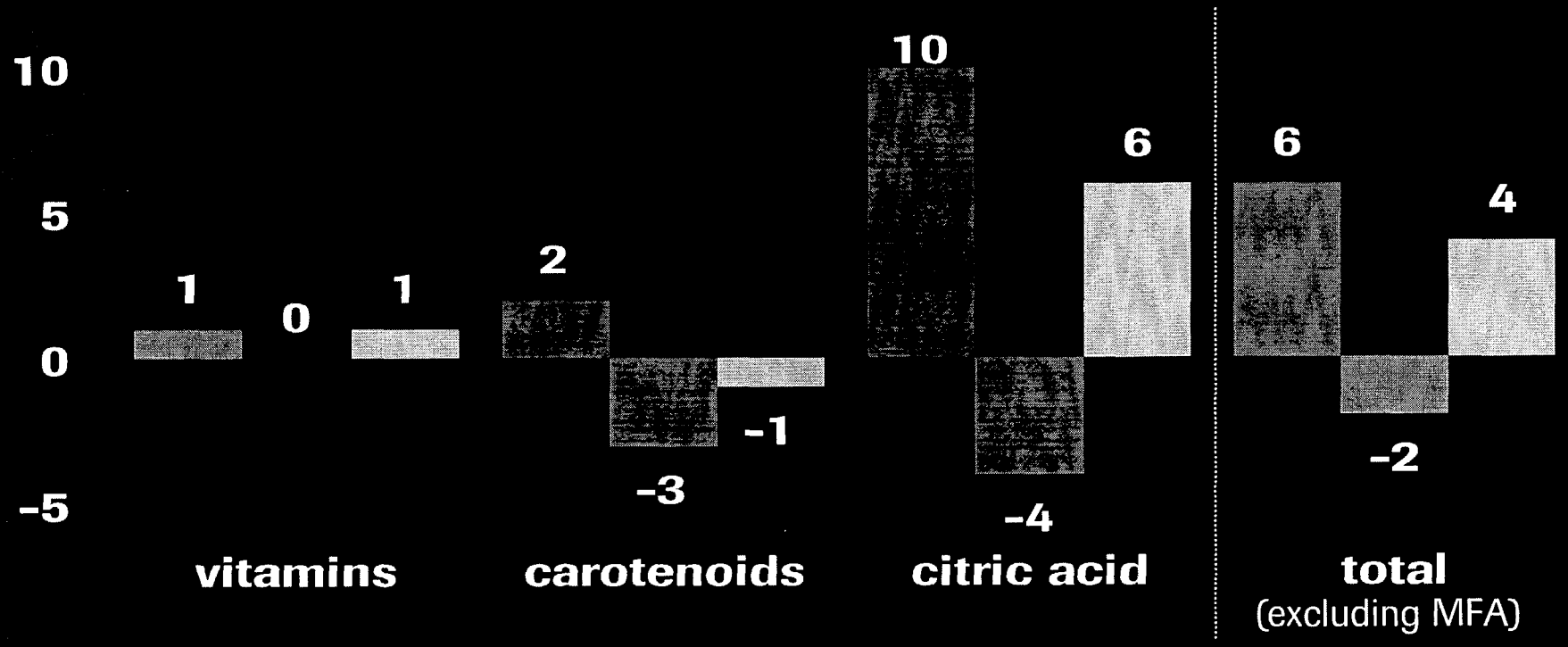
Sources of growth in H1 2001

Quantity driven growth

Roche

Vitamins

deviation from H1 2000 in %

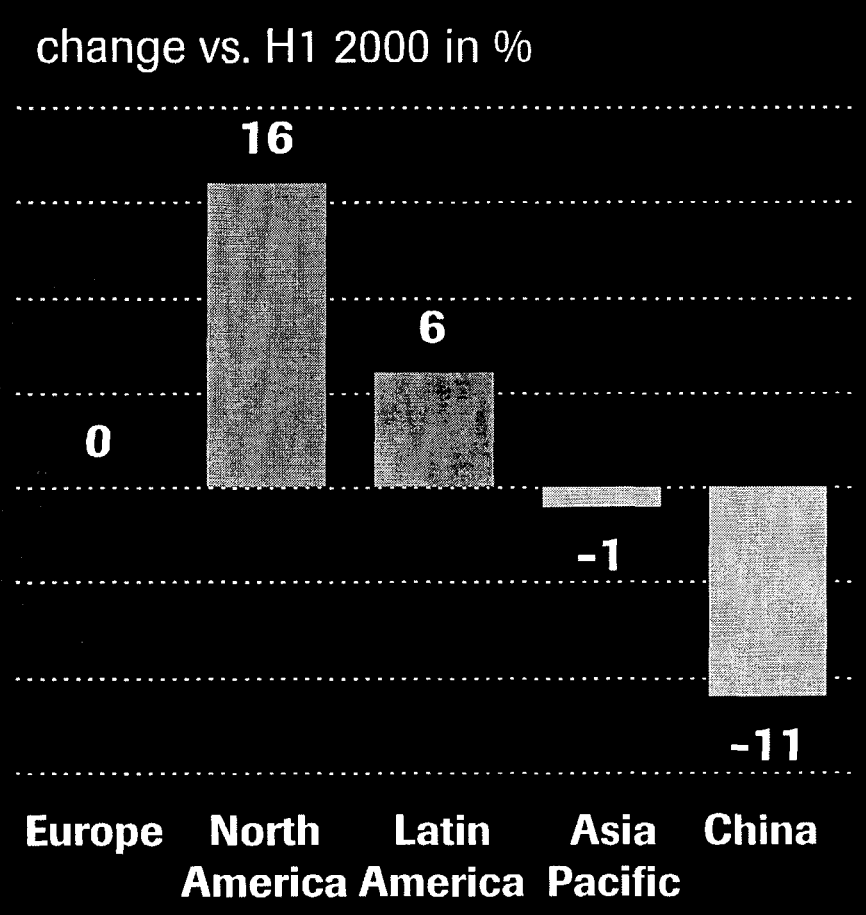


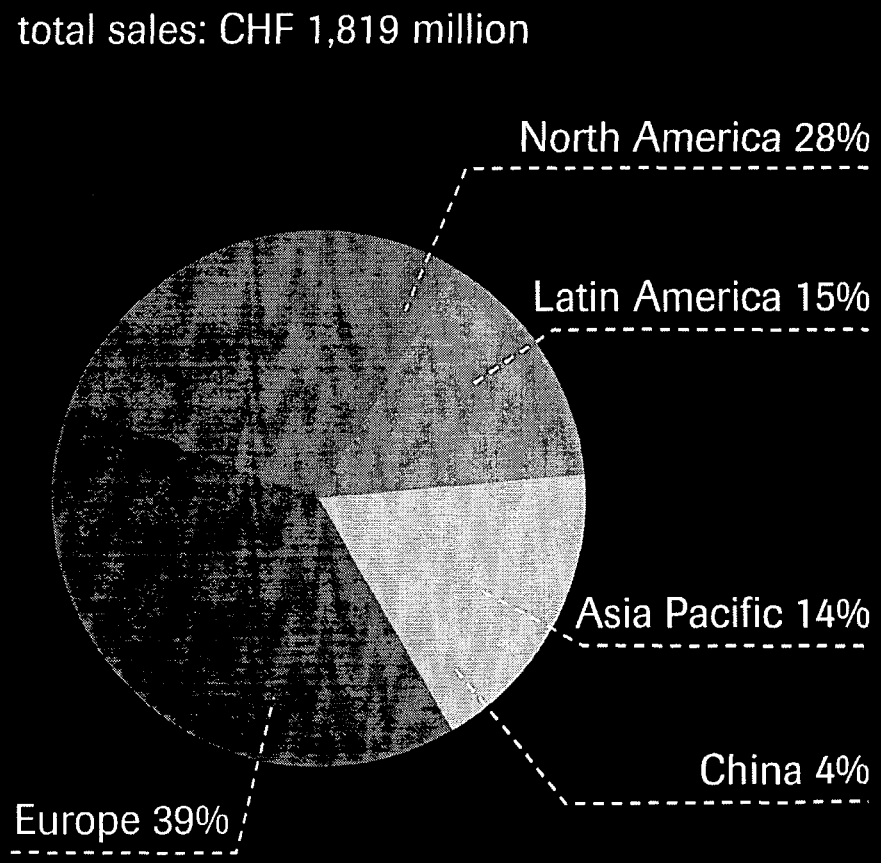
Sales by region H1 2001*

Strong comeback of North America

Roche

Vitamins





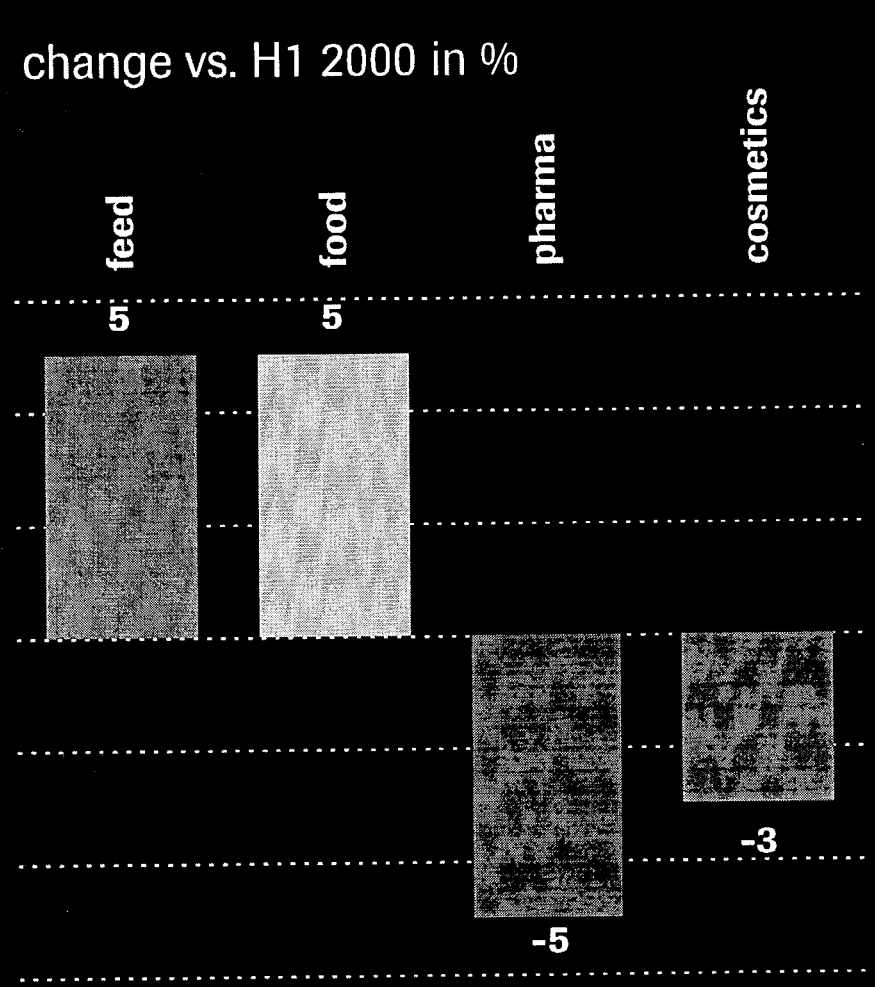
* excluding MFA sales in H1 2000

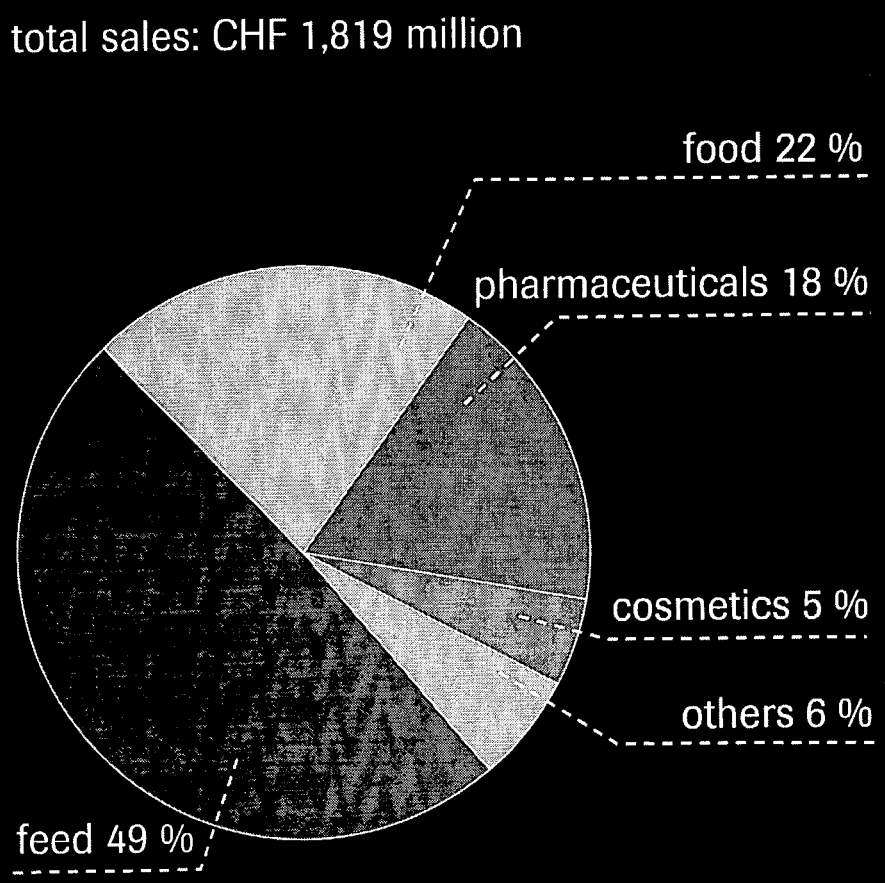
Sales by industry in H1 2001*

Good growth in human and animal nutrition

Roche

Vitamins





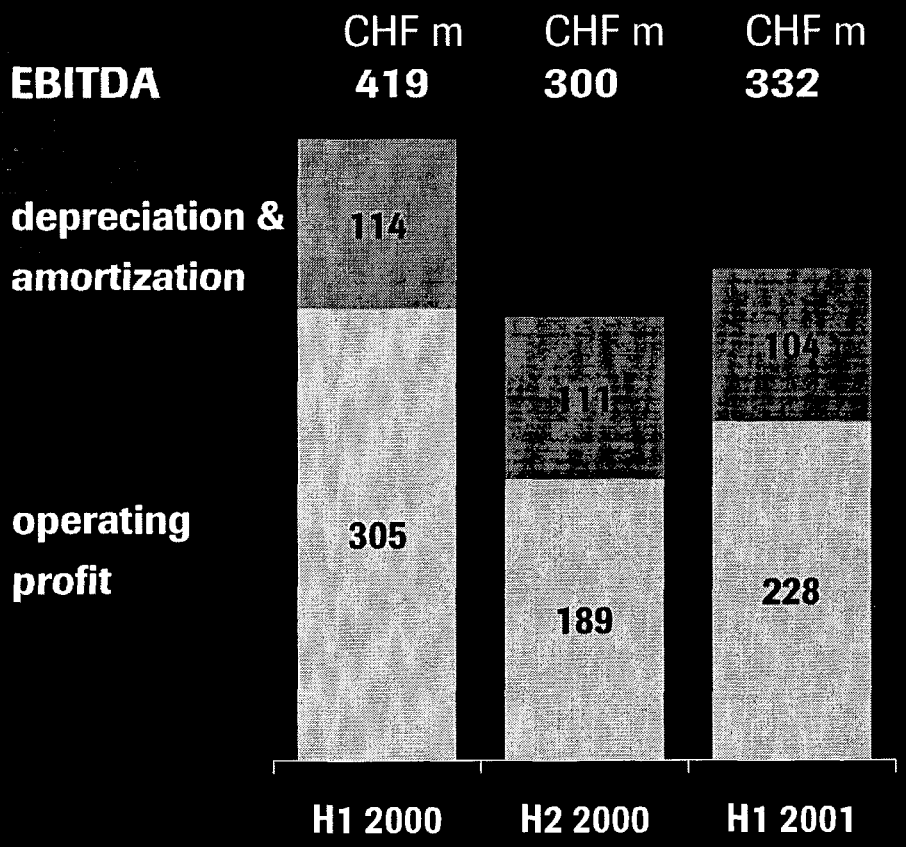
* excluding MFA sales in H1 2000

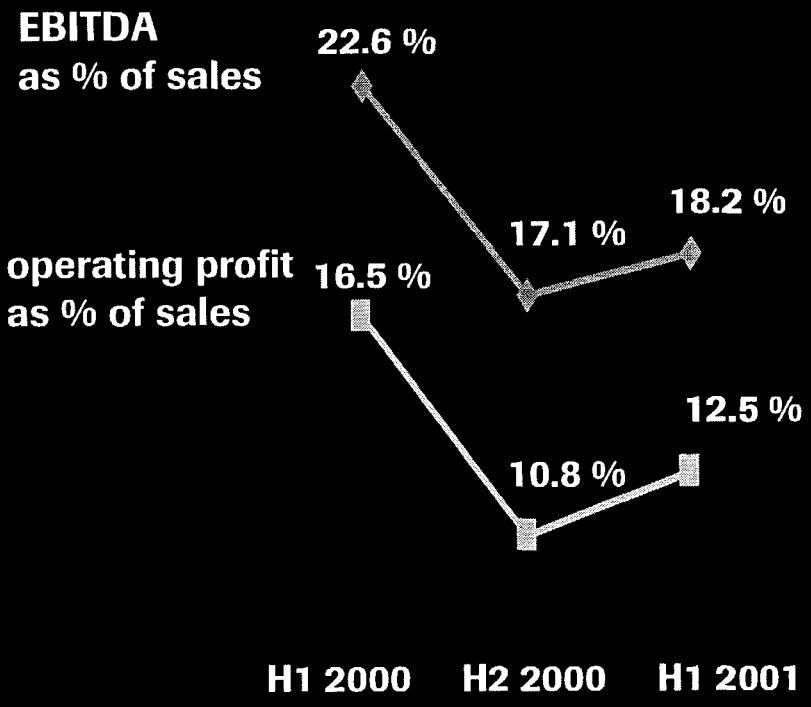
Profitability in H1 2001

Improving margins

Roche

Vitamins



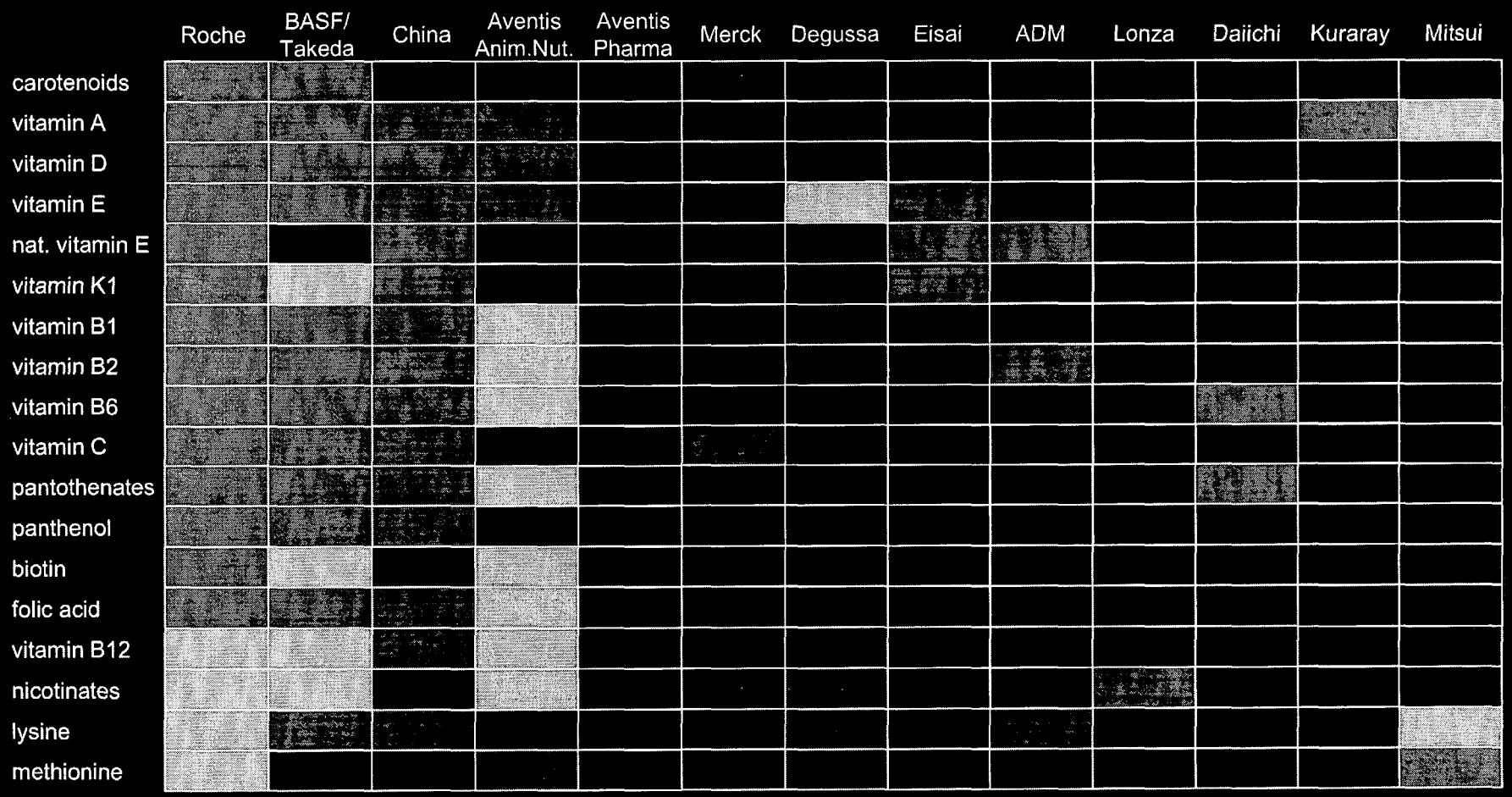


A changing business environment

Roche #1 with 34% market share

Roche

Vitamins



Trends in a CHF 11 billion market

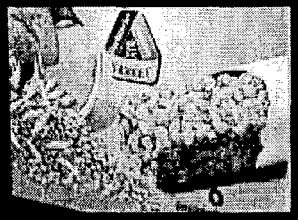
Expected market growth in the range of 3-5%

Roche

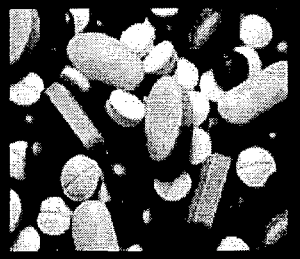
Vitamins



continued reliance on core vitamins; increased demand for natural health and performance enhancers:



changing life-styles trigger demand for health beneficials:



greater health awareness offers wide range of opportunities



high demand for innovative product concepts:

Roche

Vitamins

The way forward

Strengthening a leading position

goals

outperform market growth!

strategy for growth

strategy for growth and profitability

increase margins and remain the industry benchmark!

strategy for profitability

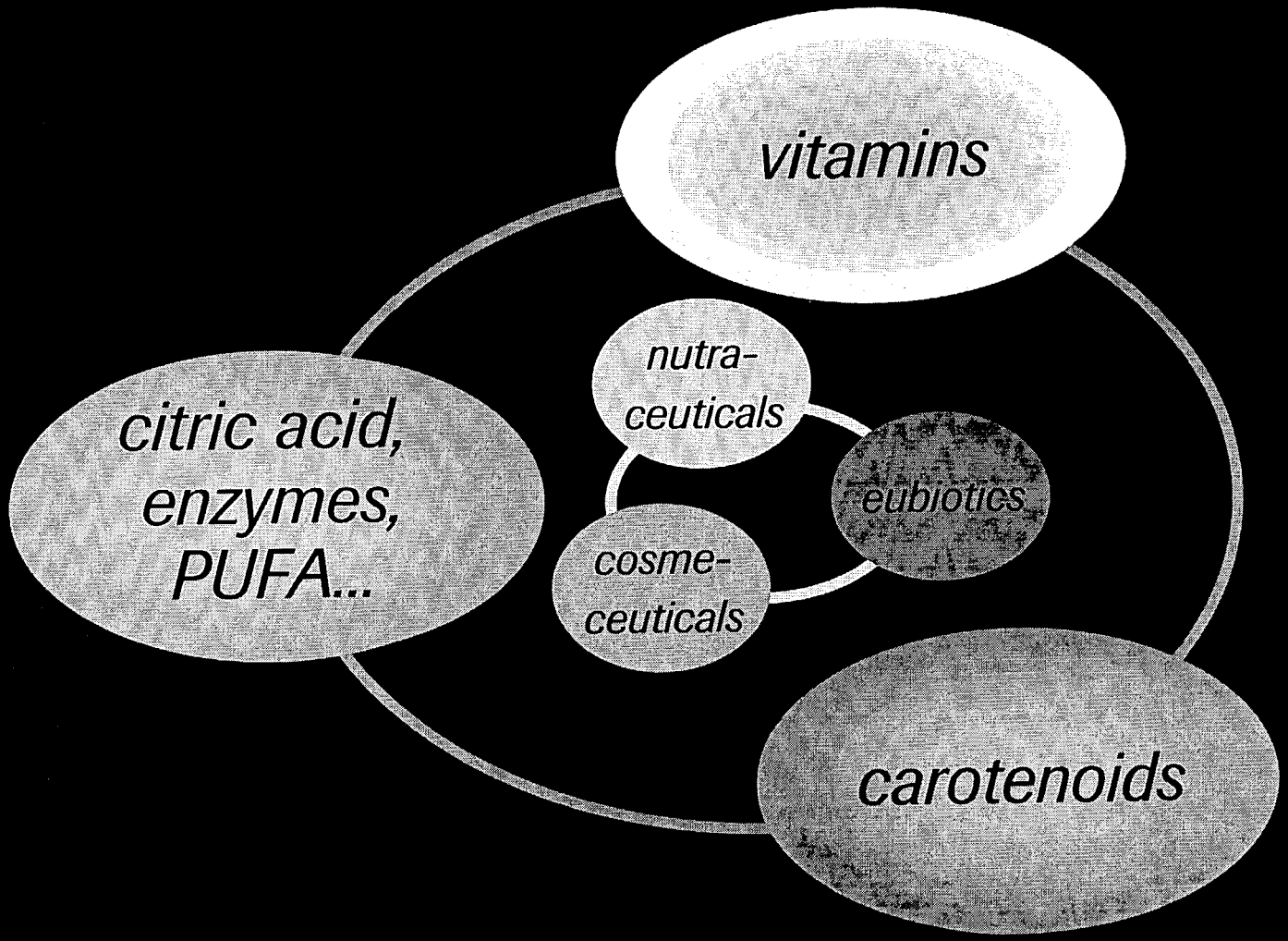
goals

Expand the core

Growth

Roche

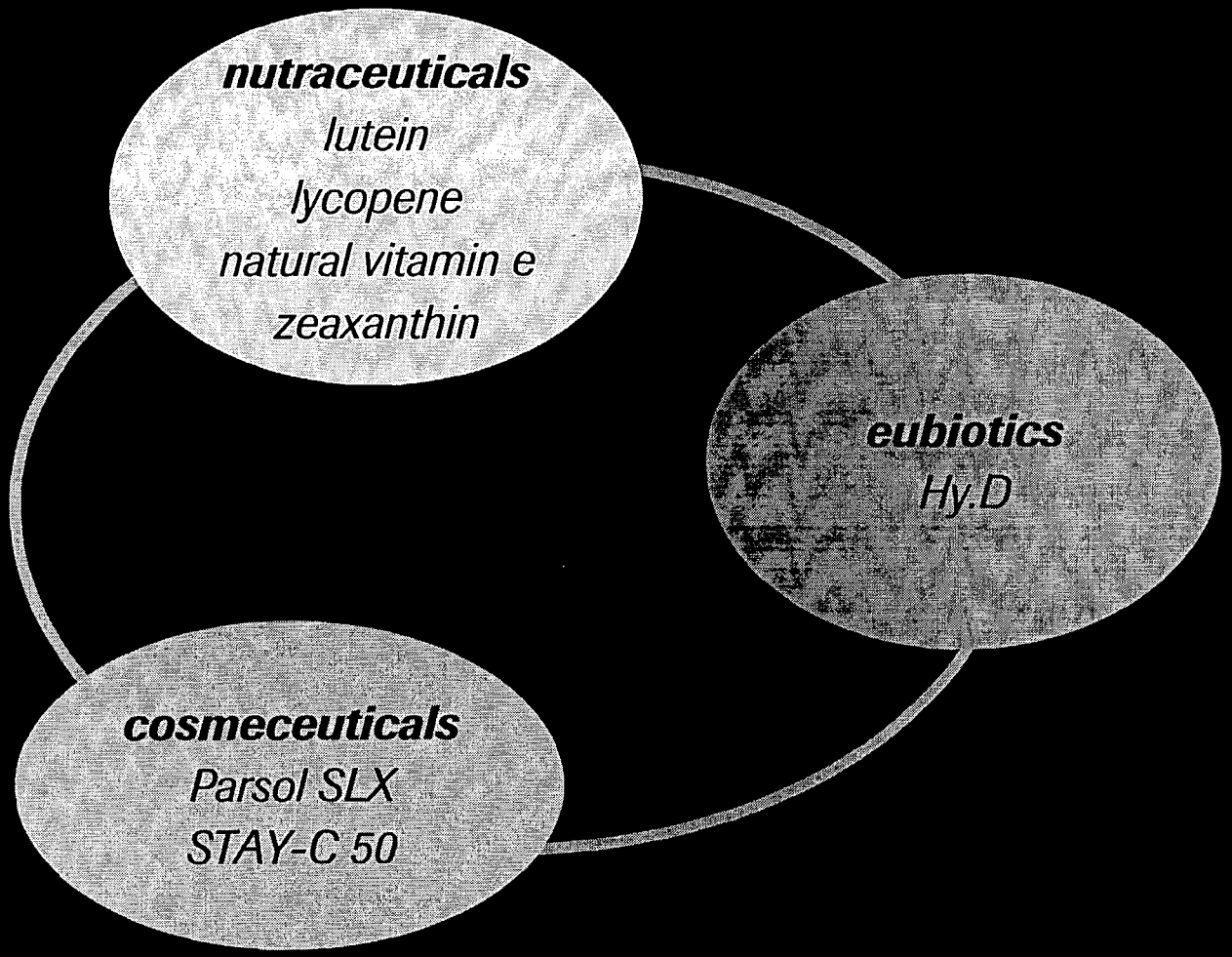
Vitamins



Growth

Roche

Vitamins



Profitability

Key drivers to achieve profitability targets

Roche

Vitamins

Quantum leaps in process improvements

- Half of R&D resources committed to production innovation
  ⇨ 50 % cost reduction target for key vitamins in next 10 years

New plants for low cost production

- Invest only to pursue lowest cost position
  ⇨ key projects: vitamins E and C

Operational excellence in all business processes

- Reduce production costs
  ⇨ plan 500
- Reduce operating costs
  ⇨ cost saving program in Europe and USA

Profitability

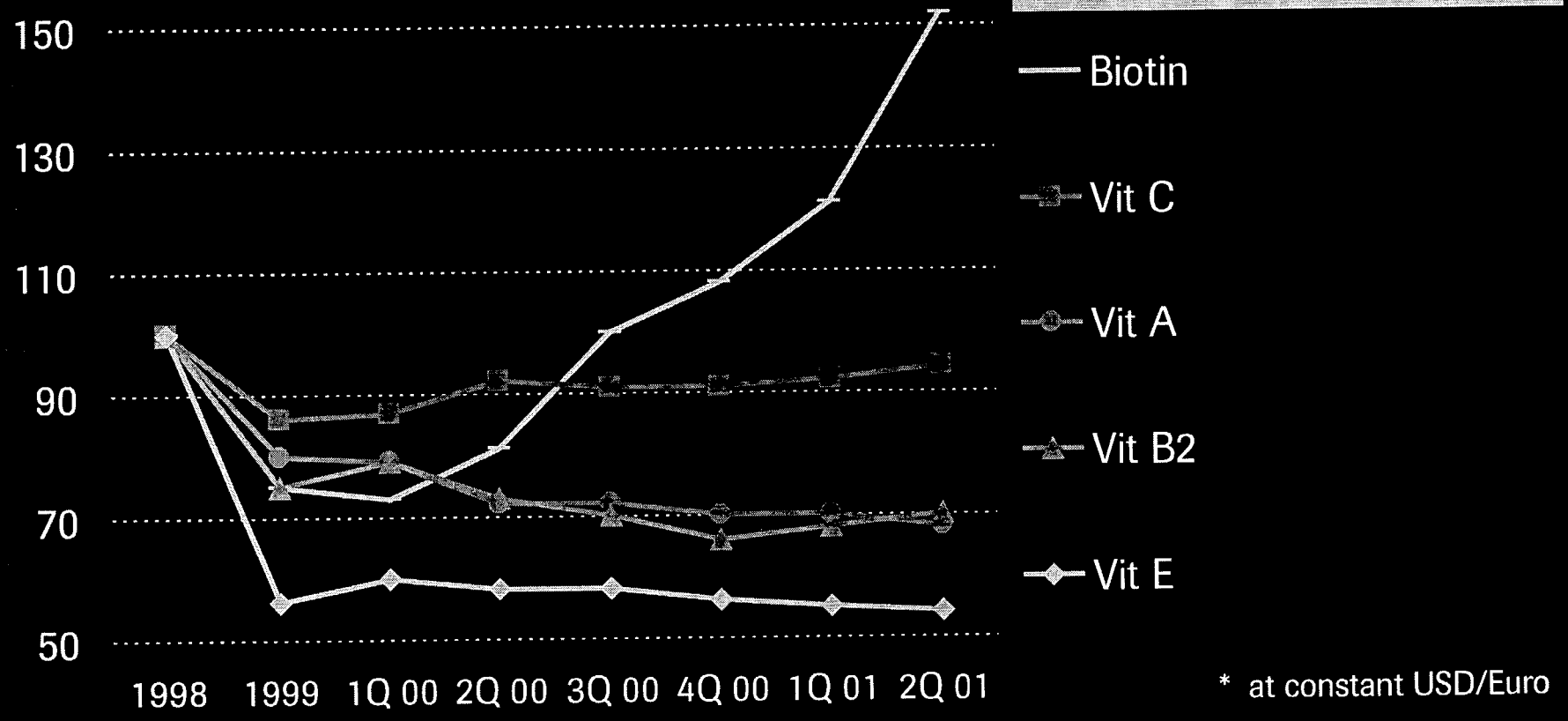
Stabilisation of major vitamin prices

Roche

Vitamins

*price development index 1998-2001**

products represent
35 % of divisional sales
70 % of vitamins sales



* at constant USD/Euro

Vitamins and Fine Chemicals Division

Summary

Roche

Vitamins

- Prices remaining stable
- Efficiency gains and a rigorous focus on costs are off-setting pressure on profitability
- The way forward: growth and profitability
  ⇨ strengthening our #1 position
- Outlook 2001
  ⇨ continued single-digit sales growth
  ⇨ operating margin maintained

Diagnostics Division at H1 2001

Performance

Roche

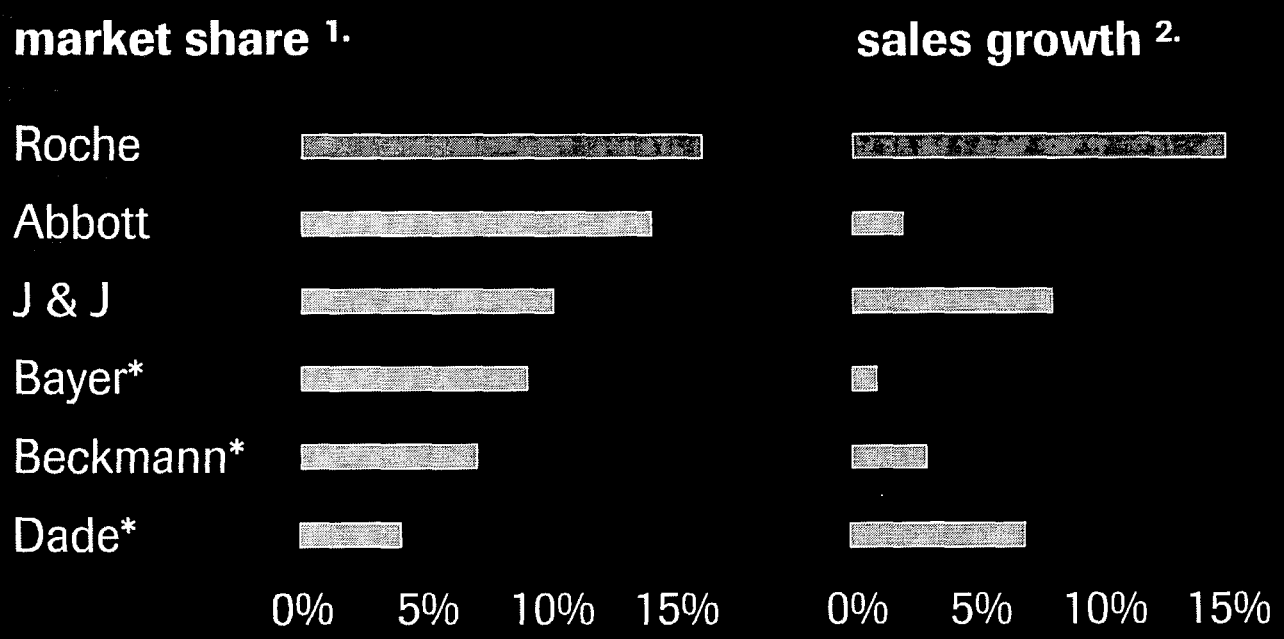
Diagnostics

Diagnostics sales in H1 2001

Increasing global IVD market leadership

Roche

Diagnostics



Company reports Q2/2001 and Q1/2001(*), Roche Analysis, Boston Biomedical Consultants

1. Excludes Applied Science
2. In local currencies

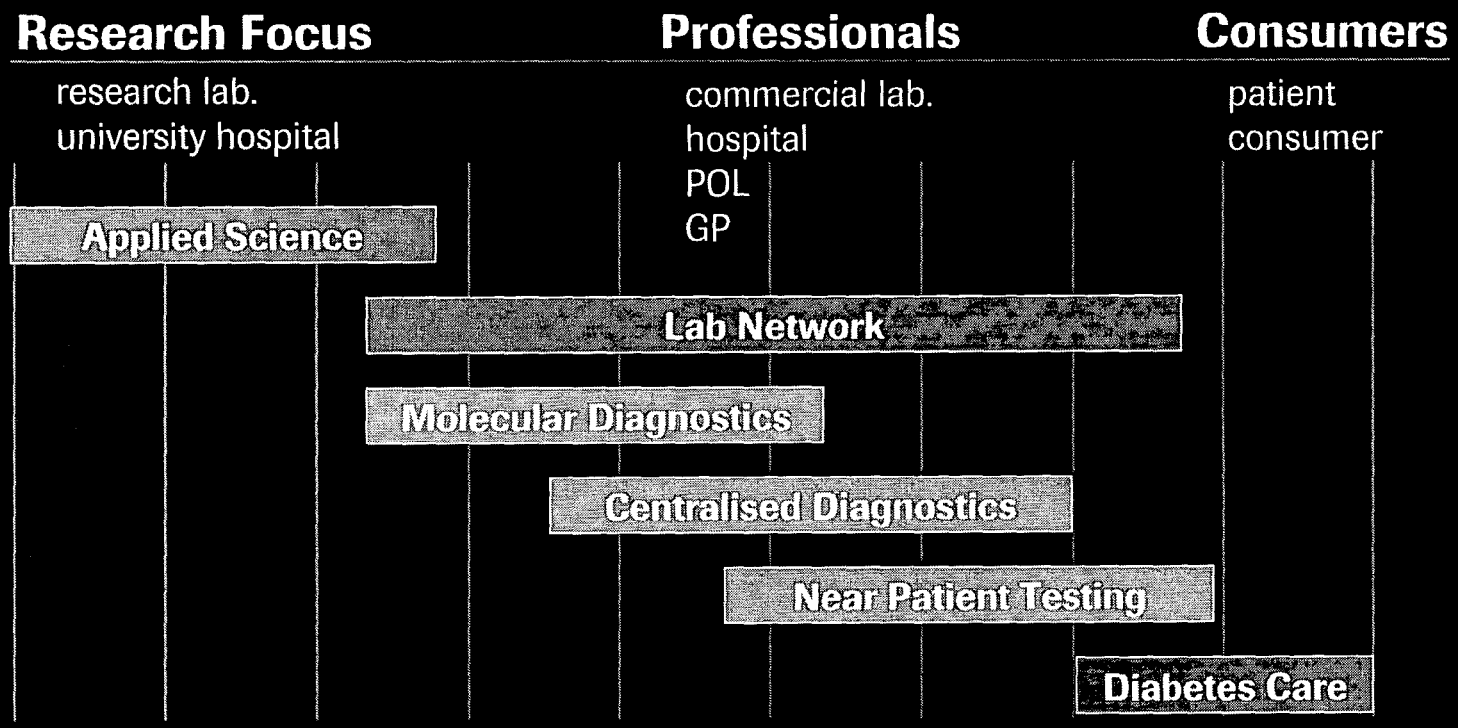
Performance

Roche Diagnostics

New organisation enhances customer focus

Roche

Diagnostics



Performance

Diagnostics sales in H1 2001

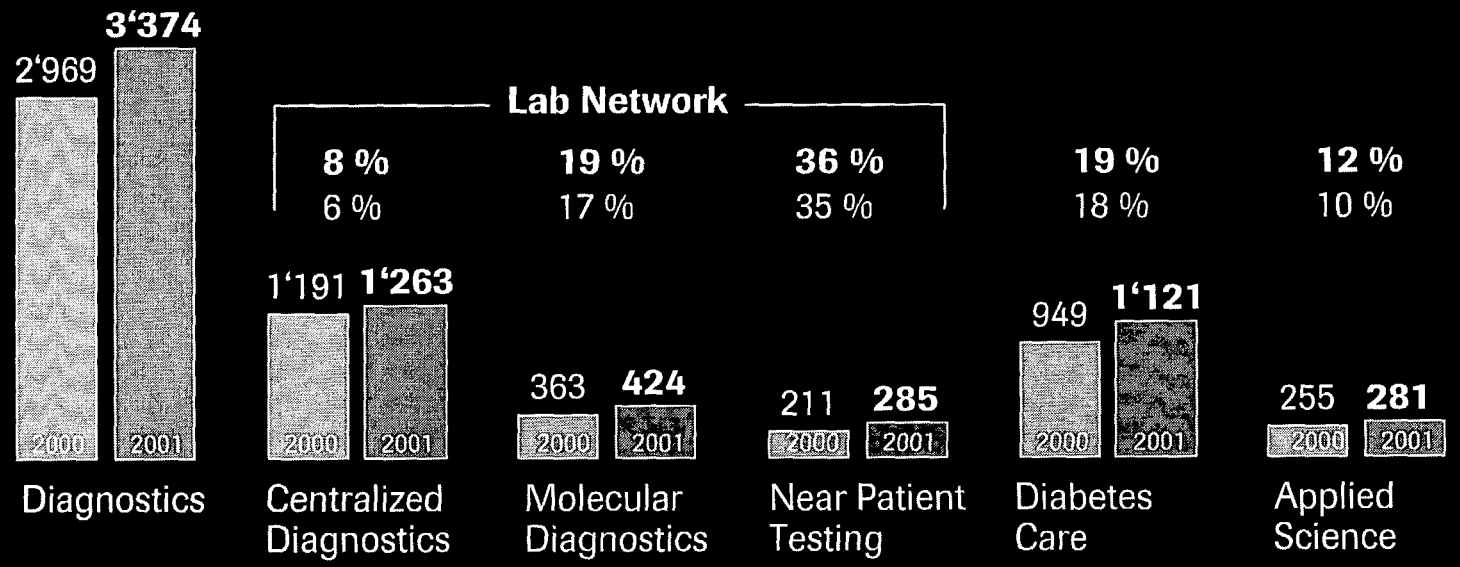
Double-digit growth in high margin businesses

Roche

Diagnostics

CHF m

15 % local currency growth
14 % CHF growth



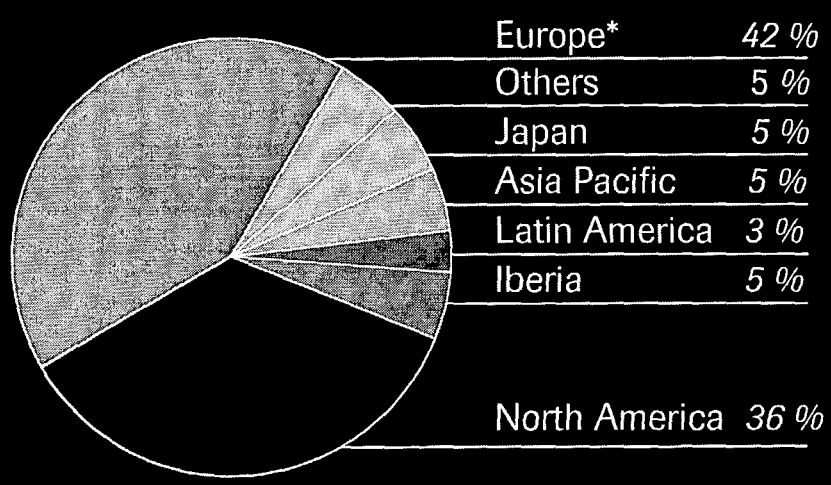
Diagnostics sales in H1 2001

Sales by region/market

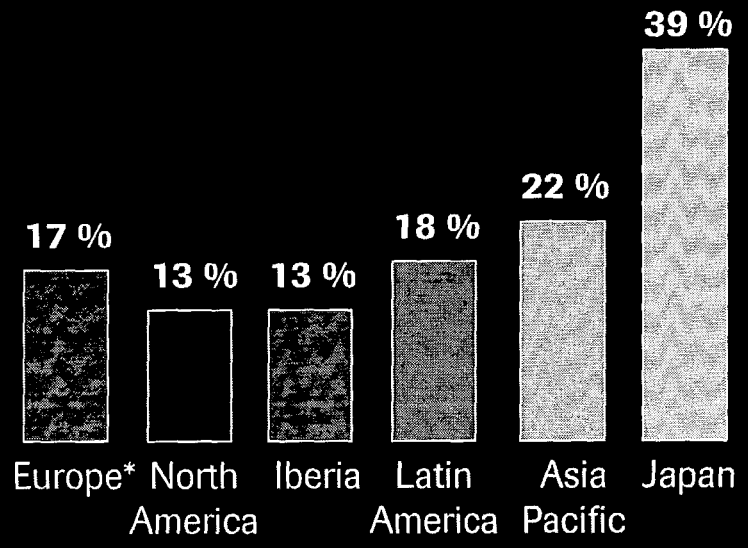
Roche

Diagnostics

CHF 3'374 m



local sales growth



* Europe and Middle East and Africa

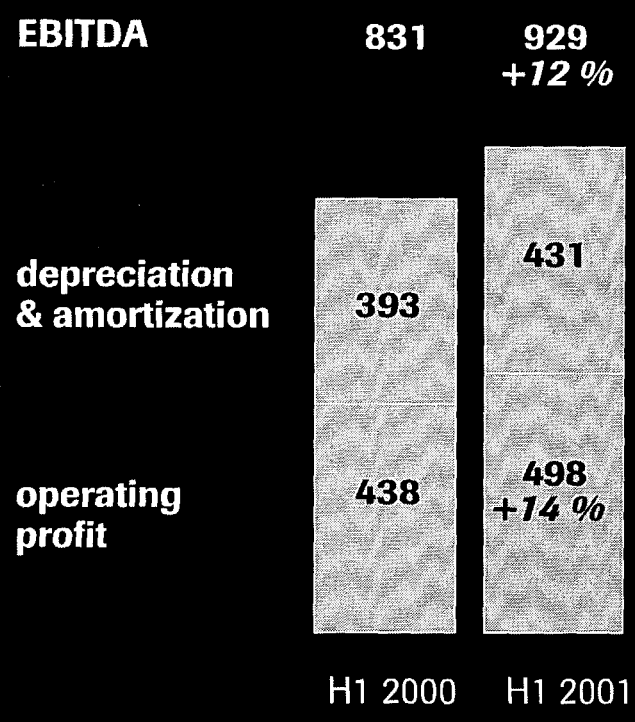
Profit development

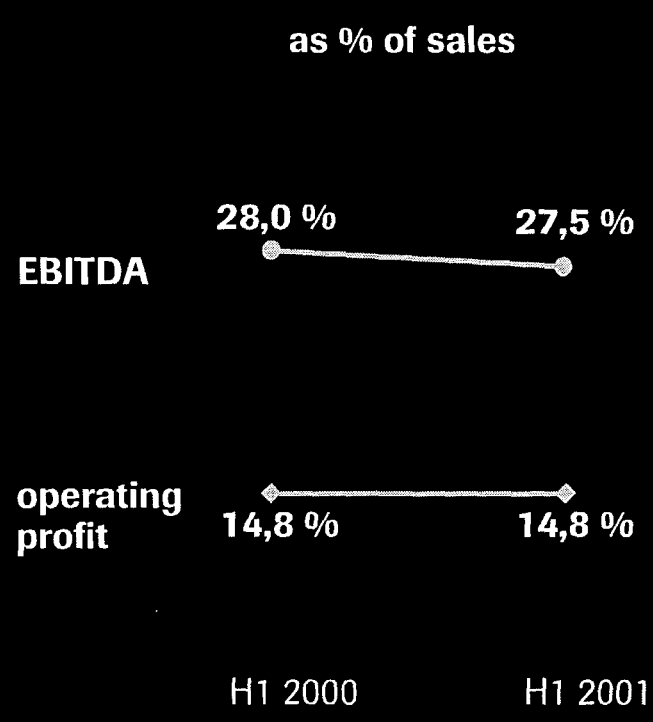
Maintaining a high level of profitability

Roche

Diagnostics

CHF m





Strategy

Roche

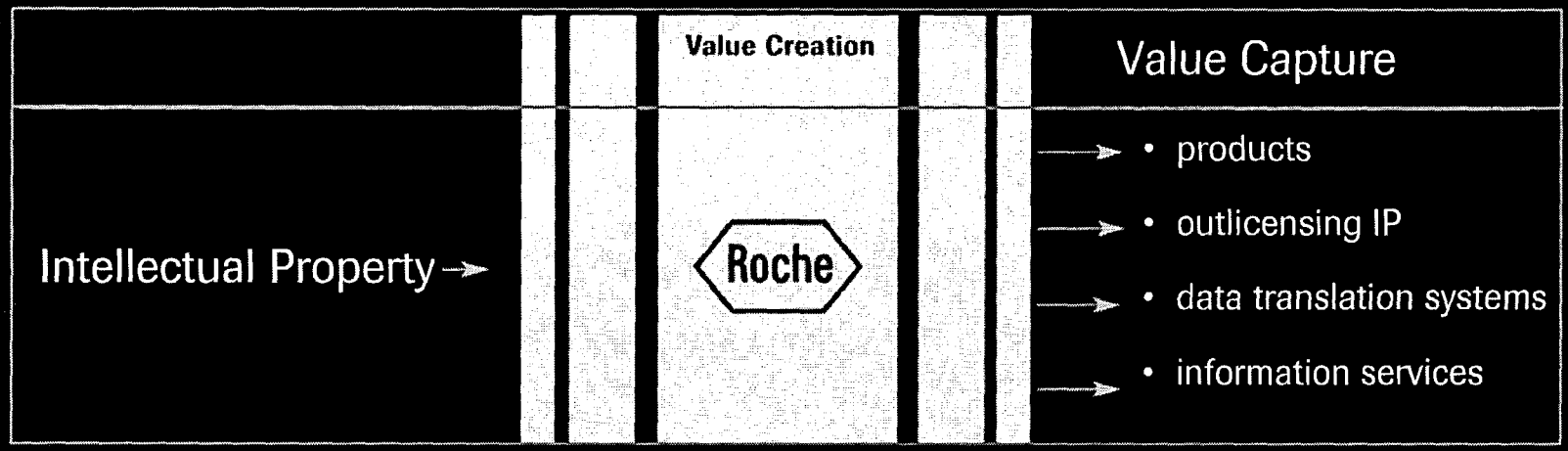
Diagnostics

Our strategy
Capturing future value

Roche

Diagnostics

Roche Diagnostics future business model

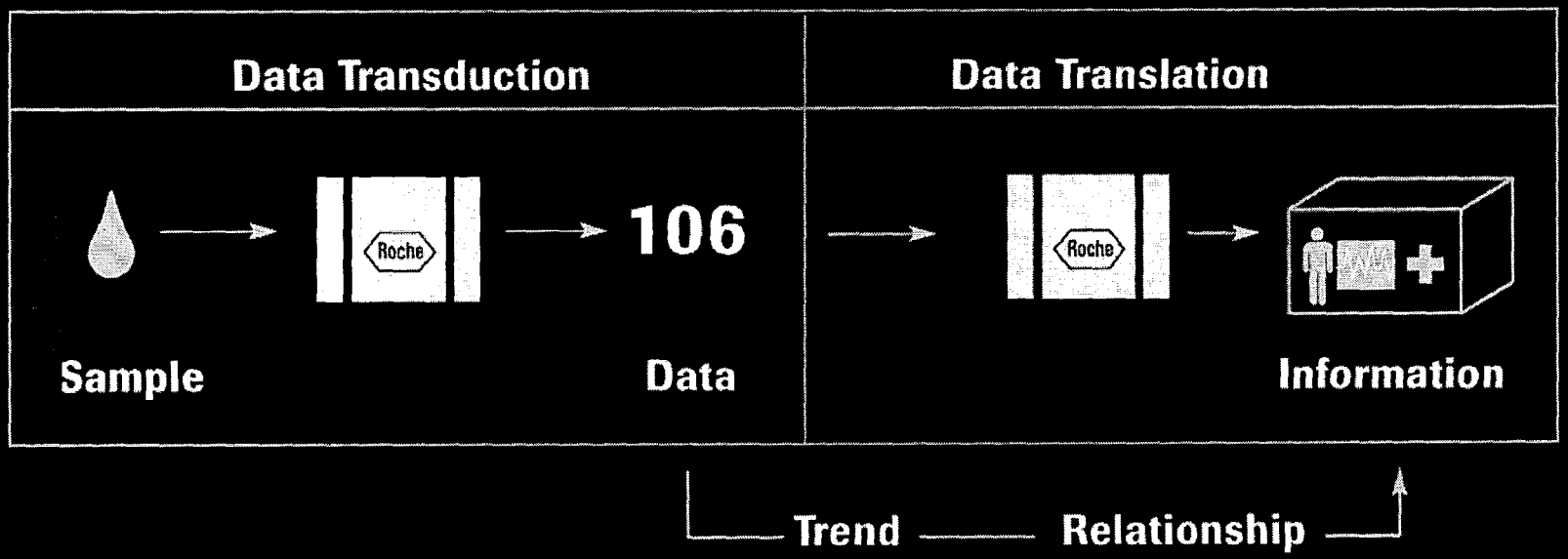


Actionable health information

Supplementing data transduction systems with data translation systems

Roche

Diagnostics



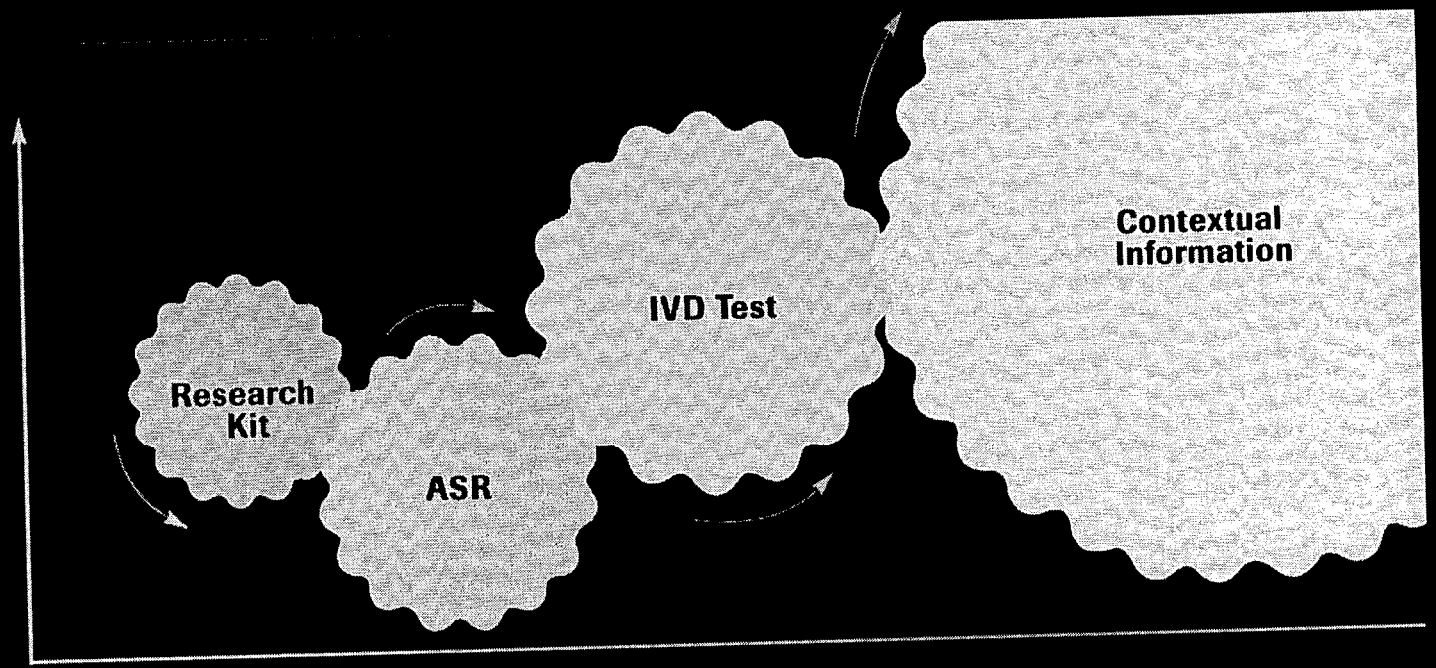
Strategy

Actionable health information

Driving value creation

Roche

Diagnostics



Possible Value Creation

ASR = analyte specific reagent
IVD = in vitro diagnostics

Strategy

Business Area objectives
Market and segment leadership

Roche

Diagnostics

Applied Science	Pioneer platforms for genomics/proteomics research
Lab Network	Drive convergence in professional labs through platform harmonization, reagent standardization and IT connectivity
Molecular Diagnostics	Expand business beyond virology to clinically novel parameters with premium value
Centralized Diagnostics	Become supplier of choice for integrated solutions
Near Patient Testing	Realise the promise of decentralized testing
Diabetes Care	Be the leading provider of diabetes care technology, products and services

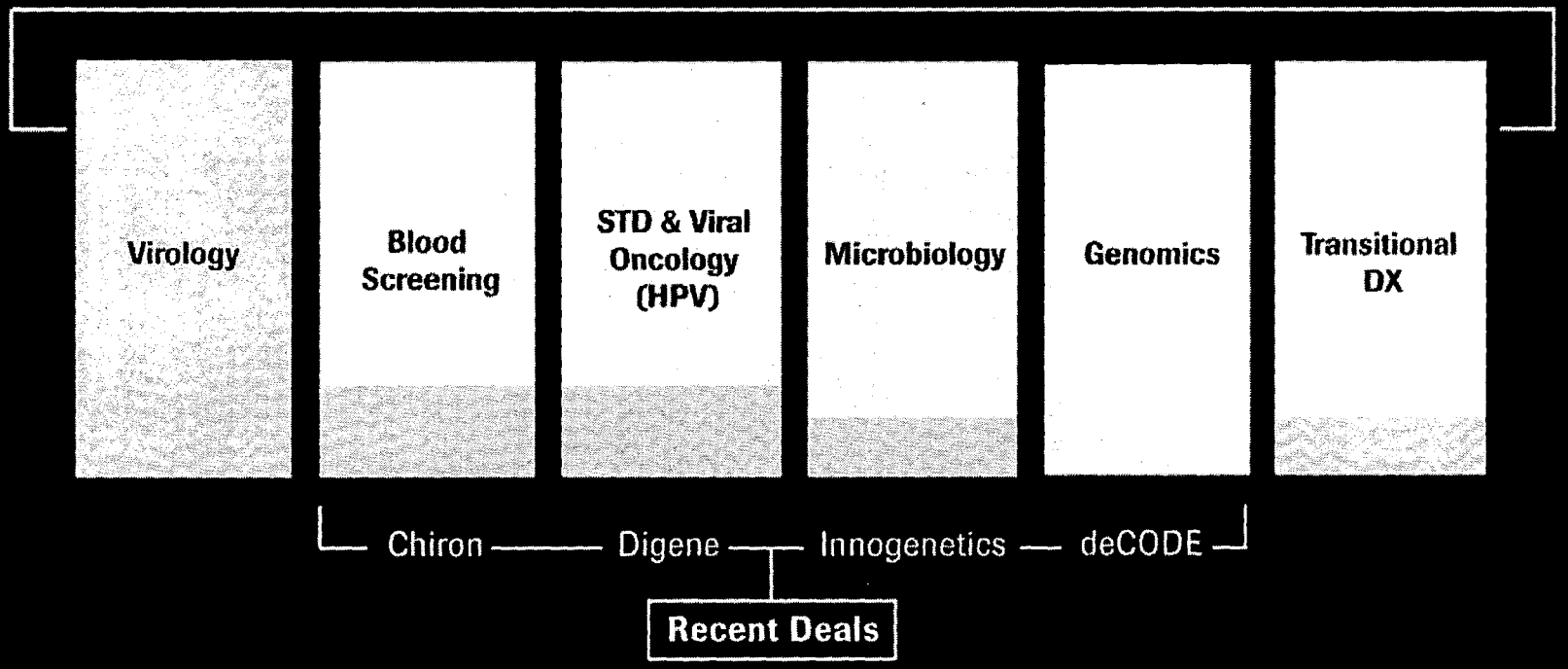
Molecular Diagnostics

Building a portfolio of unique PCR businesses

Roche

Diagnostics

Molecular Diagnostics portfolio



STD = sexually-transmitted diseases
HPV = human papilloma virus

Strategy

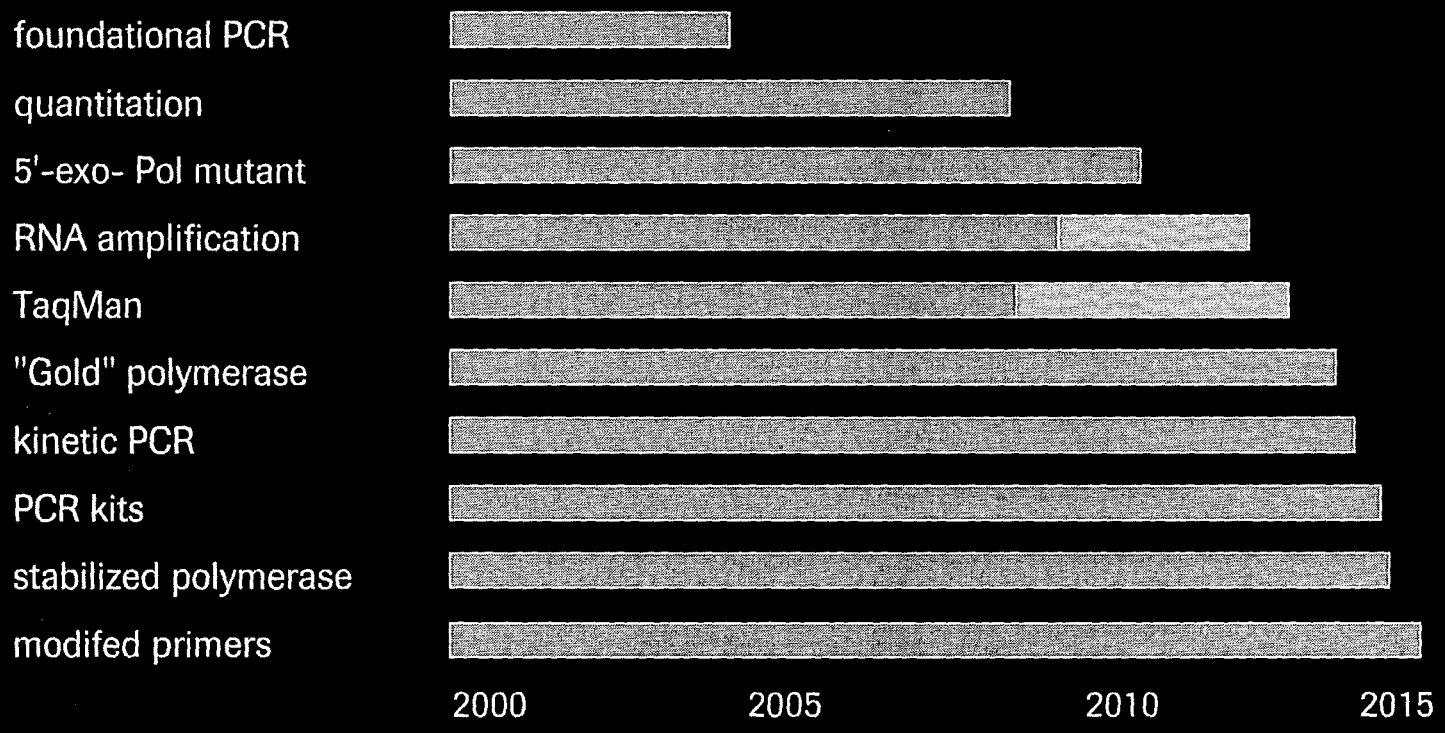
PCR intellectual property

Leading edge patents secure continued protection

Roche

Diagnostics

US patents for key technologies



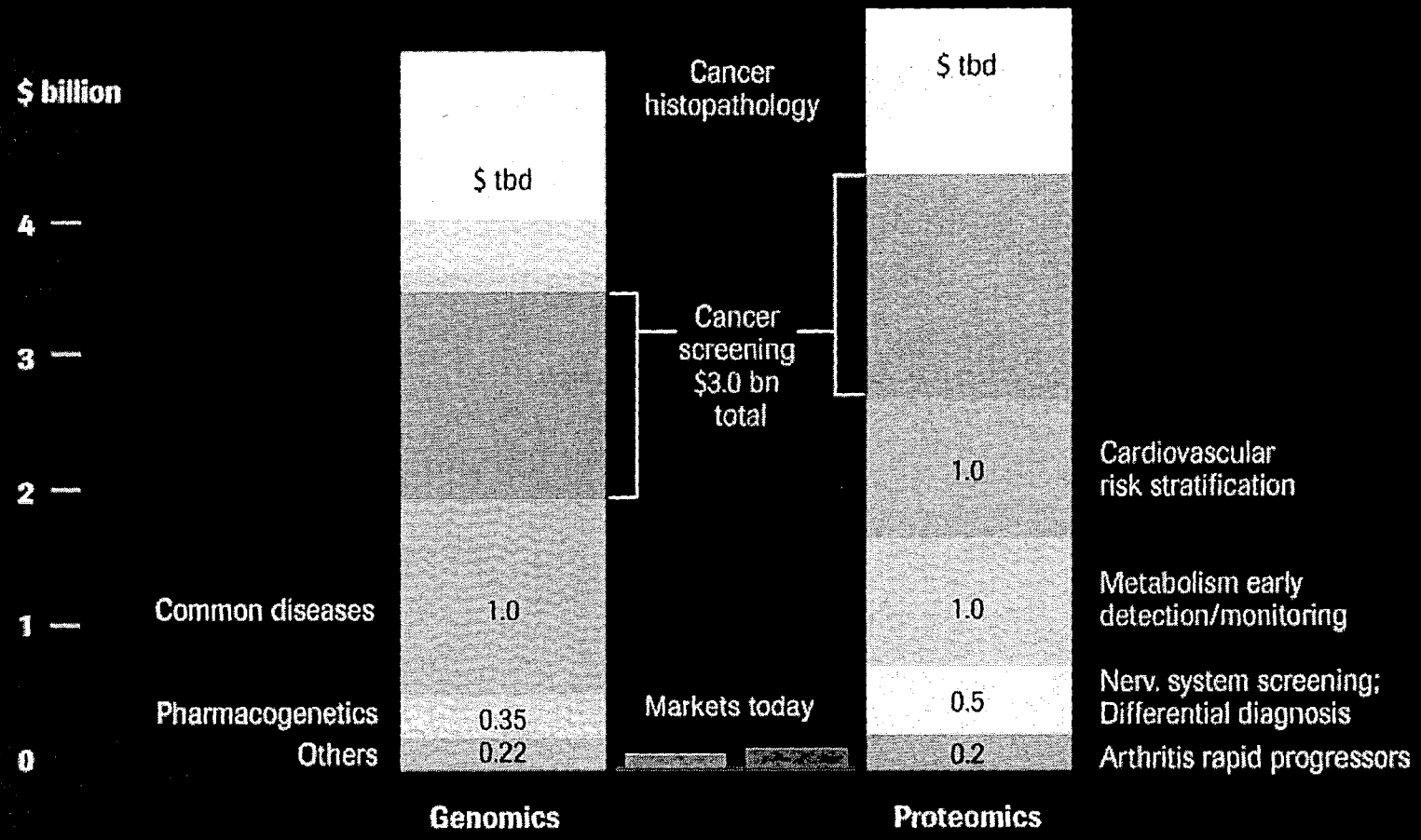
Strategy

Genomics and proteomics markets in 2010

Explosion of revenues expected

Roche

Diagnostics



Subsegments: monogenetic diseases $100m
paternity $50m
forensic $45m
HLA $35m

Source: Roche estimates

Strategy

Innovation

Roche

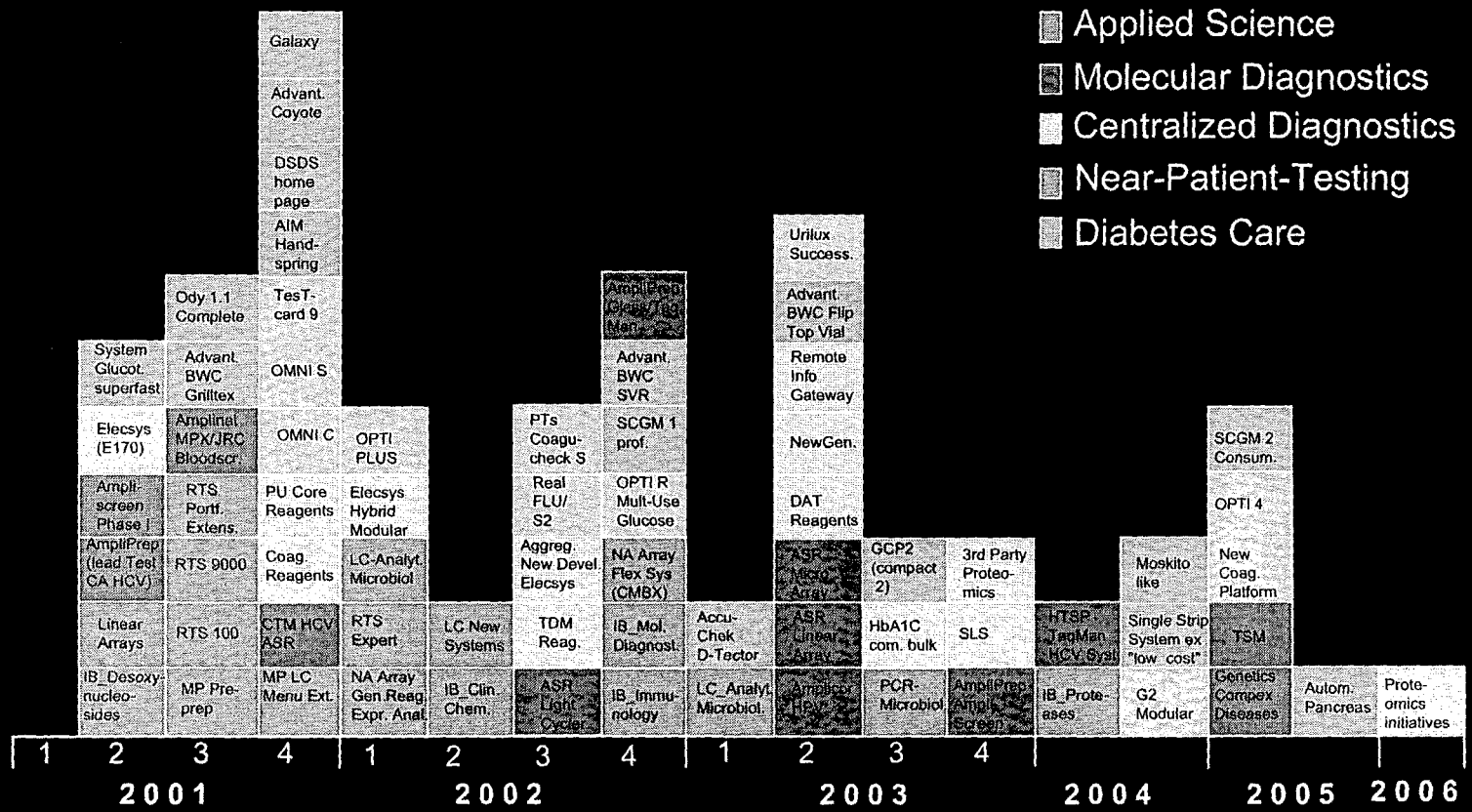
Diagnostics

Expected launches of major products

Strong pipeline for future growth

Roche

Diagnostics



Innovation

Launches planned for 2001

On track so far

Roche

Diagnostics

launched	**Hitachi® MODULAR E 170**	Centralized Diagnostics
launched	**Cobas® Ampliprep®**	Molecular Diagnostics
launched	**Accu-Chek Inform®**	Diabetes Care
launched	**Accu-Chek Compact®**	Diabetes Care
launched	**Accu-Chek Active®**	Diabetes Care
on track	**RTS ProteoMaster® system**	Applied Science
on track	**OMNI® S, OMNI® C**	Near Patient Testing

PDA type diabetes monitoring device

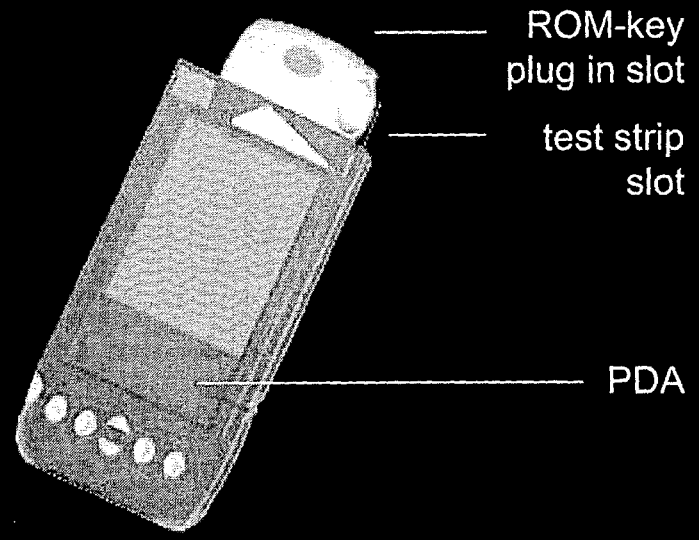
Allows direct consumer contact

Roche

Diagnostics

Features

- diabetes monitoring integrated into personal digital assistant (PDA) device
- open standard for any additional software solutions and tools
- opens up possibilities for wireless connection to new providers of value-adding services in the future (bi-directional)



Expected launch Q4 2001

Roche

Diagnostics

Accu Chek-D-Tector

Non-invasive screening to drive market growth

Features

- non-invasive eye examination device to detect undiagnosed type 2 diabetes
- detection of fluorescent compounds (AGES) in the lens of the eye caused by elevated glucose levels
- short (15 seconds) and safe procedure
- positive response from optometrist and diabetologists



Expected launch Q4 2001

Innovation

Roche

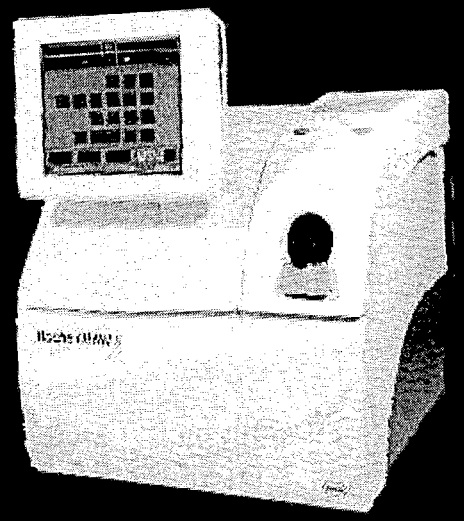
Diagnostics

OMNI® S

High-throughput glood gas/electrolyte analyser

Features

- top of the line parameter panel
- powerful software
- modular analyzer configuration
- easy to use
- full connectivity



Target segments

- medium to large hospitals
  - laboratory
  - point of care

Expected launch Q4 2001

Innovation

ProBNP test

Important marker for chronic heart failure

Roche

Diagnostics

ischemic heart disease
- stable/unstable angina pectoris
- myocardial infarction

markers of myocardial damage (necrosis)
- Troponin T ✓
- Myoglobin ✓
- CK-MB ✓

heart failure
- obvious chronic left-ventricular dysfunction and preclinical status of heart failure (diagnosis, monitoring)

markers of continuous intraventricular pressure (ventricular overload)
- ProBNP Q4 2001

Innovation

Roche Diagnostics at H1 2001

Summary

Roche

Diagnostics

- Continued double-digit sales and profit growth in H1 2001
- IVD market leadership increased in all segments
- Organization realigned
  - three Business Areas focused on five customer groups
- New product launches and roll-out's on track
- Strategic direction pursued through several new alliances
- Outlook for 2001
  - continued double-digit sales growth
  - strong sales growth in high margin Business Areas to drive operating margin improvement

Roche

Pharmaceuticals

Pharmaceuticals Division in H1 2001

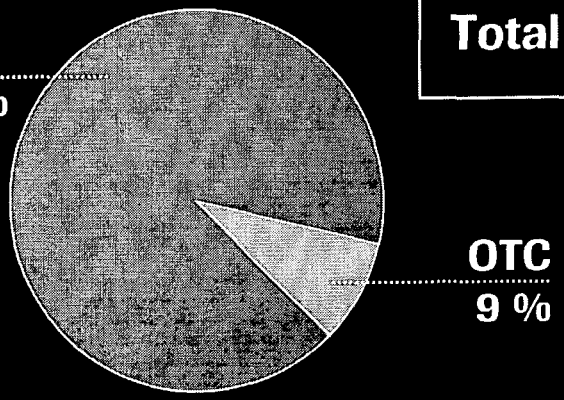
Pharmaceuticals sales in H1 2001

Stronger second quarter produces improving performance

Roche

Pharmaceuticals

	H1 2001 CHF m	H1 2000 CHF m	growth in local currencies
prescription medicines *	8,442	8,027	6 %
'over the counter' medicines	834	829	2 %
Total	9,276	8,856	5 %



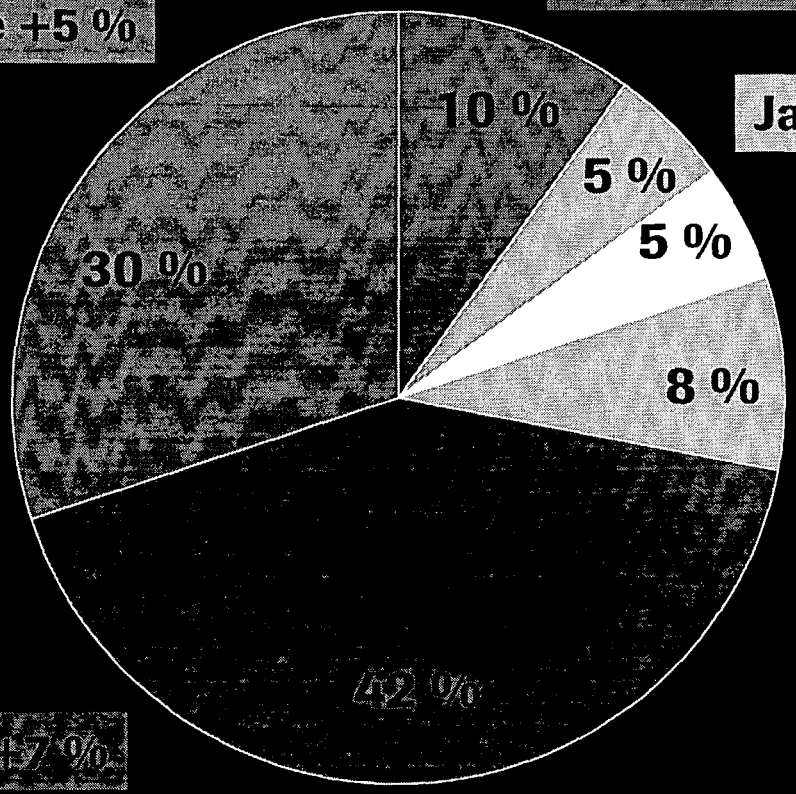
* Roche and Genentech combined

Prescription medicines sales by region* in H1 2001

North America returns to growth

Roche

Pharmaceuticals



* Roche and Genentech combined

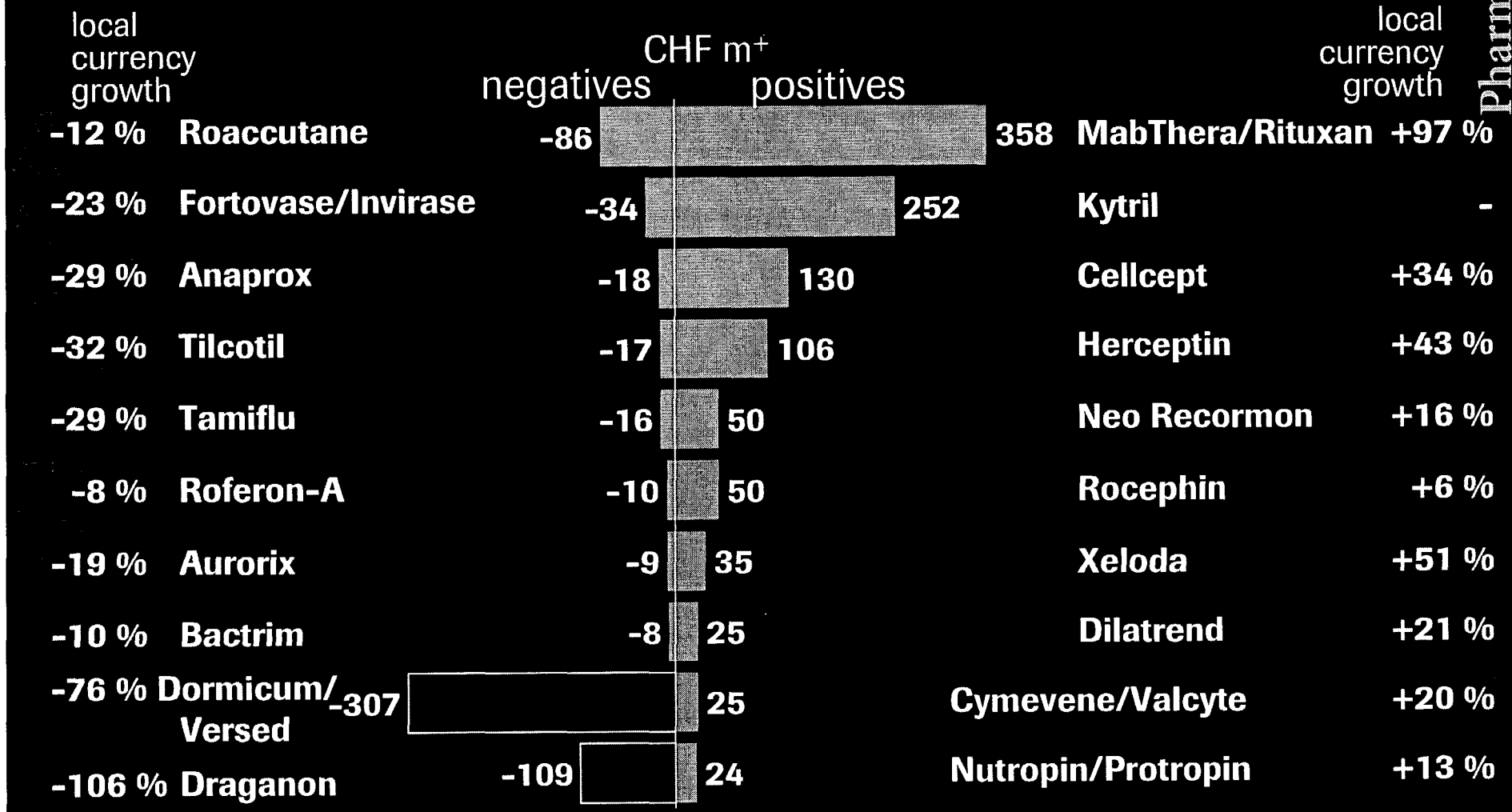
all growth rates in local currencies

Prescription medicines sales* in H1 2001

Positives and negatives

Roche

Pharmaceuticals



* Roche and Genentech combined

\+ at constant exchange rates

Prescription medicines sales* in H1 2001

Five products with annual sales >CHF 1 billion

Roche

Pharmaceuticals

Rocephin	895	6 %	6 %
Mabthera/Rituxan	742	101 %	97 %
Roaccutane	614	-11 %	-12 %
Xenical	521	3 %	4 %
CellCept	514	35 %	34 %
Herceptin	356	45 %	43 %
NeoRecormon	354	12 %	16 %
Kytril	252	-	-
Viracept	221	3 %	5 %
Nutropin/Protropin	207	17 %	13 %
Neupogen	156	4 %	5 %
Pulmozyme	153	7 %	6 %
Furtulon	145	-7 %	2 %
Lexotan	139	-5 %	-3 %
Cymevene	138	14 %	12 %
Dilatrend	137	17 %	21 %
Rocaltrol	133	-4 %	-2 %
Activase	123	-27 %	-29 %
Madopar	121	0 %	3 %
Roferon-A	117	-10%	-8 %

* Roche and Genentech combined

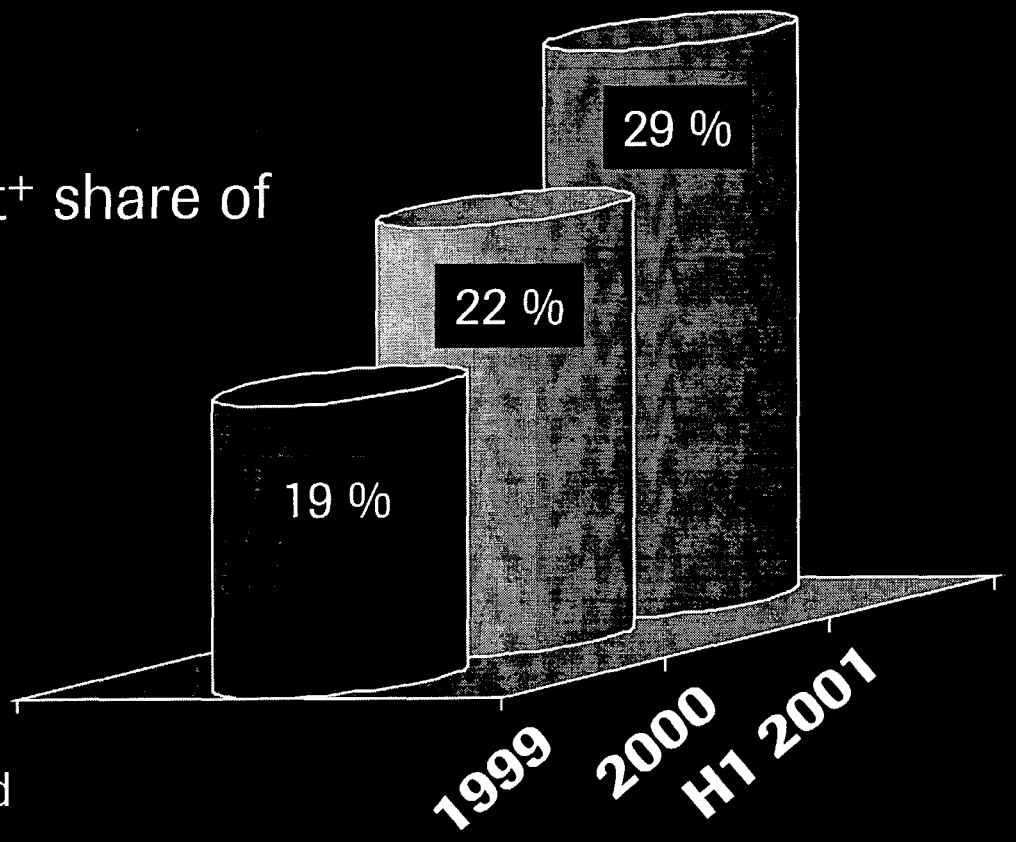
Prescription medicines sales* in H1 2001

Growing importance of new products+

Roche

Pharmaceuticals

new product+ share of total sales



* Roche and Genentech combined

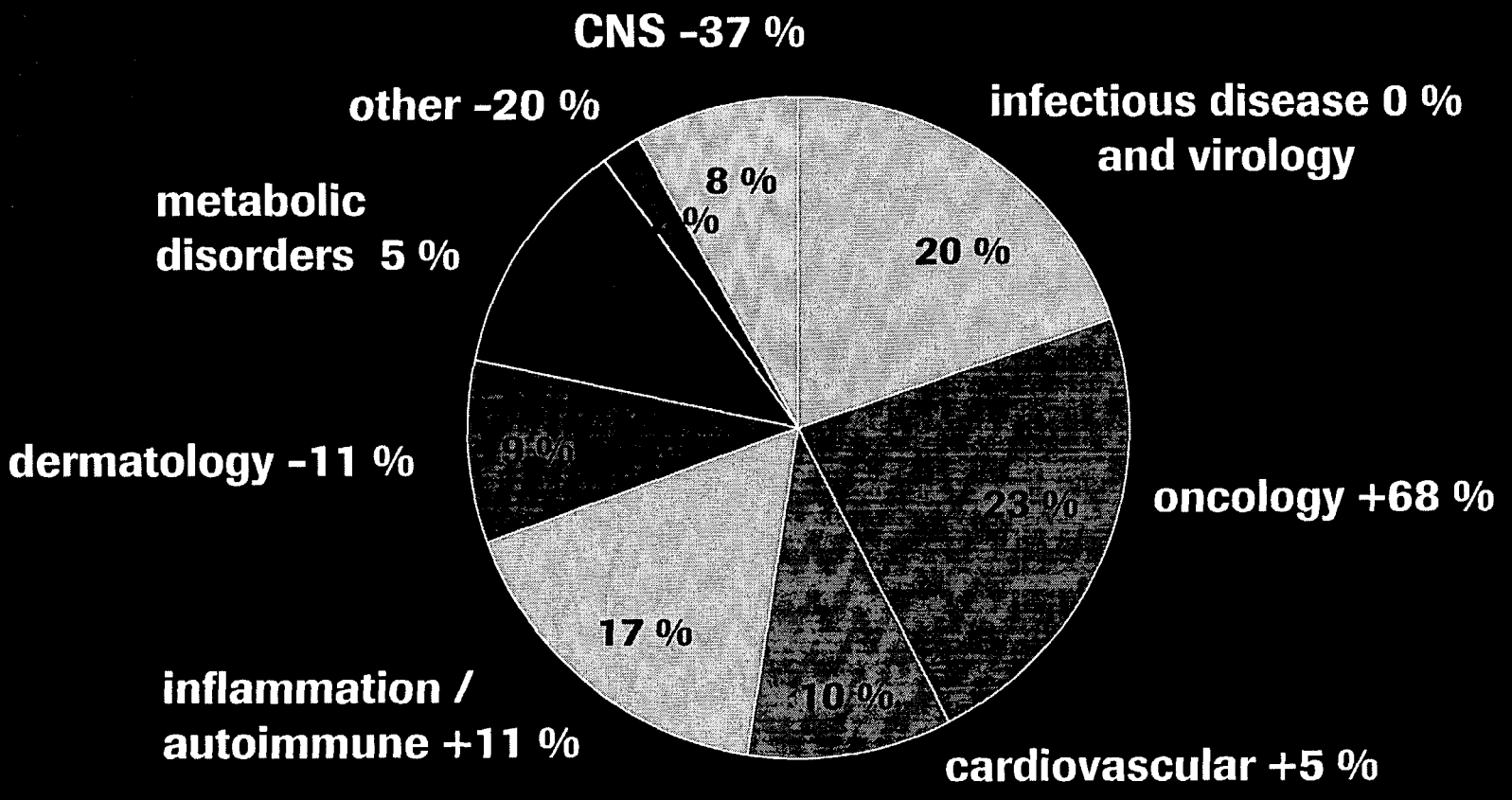
\+ launched in last five years

Prescription medicines sales by therapy area* in H1 2001

Future growth areas: oncology, virology, metabolic disorders, inflammation/autoimmune

Roche

Pharmaceuticals



* Roche and Genentech combined

all growth figures are in local currencies

Business milestones in H1 2001

Roche

Pharmaceuticals

- **MabThera/Rituxan** - initial treatment duration doubled from 4 to 8 weeks (US)
  - filed for aggressive NHL (EU and US)
  - approved in Japan
- **Herceptin** launched in Japan
- **NeoRecormon** approval for anemia associated with hematological tumors (EU)
- **Kytril** Roche initiates global marketing
- **Avastin** (anti-VEGF) in combination with Xeloda receives fast track NDA review status for metastatic breast cancer (US)
- **Tarceva** (OSI 774) for various solid tumors in-licensed from OSI

Business milestones in H1 2001

Roche

Pharmaceuticals

- **Dilatrend (carvedilol)** produces landmark data in severe CHF (COPERNICUS study) and in post-MI patients (CAPRICORN study)
- **TNKase/Activase** to be co-promoted by Genentech, Schering Plough and Cor (US)

- **Valcyte** approved for treatment of CMV retinitis (US)
- **Tamiflu** launched in Japan
- **Pegasys and ribavirin** phase 3 study reveals highest efficacy rates ever seen in chronic hepatitis C
- **levovirin** in-licensed from ICN

- **Xenical** filed for type 2 diabetes (US, EU)

'Reshaping For Future Growth'

Roche

Pharmaceuticals

- align resources to attain/retain leadership in priority disease areas
- realise organic growth potential, together with potential strategic moves, to return Division's sales growth to market growth rates or above
- re-shape cost structure to improve operating profit margin to 20-25 % of sales

'Reshaping For Future Growth'

Leaner and fitter

Roche

Pharmaceuticals

	Roche Pharma 2000	Roche Pharma 2004	pharma industry average
cost of goods/sales	21 %	19 %	22.5 %
marketing and distribution/sales	35 %	32 %	33 %
research and development/sales	18 %	17 %	15 %

'Reshaping For Future Growth'

Roche

Pharmaceuticals

Production rationalize site network to reduce over-capacity
- ↳ manufacturing to be phased out in Welwyn (UK) and chemical production to be reduced in Basel (CH)

Marketing align resources to current product portfolio, particularly in the USA, and greater emphasis on cost-effectiveness
- ↳ sales force reduced by 500 people to around 2000 representatives in USA

Research concentrate research operations in fewer of sites
- ↳ research at Welwyn (UK) to be closed and projects transferred to Palo Alto

Clinical Development concentrate development operations in fewer number of sites
- ↳ development at Palo Alto (USA) to be closed and projects transferred to other sites

Business Development business development, licensing and alliance activities across Roche Rx pharmaceuticals brought together into one new strengthened function

Roche

Pharmaceuticals

North American Pharmaceuticals

Challenges from 2000

Roche

Pharmaceuticals

- Versed patent expiration
- Slower than anticipated growth in Xenical
- Mild flu season affecting Tamiflu and Rocephin
- Regulatory and legislative scrutiny of Accutane
- Manufacturing issues
- Expense/revenue alignment

Strengths

Roche

Pharmaceuticals

- talented and committed
- 10 of top 11 are market leaders (either 1 or 2)
- promising

First Half Turnaround

Focused on fundamentals to drive performance

Roche

Pharmaceuticals

- Restructured senior management team
- Right-sized organization to align expenses with revenue
- Accelerated manufacturing improvement plan
- Enhancing sales and marketing effectiveness
- Pursuing business development aggressively

Our sales leaders are market leaders

Roche

Pharmaceuticals

1	Accutane	acne
1	Cytovene/Valcyte	CMV retinitis
1	Demadex	loop diuretics
1	Rocephin	injectable antibiotics
1	Tamiflu	flu antivirals
1	Xenical	weight loss (Rx)
1 & 3	Xeloda	metastatic breast (3rd line) & metastatic colorectal cancers
2	CellCept	transplant
2	Kytril	anti-emetic
2	Soriatane	psoriasis
3	Fortovase/Invirase	HIV / AIDS

XENICAL® orlistat

Sales performance stabilized

Roche

Pharmaceuticals

- Number 1 prescription medicine for weight loss
- Advertising & promotion generated new patient starts
- Improved patient support → XENI*Care*
- Strategy for growth
  - increase patient time on product
  - type 2 diabetes indication

Rocephin® IM
ceftriaxone sodium

Leader in a highly competitive market

Roche

Pharmaceuticals

- Number 1 with 36% of injectable antibiotic market
- H1 growth in demand
- Bacterial resistance minimal
- Large group purchase organization deals recently signed
- Maintaining marketing support

Tamiflu: market leader
2000–2001 flu season (TRx)

Roche

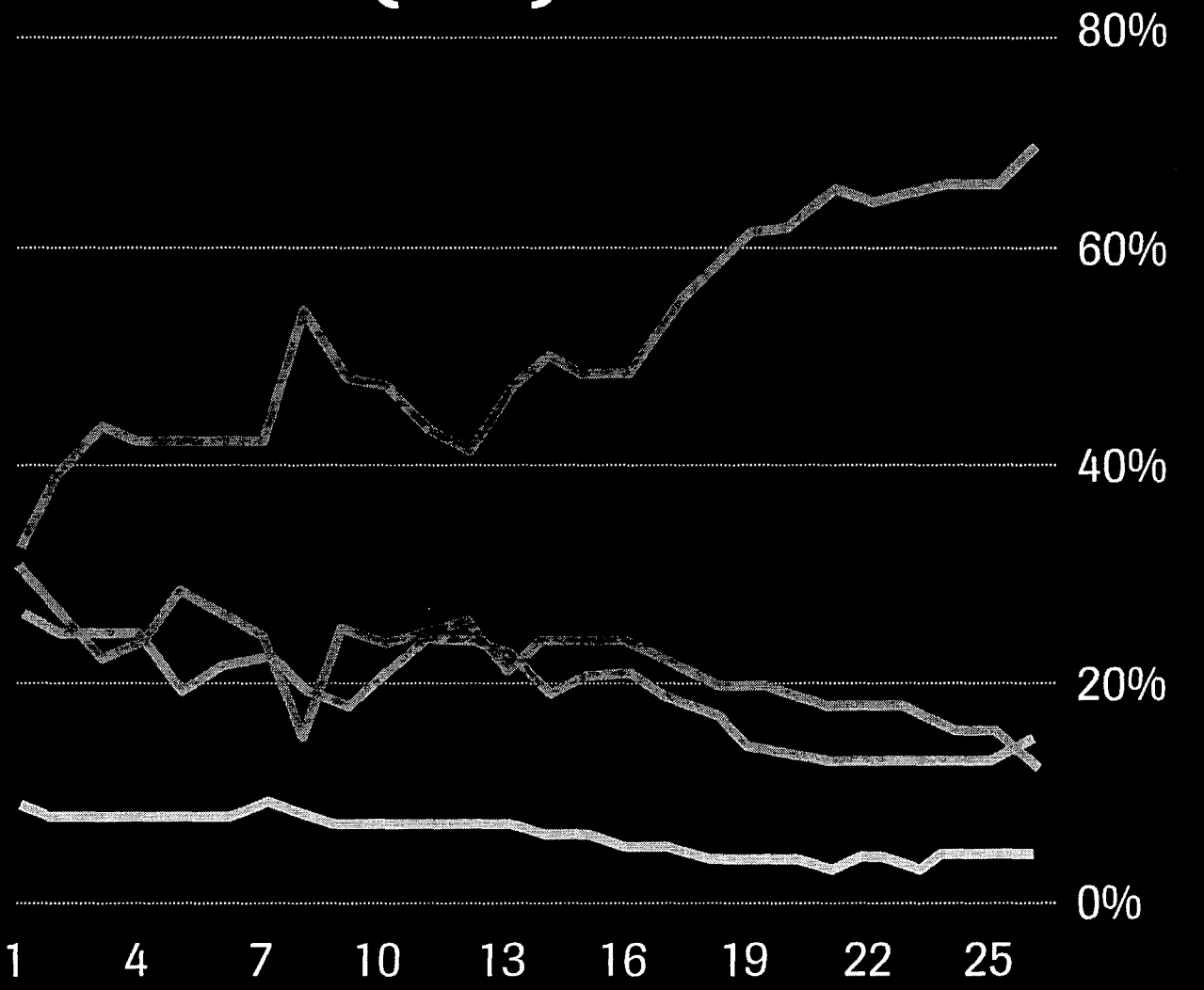
Pharmaceuticals

Tamiflu™ oseltamivir phosphate

SYMMETREL (AMANTADINE HCl)

and FLUMADINE rimantadine HCl

RELENZA® ZANAMIVIR FOR INHALATION



Tamiflu™
oseltamivir phosphate

Leading prescribed antiviral in the U.S.

Roche

Pharmaceuticals

Number 1 with 95% share in the neuraminidase inhibitor market

Family strategy

- start treatment early
- encourage preventive therapy

FluSTAR enables localized marketing

Unique and effective marketing approaches



Key part of first combination to show survival benefit in metastatic breast cancer

Roche

Pharmaceuticals

Good market positions in breast and colorectal cancer

First drug approved for first-line treatment of metastatic colorectal cancer since 1996

Xeloda and Taxotere is first combination to show survival benefit against current standard treatment

Clinical investigation widespread across U.S.

Xeloda weekly TRx since launch

Roche

Pharmaceuticals

KYTRIL®
granisetron HCl
Tablets and Injection

Returning a proven product to growth

Roche

Pharmaceuticals

Number 2 product with 25% share in U.S. anti-emetic market

Significantly strengthens Roche U.S. oncology franchise

Hospital capability and appropriate support is returning product to growth

CellCept® (mycophenolate mofetil)

Building the next cornerstone of immunosuppressive therapy

Roche

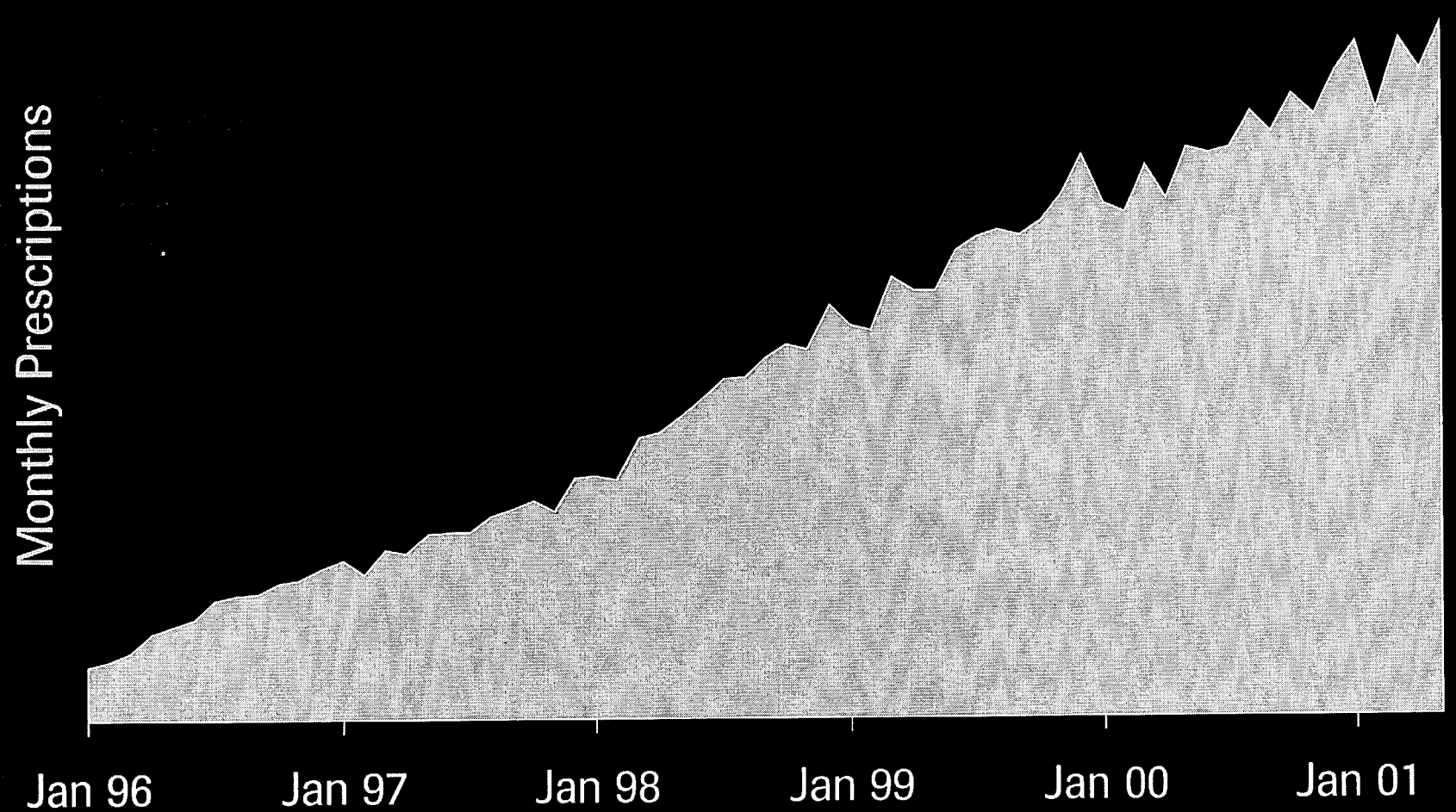
Pharmaceuticals

- Number 2 product in transplantation
- Unique efficacy and safety profile
- Strategy for growth
  - liver transplants
  - displace older drugs
  - pursue new uses
- Substantial marketing and medical marketing support

Growth in CellCept Prescription Demand

Roche

Pharmaceuticals



*YTD Growth shown versus YTD 2000

IIMS NPA4/01

New product and indication launches

Roche

Pharmaceuticals

Tamiflu – flu prophylaxis and pediatric (late 2000)
Xeloda – metastatic colorectal cancer (April 2001)
Valcyte – CMV retinitis (March 2001)

Xenical – type 2 diabetes
Pegasys – chronic hepatitis C
Xeloda – in combination for metastatic breast cancer

Summary

Roche

Pharmaceuticals

Restructured organization
Aligned expenses with revenues
Sharpened focus on sales and profit generation

Optimize current portfolio
Pursue strategic alliances
Prepare for pipeline contributors

Roche

Pharmaceuticals

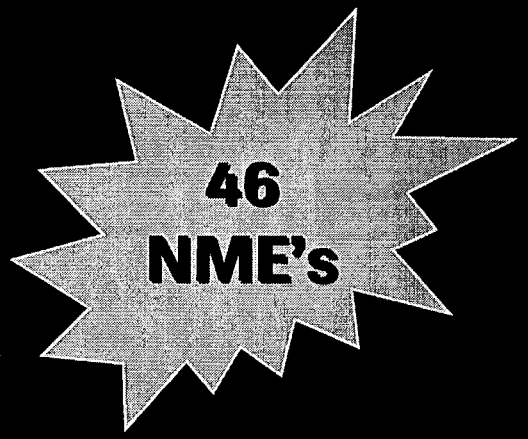
Pharmaceuticals pipeline

Roche R&D pipeline

46 NME's focused primarily in 7 therapy areas

Roche

Pharmaceuticals



7 NME's in phase 0 in preparation for phase I at Roche

19 NME's currently undergoing clinical trials at Roche

- 11 phase I
- 4 phase II
- 4 phase III / registration

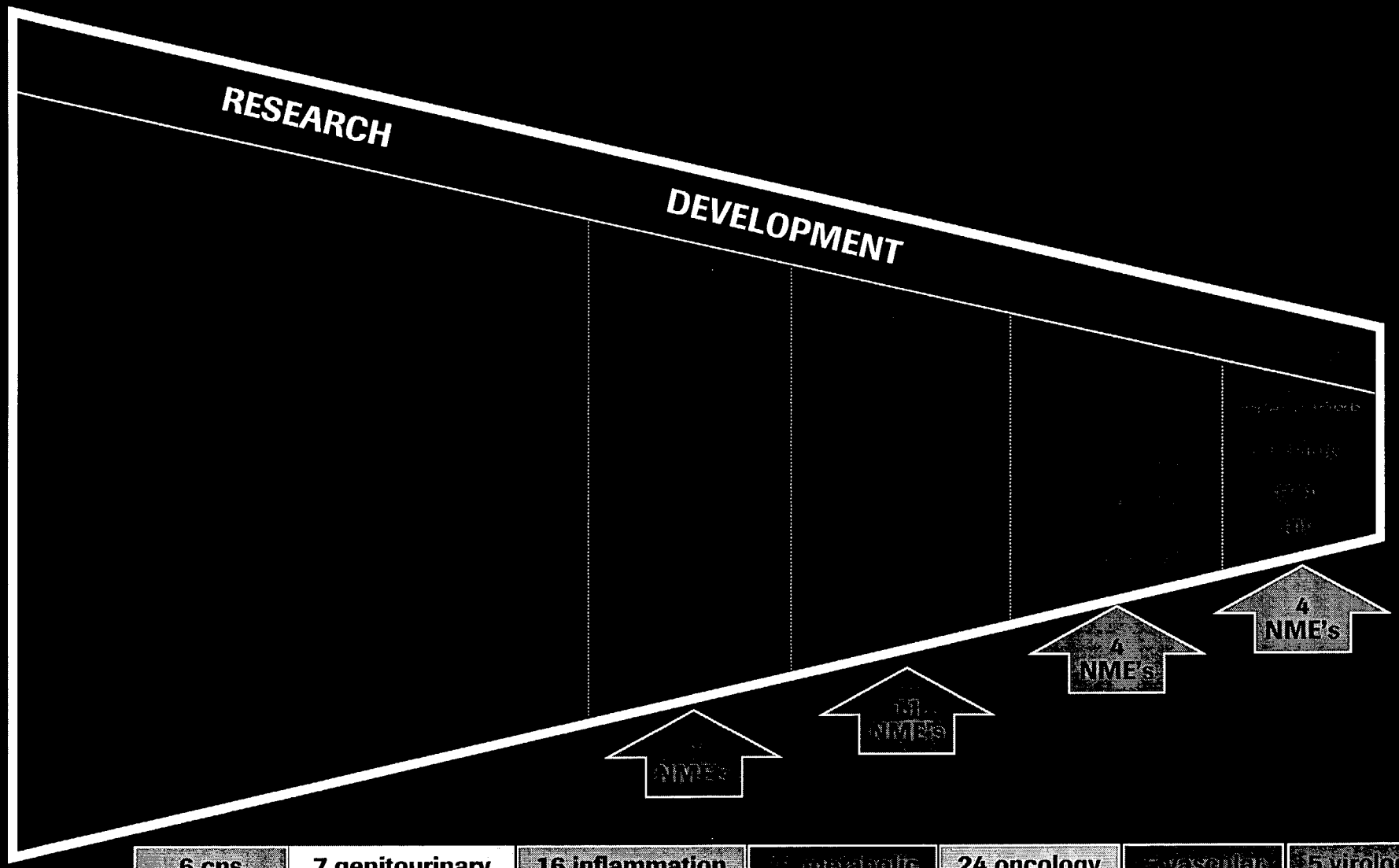
13 NME's opt-in opportunities

7 NMEs with Genentech where Roche financially benefits

Fueling the R&D pipeline at Roche

Roche

Pharmaceuticals



6 cns | 7 genitourinary | 16 inflammation | metabolic | 24 oncology | vasc | 5 virology

Roche managed pipeline status at June 2001

* in preparation for phase I

** in preparation for phase II

Roche R&D pipeline

26 NME's in development at Roche

Roche

Pharmaceuticals

R1124	emesis
R1164	osteoporosis
R1395	solid tumors
R1458	type 2 diabetes
R1065	(5HT2c) obesity
R1273	solid tumors
R1435	deep vein thrombosis

R411	asthma
R545	overactive bladder
R594	rheumatoid arthritis
R665	COPD
R667	emphysema
R673	(NK1) depression /anxiety
R701	overactive bladder
R804	oncology
R765*	type 2 diabetes
R1270*	(levovirin) HCV
R724	(T-1249) HIV

R440	(CCI) solid tumors
R450	(alpha 1 agonist) stress incontinence
R483**	(insulin sensitizer) type 2 diabetes
R744	(new generation epo) anemia

R420	(Pegasys) HCV
R484	(Bonviva)osteoporosis
R698	(T-20) HIV
R1415	(Tarceva) oncology

..... collaborations

* in preparation for phase I

** in preparation for phase II

pipeline status at June 2001

Roche R&D pipeline

... plus 13 'opt-in' projects gives 39 NME's

Roche

Pharmaceuticals

R1124	emesis
R1164	osteoporosis
R1395	solid tumors
R1458	type 2 diabetes
R1065	(5HT2c) obesity
R1273	solid tumors
R1435	deep vein thrombosis
antitumor (G)	
TF mab (G)	
antifungal (B)	

R411	asthma
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R765*	type 2 diabetes
R1270*	(levovirin) HCV
R724	(T-1249) HIV
antibiotic (B)	
psoriasis (B)	
migraine (P)	
endothelin antagonist (S)	
macular degeneration (G	

R440	(CCI) solid tumors
R450	(alpha 1 agonist) stress incontinence
R483**	(insulin sensitizer) type 2 diabetes
R744	(new generation epo) anemia
cephalosporin (B)	
eczema (B)	
SCLC (N)	
Inflamm. bowel disease (G)	

R420	(Pegasys) HCV
R484	(Bonviva)osteoporosis
R698	(T-20) HIV
R1415	(Tarceva) oncology
oncology (G)	

..... collaborations

opt-in opportunities

Basilea (B)
Genentech (G)
Novus (N)
Pozen (P)
Speedel (S)

* in preparation for phase I
** in preparation for phase II

pipeline status at June 2001

Roche R&D pipeline

... plus 7 Genentech NMEs which Genentech will commercialise alone gives 46 NMEs

Roche

Pharmaceuticals

R1124	emesis
R1164	osteoporosis
R1395	solid tumors
R1458	type 2 diabetes
R1065	(5HT2c) obesity
R1273	solid tumors
R1435	deep vein thrombosis
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migraine (P)	
endothelin antagonist (S)	
macular degeneration (G	
Anti-CD11a AB (G)	

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eczema (B)	
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inflamm. bowel disease (G)	
E-26** (G)	

R420	(Pegasys) HCV
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R1415	(Tarceva) oncology
oncology (G)	
Xanelim (G)	
Xolair (G)	
Tracleer (G)	
TNKase (G)	
Thrombopoietin (G)	

..... collaborations

opt-in opportunities

Basilea (B)
Genentech (G)
Novus (N)
Pozen (P)
Speedel (S)

Genentech (without Roche opt-in but Roche benefits financially)

* in preparation for phase I
** in preparation for phase II

pipeline status at June 2001

Roche R&D pipeline

46 NME's focused primarily in 7 therapy areas

Roche

Pharmaceuticals

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antitumor (G)	R804 oncology	inflamm. bowel disease (G)	Tracleer (G)
TF mab (G)	R765* type 2 diabetes	E-26** (G)	TNKase (G)
antifungal (B)	R1270* (levovirin) HCV		Thrombopoietin (G)
	R724 (T-1249) HIV		
	antibiotic (B)		
	psoriasis (B)		
	migraine (P)		
	endothelin antagonist (S)		
	macular degeneration (G		
	Anti-CD11a AB (G)		

R667
emphysema

..... collaborations

opt-in opportunities

Basilea (B)
Genentech (G)
Novus (N)
Pozen (P)
Speedel (S)

Genentech (without Roche opt-in but Roche benefits financially)

* in preparation for phase I
** in preparation for phase II

pipeline status at June 2001

R667 in emphysema

Rebuilding lung tissue / improving lung function

Roche

Pharmaceuticals



- a selective retinoid agonist (RAR-γ)
- first compound able to regenerate lung tissue (in animal studies)
- restores lung function in animal models
- potential to reverse the disease process
- selectively avoids toxicity associated with the retinoids

R667 in emphysema

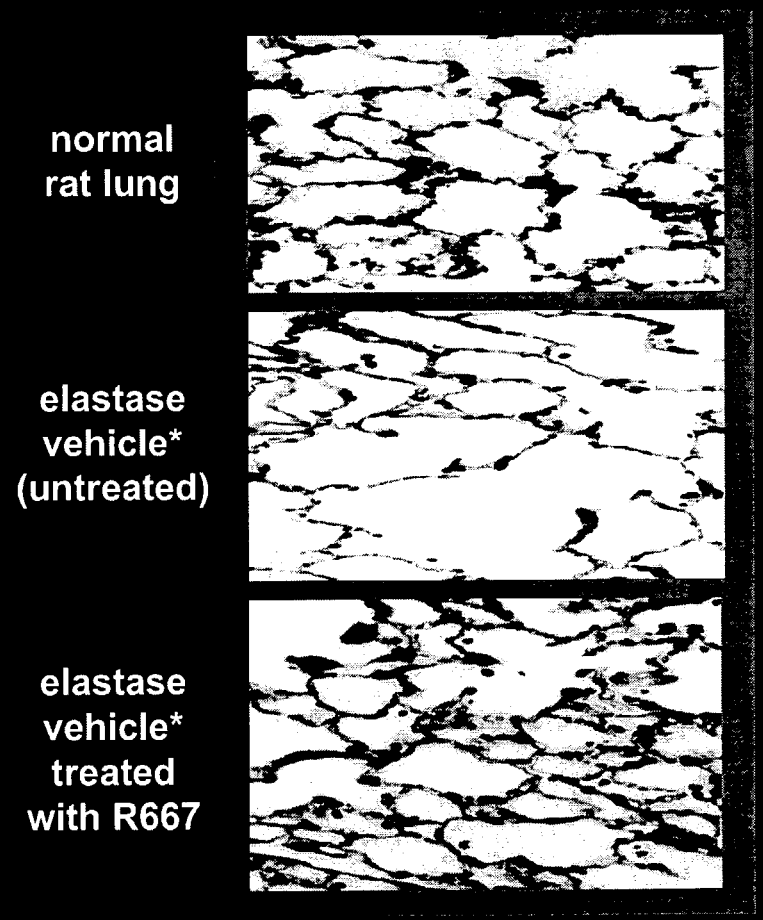
Rebuilding lung tissue / improving lung function

Roche

Pharmaceuticals

phase I

- regeneration of lung tissue
- increases arterial oxygen
- clean side effect profile
- expected once daily dosing
- phase 1 initiated



* vehicle = disease state model

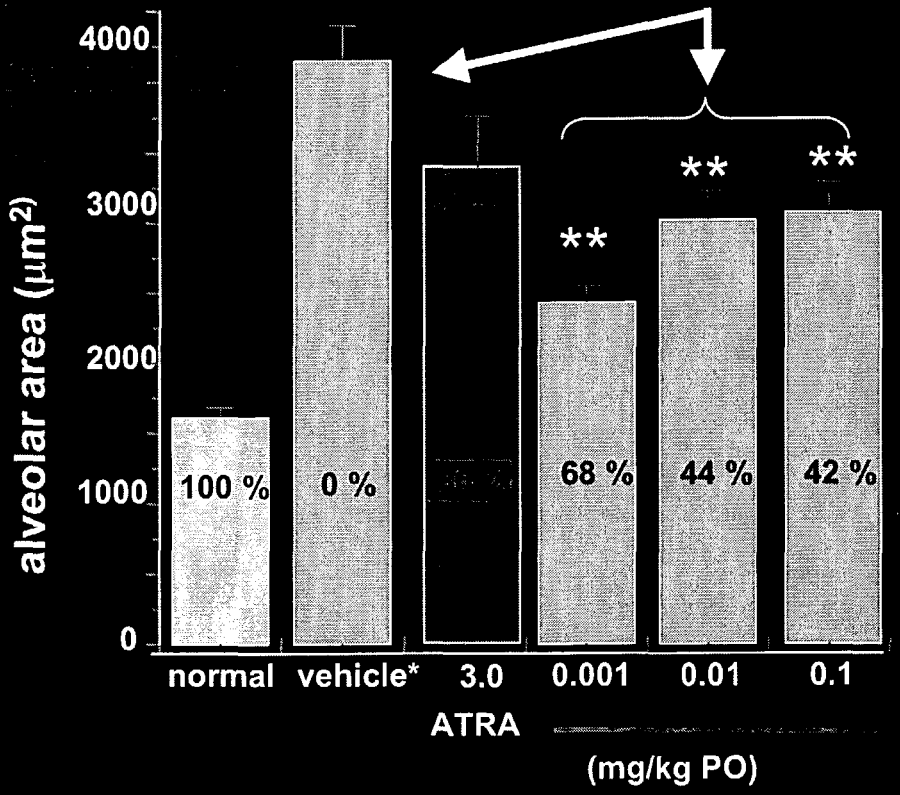
R667 in emphysema

Rebuilding lung tissue / improving lung function

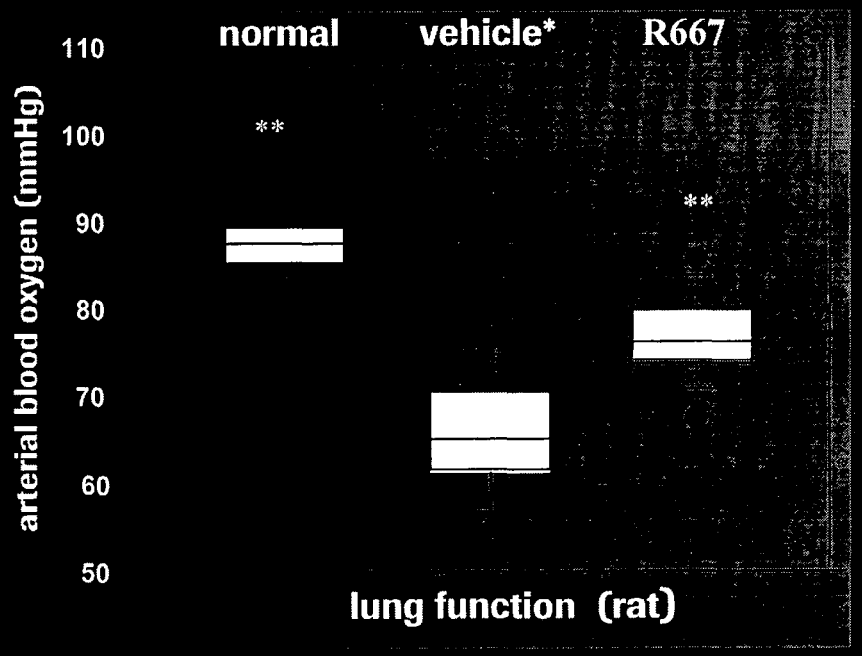
Roche

Pharmaceuticals

lung structure



lung function



* vehicle = disease state model

Roche R&D pipeline

46 NME's focused primarily in 7 therapy areas

Roche

Pharmaceuticals

R1124 emesis
R1164 osteoporosis
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R66[illegible] [illegible]D
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cephalosporin (B)
eczema (B)
SCLC (N)
Inflamm. bowel disease (G)
E-26** (G)

oncology (G)
Xanelim (G)
Xolair (G)
Tracleer (G)
TNKase (G)
Thrombopoietin (G)

* in preparation for phase I
** in preparation for phase II

..... collaborations

opt-in opportunities
Basilea (B)
Genentech (G)
Novus (N)
Pozen (P)
Speedel (S)

Genentech (without Roche opt-in but Roche benefits financially)

pipeline status at June 2001

R411 in asthma

Novel integrin antagonist selective in asthma



- selectively targets the underlying disease pathology
- powerful inhibitor of inflammatory cell infiltration
- side effect-free profile in animal studies
- potentially superior safety to inhaled corticosteroids
- better efficacy than the leukotrienes in animal studies
- potential once a day monotherapy for asthma prophylaxis

Roche

Pharmaceuticals

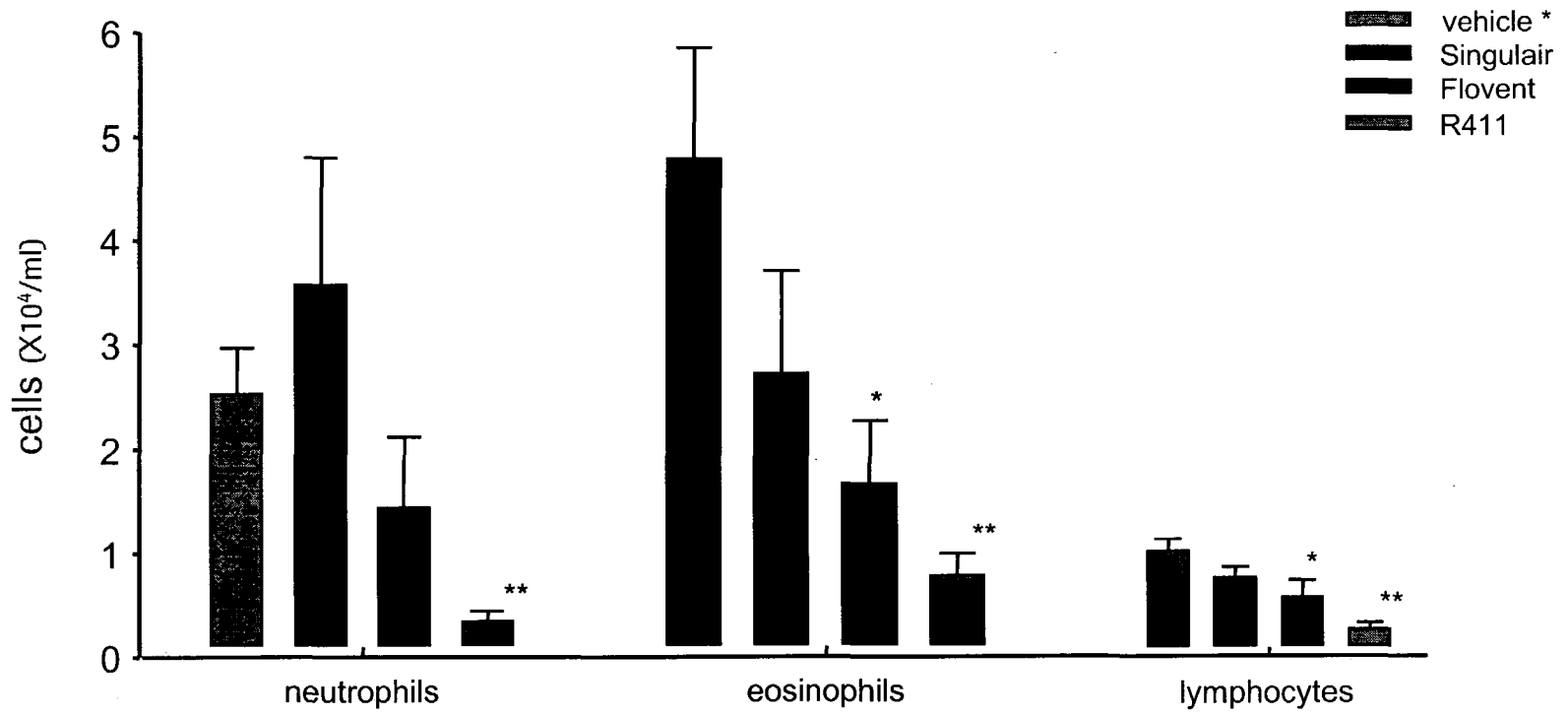
R411 in asthma

Dramatic reduction in inflammatory response in animal studies

Roche

Pharmaceuticals

allergen-induced inflammatory cell influx in the atopic primate



* vehicle = disease state model

Roche R&D pipeline

46 NME's focused primarily in 7 therapy areas

Roche

Pharmaceuticals

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	R724 (T-1249) HIV		Thrombopoietin (G)
	antibiotic (B)		
	psoriasis (B)		
	migraine (P)		
	endothelin antagonist (S)		
	macular degeneration (G		
	Anti-CD11a AB (G)		

R450 (alpha1 agonist) stress incontinence

..... collaborations

opt-in opportunities

Basilea (B)
Genentech (G)
Novus (N)
Pozen (P)
Speedel (S)

Genentech (without Roche opt-in but Roche benefits financially)

* in preparation for phase I
** in preparation for phase II

pipeline status at June 2001

R450 in stress urinary incontinence (SUI)

Potent non-surgical treatment

Roche

Pharmaceuticals



- over 40 million patients in major markets
- no globally approved drug therapy with SUI indication
- high unmet need for a non-surgical treatment
- in preclinical tests, potent effects on bladder outlet muscle tone with minimal cardiovascular effects ("uroselectivity")

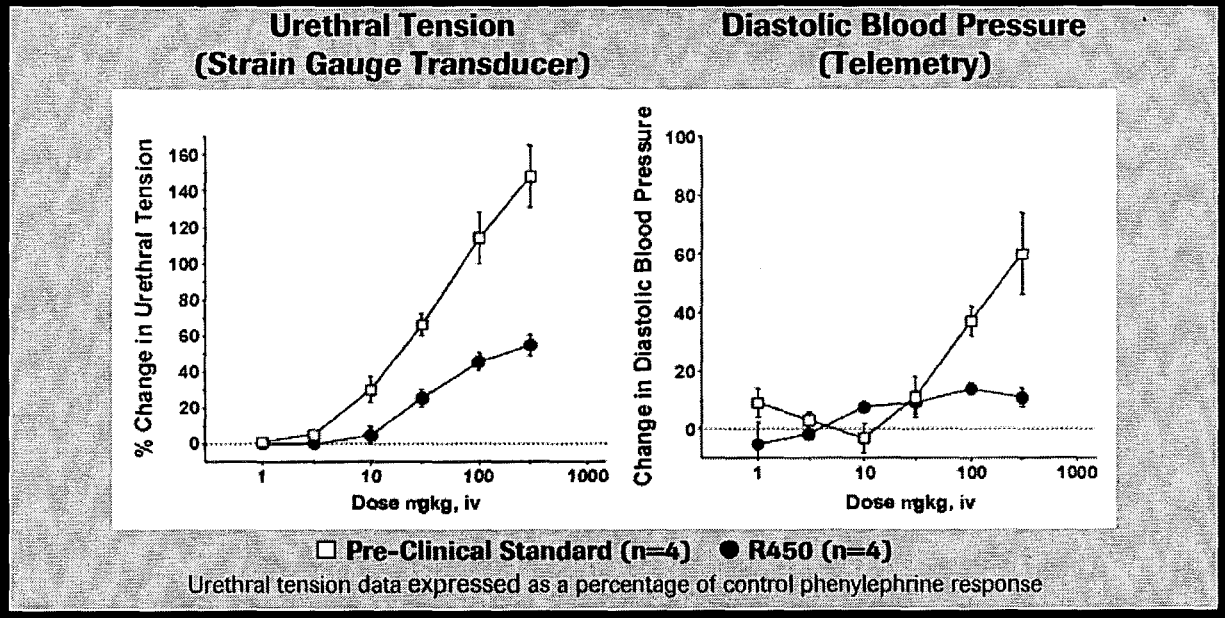
R450 in stress urinary incontinence

Good efficacy and improved safety

Roche

Pharmaceuticals

animal urethra/blood pressure model



phase IIa clinical trial in SUI patients

- significant decrease in incontinent episodes versus placebo
- generally safe and well tolerated
- phase IIb studies have been initiated

Roche R&D pipeline

46 NME's focused primarily in 7 therapy areas

Roche

Pharmaceuticals

R1124 emesis
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..... collaborations

opt-in opportunities
Basilea (B)
Genentech (G)
Novus (N)
Pozen (P)
Speedel (S)

Genentech (without Roche opt-in but Roche benefits financially)

* in preparation for phase I
** in preparation for phase II

pipeline status at June 2001

R440 (CCI) in oncology

Cell cycle inhibitor for a range of cancers

Roche

Pharmaceuticals

phase II

- novel mechanism
- effective in a range of cancers (pre-clinical data)
- effective in tumors resistant to conventional drugs
- monotherapy or add-on potential
- convenient oral formulation
- well tolerated and safe in phase I studies
- phase II initiated in breast, non-small cell lung and colorectal cancers



R440 (CCI) in oncology

Cell cycle inhibitor for a range of cancers

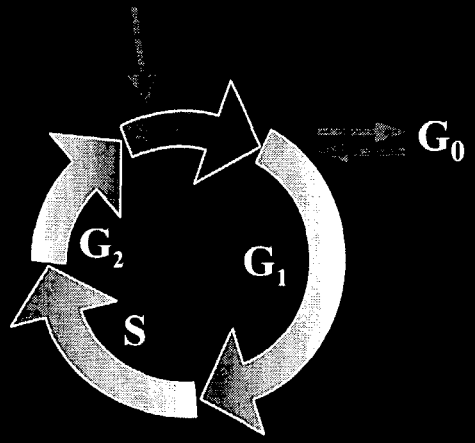
Roche

Pharmaceuticals

phase II

Preclinical data

- cell cycle and anti-proliferative activity tested in all tumor cell lines
- anti-tumor activity in 15/16 **in vivo** tumor models with activities ranging from growth inhibition to regressions and even cures
- active in tumor models resistant to conventional therapy



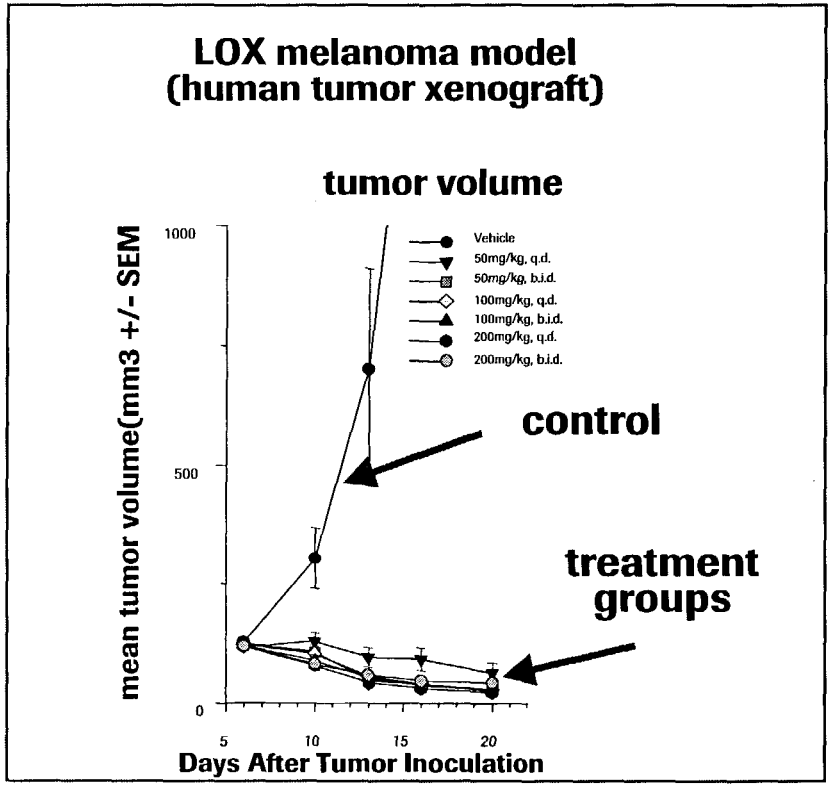
R440 causes cell cycle arrest in M-phase, followed by apoptosis

R440 (CCI) in oncology

Cell cycle inhibitor for a range of cancers

Roche

Pharmaceuticals



- R440 produces antitumor effects ranging from growth inhibition to regressions and cures (depending on the specific model and treatment regimen tested) at well tolerated doses

Roche R&D pipeline

just 4 of the 46 NME's under development

Roche

Pharmaceuticals

R1124	emesis
R1164	osteoporosis
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[illegible]	
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macular degeneration (G	
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TNKase (G)	
Thrombopoietin (G)	

..... collaborations

opt-in opportunities

Basilea (B)
Genentech (G)
Novus (N)
Pozen (P)
Speedel (S)

Genentech (without Roche opt-in but Roche benefits financially)

* in preparation for phase I
** in preparation for phase II

pipeline status at June 2001

Roche R&D pipeline

Summary

Roche

Pharmaceuticals

- substantial investments in research technologies and process re-engineering
- world class capability in research and development
- research investments beginning to bear fruit
  - good quantity and quality of pre-clinical and early clinical projects

Roche

Pharmaceuticals

Pharmaceuticals Division
Looking Forward

Roche oncology going forward

Roche

Pharmaceuticals

Herceptin®
Trastuzumab
anti-HER2 monoclonal antibody

- continued launch roll-out in Europe and Japan
- expand market through increased HER2 testing
- initiate adjuvant breast cancer study

MABTHERA®
RITUXIMAB

- continued launch roll-out in Europe
- Japan to launch in H2 2001
- pursue first line position for intermediate / high grade NHL in combination with CHOP
- pursue first line position for low grade NHL in combination with CVP

Xeloda®
(capecitabine)

- roll-out of first line indication in metastatic colorectal cancer in Europe and USA
- approval of Xeloda / docetaxel combination in first / second line therapy for metastatic breast cancer expected in H2 2001 in USA, and in 2002 in Europe

Roche oncology going forward

Roche

Pharmaceuticals



- roll-out of new oncology indication (anemia associated with haematological tumours) throughout Europe and smaller markets
- approval expected for once weekly administration in H2 2001 in Europe
- strengthened patent situation after agreement reached between Roche, Genetics Institute, J&J and Amgen
- next generation EPO expected to progress to phase II

KYTRIL® granisetron HCl Tablets and Injection

- re-launch in major markets ongoing
- marketing support justified by superior efficacy profile
- NDA filing in USA for post-operative nausea and vomiting (PONV) in H2 2001

BONDRONAT™ (ibandronic acid)

- phase III results in bone metastases in breast cancer to be discussed with US and EU authorities, with aim of filing NDA in 2002

pegylated GCSF

- in phase III for neutropenia with Amgen
- Roche to co-promote

Tarceva (OSI 774)

- positive phase II data in ovarian cancer, NSLC, head and neck cancer presented at ASCO
- now in phase III

CellCept®

Building the next cornerstone of immuno-suppressive therapy

Roche

Pharmaceuticals

- launch roll-out of liver transplant indication
- launch roll-out of paediatric renal transplant indication
- launch roll-out of renal rejection prevention indication in Japan
- data supporting CellCept as cornerstone of immuno-suppressive regimens
- further demonstration of improved long term patient and graft survival

XENICAL® orlistat
Lose Weight. Gain Life

Returning to growth
A unique marketing challenge

Roche

Pharmaceuticals

- minority of doctors active in weight management
- more interested in long-term health risks than in today's "well-being"

- key demand drivers
- unrealistic expectations
- more interested in today's problems than tomorrow's health risks
- they need support

- important player in the system
- under-utilised

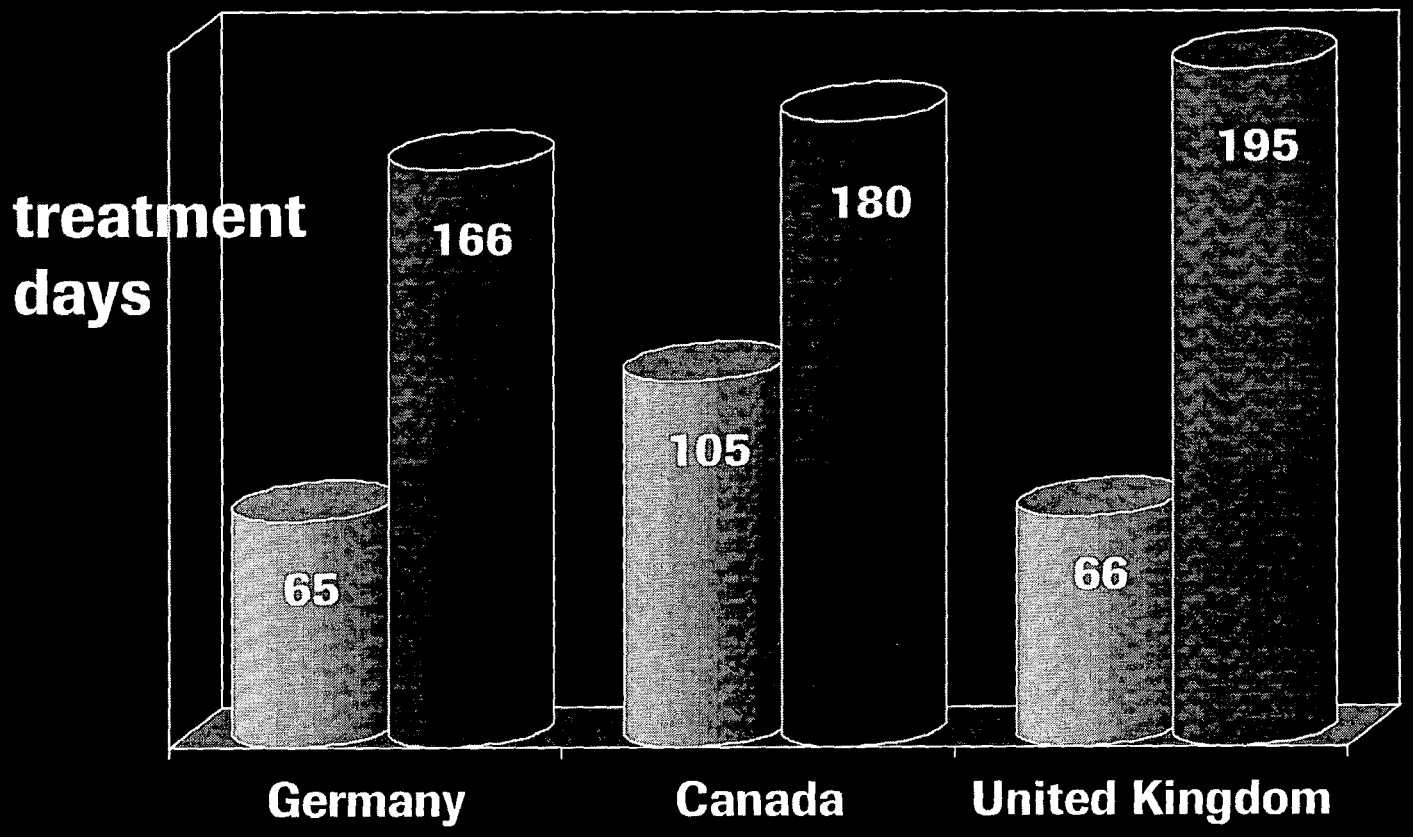
XENICAL® orlistat
Lose Weight. Gain Life

Returning to growth

Quality support increases duration of therapy, drug performance, and patient satisfaction

Roche

Pharmaceuticals



XENICAL® orlistat
Lose Weight. Gain Life

Returning to growth
Compelling data in type 2 diabetes

Roche
Pharmaceuticals

- currently 140 million people worldwide (300 million by 2025)
- 4 out of 5 people with type 2 diabetes are overweight or obese
- most anti-diabetic medications cause weight gain
- weight loss and maintenance difficult to achieve by diet and exercise alone

- weight loss is 3-4 times greater that through diet alone
- significant improvements in blood sugar control (↓ fasting blood glucose, ↓ HBA_{1c})
- improved lipid (LDL cholesterol) profile
- reduction in anti-diabetic medication use

XENICAL® orlistat
Lose Weight. Gain Life

Returning to growth

Roche

Pharmaceuticals

Strategy

- focus activities on target doctors
- increase duration of therapy and patient satisfaction
- launch type 2 diabetes indication

Sales beginning to respond

- sales growth: +4 % in H1 2001 v. -4 % in 2000

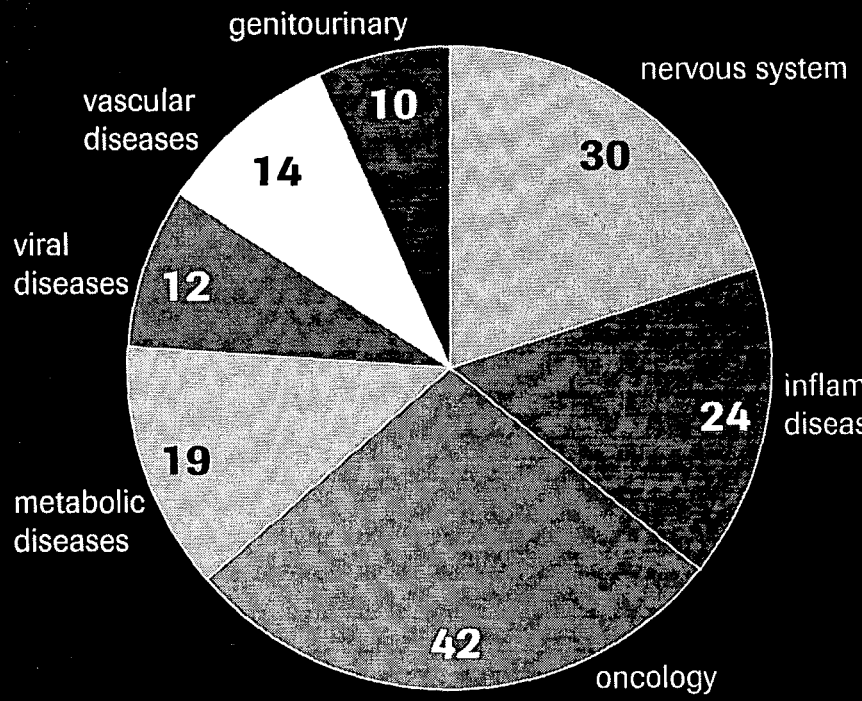
Research & Development pipeline

Getting stronger

Roche

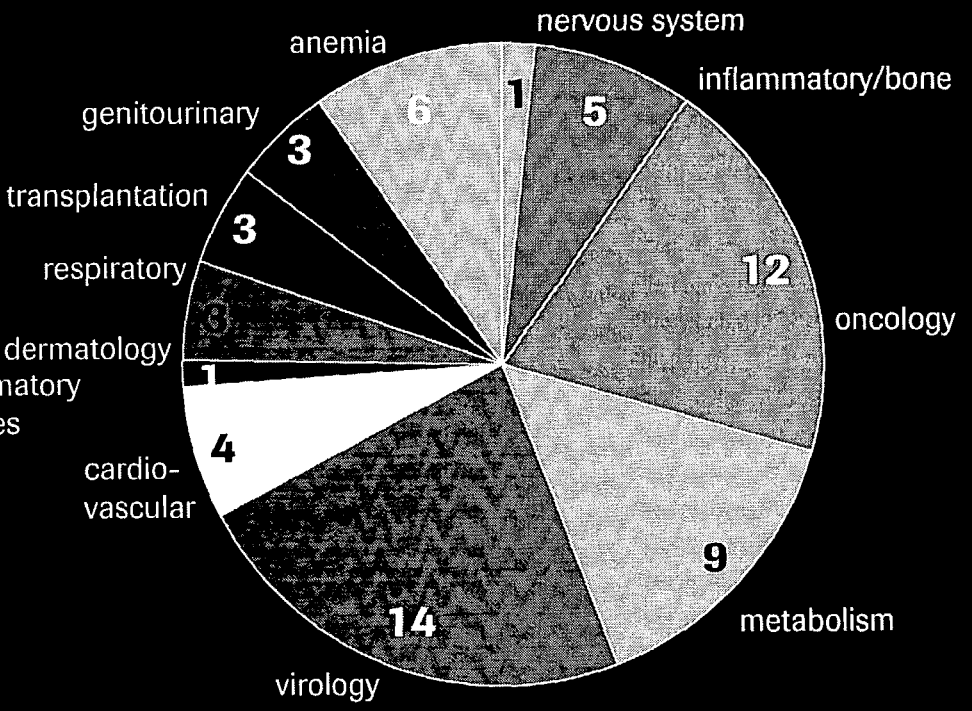
Pharmaceuticals

Research



151 projects

Development



60 projects including 26 NME's*

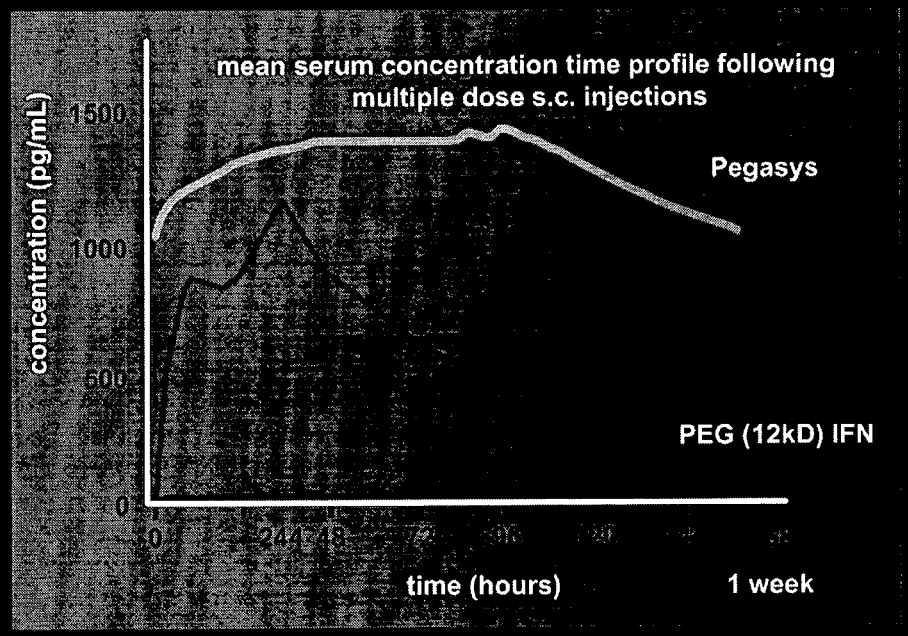
*** New Molecular Entities prior to regulatory approval**

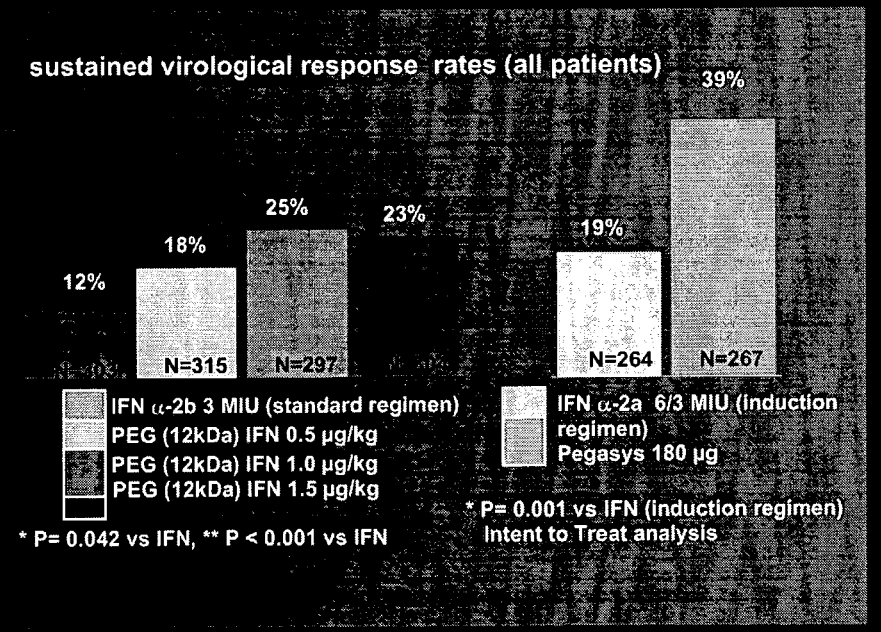
PEGASYS

Superior kinetics suggest superior efficacy

Roche

Pharmaceuticals



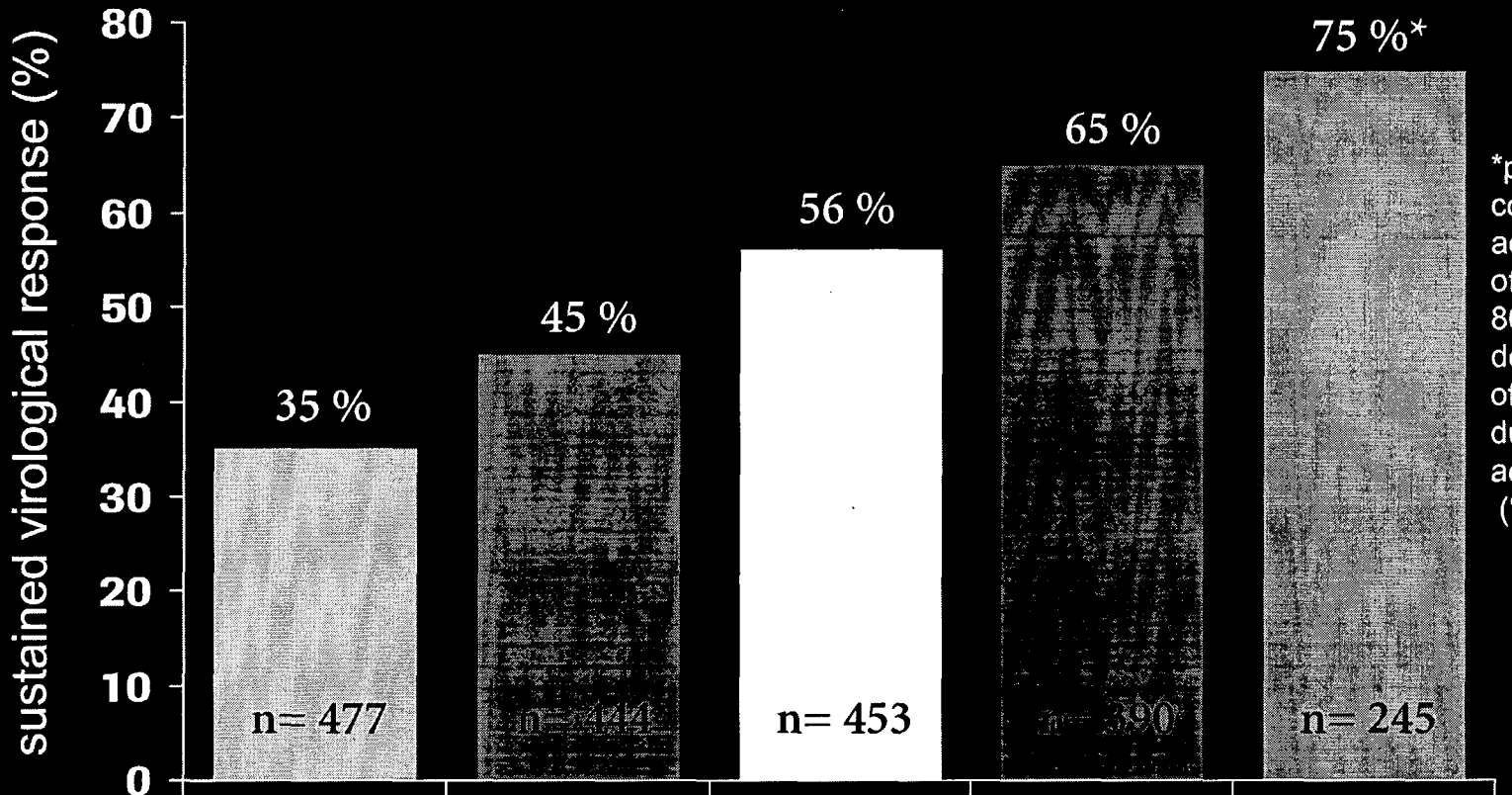


Pegasys and ribavirin combination[1].

Highest response rates ever in chronic hepatitis C

Roche

Pharmaceuticals



*patients are considered adherent if 80 % of Pegasys and 80 % of ribavirin doses for 80 % of treatment duration is administered ("80/80/80")

- PEGASYS monotherapy (pooled data)
- Intron-A + ribavirin ('Rebetron') : all patients
- PEGASYS + ribavirin : all patients
- PEGASYS + ribavirin : all patients with early response (12 weeks)
- PEGASYS + ribavirin : all patients with early response and adherent* (80/80/80)

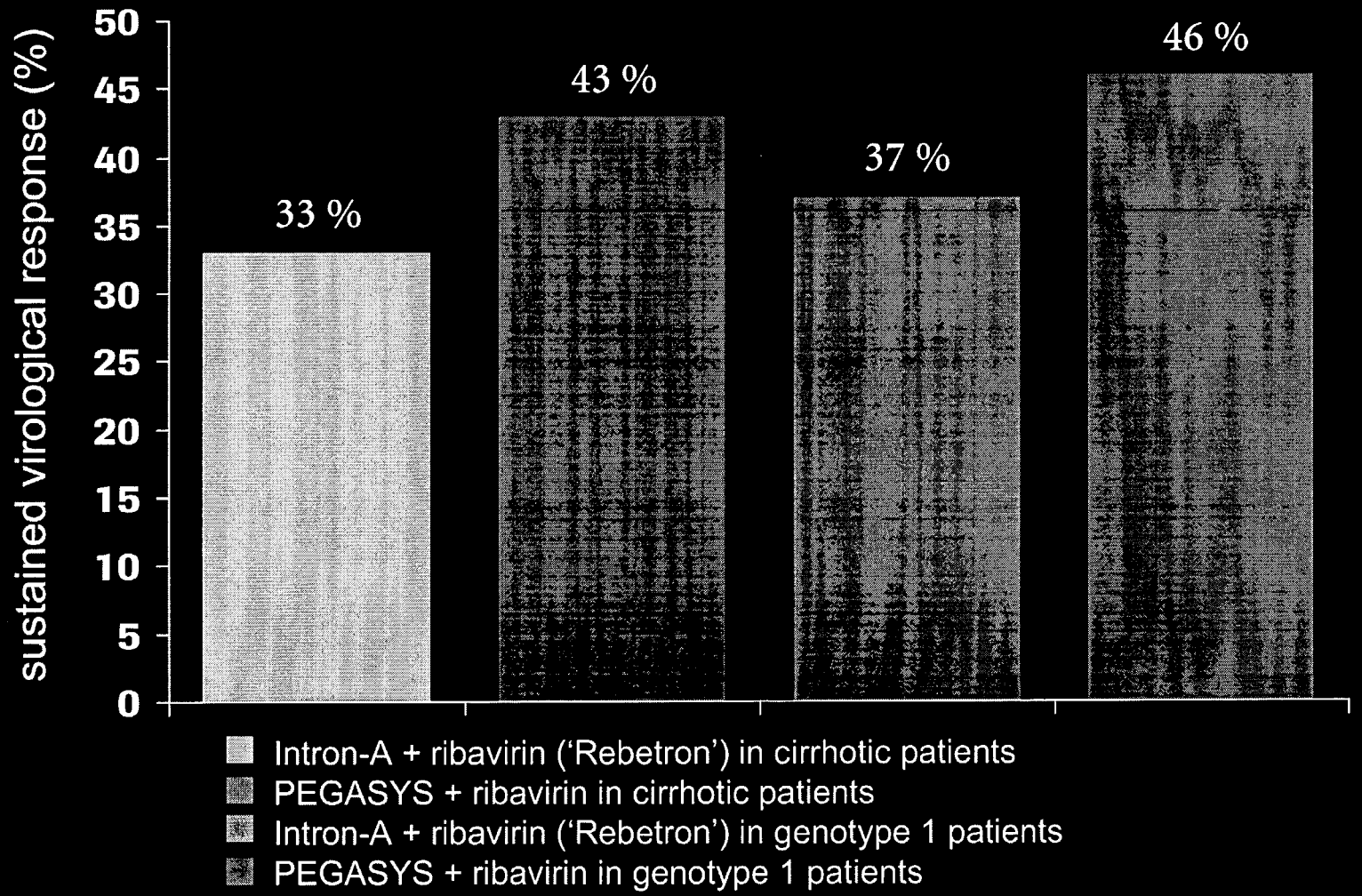
[1] phase 3 data presented at Digestive Disease Week, 22 May 2001

Pegasys and ribavirin combination[1.]

Highest response rates ever in 'difficult to treat' patients

Roche

Pharmaceuticals



[1.] phase 3 data presented at Digestive Disease Week, 22 May 2001

Pegasys and ribavirin combination[1.]

Improved safety and convenience over standard therapy

Roche

Pharmaceuticals

10 % less flu-like symptoms than 'Rebetron'
10 % less depression than 'Rebetron'
40 % less injection site reactions than 'Rebetron'

ready to use vial/syringe
no dose adjustment

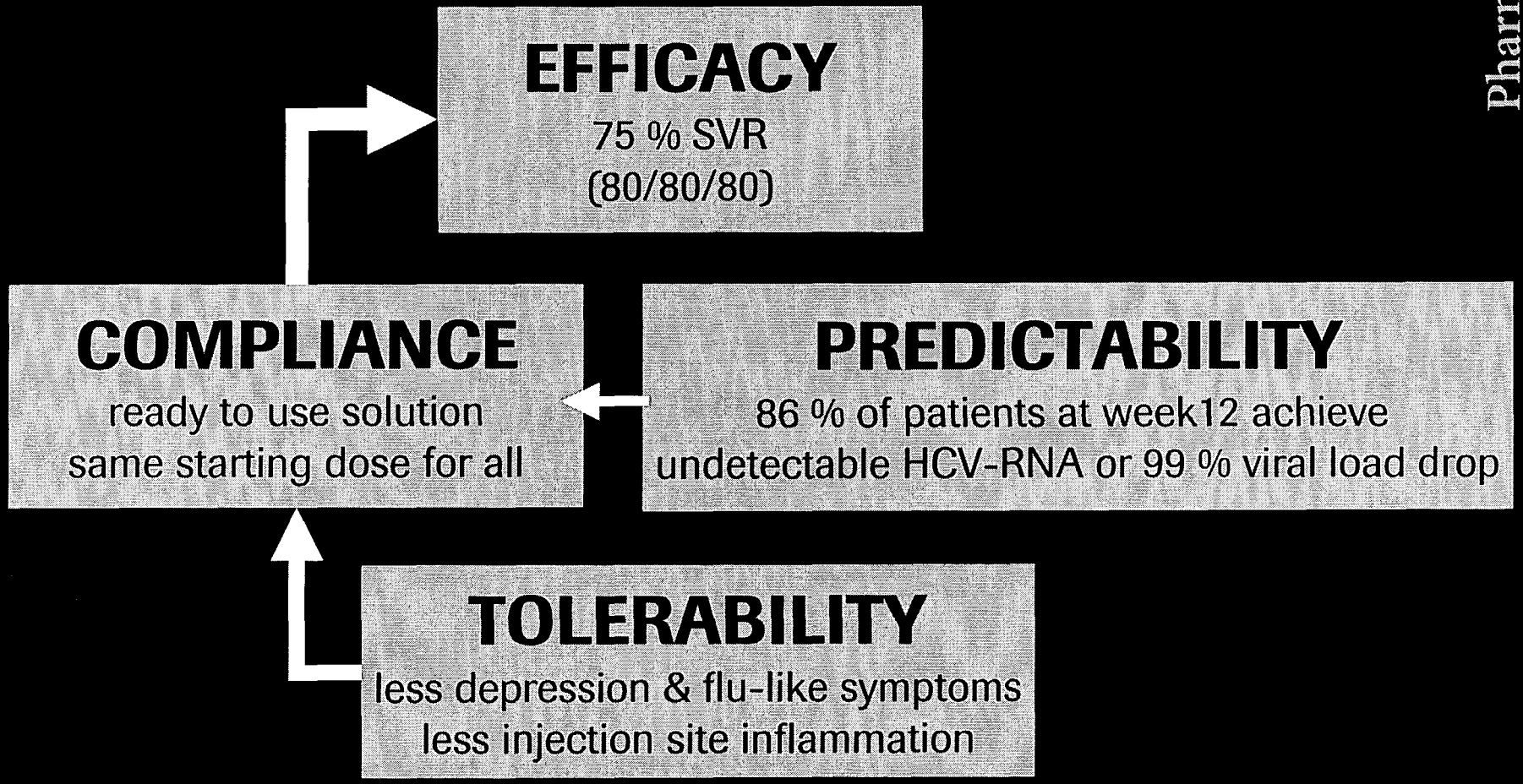
[1.] phase 3 data presented at Digestive Disease Week, 22 May 2001

Pegasys and ribavirin combination[1.]

A success cycle

Roche

Pharmaceuticals



[1.] Pegasys + ribavirin combination data (phase 3) in chronic hepatitis C presented at Digestive Disease Week, 22 May 2001

Bonviva

Strong evidence from new osteoporosis data

Roche

Pharmaceuticals

- Major phase 3 treatment trial recently completed: promising results with both daily and intermittent oral regimens. Data to be presented in 2002
- High potency of ibandronate and new data provides foundation for development of innovative oral and intravenous intermittent regimens
- Regulatory strategy and complementary programmes currently being discussed with health authorities
- NDA filing of oral formulation for treatment and prevention of post menopausal osteoporosis planned for early 2002
- Further development of oral and iv formulations to address unmet needs in osteoporosis planned

HIV fusion inhibitors

A revolutionary approach to HIV infection

Roche

Pharmaceuticals

- first agent clinically developed to act by stopping virus entering the human cell
- good safety profile demonstrated and anti-viral activity confirmed (phase 2 data)
- good activity demonstrated in drug-resistant viruses
- phase 3 studies now recruiting → study completion expected H1 2002

- highly potent antiviral activity demonstrated
- phase 2 to run through 2002

NDA filings

Roche

Pharmaceuticals

Bondronat

Bonviva

NeoRecormon

Pegasys

Pegasys + ribavirin

Tamiflu

Xenical

Launch roll-out

Roche

Pharmaceuticals

CellCept

NeoRecormon

Pegasys

Pegasys + ribavirin

Tamiflu

Valcyte

Viracept

Xeloda + docetaxel

Xenical

Clinical news expected

Roche

Pharmaceuticals

2001

September

FIT study (influenza prophylaxis in families) at ICAAC

October

Xeloda/docetaxel phase III survival data in breast cancer,
Xeloda/oxaliplatin and Xeloda/irinotecan phase II data, at ECCO

November

phase 3 data (48 weeks therapy) at AASLD
'Creeping Creatinine' trial (interim results) at ESOT

December

first line therapy in aggressive NHL in combination with CHOP at ASH

2002

phase 3 results of oral formulation in metastatic bone disease
phase 3 results of oral formulation
effects of adrenergic blockade on CHF at ACC
once weekly dosing in oncology
phase 3 results

Prescription medicines strategy

Focus for growth

Roche

Pharmaceuticals

Roche

- oncology
- metabolic diseases
- virology
- inflammatory diseases
- genito-urinary diseases
- central nervous system
- peripheral vascular diseases

Genentech, Inc. 25 YEARS
IN BUSINESS FOR LIFE

- oncology
- cardiovascular
- opportunistic

Business Development, Licensing and Alliances

Building on a base of experience ...

Roche

Pharmaceuticals

Curagen
New Haven Conn

UO/IC
Oxford UK

Max Planck
Munich Germany

Myriad
Salt Lake City UT

Vernalis
Winnersh UK

Karolinska
Stockholm Sweden

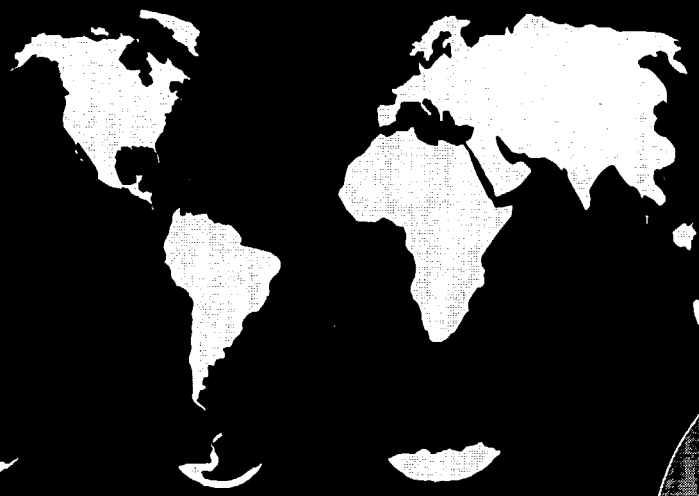
Incyte
Palo Alto CA

DeCode
Reykjavik Iceland

UCL
London UK

Analyticon
Berlin Germany

Tularik
San Francisco CA



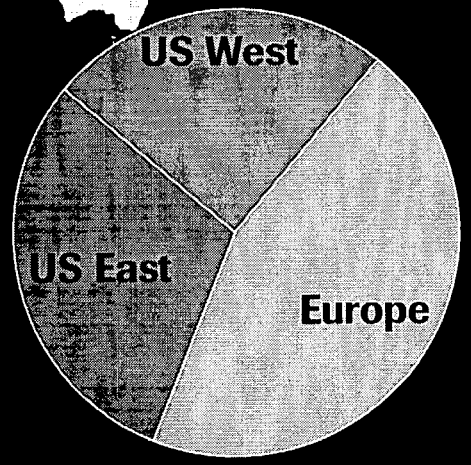
ETH
Zurich Switzerland

Wake Forest
Winston-Salem NC

Affymetrix
Santa Clara CA

Morphosys
Munich Germany

Immunogenex
San Diego CA



SNP
Boston Mass

Pharmacopeia
Cranbury NJ

Trimeris
Durham NC

Atugen
Boulder CO

Progenics
Terrytown NY

Business Development, Licensing and Alliances

... and capability

Roche

Pharmaceuticals

PriceWaterhouseCoopers Research Alliance Partners Survey 2000

- Competence of 25 major pharmaceutical companies as a research alliance partner measured by 17 criteria
- Roche and Genentech ranked 5th

Global Business Development, Licensing and Alliances

One organisation, four processes

Roche

Pharmaceuticals

- one structure to encompass entire range of deals
- want, find, get, manage
- global responsibility

Pharmaceuticals Division outlook

Near term expectations

Roche

Pharmaceuticals

- good single-digit sales growth in 2001
- continued double-digit sales growth for: Mabthera/Rituxan, Herceptin, Xeloda, CellCept, Dilatrend
- single-digit sales growth for Xenical, NeoRecormon
- slow decline: Roaccutane
- flu-dependent: Tamiflu
- operating margin to improve to 20-25 % of sales in next two to three years

Pharmaceuticals Division at H1 2001

Summary (1)

Roche

Pharmaceuticals

- Stronger second quarter produces improving sales performance
  - five prescription medicines with annual sales of more than CHF 1 billion
  - North America sales return to growth
  - Continued strong growth of Genentech
  - Xenical returns to growth

- 'Reshaping for the Future' is rolling out
  - aligning resources to maximise growth and achieve leadership in priority areas
  - improving the operating margin to 20-25 % of sales
  - business development, licensing and alliances capability strengthened
  - principal actions identified and many already implemented

- In USA, Roche Rx is restructured and focused for growth

Pharmaceuticals Division at H1 2001

Summary (2)

Roche

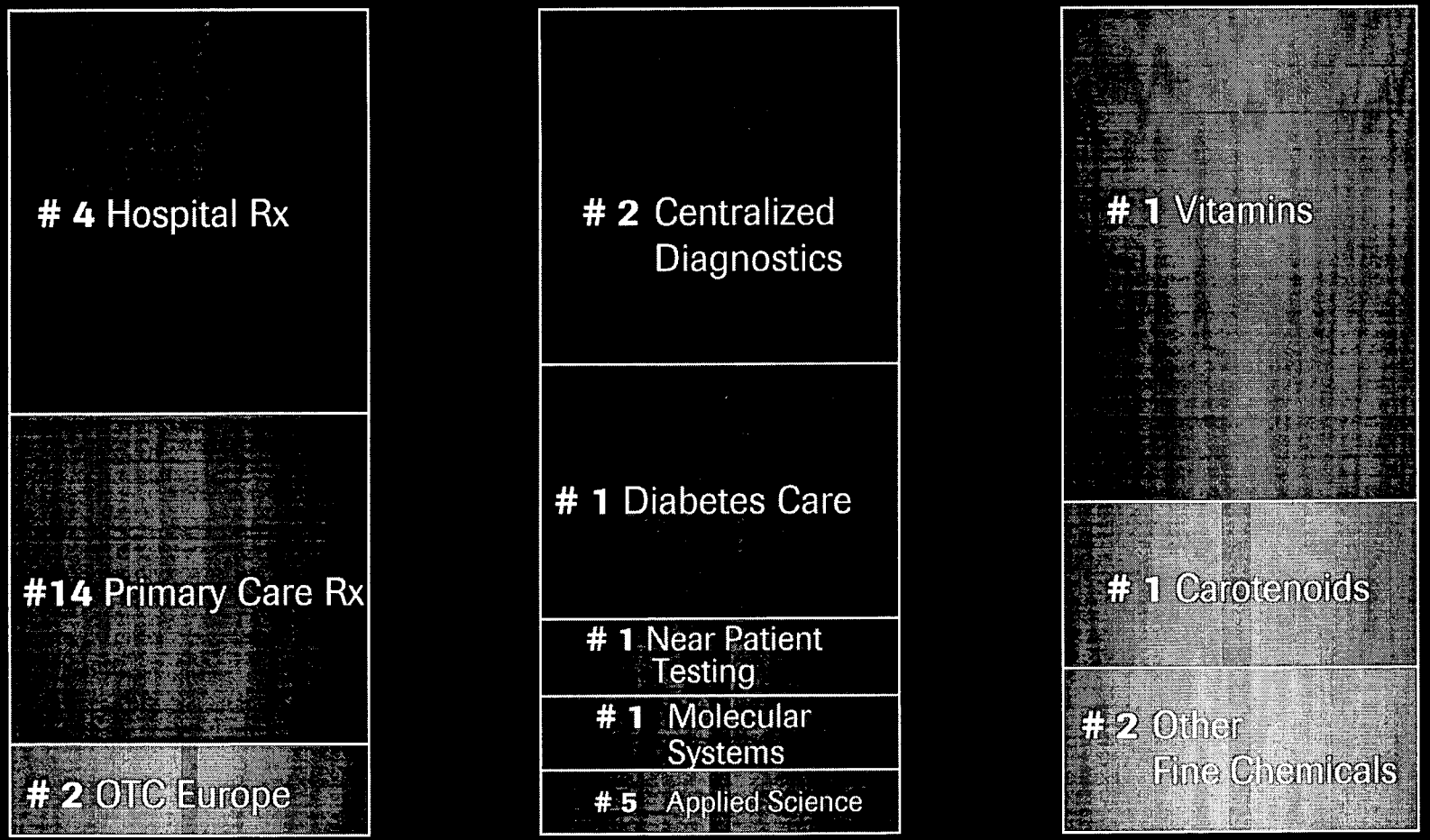
Pharmaceuticals

- World class capability in research and development
- Strengthening pipeline
  - 46 NME's focused on 7 therapy areas
  - approvals for 11 NME's expected over next four years
- Good near-term growth expected from oncology, virology, metabolic disorders, inflammation/autoimmune

Roche Group Outlook

Global sector leadership

Our strategic goal



Integrated Health Care

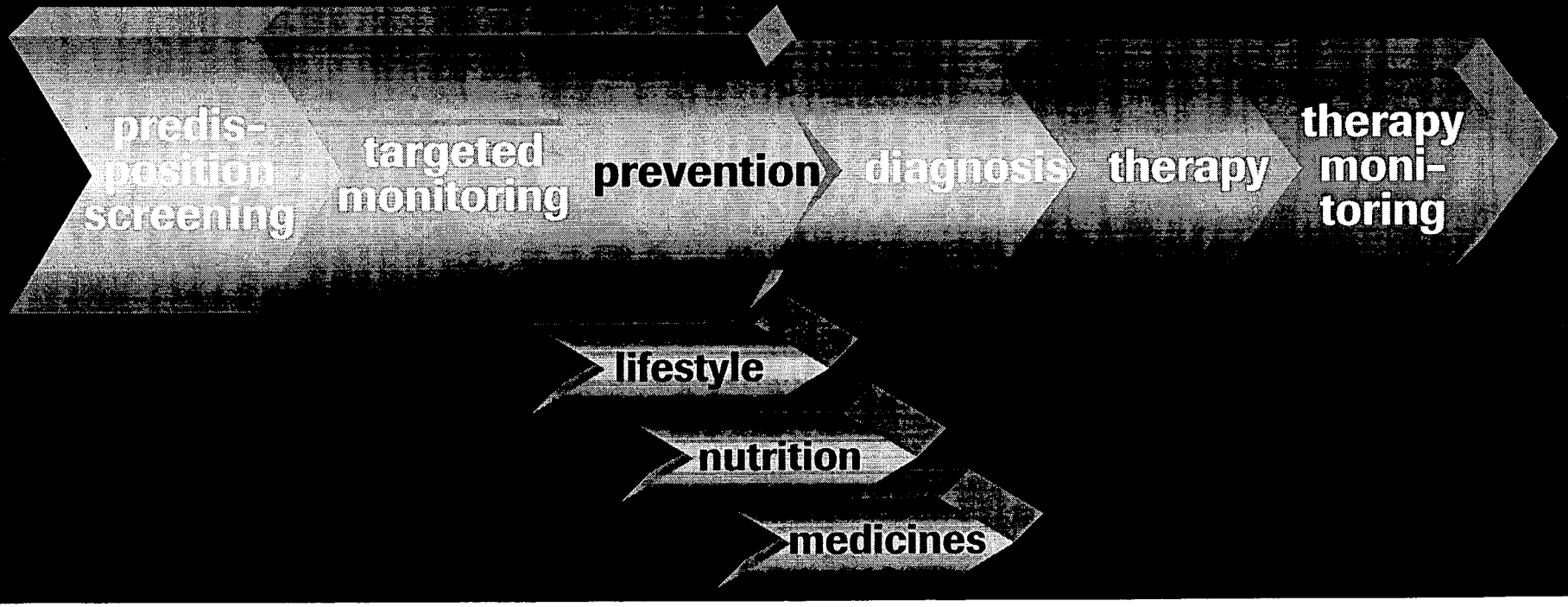
Diagnostics is the critical link

Roche

from today...

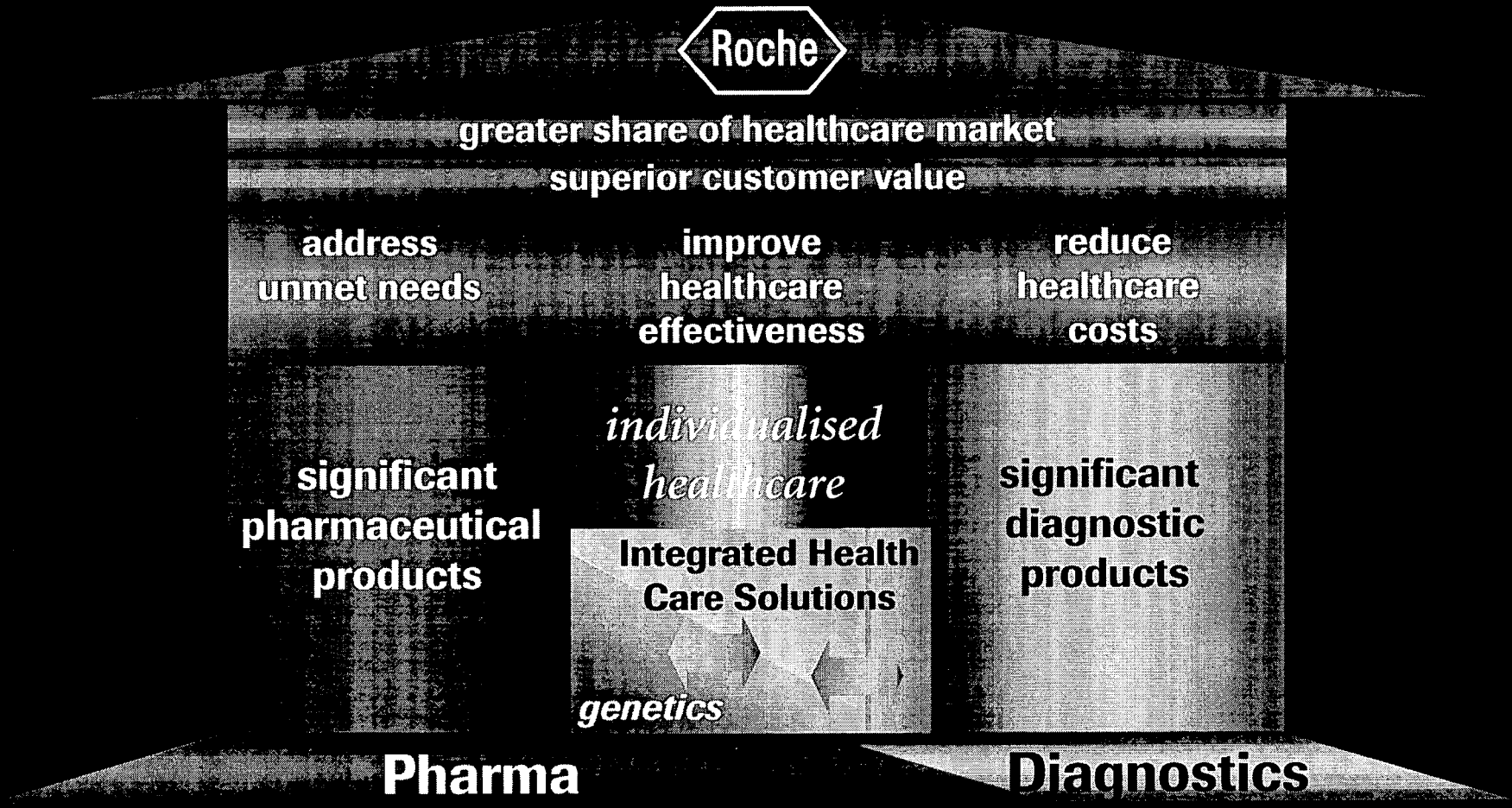


...into the future



Roche healthcare strategy

The foundation for stakeholder value



Roche at Half Year 2001

- Good results in a difficult year have exceeded expectations
  - sales growth in all Divisions
  - accelerating sales growth in Pharmaceuticals
  - operating profit and net income levels maintained
- Pharmaceuticals reshaping for future growth
- Diagnostics delivering double-digit sales and profit growth
- Vitamins and Fine Chemicals returning to top-line growth

Roche Group Outlook

- Pharmaceutical sales to achieve good single-digit sales growth in 2001
- Pharmaceuticals operating margin to improve to 20 - 25 % of sales over the next two to three years
- Group operating profit in 2001 to be similar to that in 2000
- Group operating margin to improve to over 20 % of sales in the medium term

Roche Holding Ltd

29 June 2001 - Roche at
Bank Sarasin 1st Lifescience Conference, Basel

As Posted on Roche.com

Furnished Under Rule 12g3-2(b)
Roche Holding 82-3315

Capturing Value from Genetics and Genomics: Joining Diagnostics and Therapeutics in Integrated Health Care

Klaus Lindpaintner, MD, MPH

Director, Roche *Genetics*

29/6/01

Introduction

- increasingly important role of and reliance on *in-vitro* diagnostics
- further developments of specific medicines targeting the molecular cause of disease
- the historic disconnect between – and will be closed by an ***integrated health care approach***

Roche is uniquely placed to capitalize on the Health Care Revolution

Integrated Health Care

Part 1

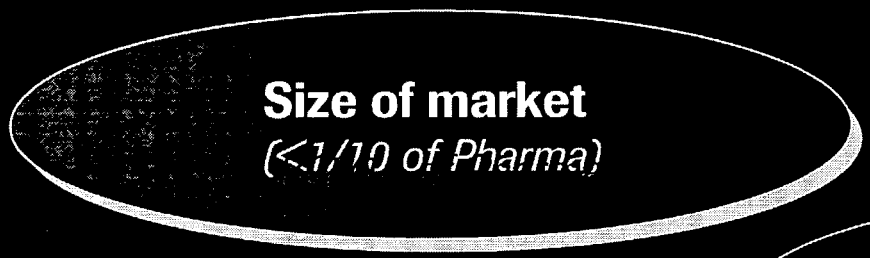
Roche

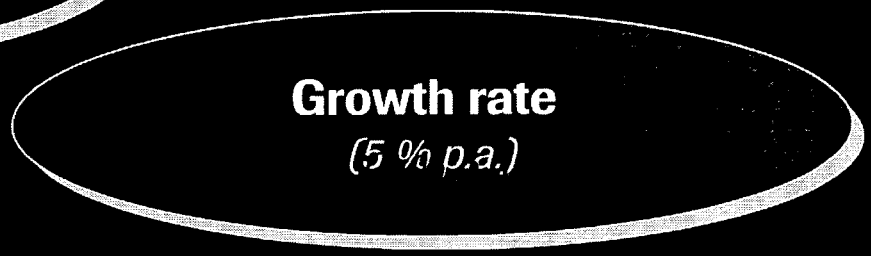
–

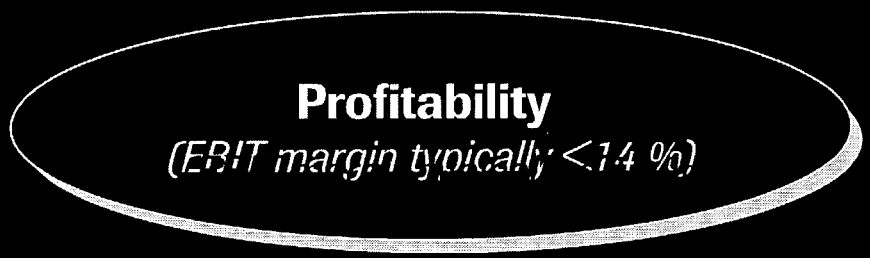
Pharmaceuticals – custom-tailored treatment

Integrating Health Care – others talk, Roche does it today

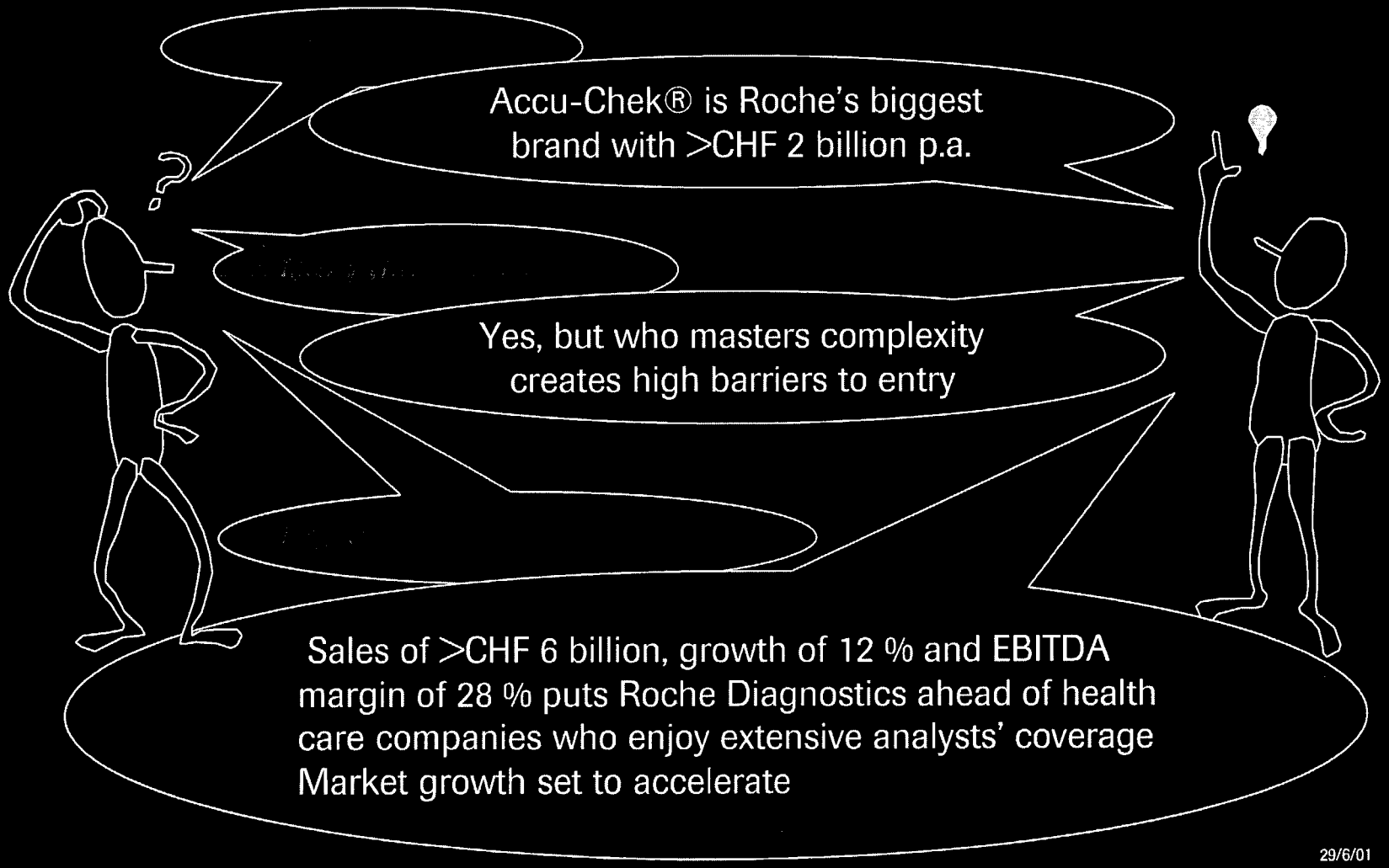
Why look at Roche Diagnostics?







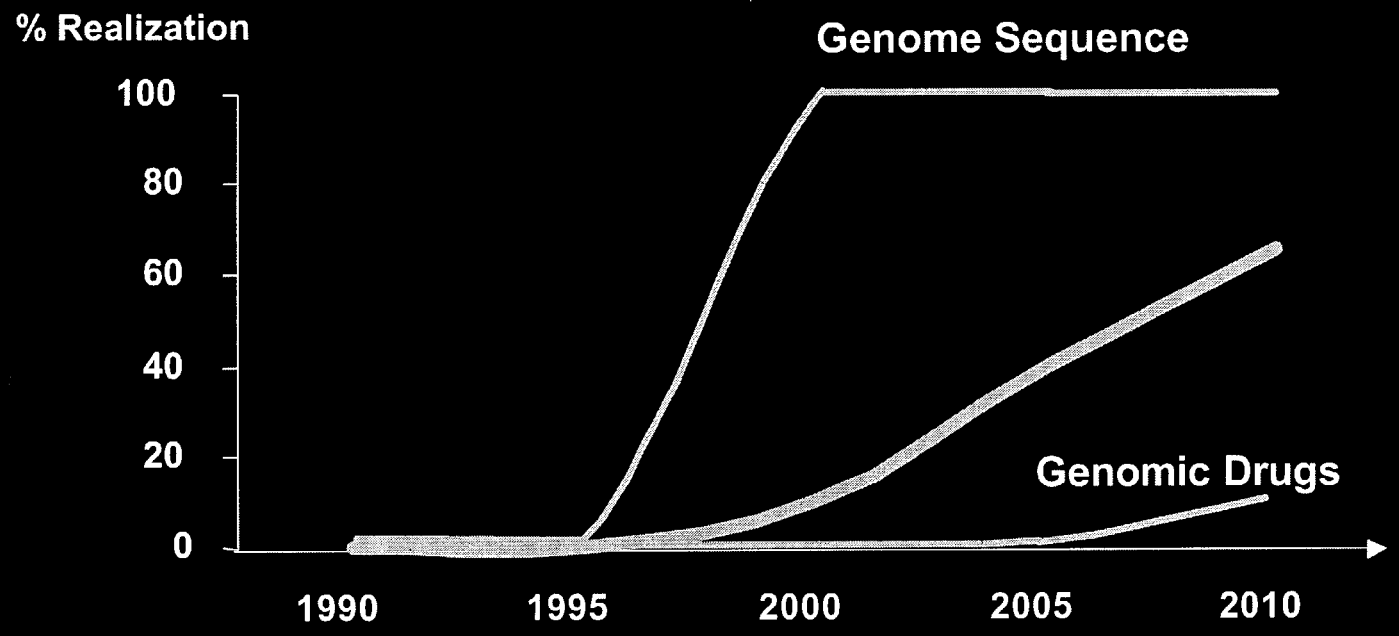
Why look at Roche Diagnostics?



29/6/01

Drivers accelerating market growth

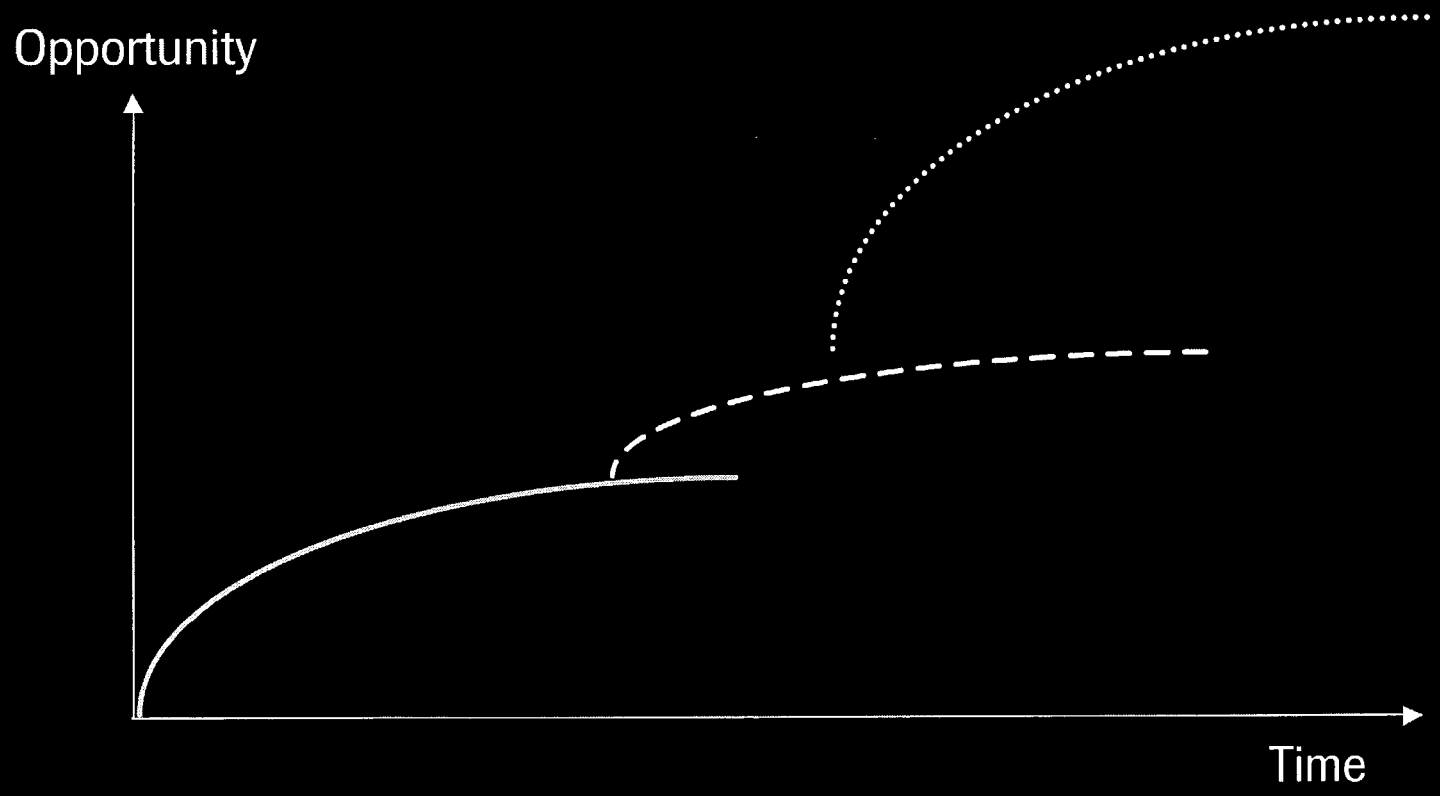
Genomics: diagnostics will precede drugs



29/6/01

Drivers accelerating market growth (cont'd.)

Nucleic acid testing set to create new markets



29/6/01

Roche blood screening

PCR demonstrates value - shown in clinical trials

- 60 million blood/plasma units tested globally per year
- Market size depends on transition from pooling

Window cases identified with Roche NAT products

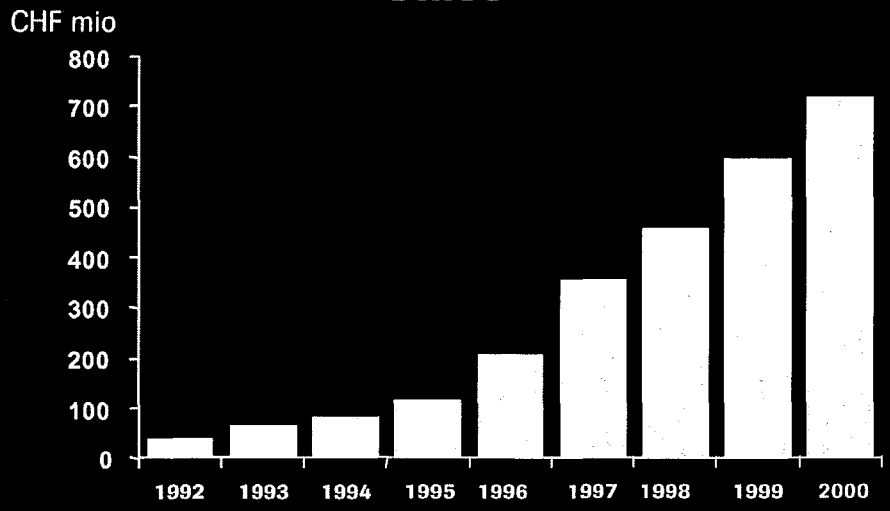
	Assay	Donations Tested	Pool Size	Window Cases Identified
N. America	HCV	5.5 Million	24	23
N. America	HIV	2.0 Million	24	1
Japan	HCV	4.5 Million	50	16
Japan	HIV	4.5 Million	50	2
Japan	HBV	4.5 Million	50	50
Total window cases to through August				**92**

29/6/01

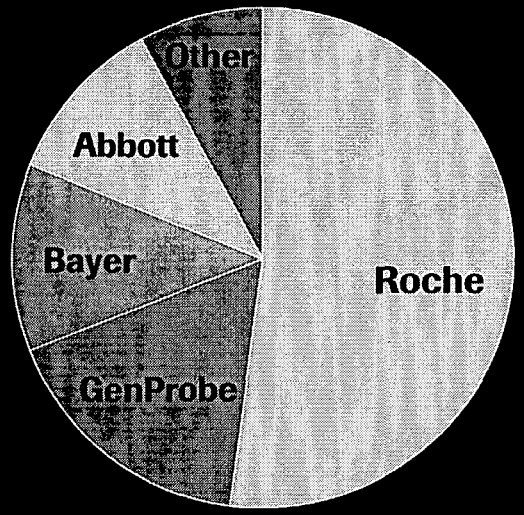
RMS PCR sales and market share

Leadership maintained in rapidly growing market

Sales



Dx market share



CHF 1.5 bn

- 9 years since Roche acquired PCR technology
- Routine tool for the research and diagnostic labs
- PCR business continues to grow 20 % annually

29/6/01

Diagnostics Success

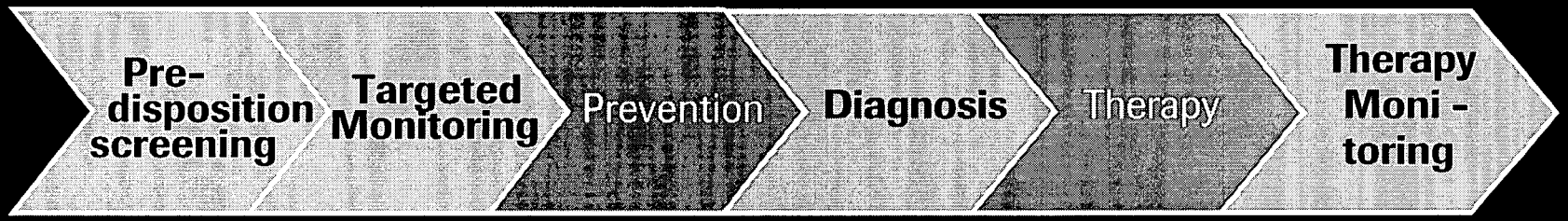
Roche is ahead of the competition

- **Superior technology**
  - carryover control
  - internal control to detect inhibition
  - quantitative standard: accuracy
  - ultrasensitivity
  - international units
  - continual upgrades of performance
- **Automation for IVD**
  - COBAS AMPLICOR - 1995
  - COBAS AMPLIPREP - 2000

Drivers accelerating market growth (cont'd.)

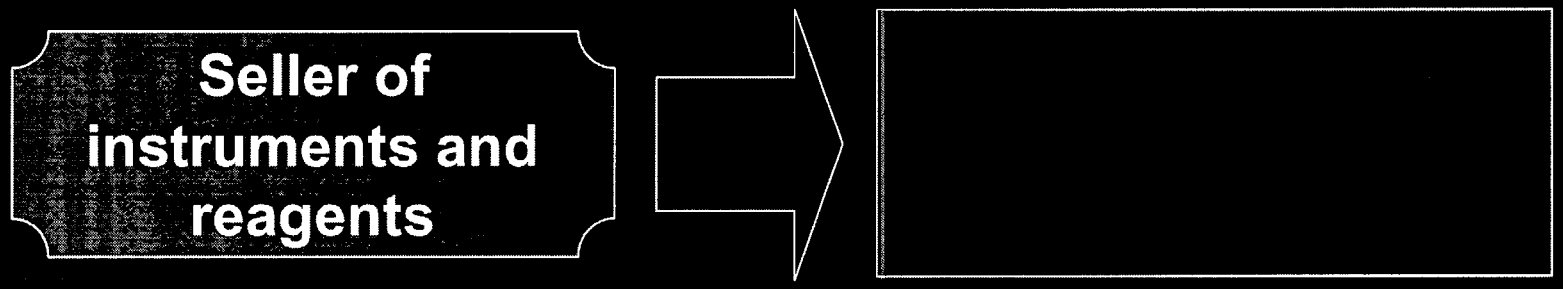
Reaching beyond today's view

The scope of diagnostic products is ...



Roche Diagnostics

Expanding the role in the future

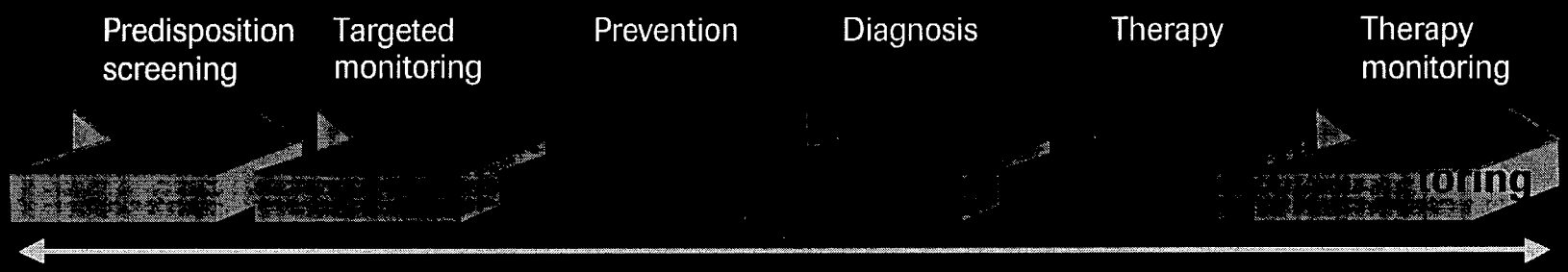


Industrial age model

Information age paradigm

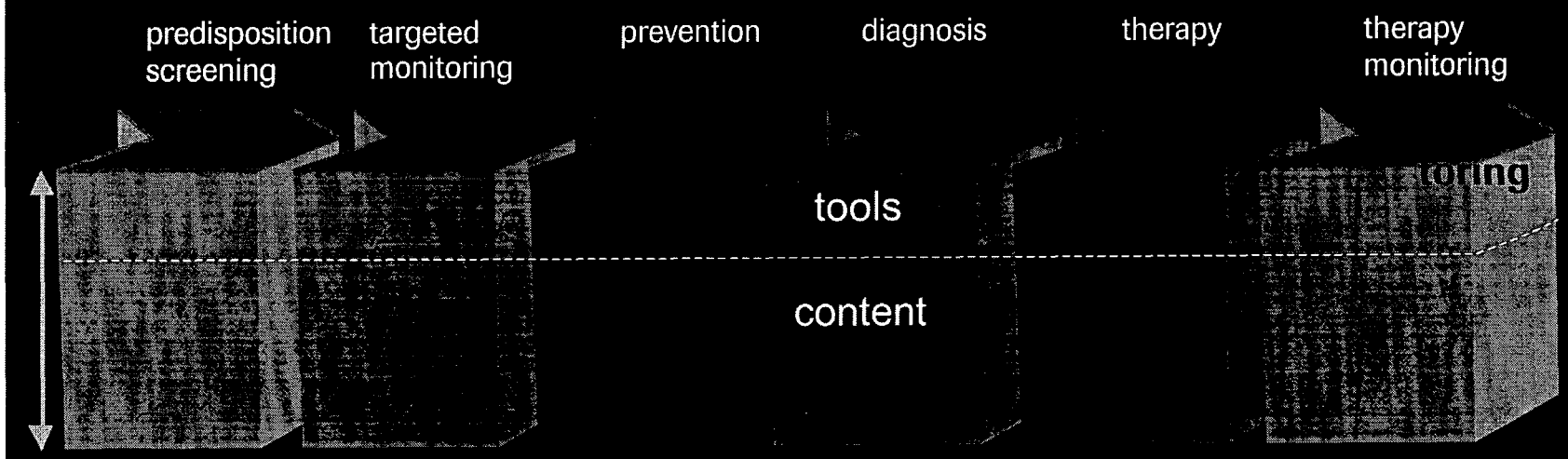
Expanding the business perspective

More breadth



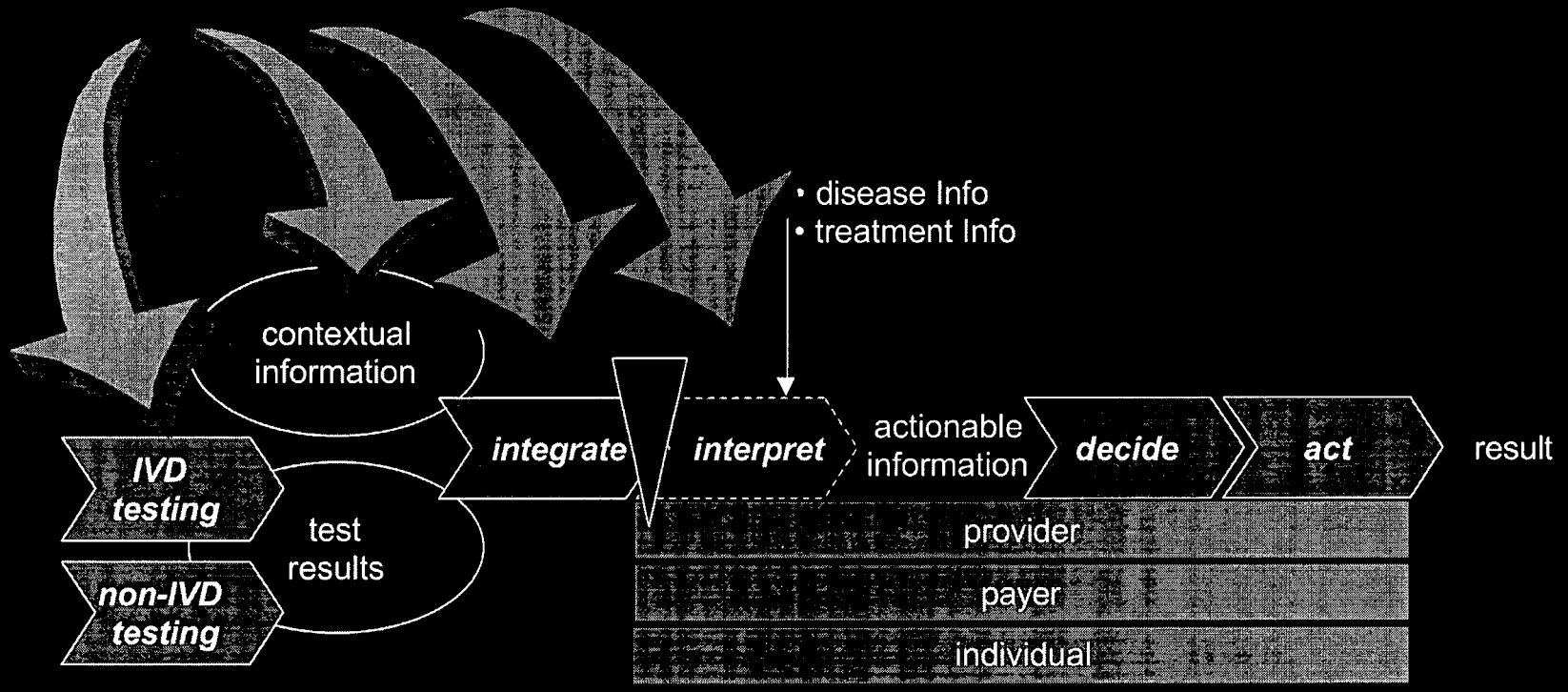
Expanding the business perspective

More depth



Disaggregating the health care process

Providing new business opportunities



Integrated Health Care

Part 2

Diagnostics – innovation and the business case

Integrating Health Care – others talk, Roche does it today

Roche *Genetics* (& Genomics)

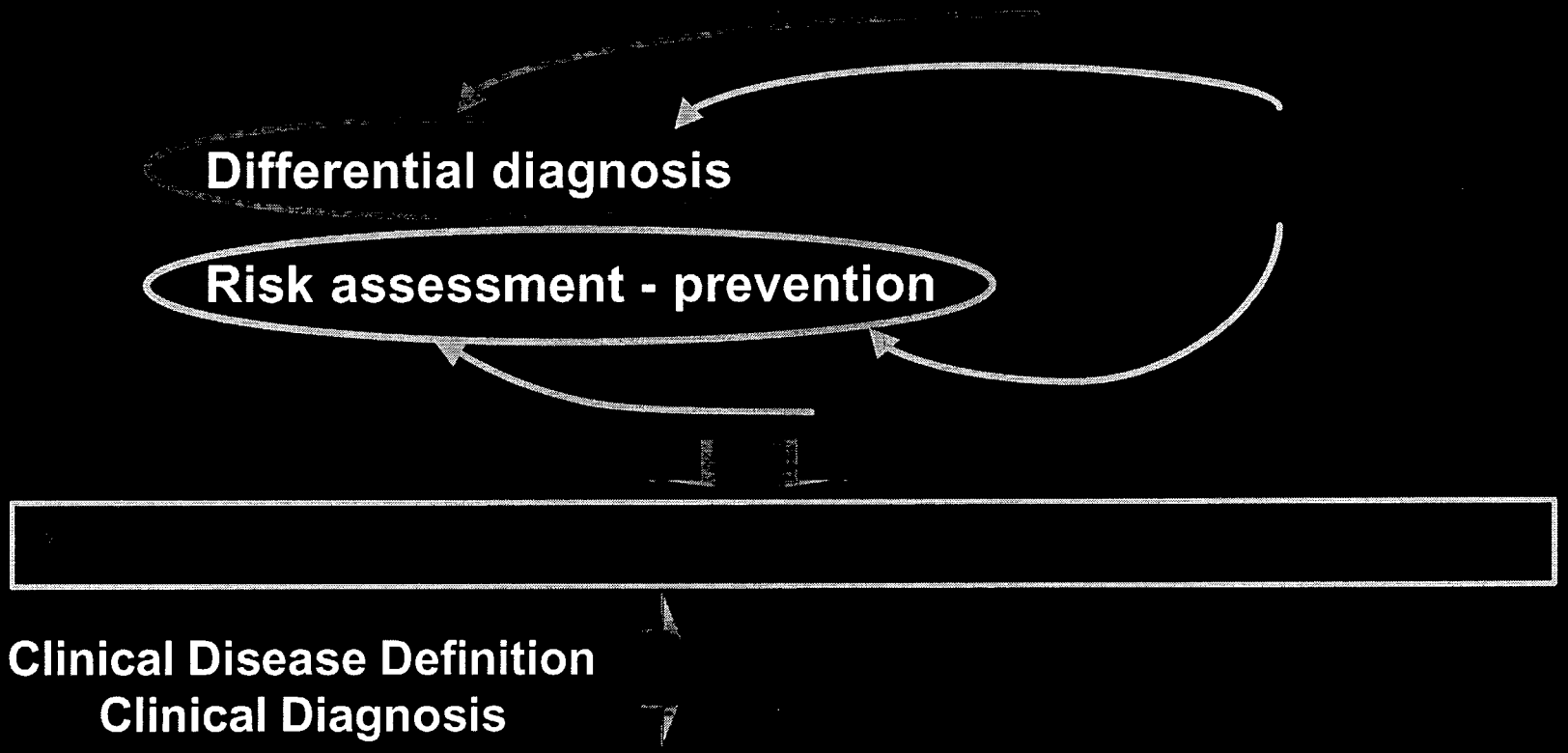
The foundation of more individualized health care

GOALS

- Short/mid-term: pharmacogenetics
- Mid-term: pharmaco-/toxicogenomics
- Long-term: new causative drug target/pathway discovery

Impact of Genetics on Medicine

Historical Drivers of Medical Progress:



Pharmacogenetics: malignant melanoma

α-Interferon is a mainstay of MM therapy, but

- just 20-30% of MM population respond to α-Interferon (INF- α) R_x
- currently only high-risk MM patients receive INF-α therapy

  - increase effectiveness and cost-efficacy of treatment;
  - improve quality-of-life for non-responders (no risk of side effects);
  - **increase market by making use of INF-α compelling and standard practice at earlier stages of disease**

Interferons in malignant melanoma

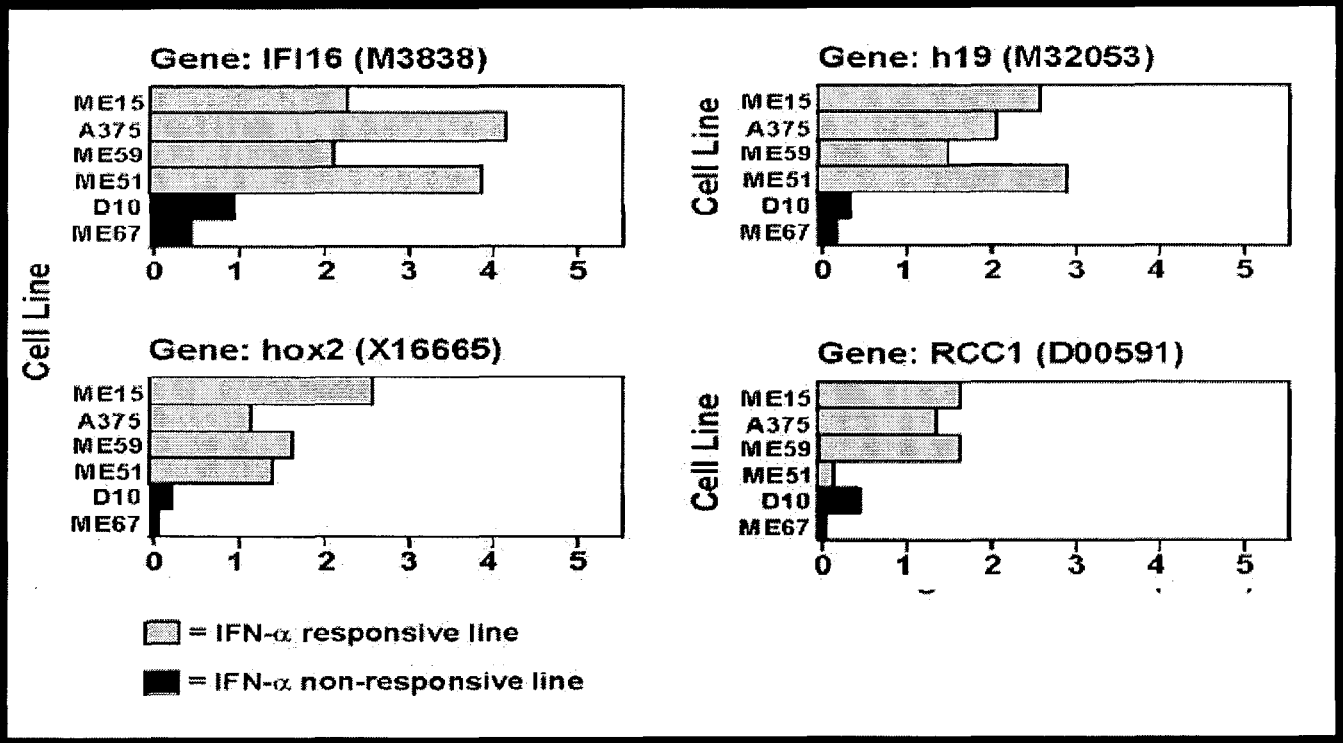
Pharmacogenetics approach to predict INF-α response

HOW IT'S DONE

- Cultured cell lines from 4 and 2 tumors
- Measured comparative gene expression of ~10,000 genes using gene chip technology
- Analyzed for patterns of differential gene expression characteristic for the two sets of cell lines

Interferons in malignant melanoma

Differential gene expression predicts responders



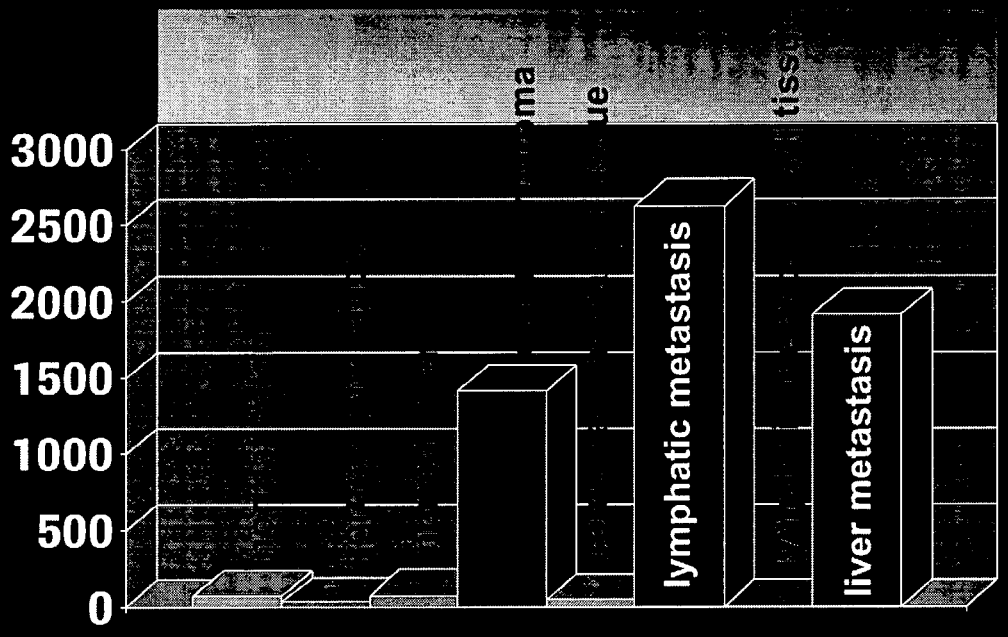
Among 10.000 genes:

Responders' cell lines with 4 over-expressed genes

- consistently
- significant differences

Target Discovery with Expression Profiling

A novel receptor correlates highly with disease



Study:

large number of normal, colon cancer, lymphatic and hepatic metastatic, as well as adjacent tissues examined using gene chip expression profiling.

Result:

A novel receptor correlates highly with disease (this receptor class is known to be an excellent drug target)

Roche-deCODE Alliance

On track to deliver the milestones

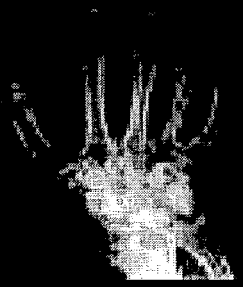
- 12 diseases, 4 indication areas:
  - cardiovascular diseases
  - inflammatory diseases
  - metabolic diseases
  - CNS-psychiatric diseases
- Commitment to rapidly integrating discoveries into Roche projects
- Results to date
  - 3 milestones announced, 1999-2000: osteoarthritis, stroke, Alzheimer's disease
  - several additional milestones still to be announced in 2001

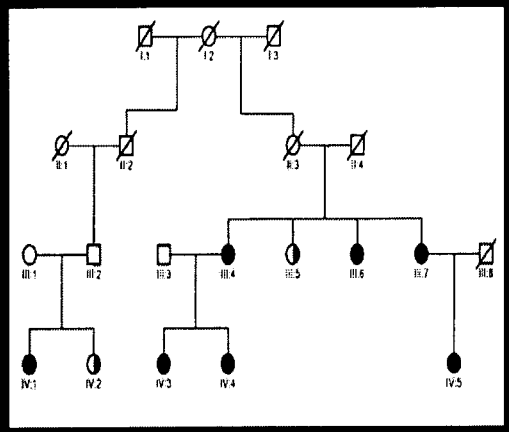
deCODE-Roche Discoveries

Molecular disease definition – example osteoarthritis (OA)









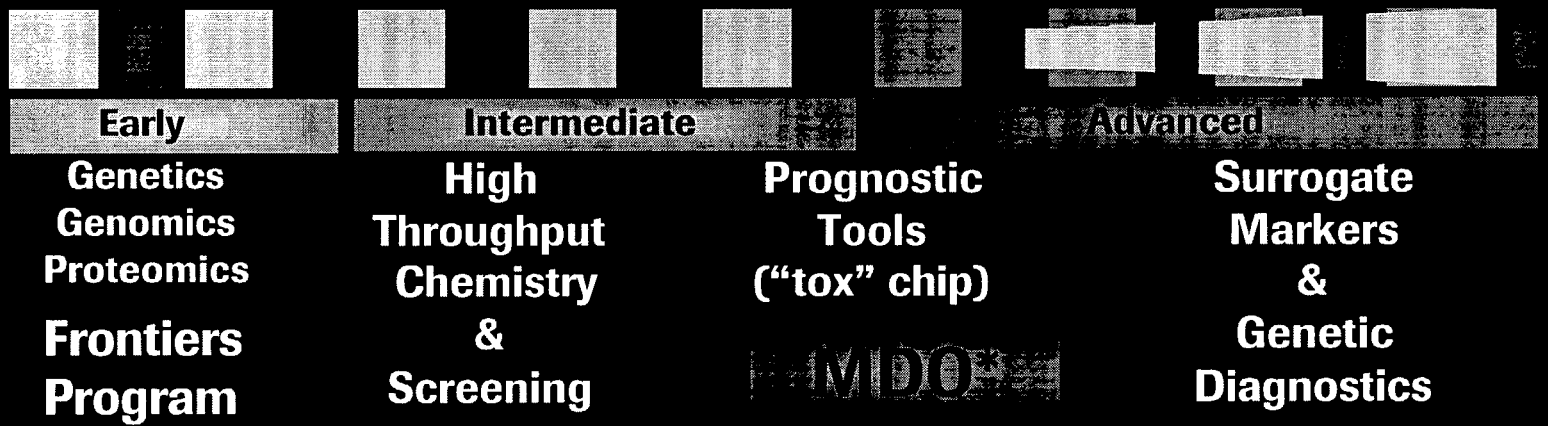
- Hip-, knee-, wrist-OA: one disease or separate diseases?
- deCODE studies found 3 gene locations linked to OA
  - 1 each specific for hip and wrist OA in some families;
  - 3rd that appears to contribute to equally
    , not imaging, critical for development

Genetics, Genomics, and the Portfolio

	Pharmacogenetics	More patient-specific, more effective drug Rising importance of *in-vitro* diagnostics Integrated Health Care Products
	Pharmacogenomics **Toxicogenomics** **New Target Discovery**	**Earlier, better compound selection** **Earlier attrition of future failures** **New targets for diagnostics & therapeutics**
	New Target Discovery	**New targets for diagnostics & therapeutics** **Integrated Health Care Products**
	New Target Functional Assessment HGP data mining	"Validated" new targets for diagnostics & therapeutics for rapid portfolio entry

Optimizing research

Key improvements from...



Advanced Global Informatics

Strategic Research Alliances and Collaborations

*Multi-dimensional drug optimization

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More effective tools

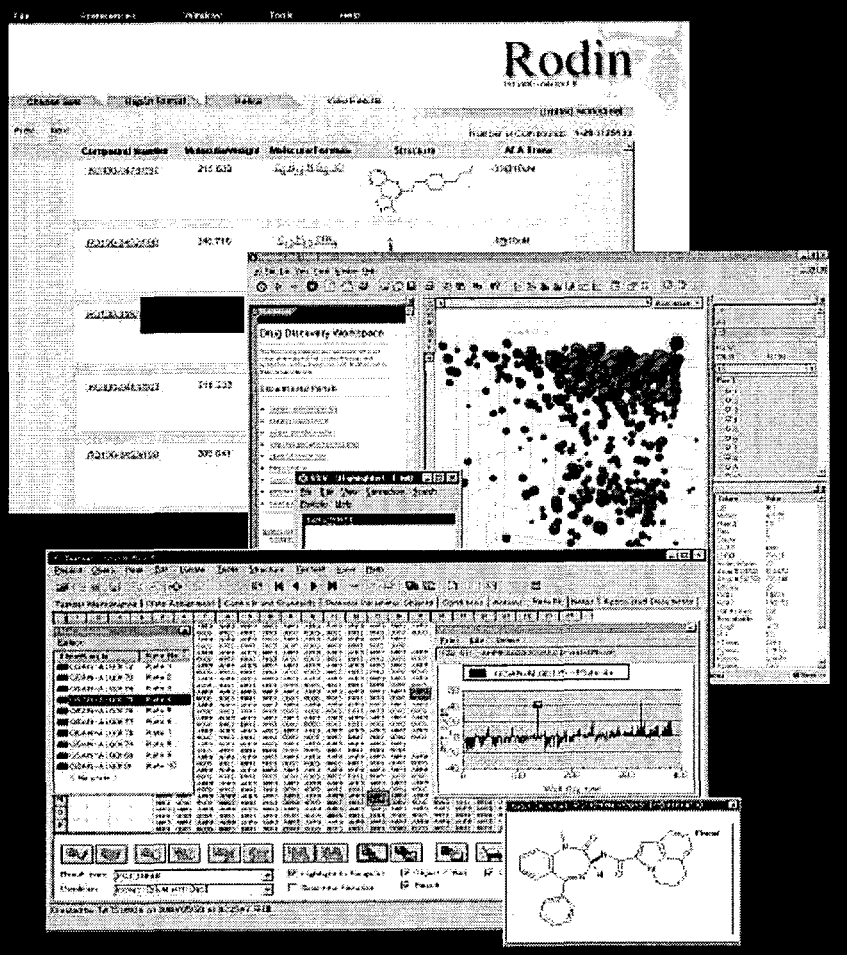
Multidimensional Drug Optimization

- **Description**
  - high-throughput testing earlier in the discovery process to select compounds with low likelihood for toxicity or PK problems
- **Impact**
  - higher success rate with regard to SAFETY
- **Expectation**
  - doubling number of launches in the mid-term
  - shift in portfolio shape

Advanced global informatics

Leading the way in critical R&D information systems

- New information systems supporting new discovery technologies and processes
- Global installation & networks
- Information sharing across all Research Centers
- Generation of critical new knowledge



New processes & tools starting to deliver

19 NMEs could enter CCS by end 2001

Drug Type	Therapy Area	Indication
antibody	CNS	Alzheimer's
GPCR antagonist	CNS	Emesis
GPCR antagonist	CNS	Depression
GPCR antagonist	GenitoUrinary	Benign Prostatic Hypertrophy
GPCR agonist	Metabolic Disease	Obesity
intracellular enzyme	Oncology	Solid Tumors
intracellular enzyme	Oncology	Solid Tumors
intracellular enzyme	Oncology	Solid Tumors
kinase inhibitor	Inflam/Bone	Rheumatoid Arthritis
nuclear receptor	Inflam/Bone	Osteoporosis
protease	Vascular Disease	Deep Vein Thrombosis
protease	Virology	HIV
back-up compounds (7 NMEs)	various	various

Integrated Health Care

Part 3

Roche

Diagnostics – innovation and the business case

Pharmaceuticals – custom-tailored treatment

29/6/01

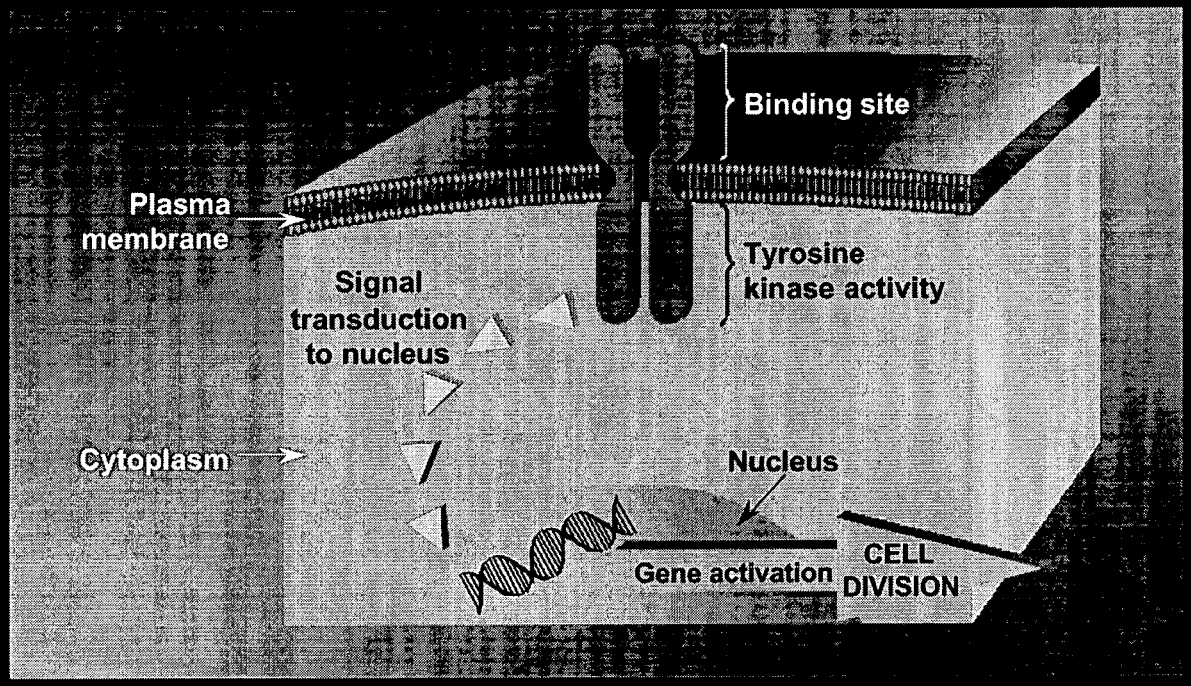
Breast cancer epidemiology
Substantial market opportunity

Breast Cancer - the facts:

- + 250'000 cases diagnosed annually in Europe
- + 100'000 deaths per year in Europe -370'000 worldwide
- 1 in 10 women will develop breast cancer in her lifetime
- leading cause of death in women 35 to 55
- second leading cause of death in women

HER2 receptor

Provides an extra cellular therapeutic target



HER2 is :

- 15 to 20 % of breast cancer tumors show high HER2 level
- higher incidence of metastases, drug resistance, shorter survival 3 vs. 7 yrs

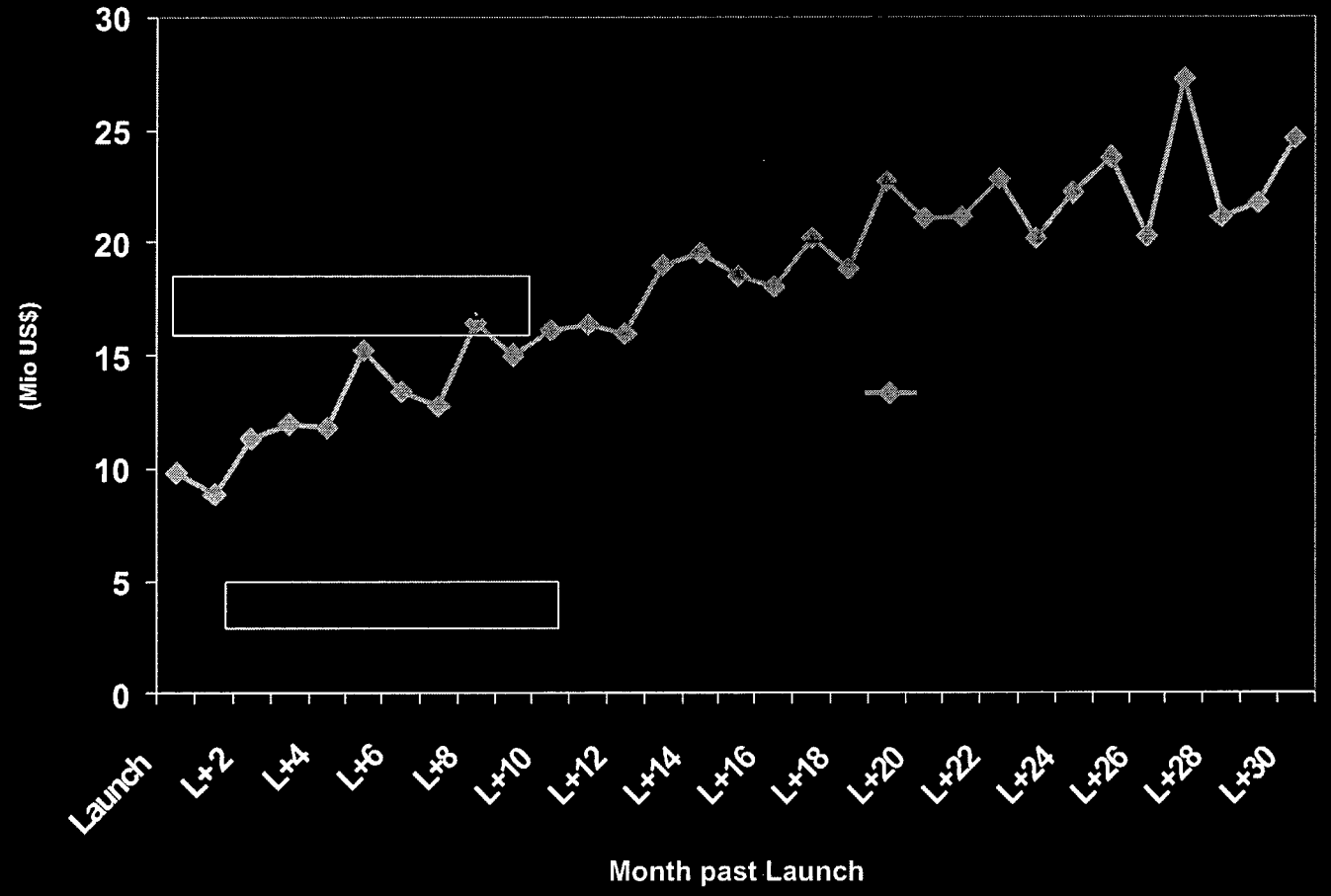
HERCEPTIN®

Pharmacogenomics now

- Herceptin selectively binds to the overproduced receptors:
  - blocking the mechanism by which the cancer cells grow ( ), and
  - inducing cell killing by the immune system ( ).
- Herceptin
  - improves survival and time to disease progression
  - improves response rate and duration
  - fewer side effects than traditional chemotherapy
- "Hurdles" in Herceptin's way:
  - only 15-20 % of all BC patients eligible
  - use of in-vitro diagnostic test necessary

Comparison Roche Territory vs US Territory

Sales (US $) since launch



Herceptin®
Trastuzumab
anti-HER2 monoclonal antibody

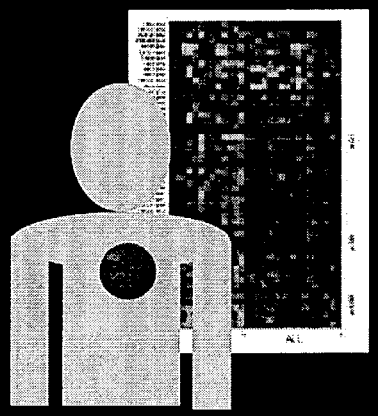
Lifecycle Management

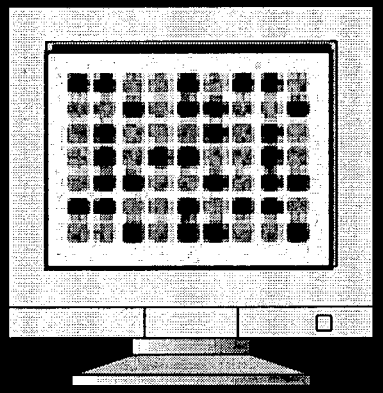
Roche

Optimising its use in breast cancer

- Approved in over 60 countries
- Increasing penetration in metastatic breast cancer therapy
  - combination with other anticancer agents, e.g. hormonal therapy
  - treatment beyond progression
- Adjuvant breast cancer (ABC): Largest line extension opportunity
  - three large ABC studies ongoing
  - first approval expected 2006

Integrated Cancer Care Unit (ICC)





Contextual Diagnostic Information

↓

Treatment Algorithms

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Cancer Incidence, Costs, Market

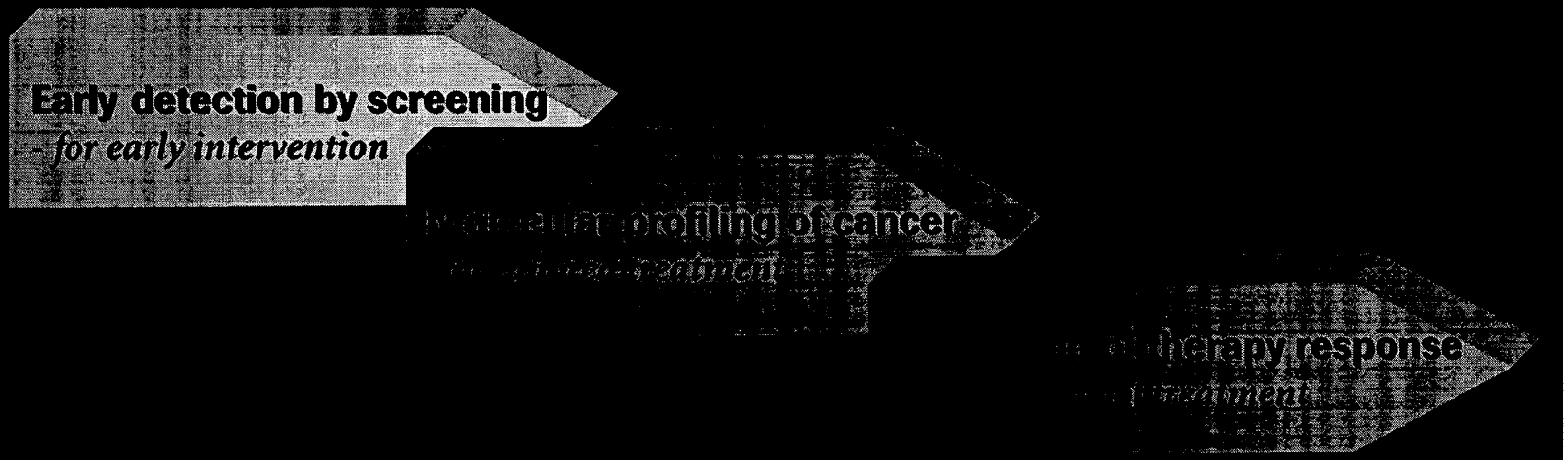
Today and trends

2000		2010
2,9 M	Incidence population *	$ 3,6 mil *
19,4 M	Prevalence population	25,1 mil *
50 %	Fatality	60 % * * *
24 %	Mortality	> 35 % * *
$ 200 B	Total cancer care costs	$ 300 B
$ 20 B	Cancer drugs	$ 50-70 B
$ 1.2 B	In-vitro Diagnostics	> $ 10 B ?

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ICC - Targeting of Diagnostic gaps in cancer

Emerging trends



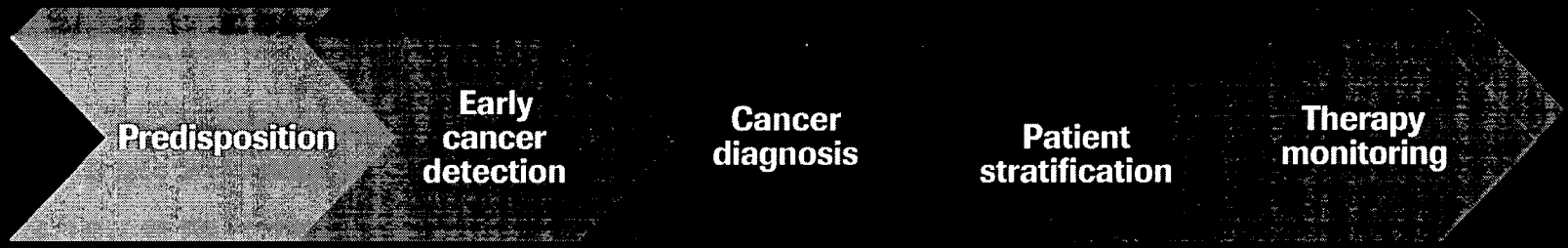
Evolution of Roche's Cancer Diagnostics Portfolio



PSA

IHCS programs:
Her2: Herceptin
Enzymes: Xeloda

Tumormarker (n=12)
Molecular markers of residual disease
(translocations)



Where therapies do exist

Screening with array platforms

Predictive tests: patient management
- risk of metastasis
- drug response and toxicity
- contextual information for therapy guidance

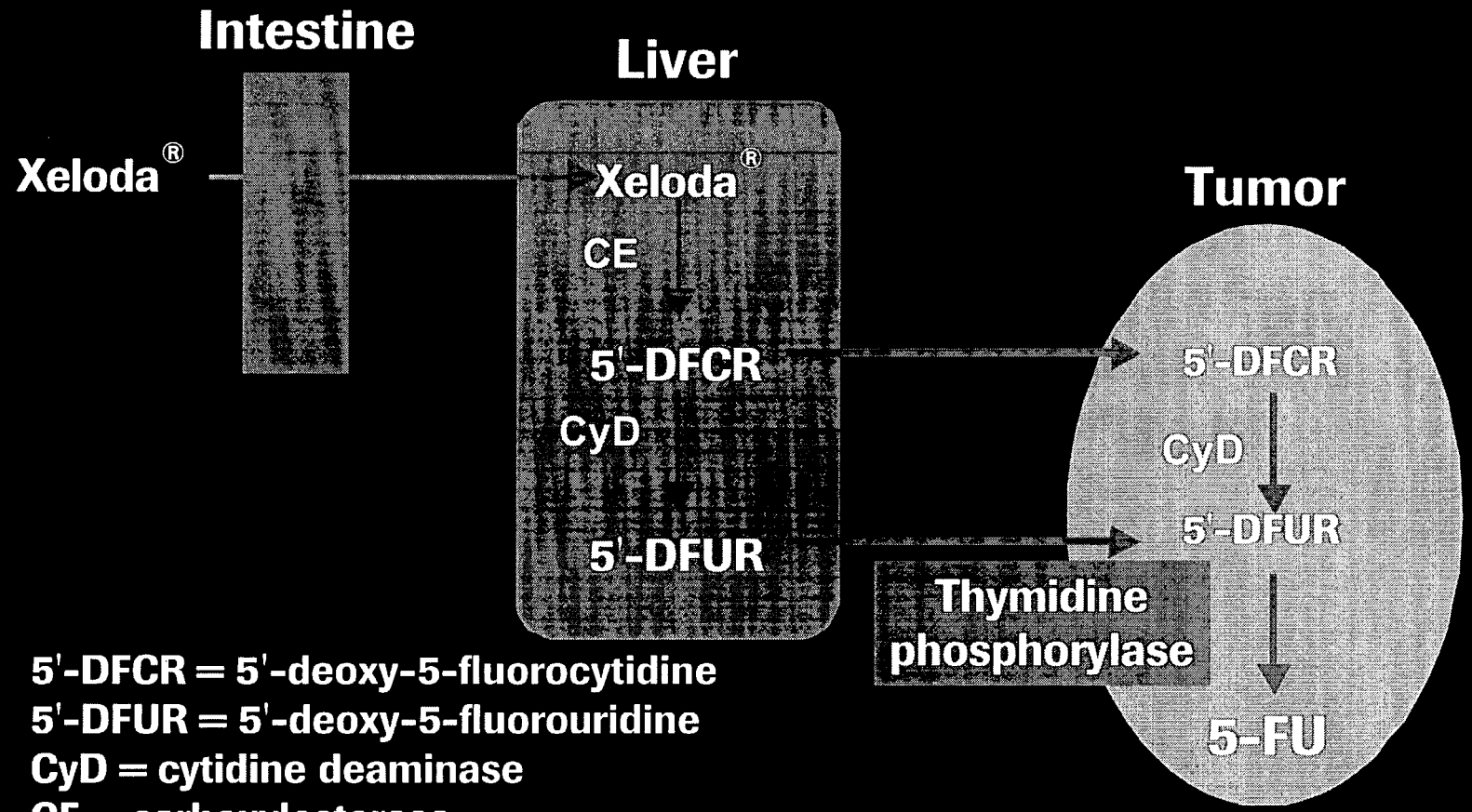
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Xeloda® (capecitabine)

capecitabine

Roche

The oral treatment for breast and colorectal cancers

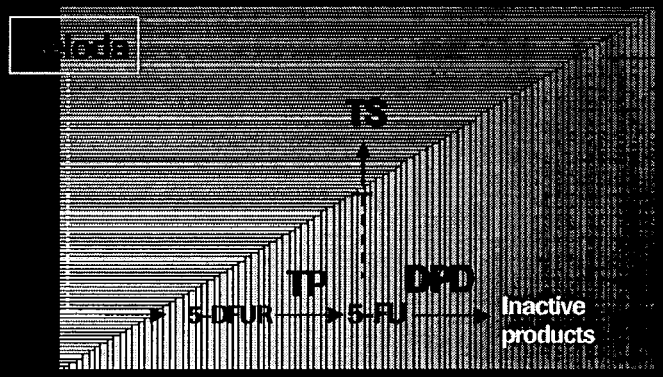


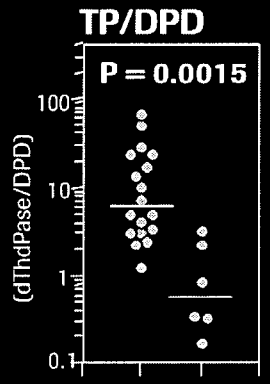
5'-DFCR = 5'-deoxy-5-fluorocytidine
5'-DFUR = 5'-deoxy-5-fluorouridine
CyD = cytidine deaminase
CE = carboxylesterase

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IHCS program on Xeloda

Patient stratification based on enzyme patterns





Impact on business: **Faster/higher market shares (better response rates)**
Extention of indication („molecular responder profiles“)

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Xeloda Enzymes: Test Platforms

Launched in 2000

Roche

ELISA (microtiter plates)



Protein concentration of enzymes

Immunohistochemistry



Cellular source of enzymes

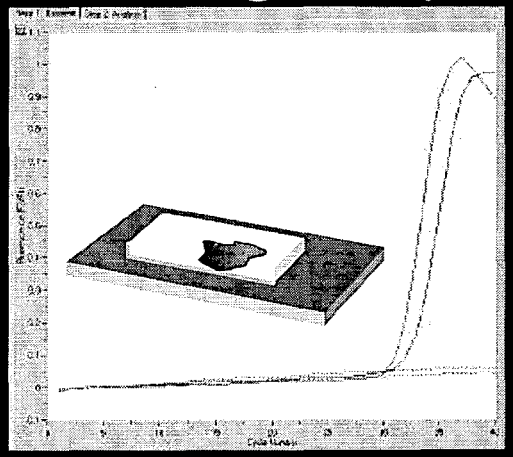
Q-PET PCR (LightCycler)



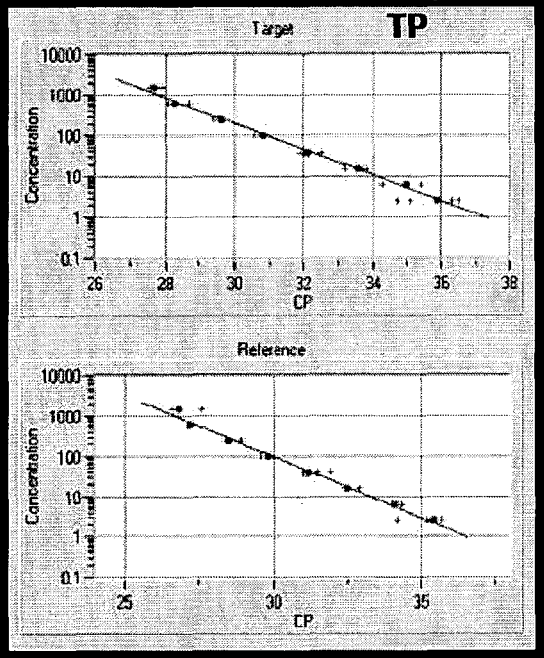
Quantitative level of mRNAs in fresh and paraffin embedded tissues

Paraffin-Embedded Tissue (PET)-PCR

Pilot Program for the Xeloda Enzymes

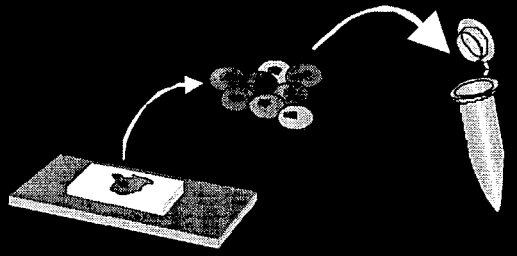


_____ of colon cancer tissue

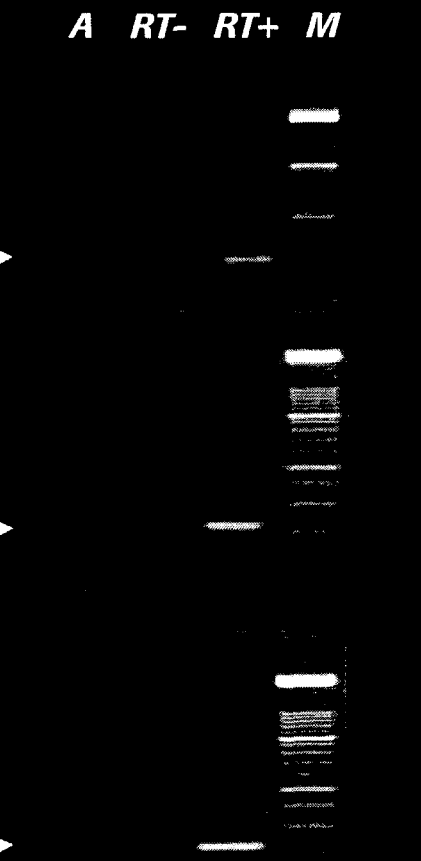


Quantification of TP, DPD and TS on the LightCycler Instrument

Roche kits in the launch phase



Quantification from RNA
From only 500 microdissected cells from validated



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Integrated Health Care:
Diagnostics is the critical link

Roche

from today...

diagnosis → therapy → therapy moni-toring

...into the future

predis-position screening → targeted monitoring → prevention → diagnosis → therapy → therapy moni-toring

lifestyle

29/6/01

Conclusion

- increasingly important role of and reliance on *in-vitro* diagnostics
- further developments of specific medicines targeting the molecular cause of disease
- the historic disconnect between – and will be closed by an ***integrated health care approach***

Roche

Roche is uniquely placed to capitalize on the Health Care Revolution

Roche Holding Ltd

June 2001 - Investor Presentation

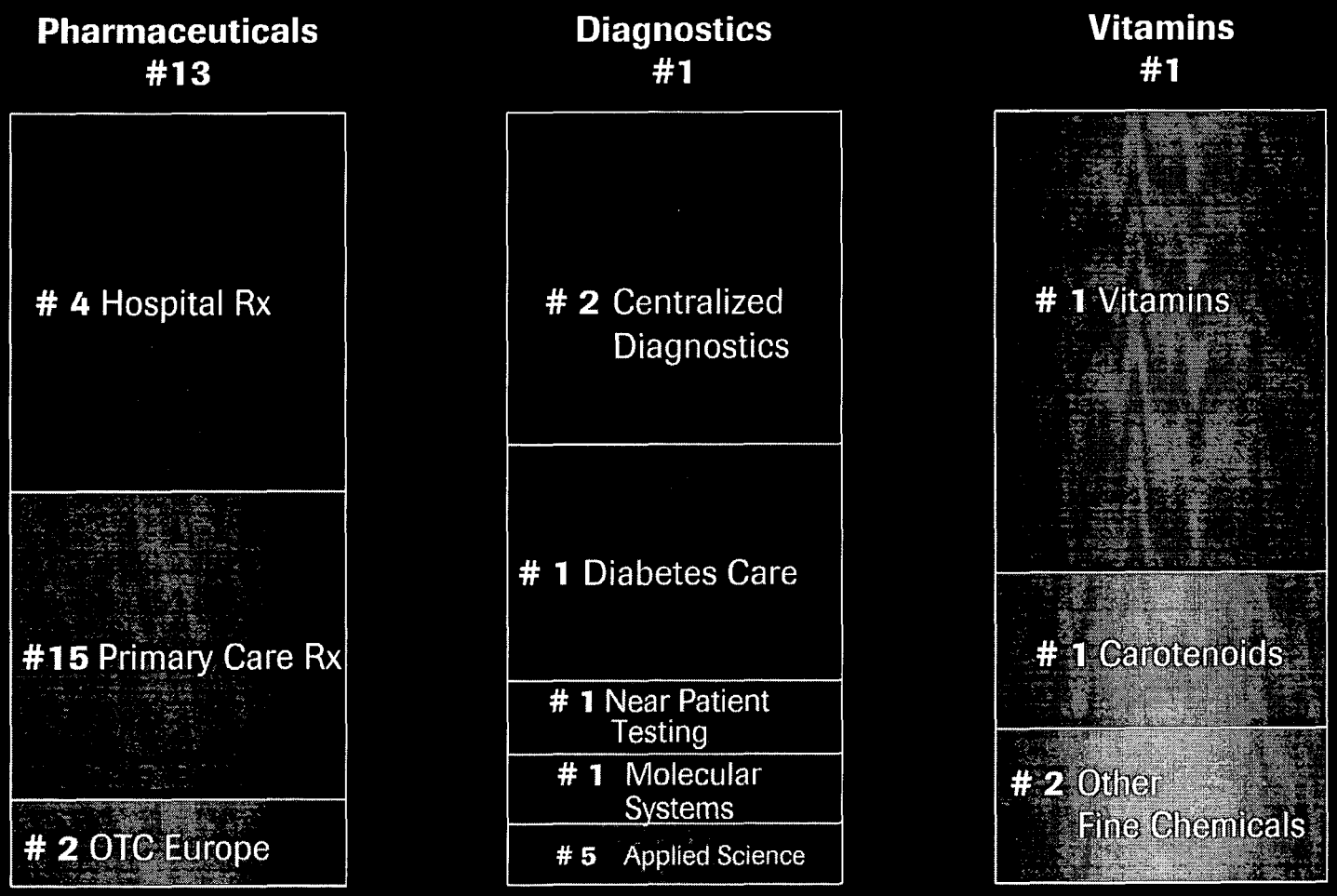
As Posted on Roche.com

Furnished Under Rule 12g3-2(b)
Roche Holding 82-3315

The Roche Group

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Global sector leadership
our strategic goal



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Integrated Health Care

Diagnostics is the critical link

Roche

from today...

diagnosis → therapy → therapy monitoring

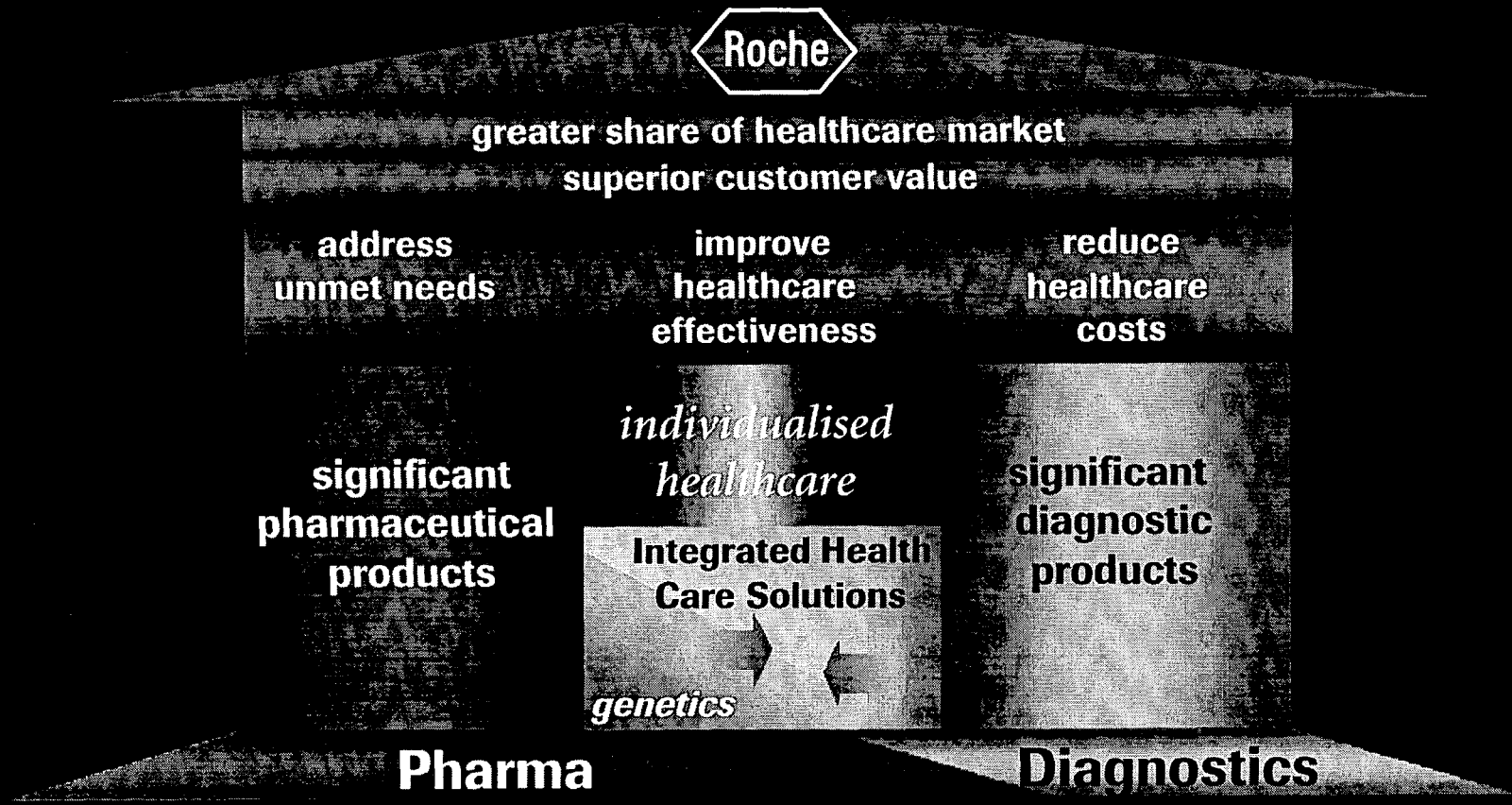
...into the future

predisposition screening → targeted monitoring → prevention → diagnosis → therapy → therapy monitoring

- lifestyle
- nutrition
- medicines

06/01

Roche healthcare strategy
the foundation for stakeholder value



06/01

Roche Group

Summary

- Record results in 2000
- Strengthening market and cost leadership in Vitamins
- Increasing global leadership in in-vitro diagnostics
- Improving Pharmaceuticals growth through
  oncology, virology, obesity and transplantation
- Seeking strategic moves which fit in Pharmaceuticals
- Strong financial position
- Better placed than any company to capture value from
  genetics/genomics-led healthcare revolution

Group Financial Results 2000 and Group Sales Q1 2001

06/01

- Actual results
- Adjusted operating results
- Adjusted non-operating results
- Cash flow
- Balance sheet
- Summary

Key figures 2000

Record results

	2000 CHF m	1999 CHF m	change in CHF m	change in %
sales	28,672	27,567	+1,105	4
EBITDA	11,126	8,874	+2,252	25
% of sales	*38.8*	*32.2*		
operating profit	7,131	6,421	+710	11
% of sales	*24.9*	*23.3*		
net income	8,647	5,764	+2,883	50
% of sales	*30.2*	*20.9*		

Actual income statement 2000

Influenced by exceptionals ...

	2000		1999		change
	CHF m	% sales	CHF m	% sales	in %
sales	28,672	100.0	27,567	100.0	4
gross profit	19,509	68.0	18,693	67.8	4
M & D	-8,746	-30.5	-7,813	-28.3	12
R & D	-3,950	-13.8	-3,782	-13.7	4
administration	-1,242	-4.3	-1,174	-4.3	6
amortization	-1,474	-5.1	-1,207	-4.4	22
impairment	-1,147	-4.0	-	-	-
OOI(E)	232	0.8	14	0.1	>100
gain GNE shares	3,949	13.8	4,461	16.2	-11
vitamin case	-	-	-2,426	-8.8	-100
GNE legal settlem.	-	-	-345	-1.3	-100
operating profit	7,131	24.9	6,421	23.3	11

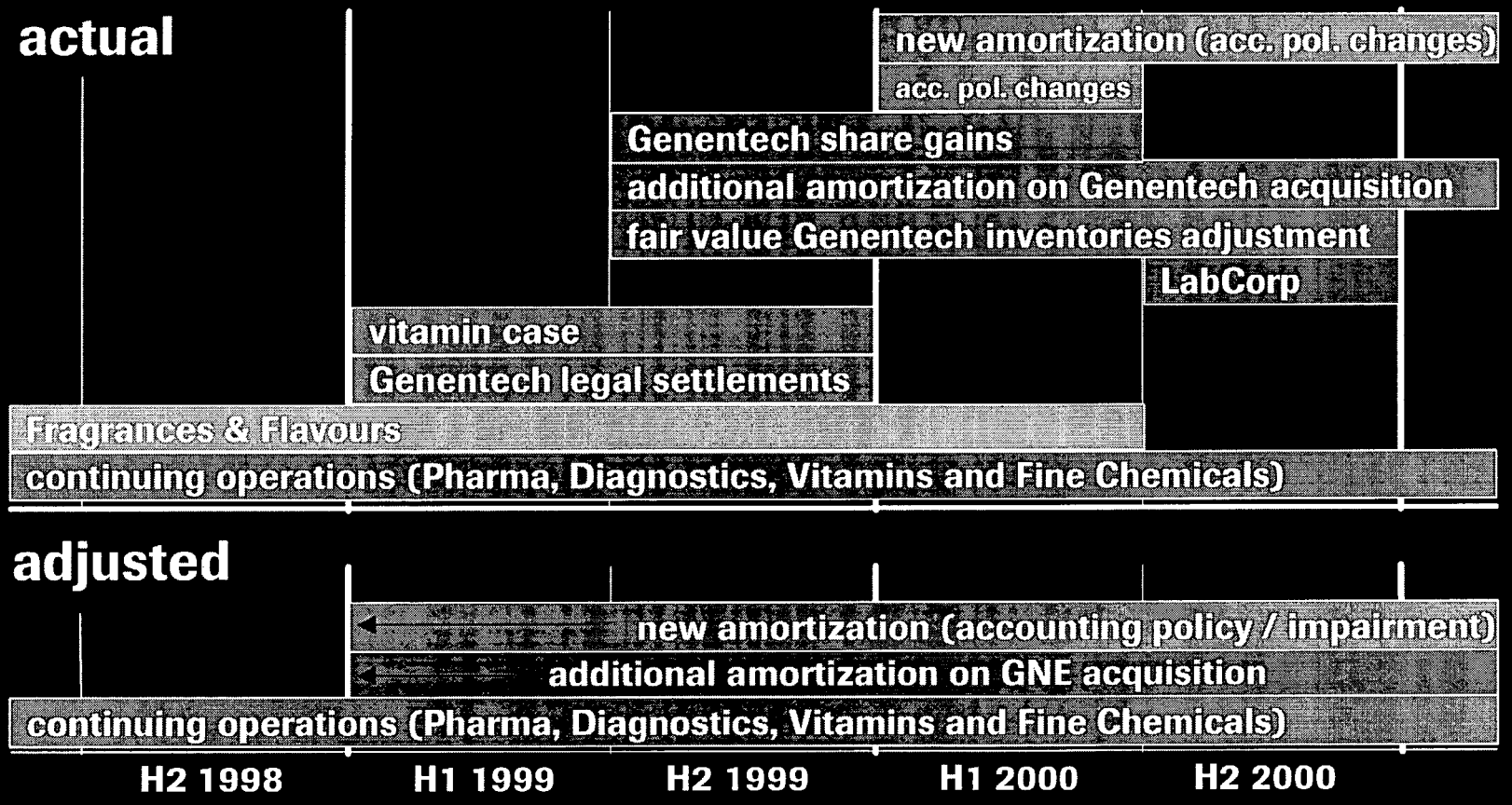
Actual income statement 2000

... and strong financial income

	2000		1999		change
	CHF m	% sales	CHF m	% sales	in %
operating profit	7,131	24.9	6,421	23.3	11
net financial income	2,337	8.1	1,134	4.1	106
result before taxes	9,468	33.0	7,555	27.4	25
income taxes	-2,272	-7.9	-1,902	-6.9	19
result after taxes	7,196	25.1	5,653	20.5	27
accounting policy	1,395	4.9	27	0.1	>100
minority interests	33	0.1	88	0.3	-63
assoc. companies	23	0.1	-4	-0.0	-
net income	8,647	30.2	5,764	20.9	50

The adjusted result

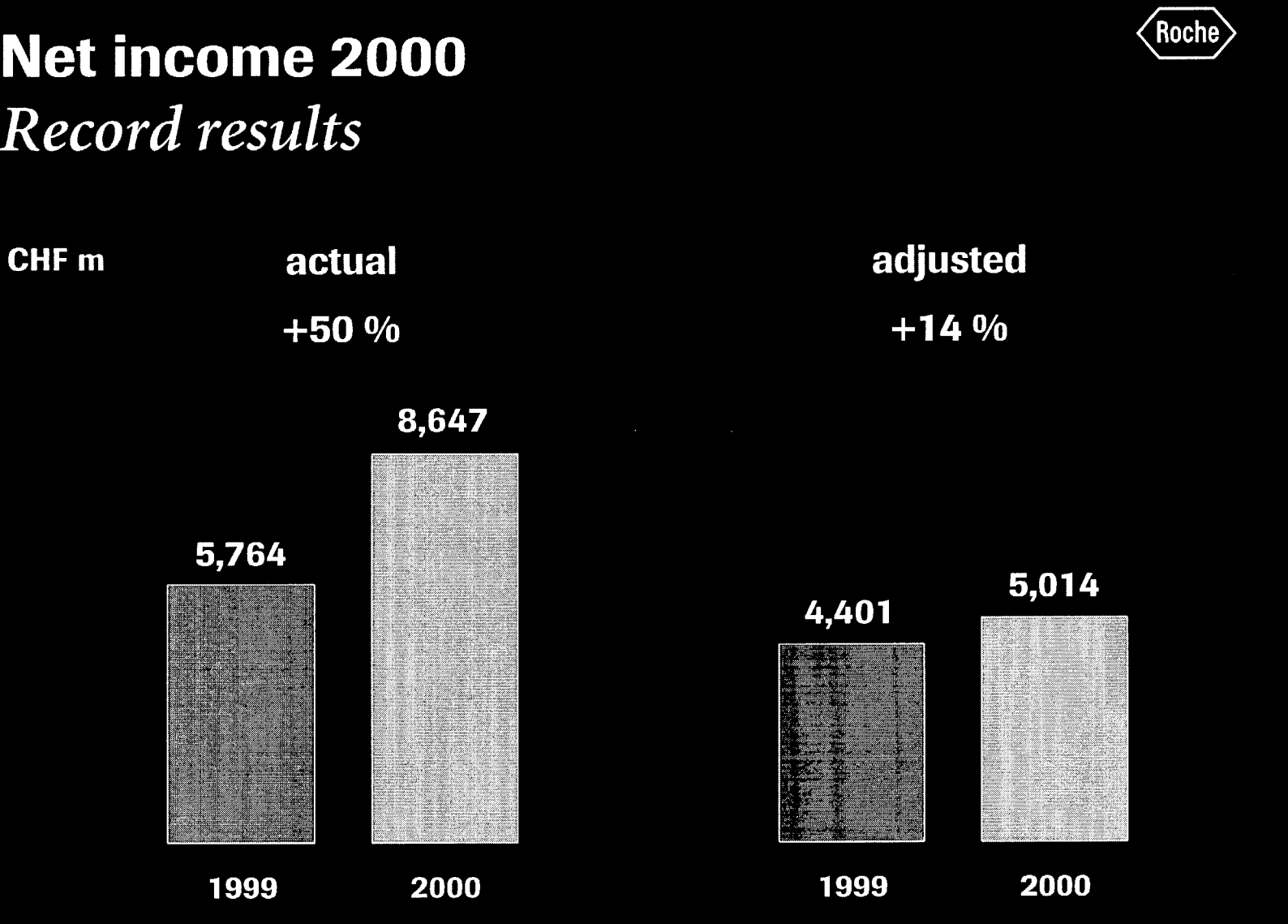
Givaudan spin-off, special items and accounting policy changes



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Net income 2000

Record results



Adjusted key figures 2000

Double-digit bottom line growth

	2000 CHF m	1999 CHF m	change in CHF m	change in %
sales	27,543	25,496	+2,047	8
EBITDA	7,068	6,647	+421	6
% of sales	*25.7*	*26.1*		
operating profit	4,301	4,094	+207	5
% of sales	*15.6*	*16.1*		
net income	5,014	4,401	+613	14
% of sales	*18.2*	*17.3*		

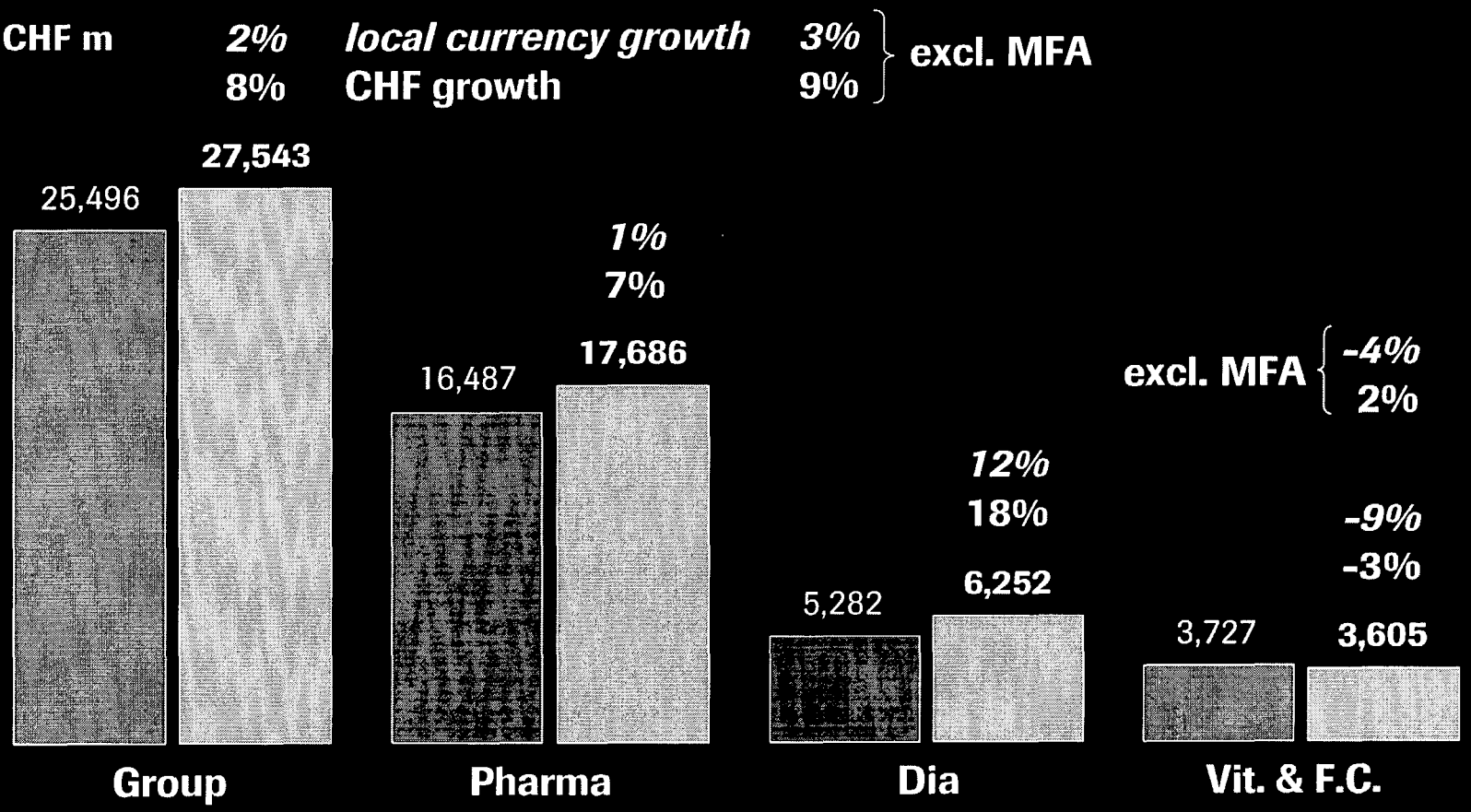
06/01

Adjusted income statement 2000

Growth of 8% in sales, 5% in operating profit

	2000		1999		change
	CHF m	% sales	CHF m	% sales	in %
sales	27,543	100.0	25,496	100.0	8
gross profit	19,098	69.3	17,683	69.4	8
M & D	-8,507	-30.9	-7,377	-28.9	15
R & D	-3,919	-14.2	-3,732	-14.6	5
administration	-1,201	-4.4	-1,103	-4.3	9
amortization	-1,439	-5.2	-1,371	-5.4	5
impairment	14	0.1	-	-	-
OOI(E)	255	0.9	-6	-0.1	-
operating profit	4,301	15.6	4,094	16.1	5

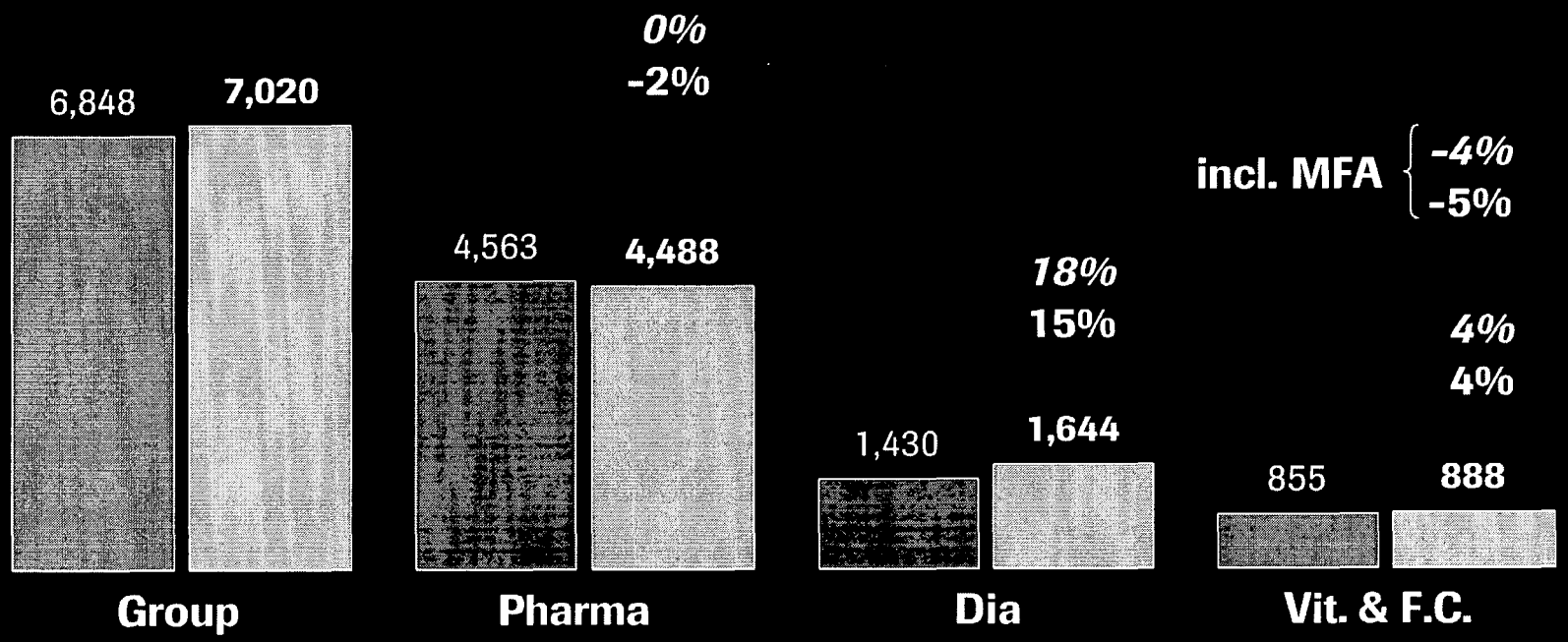
Divisional sales 2000 (adjusted)



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Divisional sales Q1 2001 (adjusted)

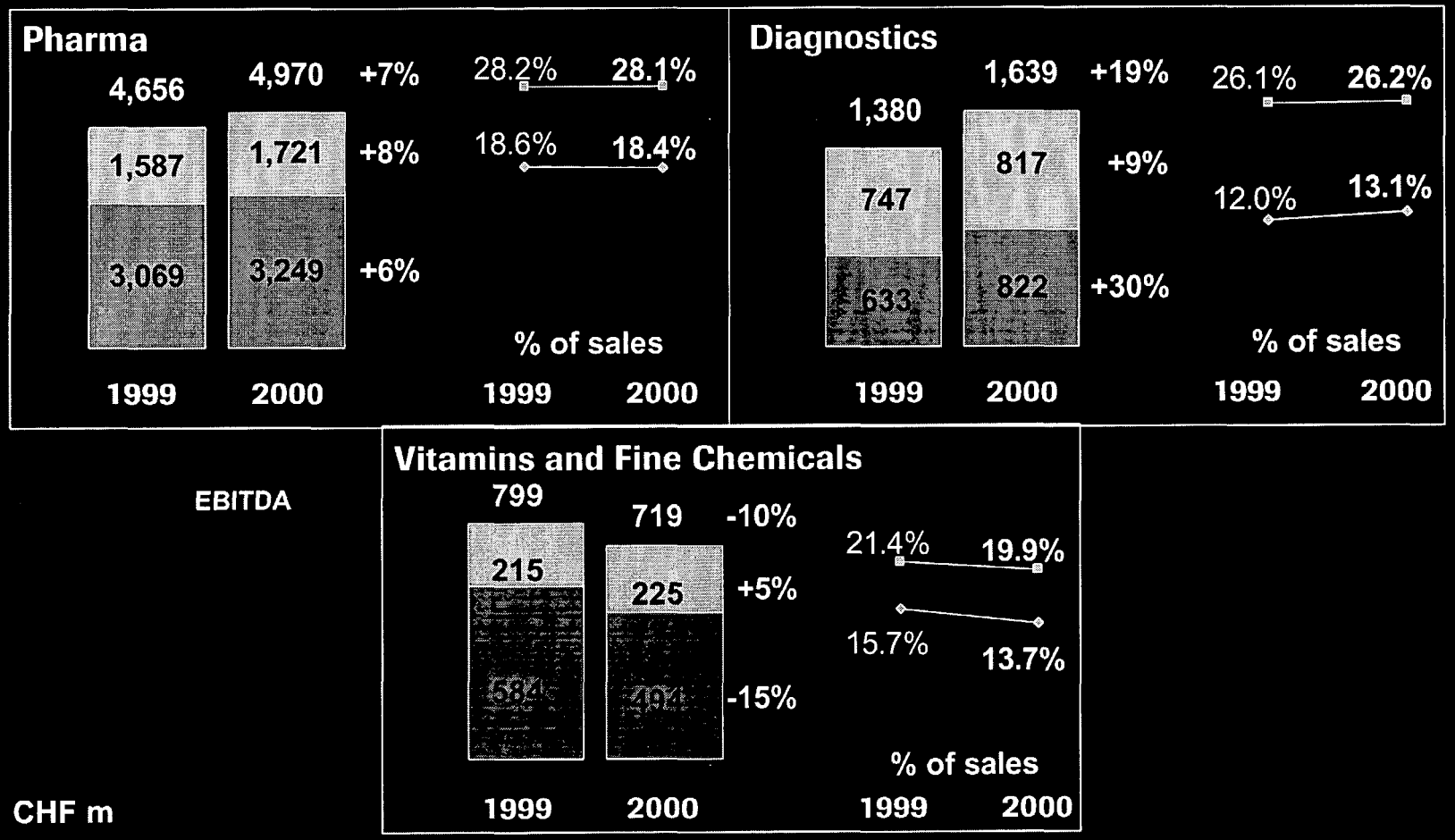
CHF m	*4%*	*local currency growth*	*3%*	incl. MFA
	3%	CHF growth	1%	



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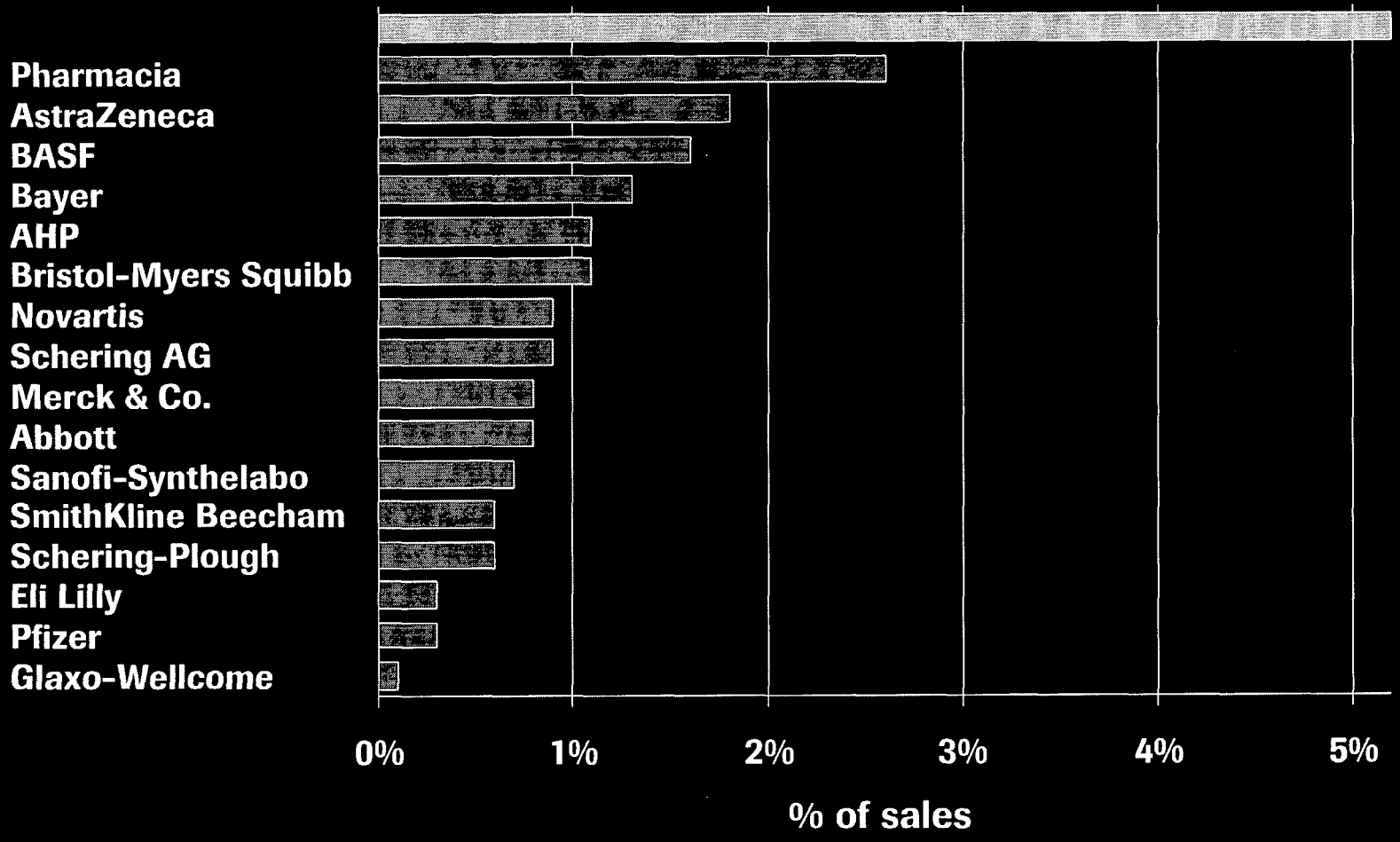
Divisional profitability 2000 (adjusted)

Stable Pharma margins, improving Diagnostics margins



Amortisation

A high charge from acquisition history & IAS policy



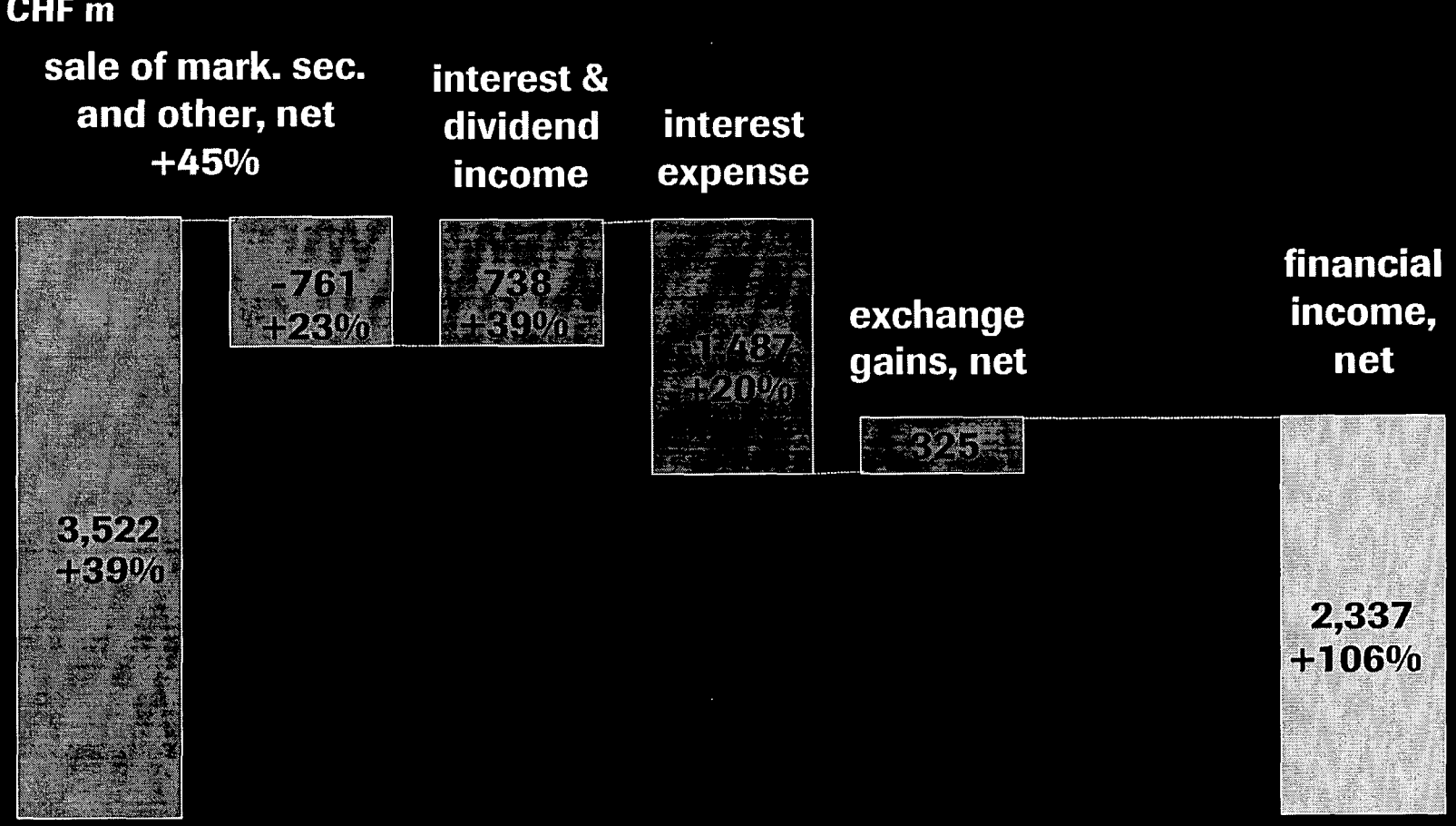
Adjusted income statement 2000

14% growth in net income

	2000		1999		change
	CHF m	% sales	CHF m	% sales	in %
operating profit	4,301	15.6	4,094	16.1	5
net financial income	1,723	6.3	1,242	4.8	39
result before taxes	6,024	21.9	5,336	20.9	13
income taxes	-1,026	-3.8	-992	-3.9	3
result after taxes	4,998	18.1	4,344	17.0	15
minority interests	-7	-0.0	61	0.3	-
assoc. companies	23	0.1	-4	-0.0	-
net income	5,014	18.2	4,401	17.3	14

Financial income 2000

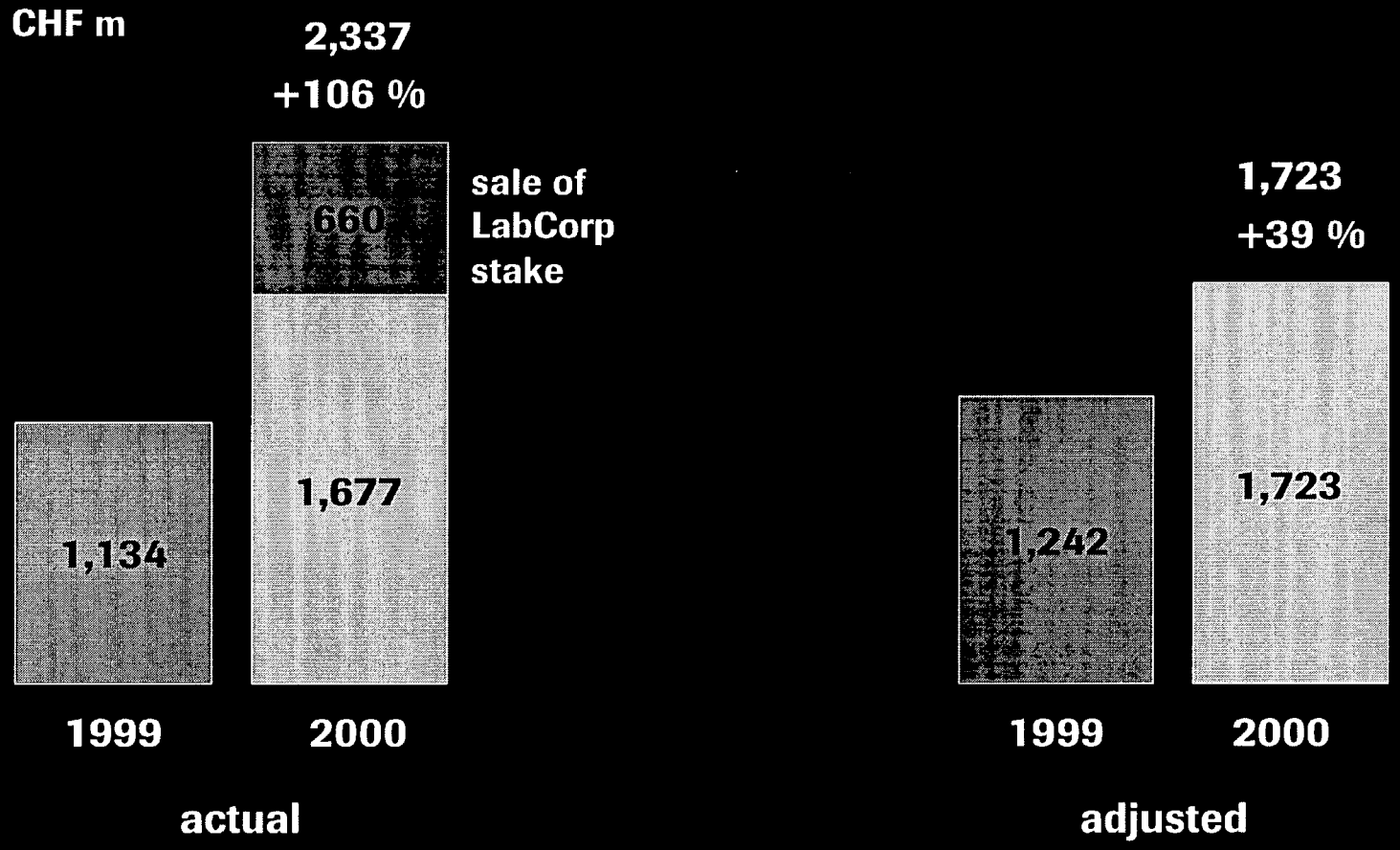
Driven by gains on marketable securities



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Financial income 2000

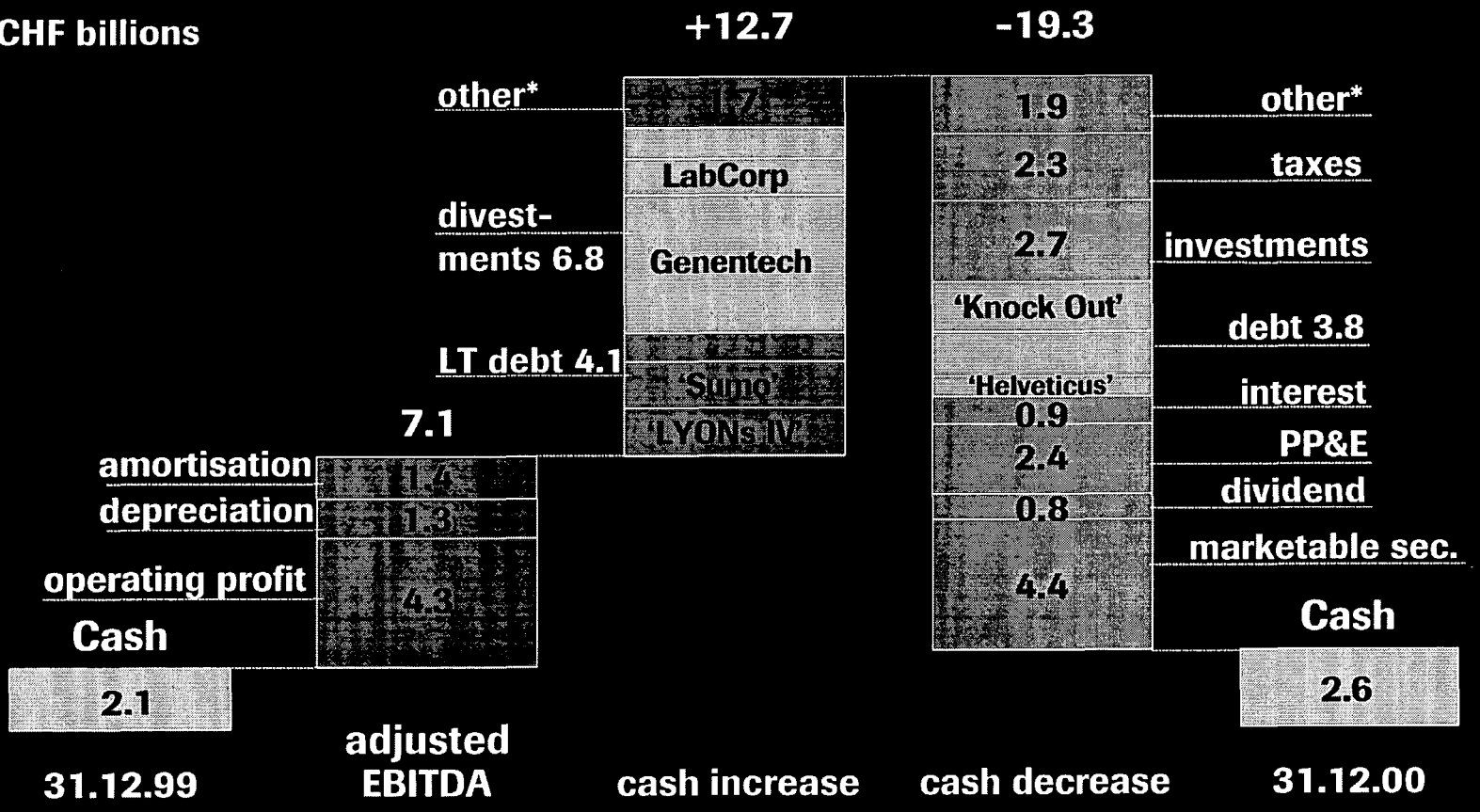
Reduced stake in LabCorp



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Cash flow 2000

Strong cash generating capacity

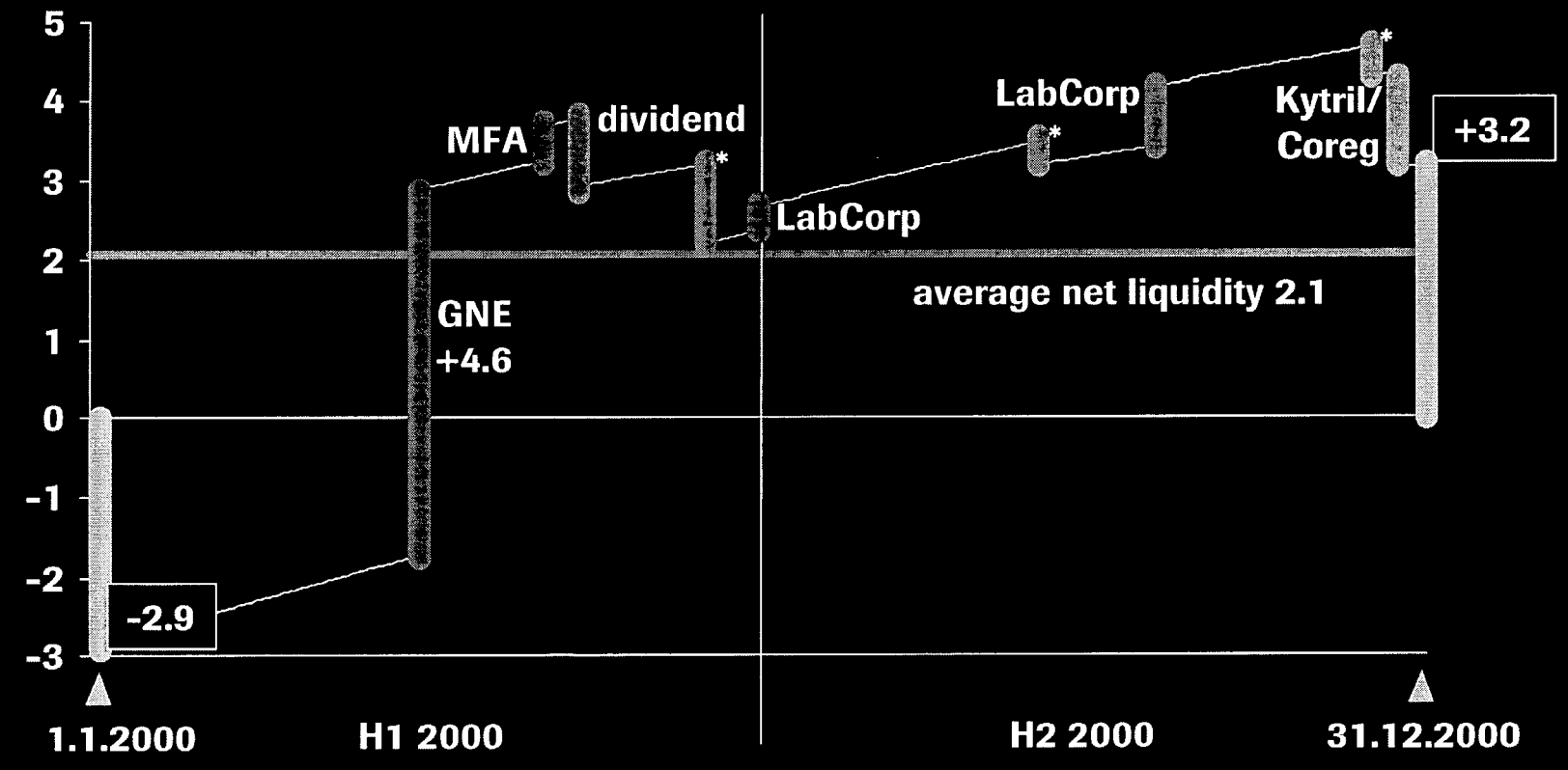


* other cash increasing: eg interest/dividends received; other cash decreasing: eg restructuring

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Net liquidity 2000

Return to net liquidity from substantial cash generation

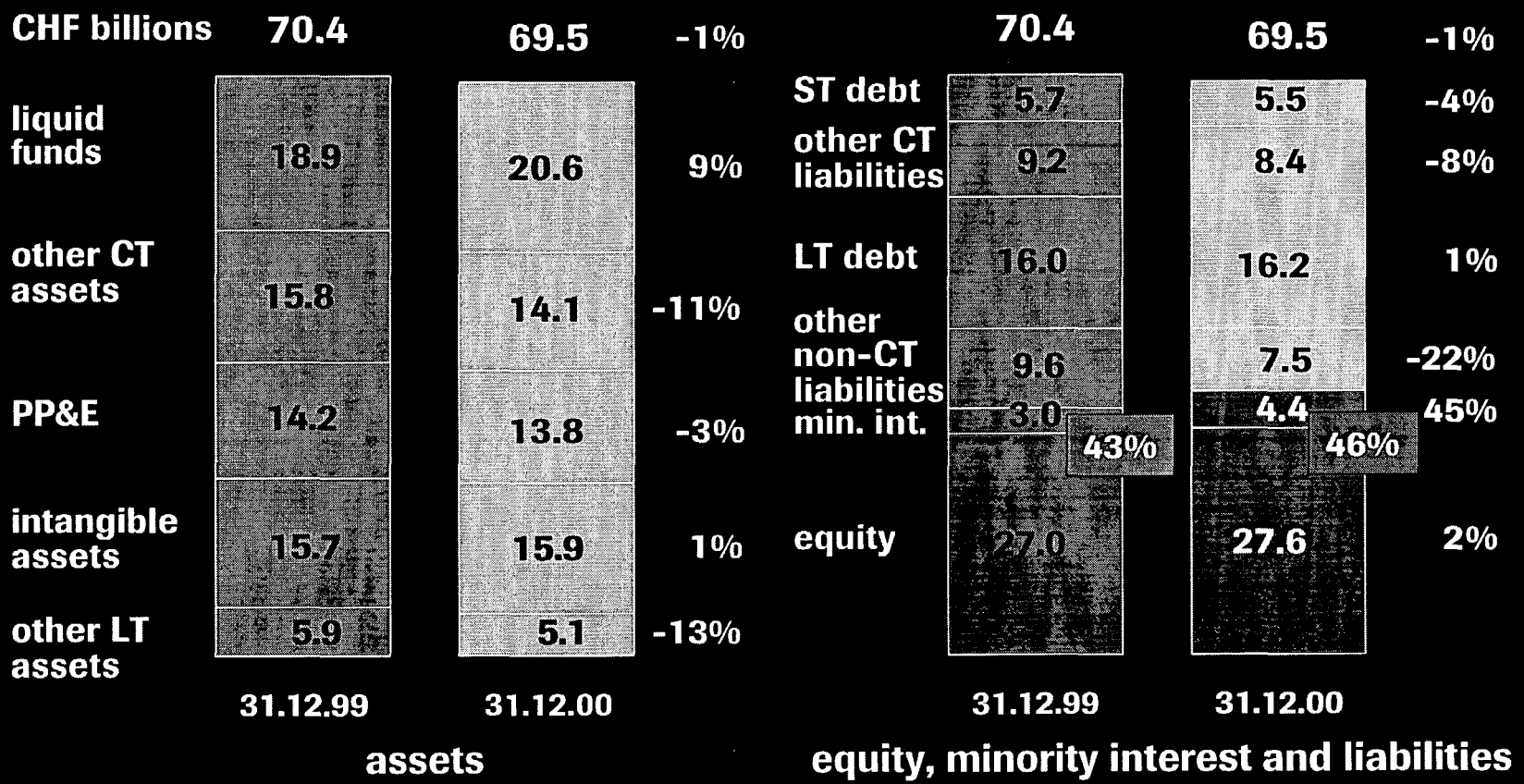


* eg taxes on GNE share sale, AVL, vitamin case

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Balance sheet 2000

High liquid funds, improved equity ratio

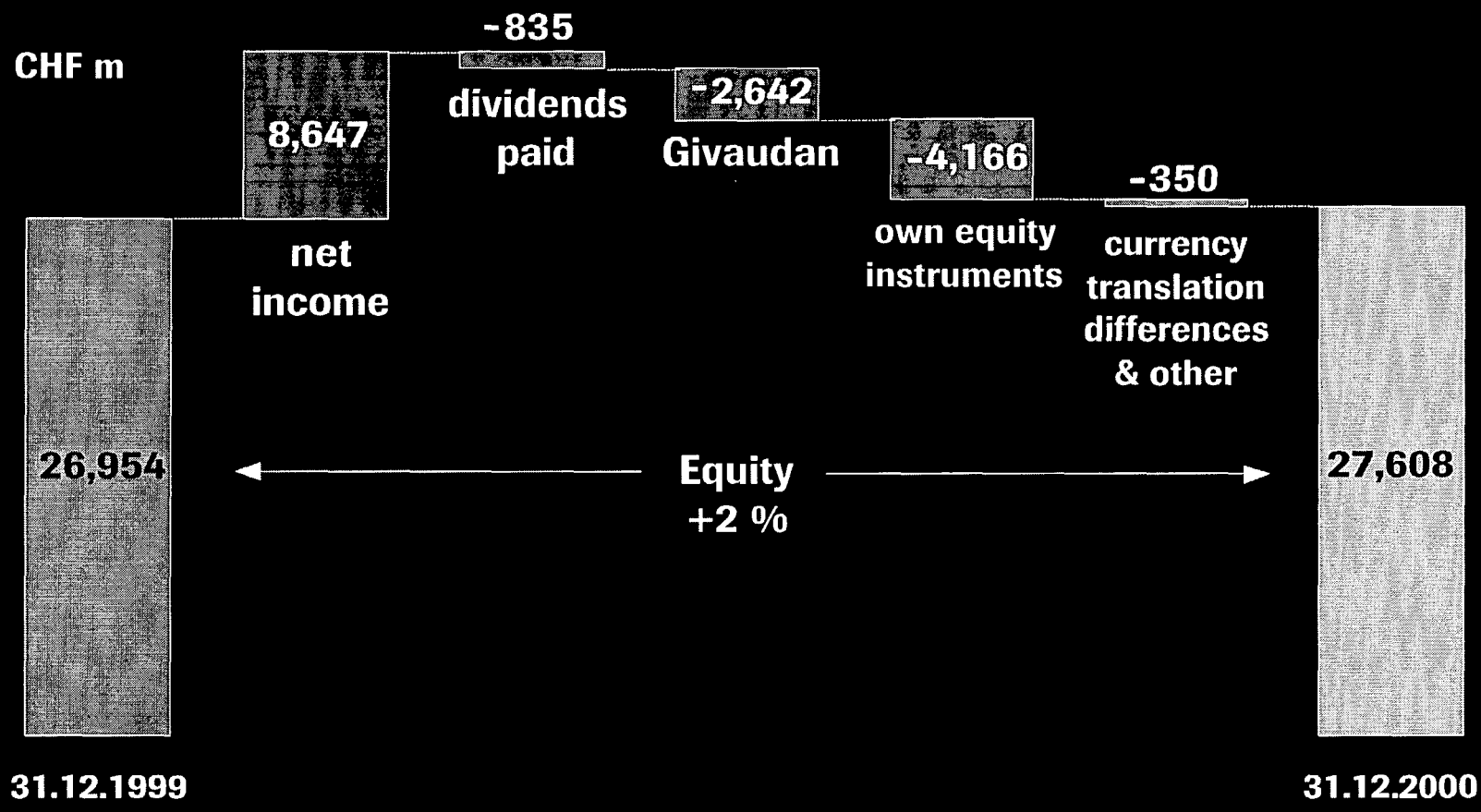


CT: current ST: short-term LT: long-term

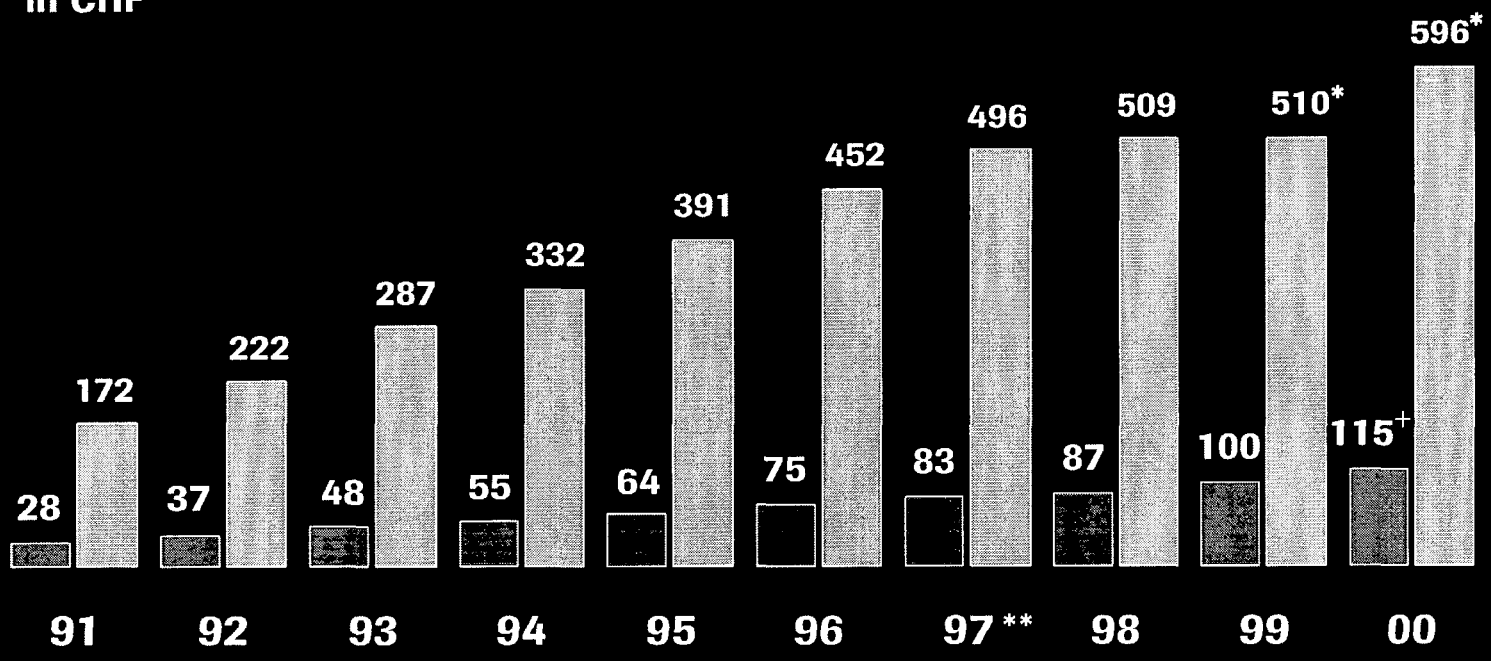
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Equity movement 2000

Growth influenced by Givaudan / IAS changes



Dividend and EPS
Consistent growth



EPS: net income per share and non-voting equity security in CHF

* adjusted ** EPS before special charges + subject to shareholder approval

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Share and non-voting equity security split

Roche

Shares and non-voting equity securities (NES) to be split 1:100

Attractive for retail investors

Liquidity expected to increase

Simple 1:1 exchange ratio with ADRs

Group financial results 2000

Summary

- Record actual results
- Growth of EBITDA and operating profit
- Strong financial result
- Financial position strengthened
- Adjusted net income growth of 14%
- Share and non-voting equity security split 1:100



Vitamins and Fine Chemicals

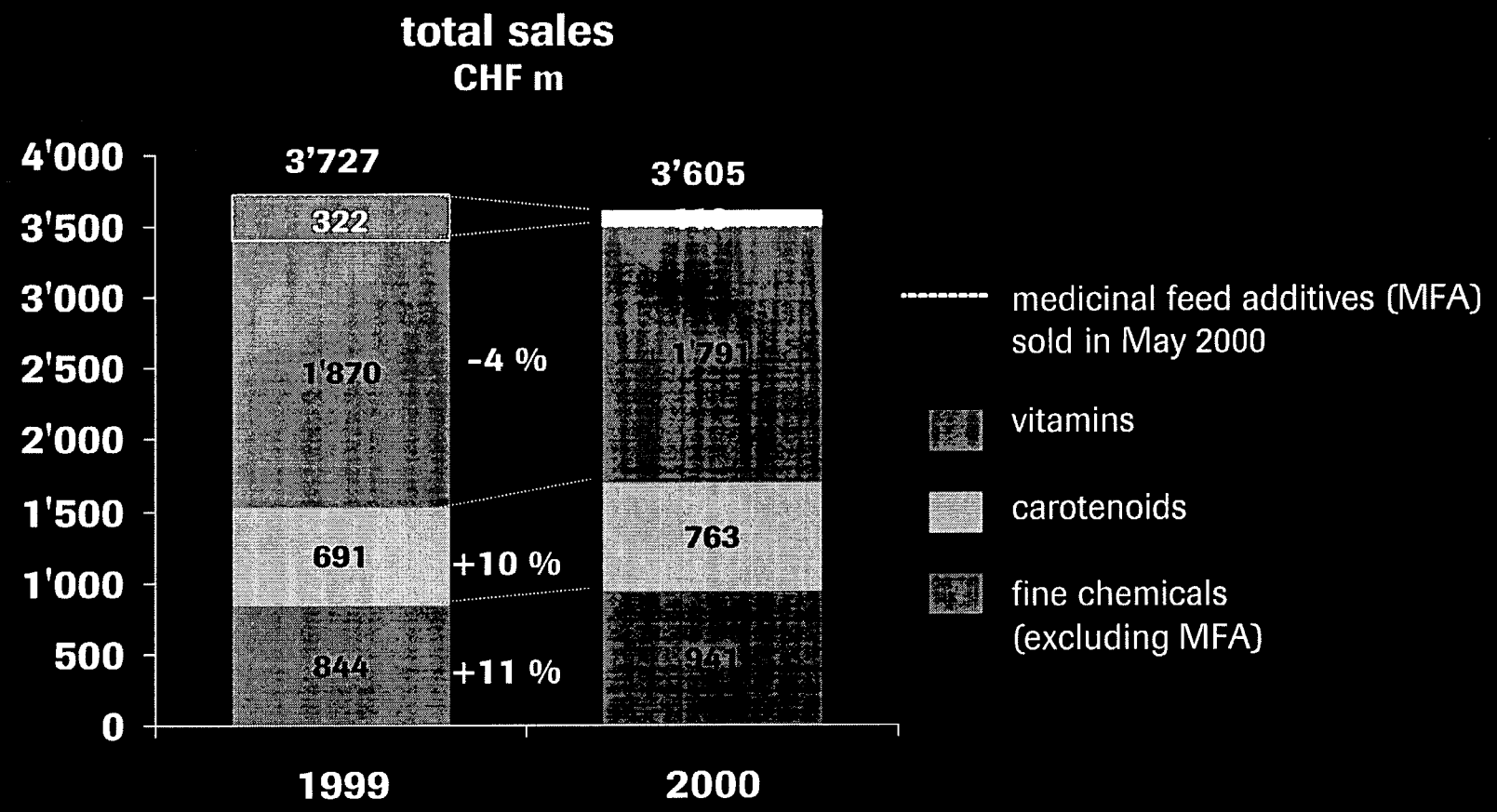
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Sales development by segment

Double-digit growth in carotenoids and fine chemicals

Roche

Vitamins

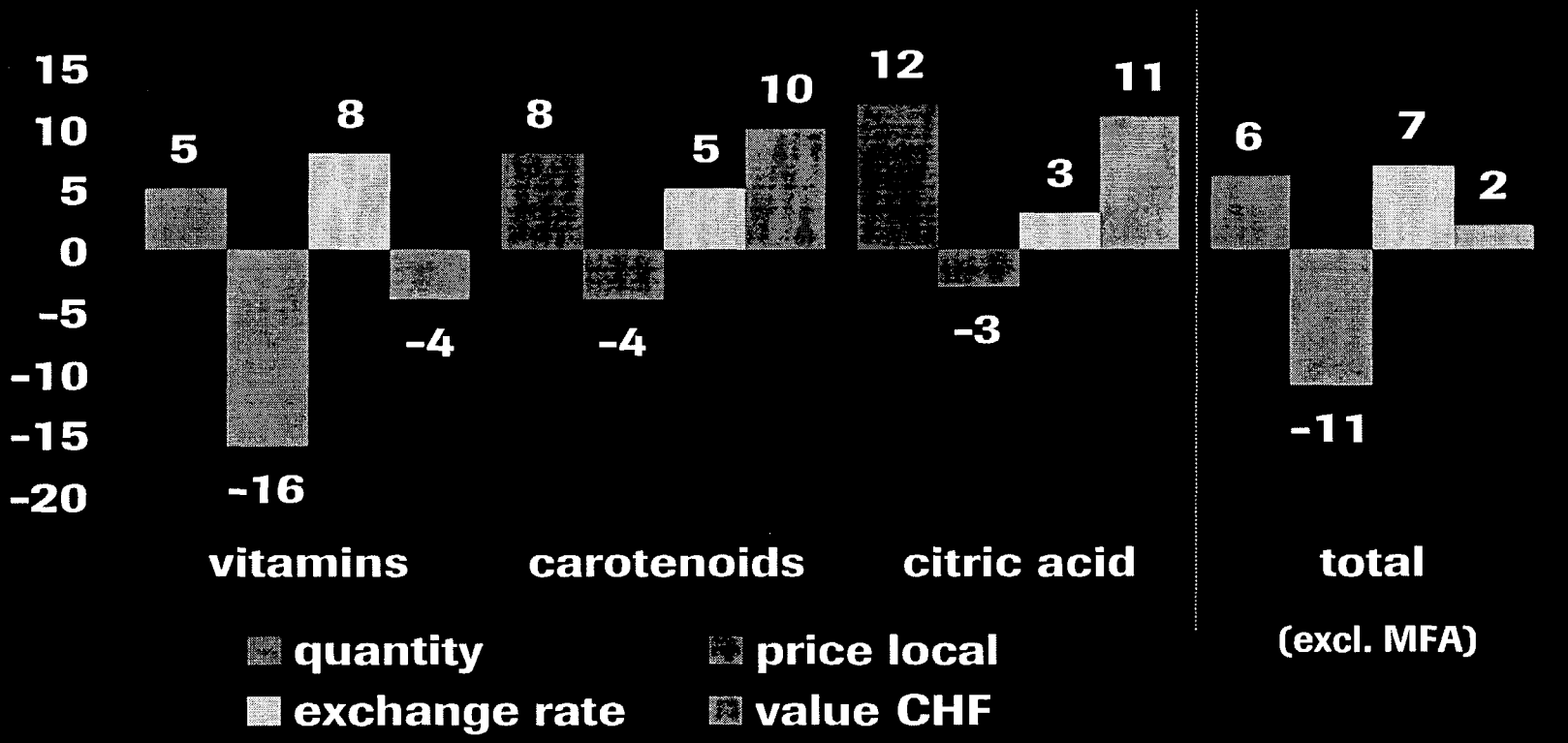


Top line drivers

Quantity and exchange rate gains offset price impact

Roche

Vitamins



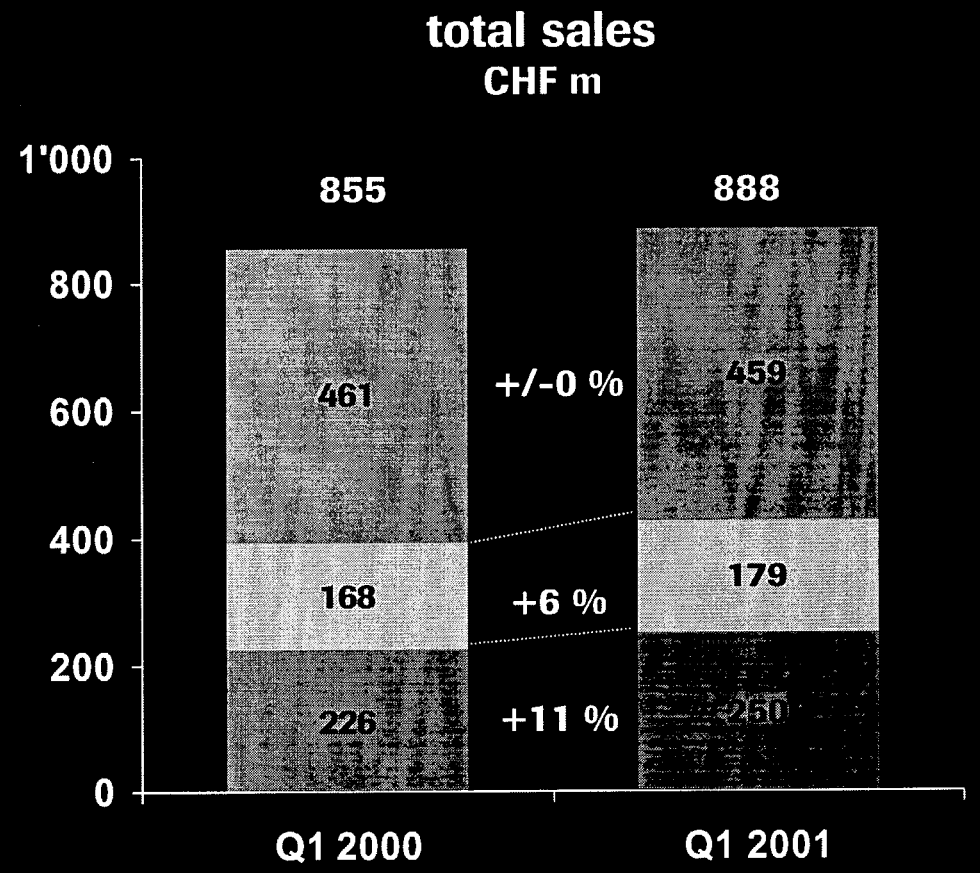
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Vitamins and Fine Chemicals Division

Sales Q1 2001

Roche

Vitamins



4 % local currency growth
4 % CHF growth

vitamins

carotenoids

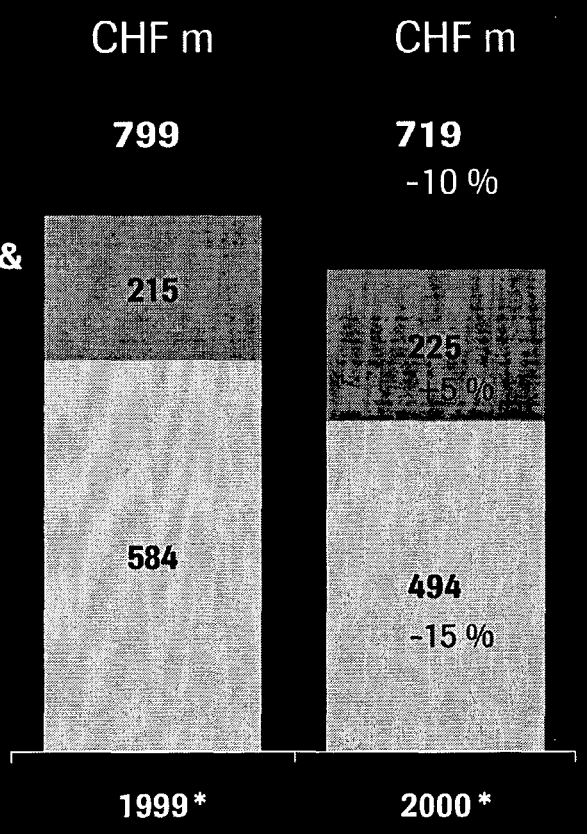
fine chemicals (excluding MFA)

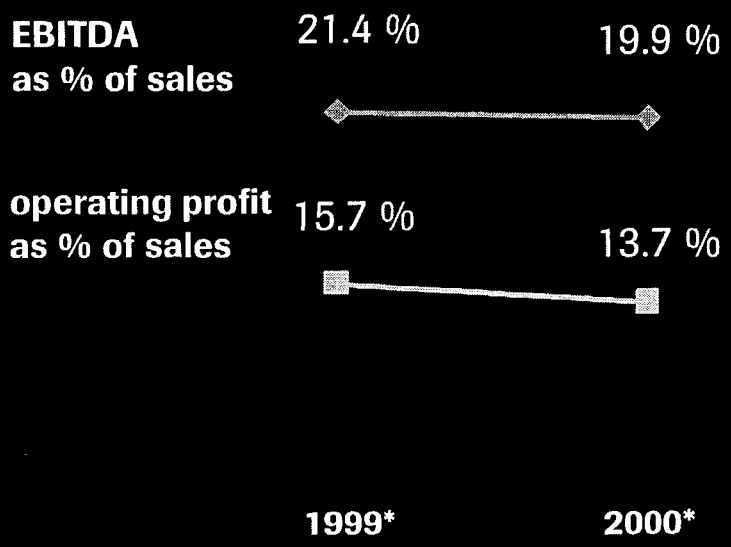
EBITDA and operating profit

Quantity and productivity increases limit margin decline

Roche

Vitamins





* on an adjusted basis (see Annual Report 2000)

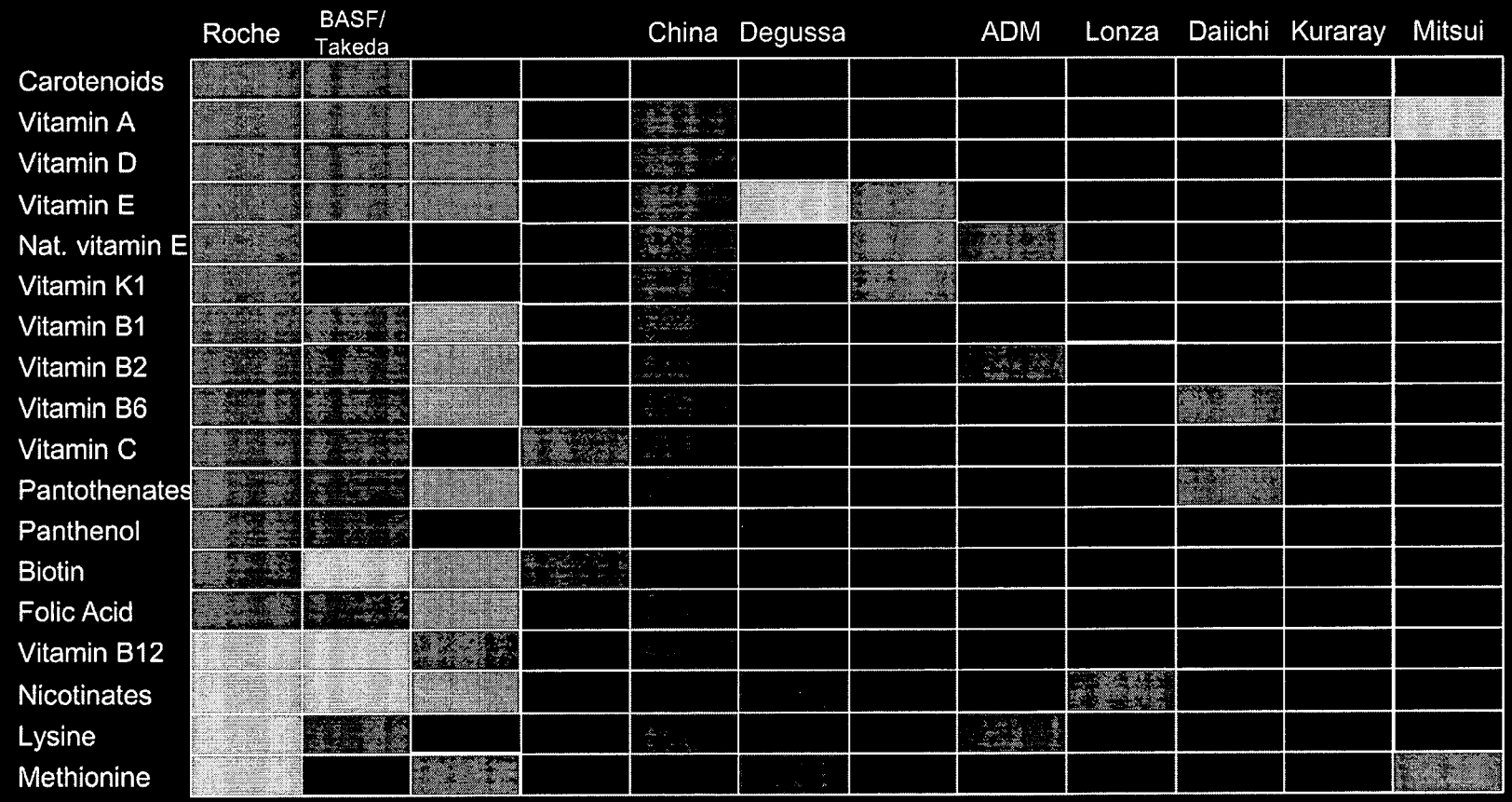
06/01

A changing business environment

Aventis, Merck and Eisai leaving the market

Roche

Vitamins



06/01

Trends in a CHF 11 billion market

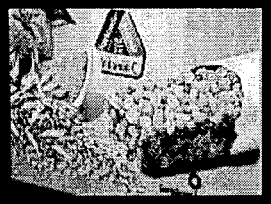
Expected market growth in the range of 3-5%

Roche

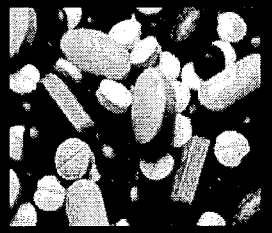
Vitamins



continued reliance on core vitamins; increased demand for natural health and performance enhancers:



changing life-styles trigger demand for health beneficials:



greater health awareness offers wide opportunities



high demand for innovative product concepts:

06/01

The way forward

Strengthening a leading position

Roche

Vitamins

goals

outperform market growth!

strategy for growth

strategy for growth and profitability

increase margins and remain the industry benchmark!

strategy for profitability

goals

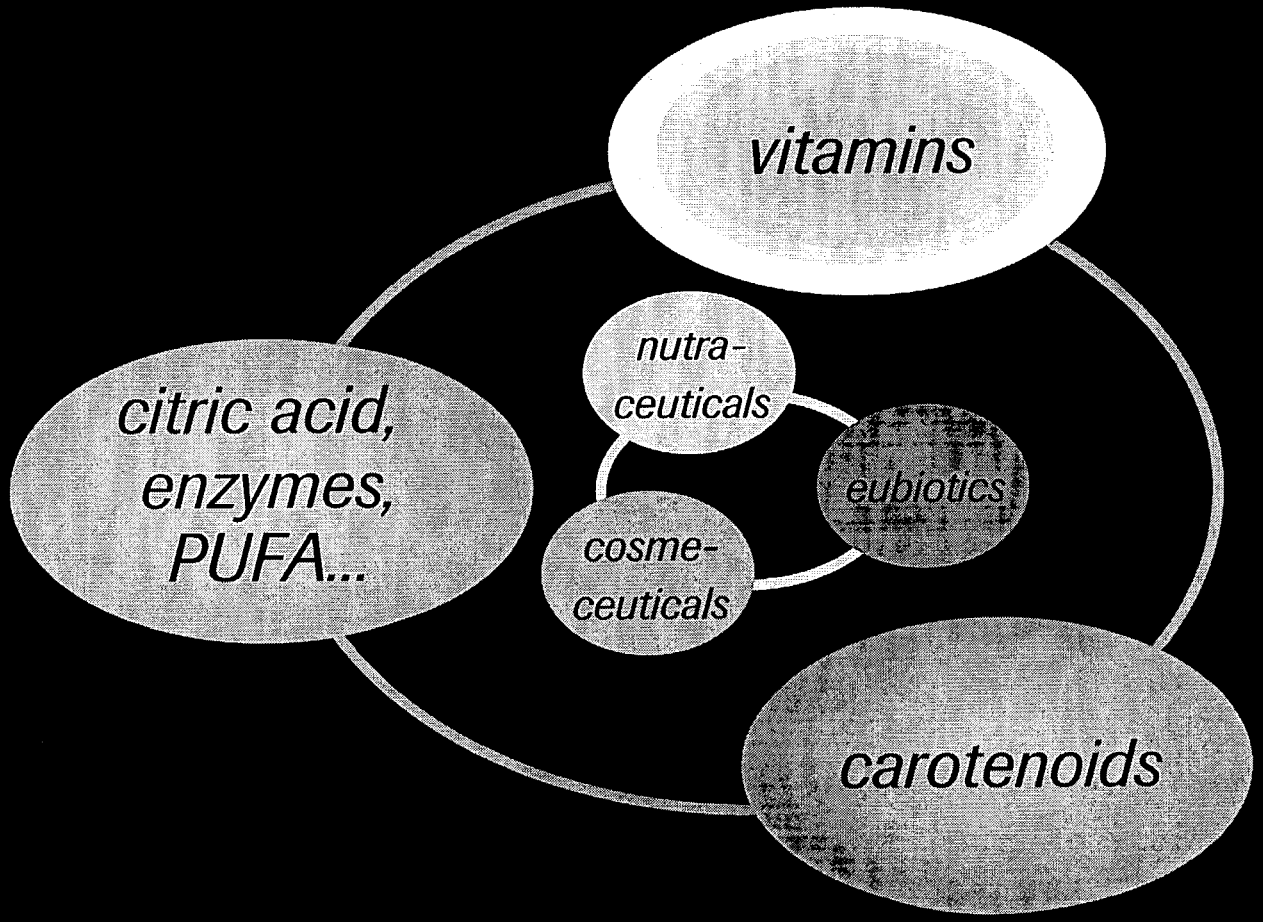
06/01

Growth

Expand the core

Roche

Vitamins



06/01

Profitability

Key drivers to achieve profitability targets

Roche

Vitamins

antum leaps in process improvements

- half of R&D resources committed to production innovation
  ⇨ 50 % cost reduction target for key vitamins in next 10 years

w plants for low cost production

- invest only to pursue lowest cost position
  ⇨ key projects: vitamins E and C

in all business processes

- reduce production costs
  ⇨ plan 500
- reduce operating costs
  ⇨ cost saving program in Europe

06/01

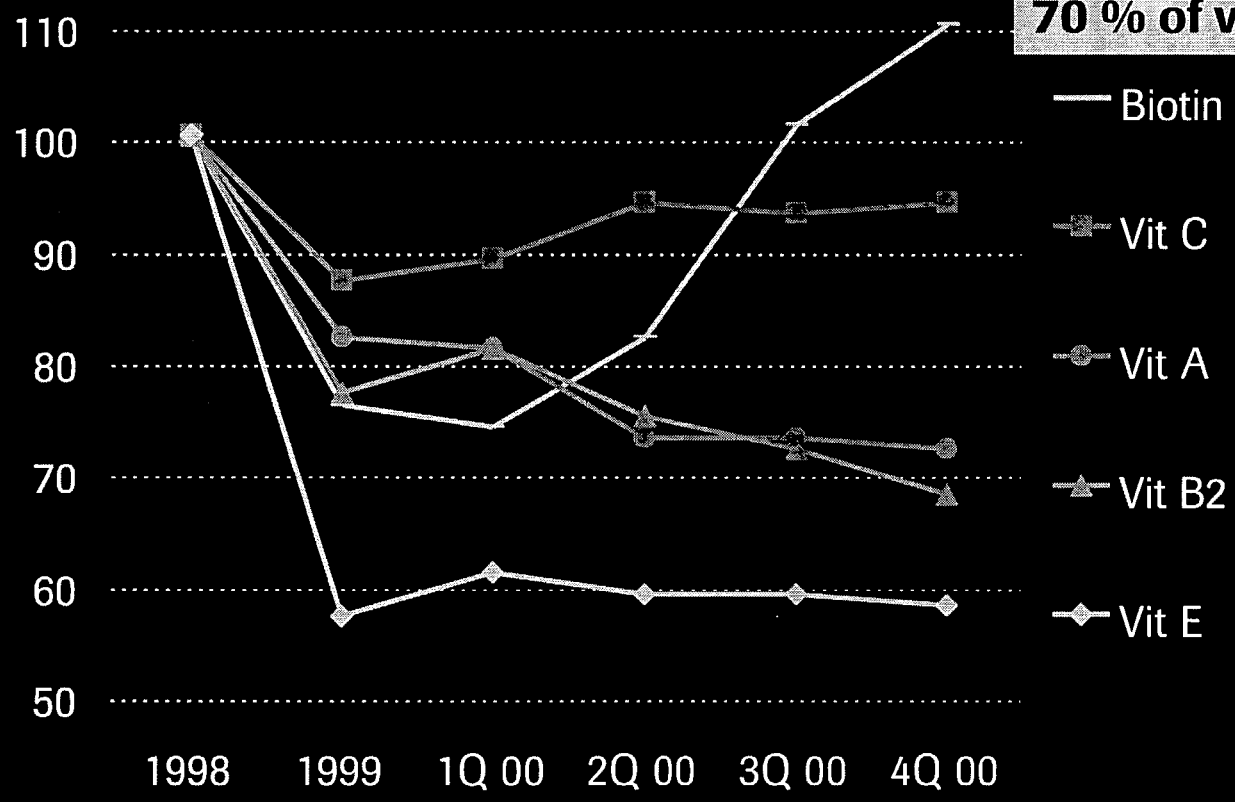
Profitability

Prices of major vitamins stabilising in 2000

Roche

Vitamins

price development 1998-2000
(at constant USD/Euro)



products represent
35 % of divisional sales
70 % of vitamins sales

06/01

Vitamins and Fine Chemicals Division

Summary

Roche

Vitamins

- Significant volume growth in all major product segments
- Efficiency gains and a rigorous focus on costs partly offset pressure on profitability
- The way forward
  ⇨ strengthening our leading position



Diagnostics

06/01

Roche

Diagnostics

Performance 2000

Near-term business drivers

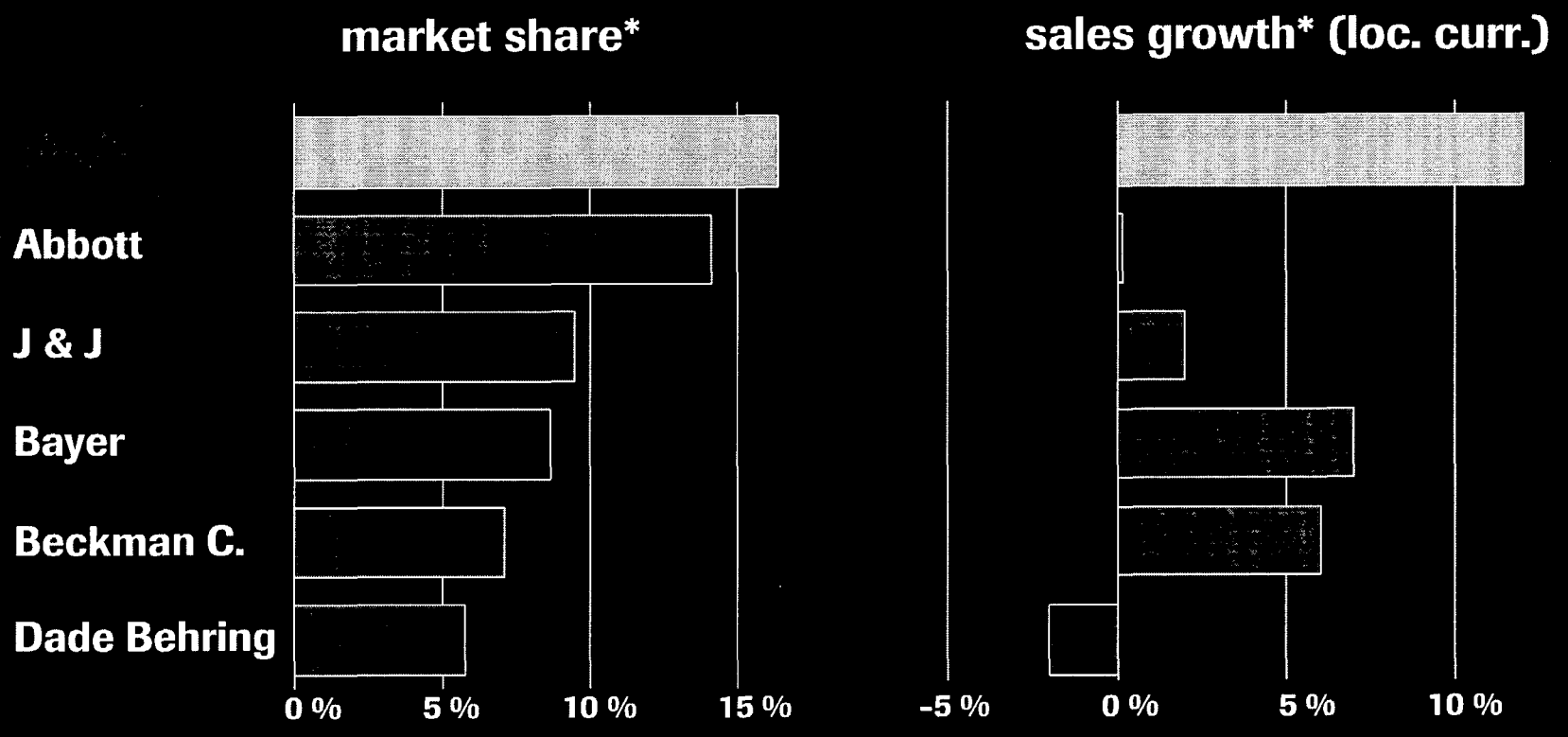
Longer-term vision

06/01

In Vitro Diagnostics Market

20.7 bln USD in 2000 (+5 % in loc. curr.)

Roche Diagnostics



* Basis: Year-End 2000

Source: Annual reports, Roche estimates/analysis, Boston Biomedical Consultants

06/01

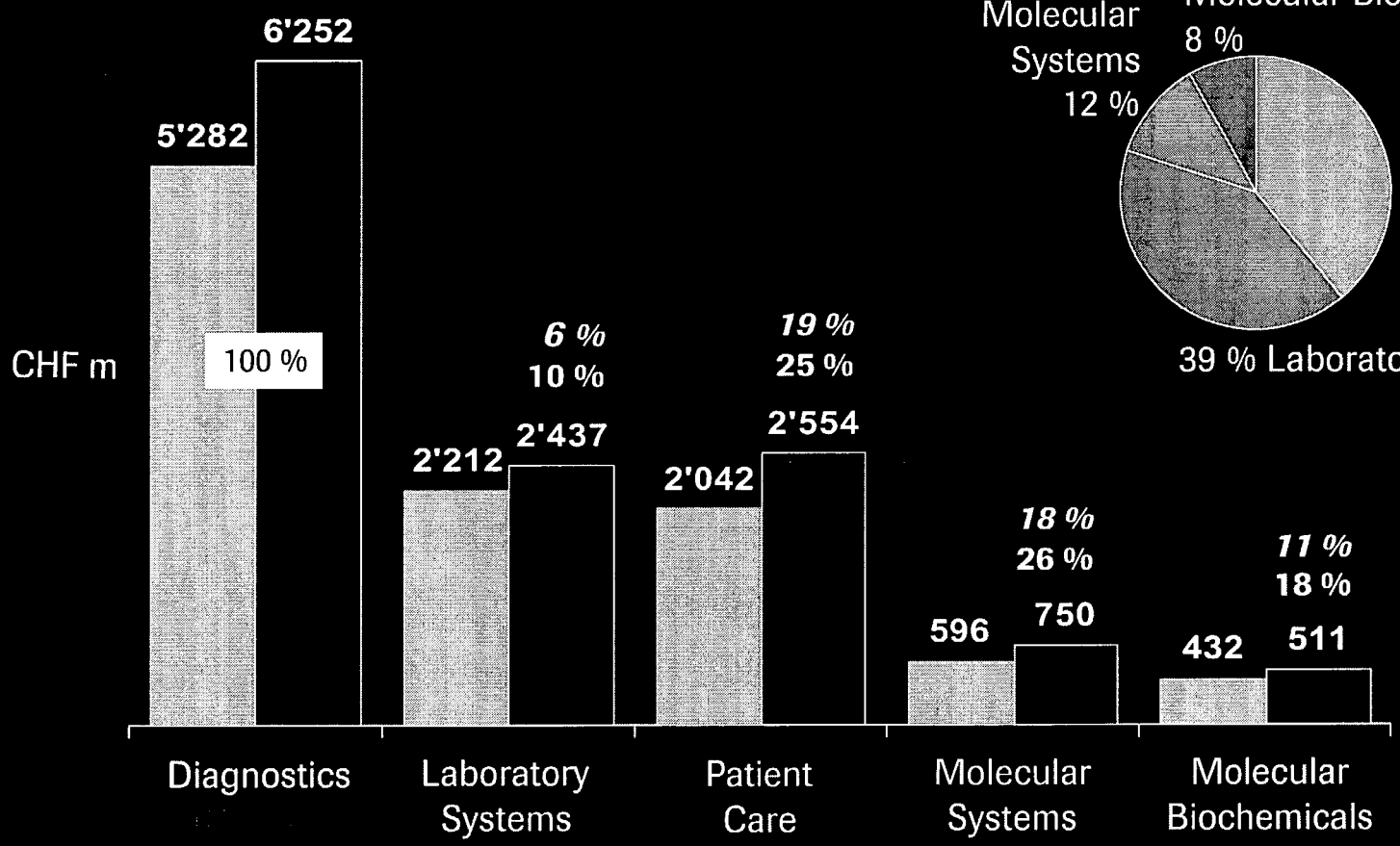
Diagnostics sales 2000

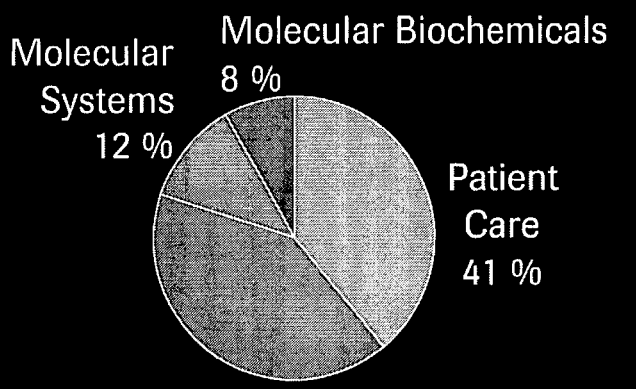
Double-digit growth in high margin businesses

Roche

Diagnostics

12 % ***local currency growth***
18 % CHF growth





06/01

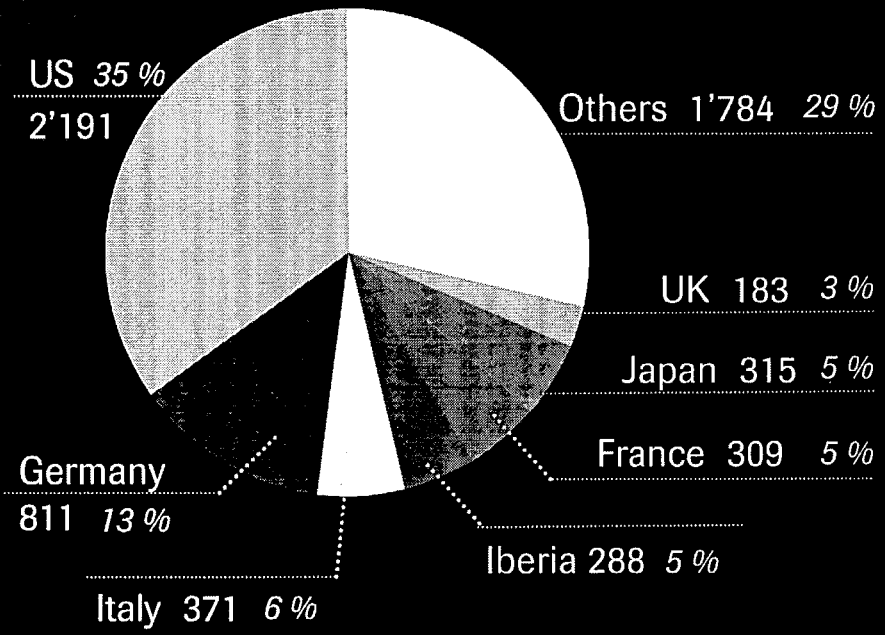
Diagnostics sales 2000

Sales by major market

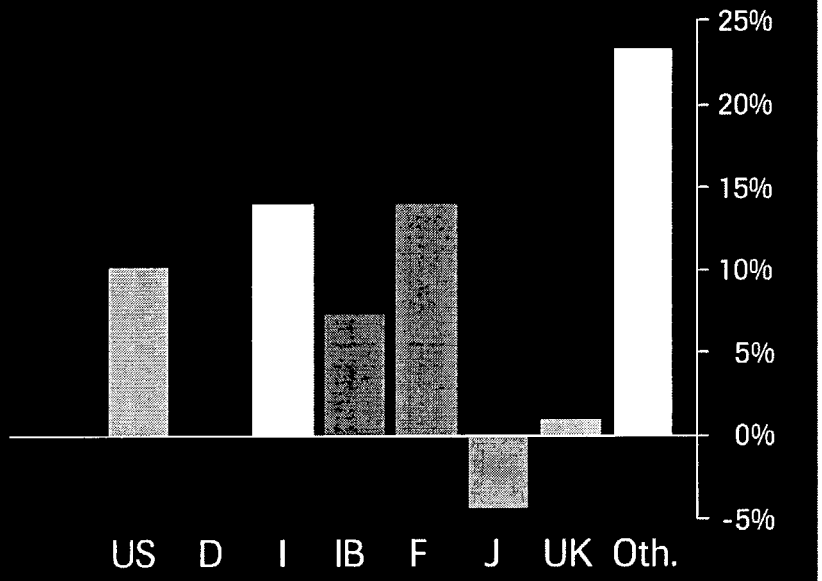
Roche

Diagnostics

sales : CHF 6,252m ***100 %***



local sales growth



06/01

Roche Diagnostics

Broadest product portfolio in industry

Roche

Diagnostics

Research		Professionals				Consumers	
research lab	univ. hospital	commercial lab	hospital	POL	GP	patient	consumer

Applied Science



Lab Network

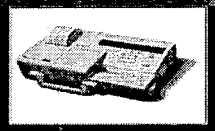
Molecular Dx



Centralized Dx



Near Patient Testing



Diabetes Care



06/01

Diagnostics Division

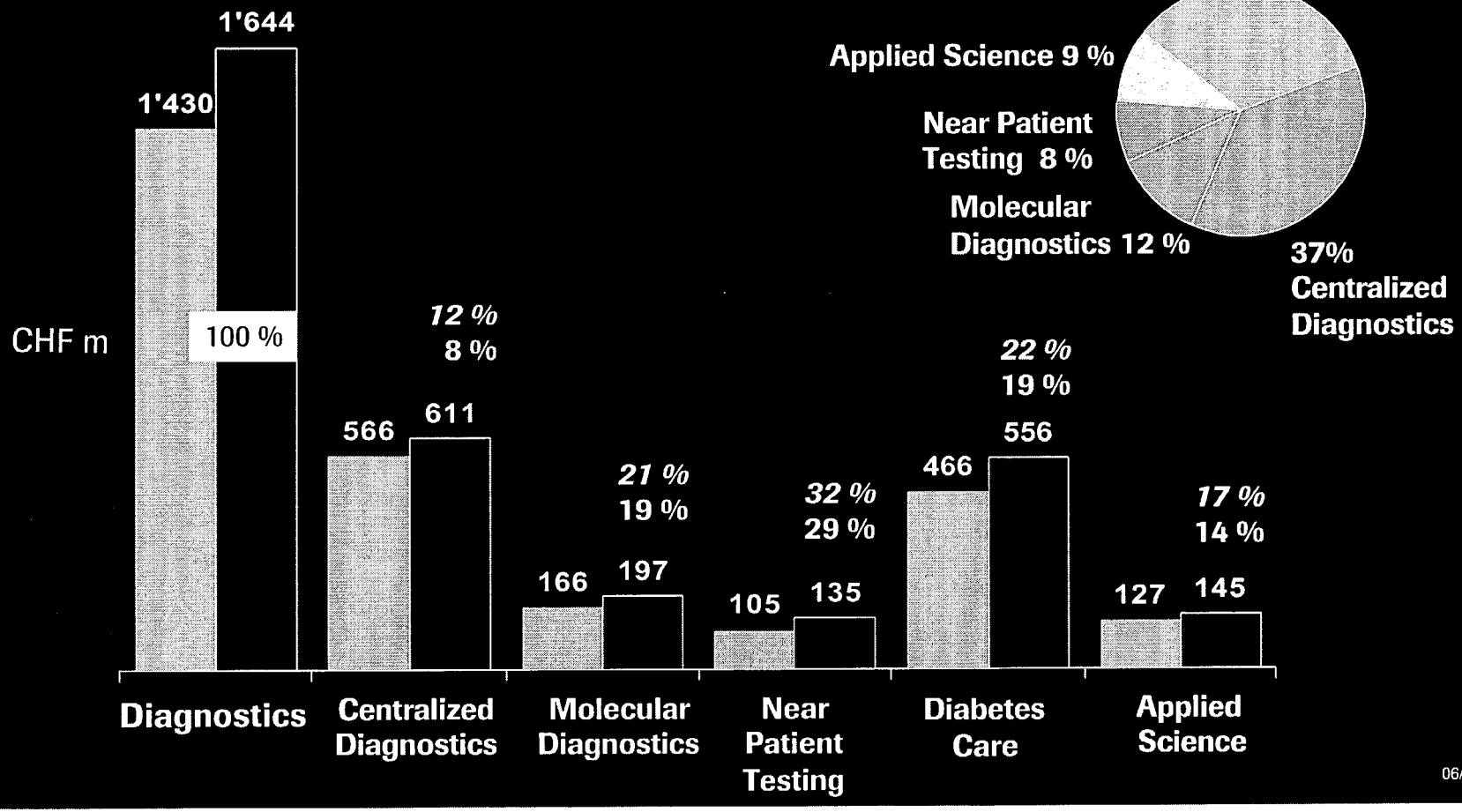
Sales Q1 2001

Roche

Diagnostics

18 % ***local currency growth***

15 % CHF growth

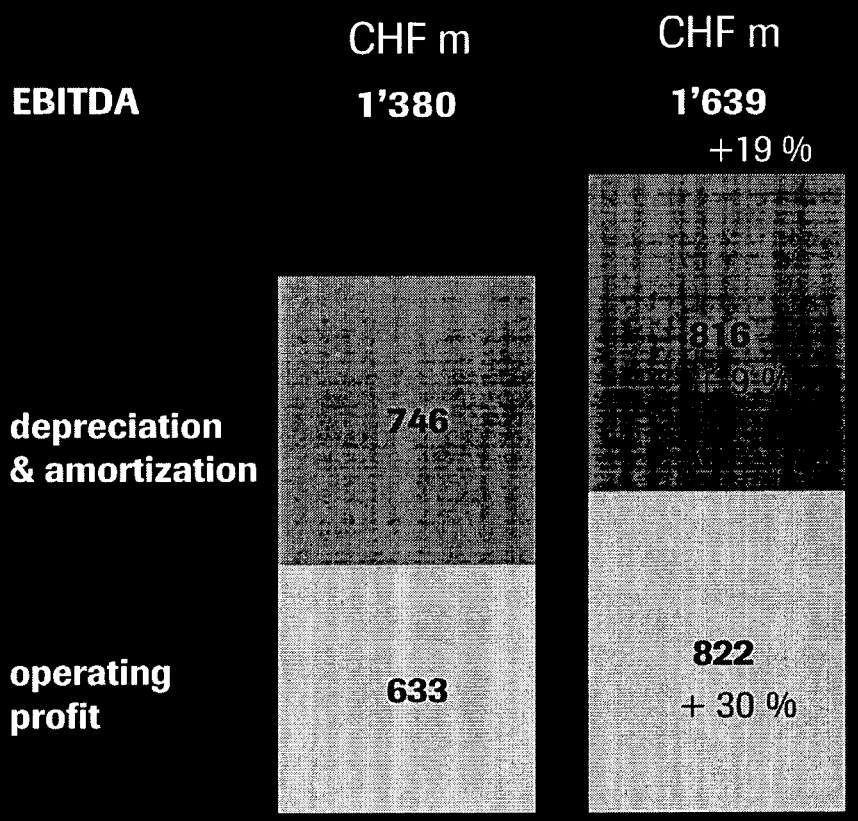


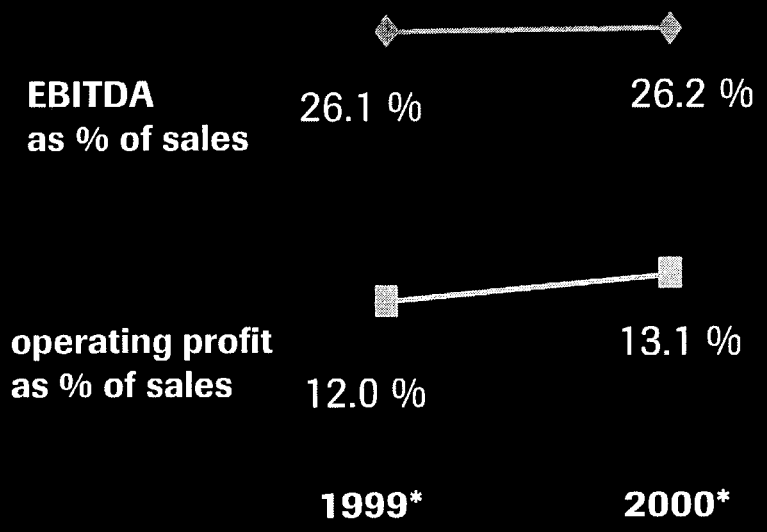
06/01

Diagnostics profitability 2000
Further improvement of margins

Roche

Diagnostics





* on an adjusted basis (see Annual Report 2000)

06/01

Major achievements in 2000
Strengthened leadership position

Roche

Diagnostics

- in sales and profitability
- in all segments to > 16 % worldwide
- (Near-Patient Testing / Point of Care, menu completion)
-
  - MagNa Pure® system — sample prep, genetics, PCR
  - RTS 500® system — protein generator, proteomics
  - Cobas Integra® 800 system — analyzer, laboratory systems
  - AccuChek Comfort Curve® — diabetes monitoring
  - Accutrend Glucotrend® 15 sec strip — diabetes monitoring
- with Chiron (HCV, HIV) and Perkin Elmer (PCR markets)
-

06/01

Roche

Diagnostics

Performance 2000

Near-term business drivers

Longer-term vision

06/01

Platforms/products to be launched in 2001

Extending our leadership

Roche Diagnostics

- worldwide 1st immunology analyzer integrated into clinical chemistry system
- automated sample preparation, PCR
- protein generator, proteomics, high throughput
- near-patient testing
- diabetes monitoring
- diabetes monitoring
- diabetes monitoring

06/01

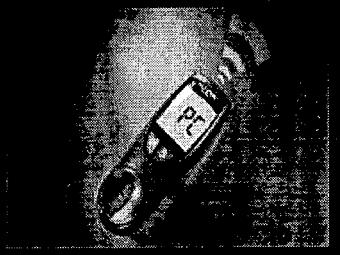
Diabetes Care

Customer segment-specific innovations

Roche

Diagnostics

- 5 second test
- infrared communication
- extremely accurate
- launch Q2 2001



- less items to carry
- no strip handling
- automatic coding
- infrared communication
- first launch in Nov. 2000 (NL)



- diabetes monitoring for professional testers
- value added features and analysis tools included

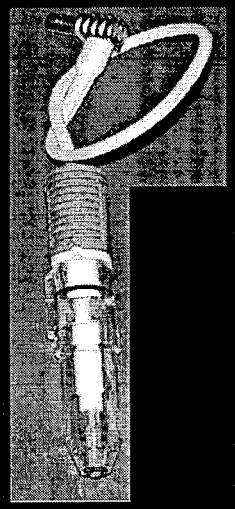


Near Patient Testing: new sensor technology

Chip based electro-chemical electrodes

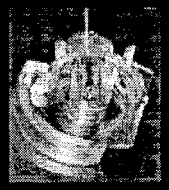
Roche Diagnostics

pH - electrode



parameters
pH, O_2, CO_2

K^+ electrode



K +, Ca, Li, Cl, Na

multi system solution

K^+ electrode for OMNI



K +, Ca, Li, Cl, Na
and blood-gas (new)
in one measuring cell

integrated system

PTF - electrode (2001)



"12 in one"

Glu, Lac, UREA,
Cl, Ca, K, Na,
(Bloodgas, pH
Crea, Mg)

- combination of biosensors with electrolyte- and blood-gas sensors
- 1st time bedside testing

COGS / parameter

100 → 33 → 13

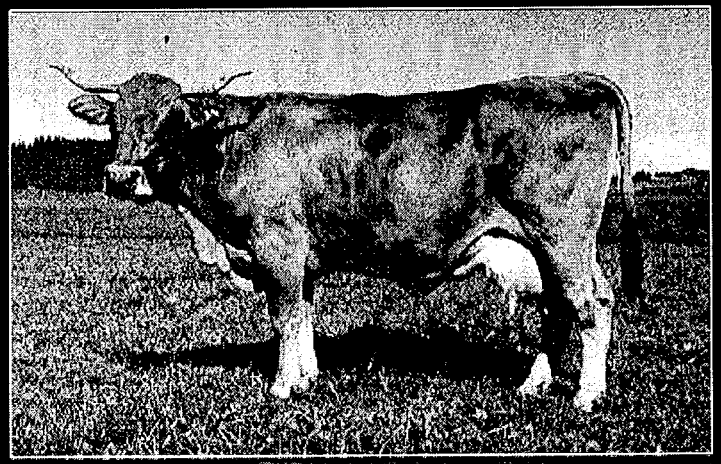
06/01

Applied Science: testing for BSE*

*Prionics Check®** sold by Roche since 1 February 2001*

Roche

Diagnostics



Roche BSE tests: worldwide exclusive rights***

- testing for prions will become a profitable new area within diagnostics, starting with BSE
- mandatory testing of slaughtered cattle > 30 months old:
  Germany, France: effective 1 January 2001
  Rest of Europe: effective 1 July 2001
- testing of cattle > 24 months old announced by German government: 26 January 2001
- **28 million** slaughtered cattle / year (thereof **10 millions** older than 30 months)
- spending on testing **> CHF 210 million / year** (thereof ca. 30-50 % on reagents)

* BSE = bovine spongiform encephalopathy
** Prionics Check® is a trademark of Prionics AG, Switzerland
*** exclusive marketing rights, Prionics AG, excl. few selected countries

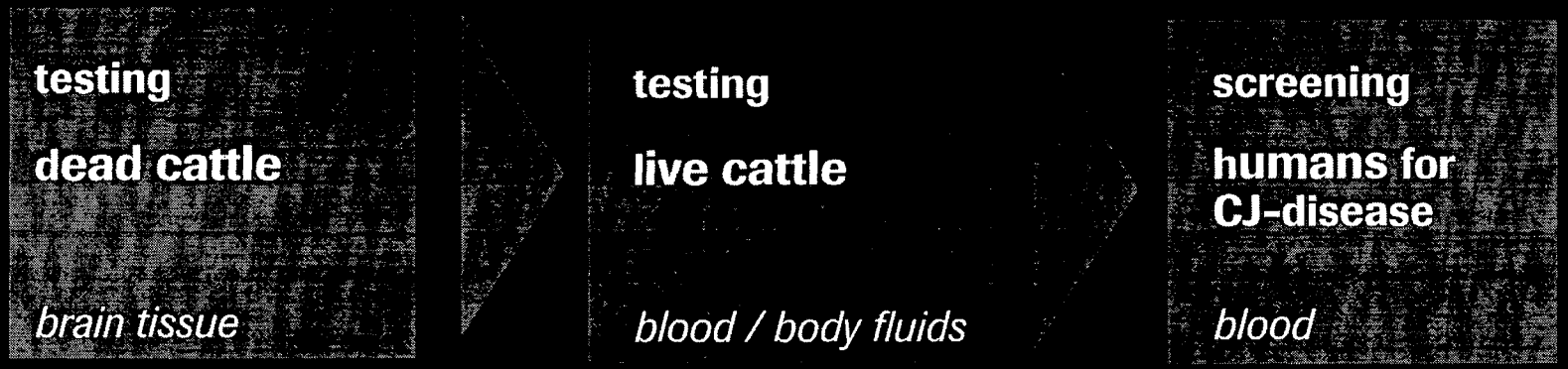
06/01

Development of BSE product program

Prionics Check®: the most sensitive BSE tests

Roche

Diagnostics



OEM supply and distribution agreement

- test: Prionics Check®
- worldwide distribution rights (excl. selected countries)
- effective **1 February 2001**

development cooperation (with Prionics AG, Zurich)

highly sensitive test in **living cattle**

IVD test in **humans** for both screening and diagnosis

expertise of Roche in . . .

- development of IVD test kits
- analysis of blood samples
- systems integration
- worldwide distribution facilities
- service and training infrastructure
- biotech manufacturing sites

06/01

Roche

Diagnostics

Performance 2000

Near-term business drivers

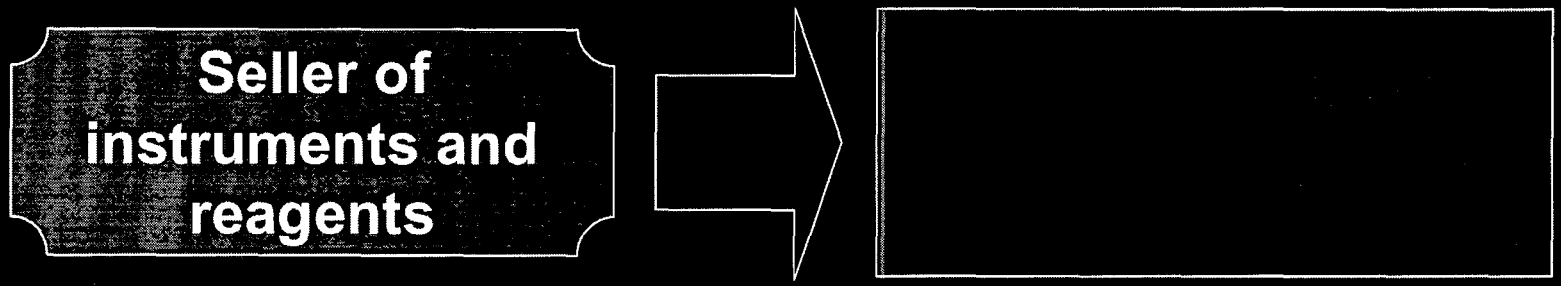
Longer-term vision

06/01

Roche Diagnostics

Expanding the role in the future

Roche Diagnostics



Industrial age model

Information age paradigm

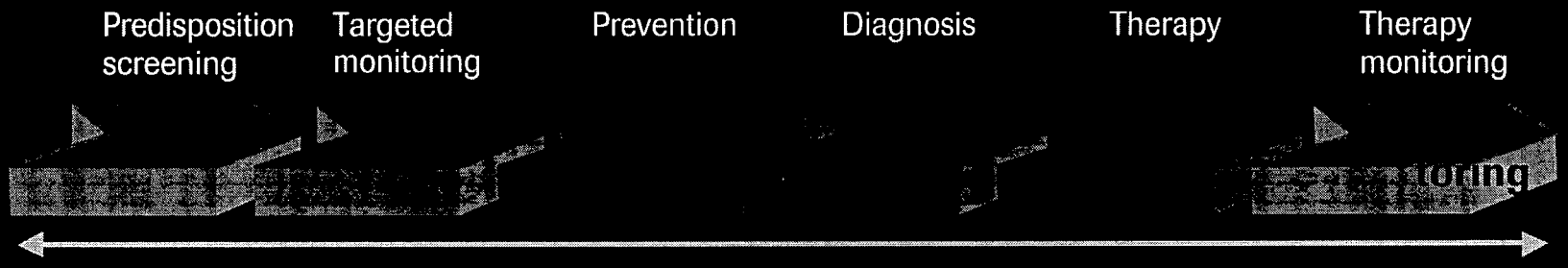
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Expanding the business perspective

More breadth

Roche

Diagnostics



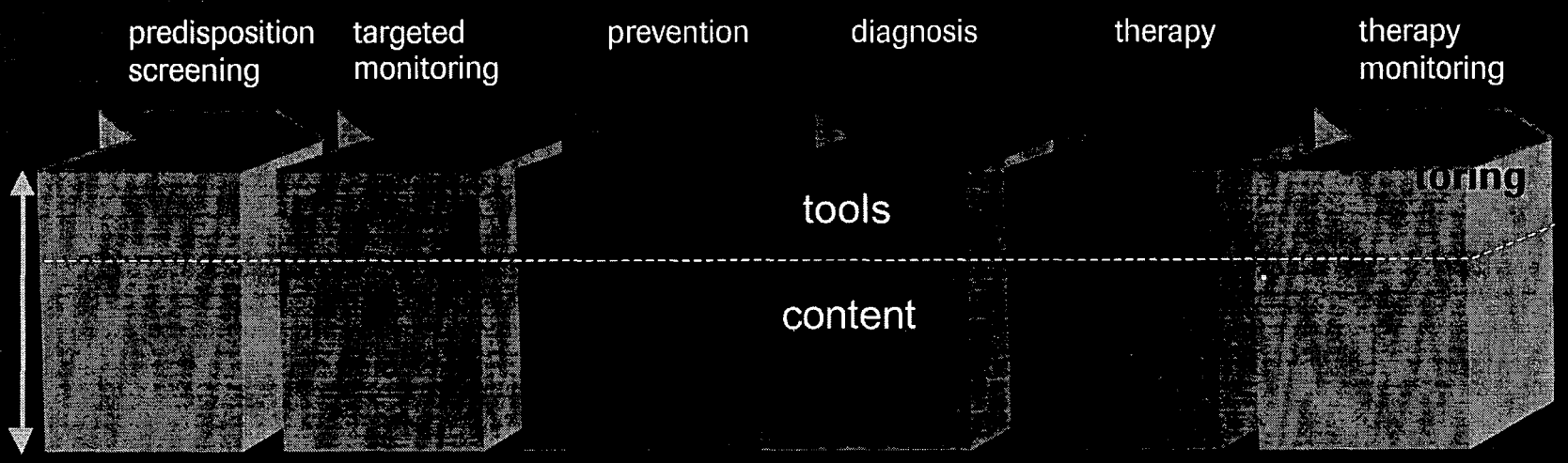
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Expanding the business perspective

More depth

Roche

Diagnostics

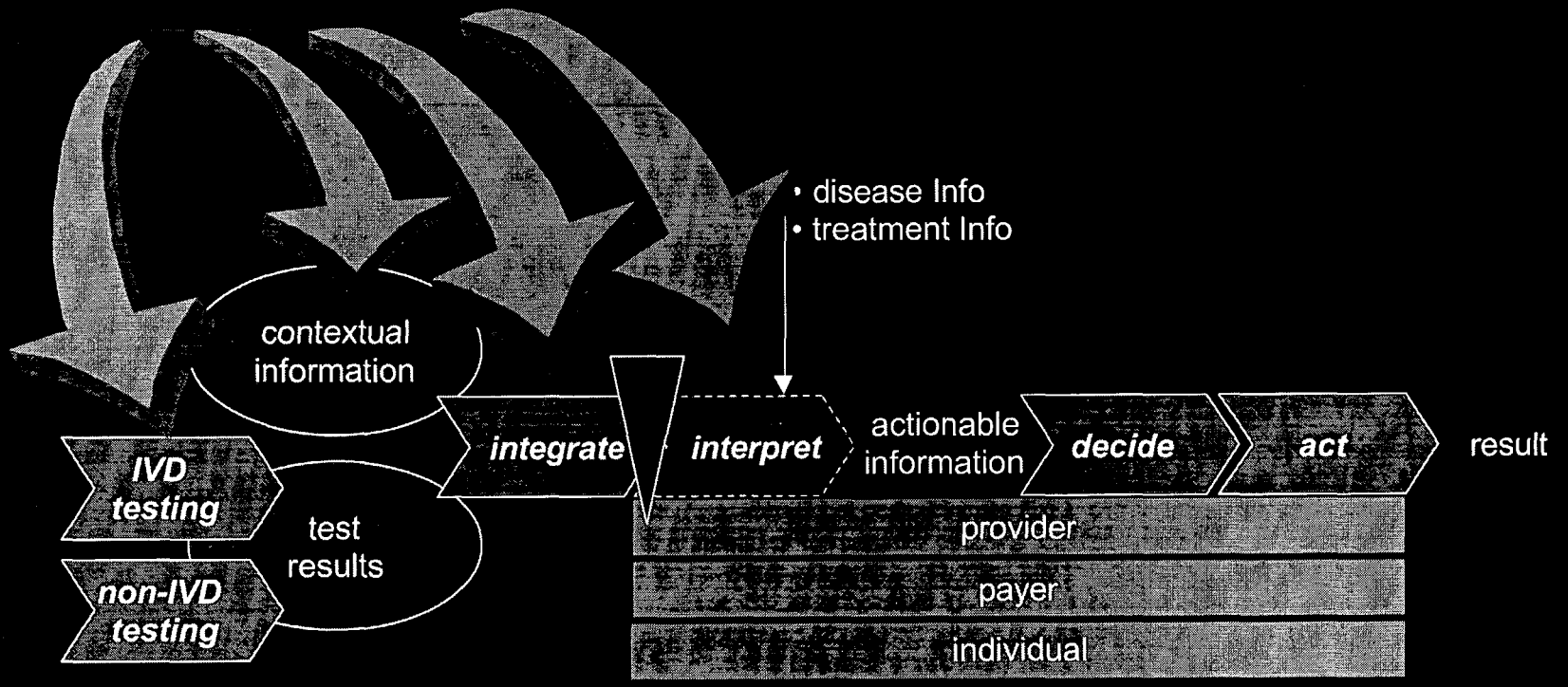


Disaggregation of health care process

Providing new business opportunities

Roche

Diagnostics



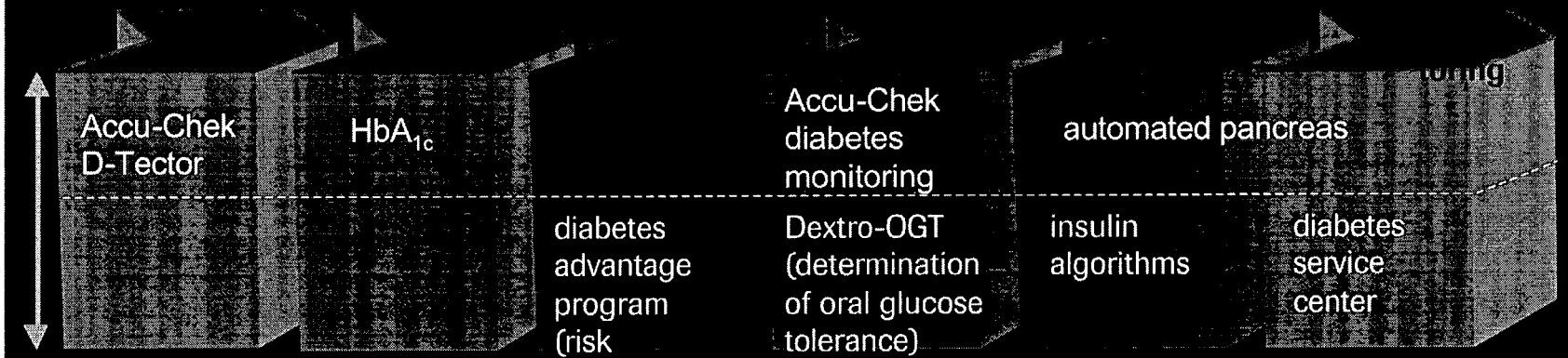
06/01

Expanding the business perspective

Examples from Diabetes Care

Roche

Diagnostics



06/01

Diagnostics
Summary

Roche

Diagnostics

- Increasing global IVD market leadership
- Double-digit growth in high-margin businesses
- Further improvement of margins
- Strong R&D pipeline enables future growth
- Strategic vision



Pharmaceuticals

06/01

Roche

Pharmaceuticals

- Results in Q1 2001 and in 2000
- Major in-market franchises
- Integrated Health Care Solutions
- Development pipeline
- NDA filings and launches
- Summary

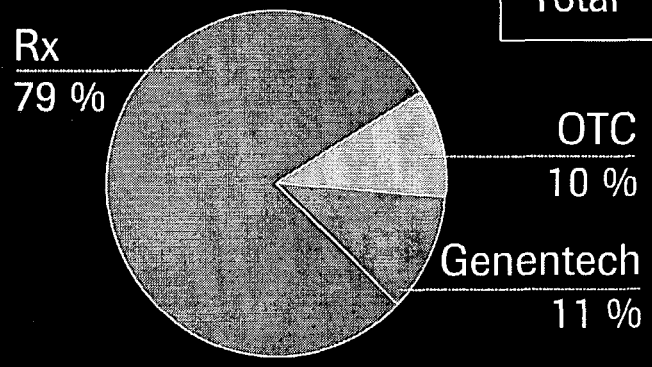
06/01

Pharmaceuticals sales 2000

Roche

Pharmaceuticals

	2000 CHF m	1999 CHF m	growth in local currencies
Rx	13,910	13,379	-2 %
OTC	1,694	1,585	4 %
Genentech	2,082	1,523	22 %
Total	17,686	16,487	1 %



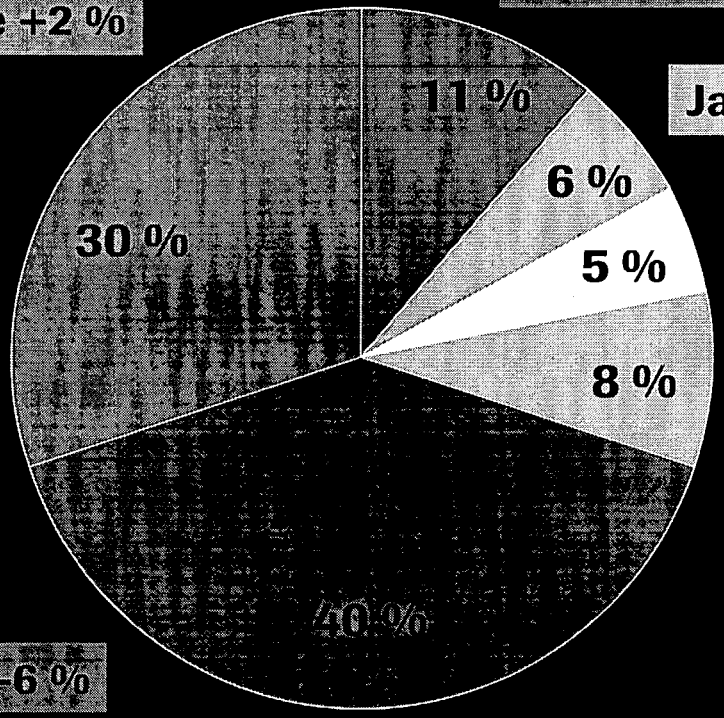
06/01

Roche Rx and Genentech sales 2000

Sales by region

Roche

Pharmaceuticals



Latin America +10 %

Western Europe +2 %

Japan -5 %

Asia +20 %

others +7 %

North America -6 %

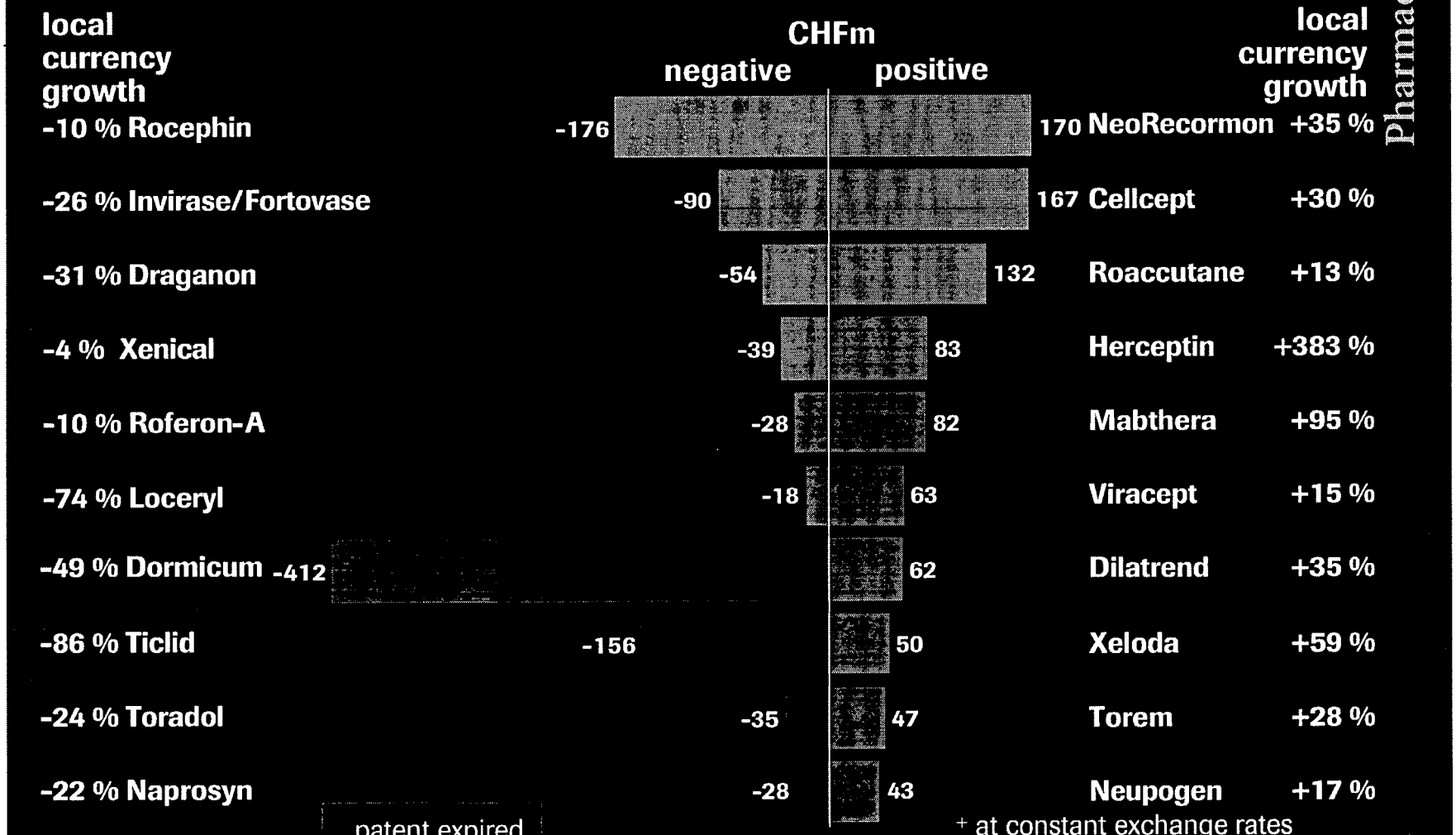
all growth rates in local currencies

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Roche Rx sales deviations 2000+

Roche

Pharmaceuticals



+ at constant exchange rates

06/01

Roche Rx & Genentech sales 2000

Eight products with sales >CHF 500m

Roche

Pharmaceuticals

Rocephin	1,710	-3 %	-10 %
Roaccutane/Accutane	1,280	23 %	13 %
Xenical	950	1 %	-4 %
Mabthera/Rituxan	900	84 %	68 %
CellCept	790	40 %	30 %
NeoRecormon	650	34 %	35 %
Herceptin	540	77 %	61 %
Viracept	500	15 %	15 %
Dormicum/Versed	470	-45 %	-49 %
Nutropin/Protropin	390	16 %	4 %
Furtulon	340	23 %	4 %
Activase	330	-16 %	-25 %
Neupogen	300	19 %	17 %
Pulmozyme	300	15 %	7 %
Lexotan	290	2 %	-2 %
Fortovase/Invirase	280	-20 %	-26 %
Rocaltrol	280	13 %	3 %
Roferon-A	260	-9 %	-10 %
Madopar	250	4 %	1 %
Dilatrend	240	36 %	35 %

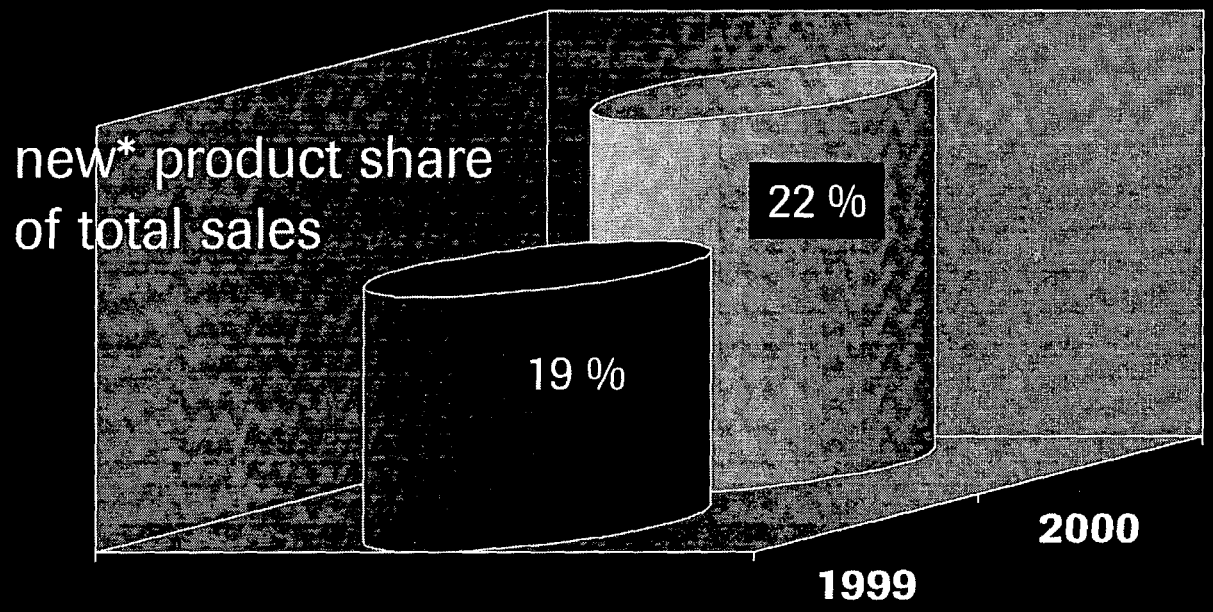
Roche Rx & Genentech sales 2000

Growing importance of new products*

Roche

Pharmaceuticals

Local currency growth of new* products +20 %



* launched between 1996 - 2000

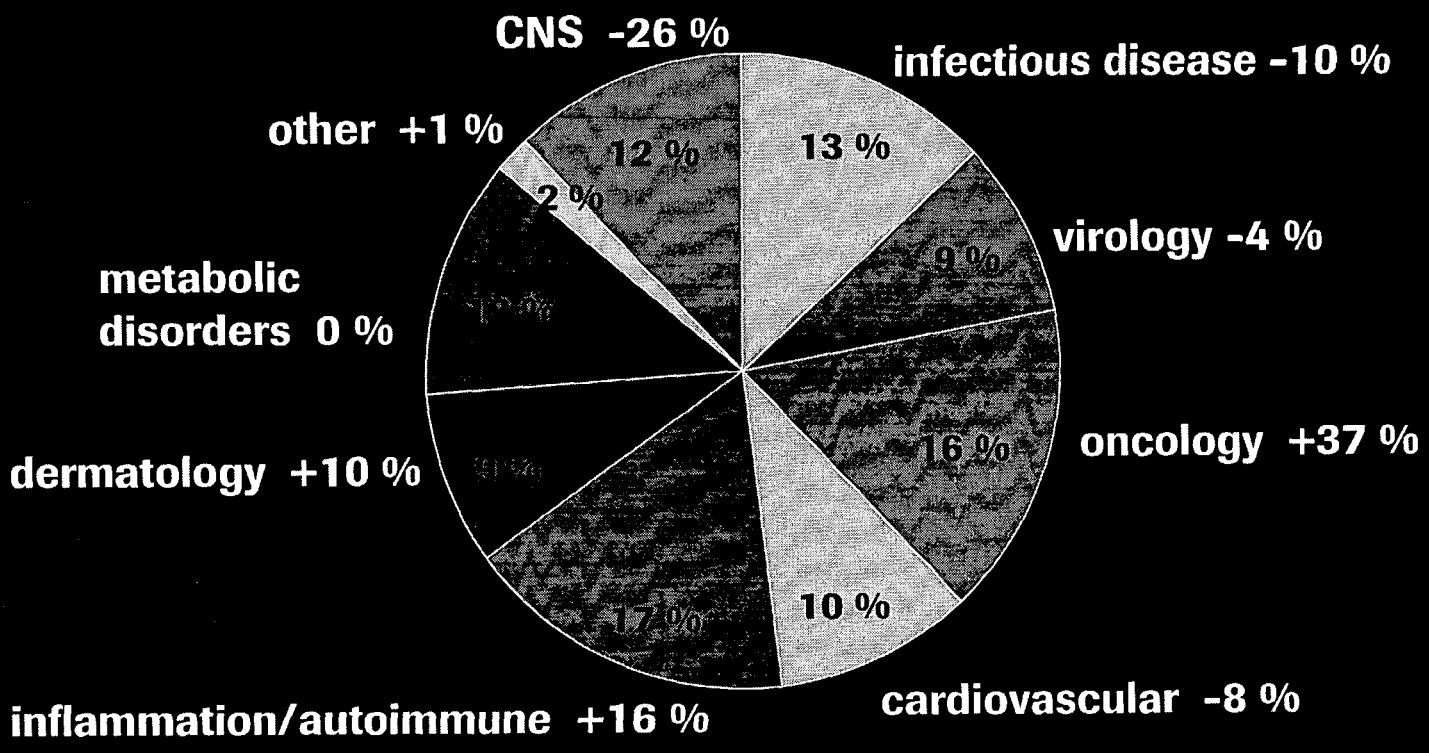
06/01

Roche Rx and Genentech 2000

Sales by therapy area

Roche

Pharmaceuticals



all growth figures are in local currencies

06/01

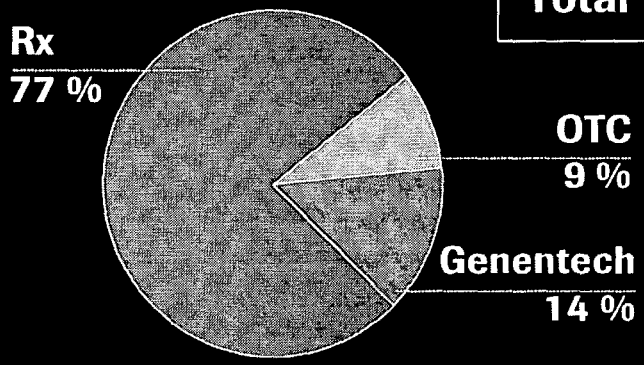
Pharmaceuticals Division

Sales Q1 2001

Roche

Pharmaceuticals

	Q1 2001 CHF m	Q1 2000 CHF m	growth in local currencies
Rx	3,453	3,717	-5 %
OTC	409	418	1 %
Genentech	626	428	43 %
Total	4,488	4,563	0 %



06/01

Roche Rx & Genentech

Sales Q1 2001

Roche

Pharmaceuticals

Rocephin	420	-25 %	-25 %
Roaccutane/Accutane	360	7 %	7 %
Mabthera/Rituxan	350	111 %	109 %
Xenical	240	-3 %	-1 %
CellCept	230	3 %	4 %
NeoRecormon	180	17 %	21 %
Herceptin	170	44 %	44 %
Kytril	130	n/a	n/a
Nutropin/Protropin	100	4 %	2 %
Viracept	80	-18 %	-15 %
Neupogen	80	8 %	10 %
Pulmozyme	80	11 %	11 %
Cymevene	70	22 %	21 %
Lexotan	70	-6 %	-3 %
Rocaltrol	60	-13 %	-11 %
Furtulon	60	-6 %	2 %
Dilatrend	60	18 %	24 %
Tamiflu	60	25 %	31 %
Roferon-A	60	-9 %	-5 %
Madopar	60	3 %	8 %

Roche oncology
Substantial progress in 2000

Roche

Pharmaceuticals

Herceptin®
Trastuzumab
anti-HER2 monoclonal antibody

- Roche sales of CHF 110m, 383 % growth
- EU launch for HER-2 overexpressing metastatic breast cancer

MABTHERA®
RITUXIMAB

- Roche sales of CHF 170m, 95 % growth
- MabThera + CHOP showed major survival improvement in int/high grade NHL: first improvement in therapy in 20 years

Xeloda®
(capecitabine)

- sales of CHF 150m, 59 % growth
- Xeloda and Taxotere in metastatic breast cancer → survival advantage over standard therapy in first/second line therapy
- approvable letter from FDA for first-line therapy in metastatic colorectal cancer; EU approval in Feb 2001

KYTRIL®
granisetron HCl
Tablets and Injection

- sales of CHF 490 (for SKB), -9 % growth
- successfully acquired from GSK

06/01

Roche oncology
Expectations for 2001

Roche

Pharmaceuticals

Herceptin®
Trastuzumab
anti-HER2 monoclonal antibody

- EU launch roll-out
- Japan NDA approval and launch
- expand market through increased HER-2 testing
- initiate adjuvant breast cancer study

MABTHERA®
RITUXIMAB

- EU filing and approval of combination therapy in int./high grade NHL
- phase 2 data in rheumatoid arthritis
- Japan launch with Zenyaku Kogyo

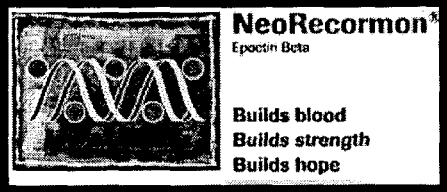
Xeloda®
(capecitabine)

- EU launch roll-out of first line therapy in metastatic colorectal cancer
- USA approval of first line therapy in metastatic colorectal cancer
- NDA filing and approval in EU and USA of combination therapy in first/second line therapy for metastatic breast cancer
- NDA filing in Japan for monotherapy as third line therapy in metastatic breast cancer
- complete recruitment for global adjuvant colorectal cancer study

Roche oncology
Expectations for 2001

Roche

Pharmaceuticals



- NDA approval in EU for haematological tumors (NHL, CLL, MM)



- NDA filing in EU and USA for treatment of bone metastases in breast cancer



- NDA filing in USA for post-operative nausea and vomiting (PONV)
- significantly increase marketing and development support

EGFR antagonist (OSI774)

- successfully in-license with Genentech from OSI
- implement full phase 3 programme

pegylated GCSF

- in phase 3 for neutropenia with Amgen
- Roche to partner in markets outside US and Japan

06/01

HIV/AIDS

Maintaining a substantial franchise .....

Roche

Pharmaceuticals

VIRACEPT

- sales of CHF 500m, 15 % growth in 2000
- leadership of protease inhibitor market maintained
- positive opinion on BID dosing expected H1 2001 in EU
- clinical data demonstrates that first-line use does not compromise future treatment options

FORTOVASE

- sales of CHF 170m, -5 % growth in 2000
- DHHS (USA) guidelines list Fortovase/ritonavir in "strongly recommended" 'A' category (Feb 2001)
- high-dose Fortovase and low-dose ritonavir shows strong clinical potential with opportunity to increase revenue
- Fortovase/ritonavir v. Crixivan/ritonavir
- Fortovase/ritonavir v. Sustiva

} data expected H2 2001

06/01

HIV/AIDS

..... and then growing it

Roche

Pharmaceuticals

- first agent clinically developed to act by stopping virus entering the human cell
- good safety profile demonstrated and anti-viral activity confirmed (phase 2 data)
- good activity demonstrated in drug-resistant viruses
- phase 3 studies now recruiting → study completion expected H1 2002

- highly potent antiviral activity demonstrated
- phase 2 to run through 2002

CellCept®

Building the next cornerstone of immunosuppressive therapy

Roche

Pharmaceuticals

- sales of CHF 790m, 30 % growth
- 'all organ' indication approved in Australia
- significantly superior for long-term survival compared to azathioprine in renal transplantation
  ↳ long term follow-up study in > 66,000 patients[1]

- launch roll-out of liver transplant indication in USA and Europe
- launch roll-out of paediatric renal transplant indication in USA and Europe
- launch roll-out of renal rejection prevention indication in Japan
- data establishing CellCept as cornerstone of immunosuppressive regimens
- further demonstration of improved long term patient and graft survival

[1] Ojo et al, 'Transplantation', June 2000

06/01

XENICAL
orlistat
Lose Weight. Gain Life

Learning from the market place
A unique marketing challenge

Roche

Pharmaceuticals

- minority of doctors active in weight management
- more interested in long-term health risks than in today's "well-being"

- key demand drivers
- unrealistic expectations
- more interested in today's problems than tomorrow's health risks
- they need support

- important player in the system
- under-utilised

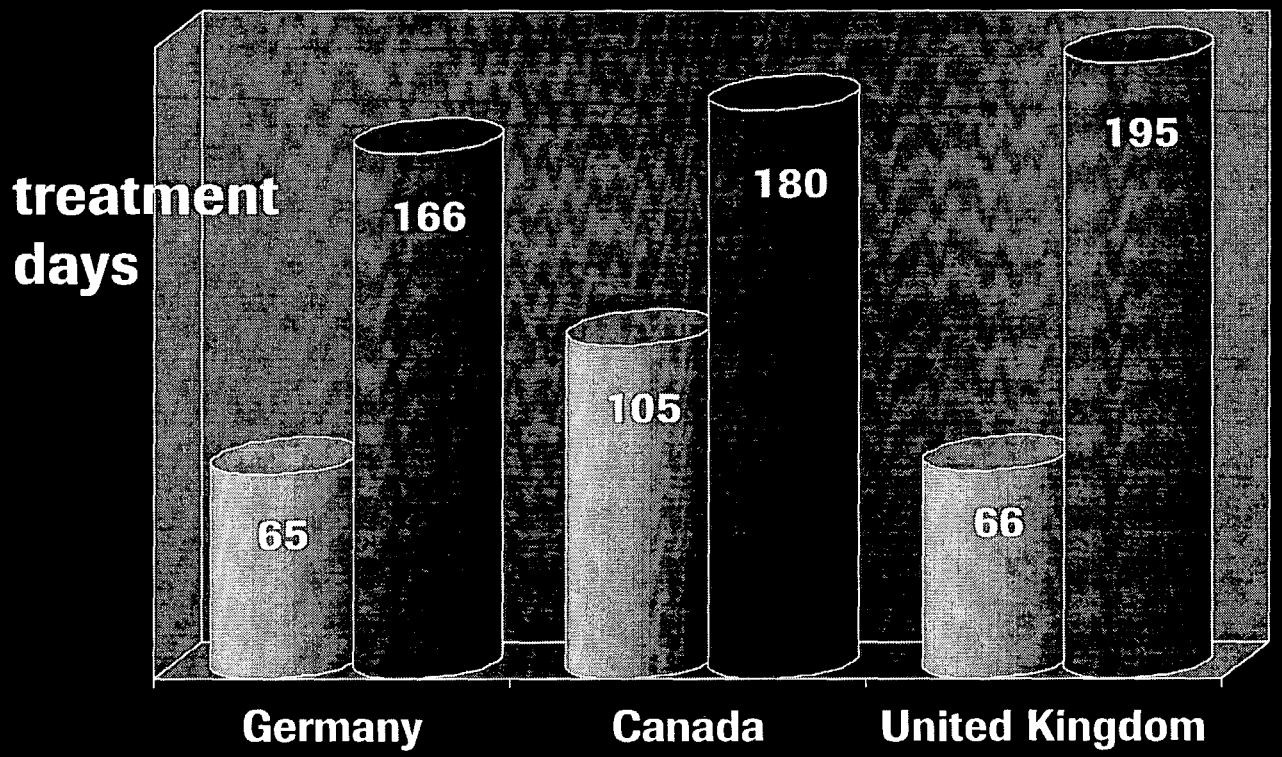
XENICAL®
orlistat
Lose Weight. Gain Life

Patients must be supported

Quality support increases duration of therapy, drug performance, and patient satisfaction

Roche

Pharmaceuticals



06/01

XENICAL®
orlistat
Lose Weight. Gain Life

In type 2 diabetes

Compelling new data to expand the market

Roche

Pharmaceuticals

- currently 140 million people worldwide (300 million by 2025)
- 4 out of 5 people with type 2 diabetes are overweight or obese
- most anti-diabetic medications cause weight gain
- weight loss and maintenance difficult to achieve by diet and exercise alone

- weight loss is 3-4 times greater that through diet alone
- significant improvements in blood sugar control (↓ fasting blood glucose, ↓ HBA_{1c})
- improved lipid (LDL cholesterol) profile
- reduction in anti-diabetic medication use

06/01

XENICAL®
orlistat
Lose Weight. Gain Life

Returning to growth

Roche

Pharmaceuticals

- focus activities on target doctors
- increase duration of therapy
- communicate new data in type 2 diabetes

06/01

Research and clinical milestones in 2000

Roche

Pharmaceuticals

- DeCode identifies genetic basis of osteoporosis, PAOD, schizophrenia, stroke, Alzheimer's
- Xenical-assisted weight loss 3-4 times greater than diet alone
- 'Copernicus' study stopped early as interim analysis shows significant survival benefit for carvedilol-treated patients
- Tamiflu, if taken within first 12 hours of symptoms, halves illness duration
- Pegasys offers promise of substantial improvement in therapy over standard interferon
- Mabthera + CHOP as first-line therapy in int./high-grade NHL delivers the first improvement in overall survival in 20 years
- Xeloda + Taxotere becomes the first combination therapy to show significantly superior survival rates compared to standard monotherapy in patients with metastatic breast cancer

Integrated Health Care Solutions

Diagnostics influencing the use of therapeutics

Roche

Pharmaceuticals

- flu surveillance for
- enzyme marker test for
- early response prediction for
- EU label for requires HER2 status diagnosis
- pre-clinical IHC managers now developing IHCS concepts at every Pharma research site

06/01

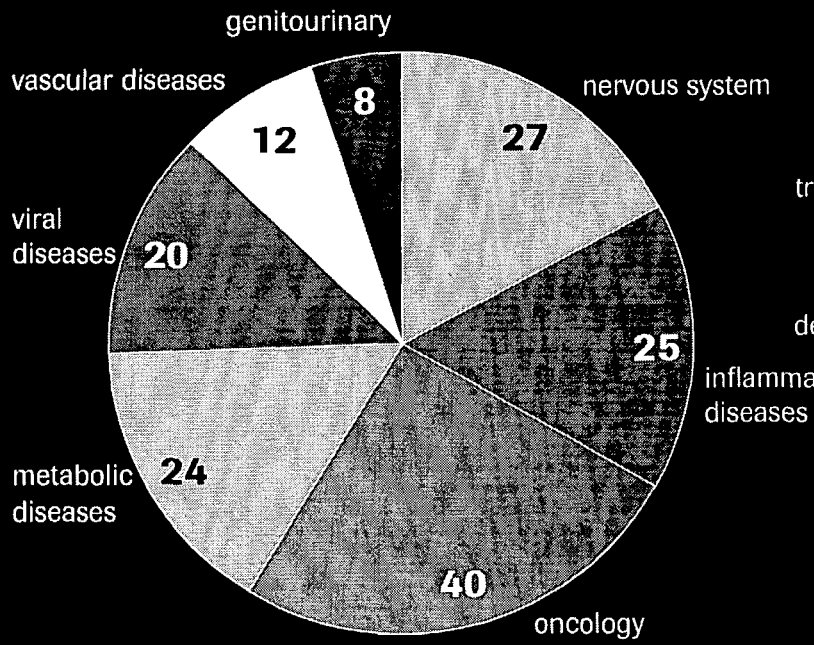
Roche Research & Development Pipeline

A strong foundation

Roche

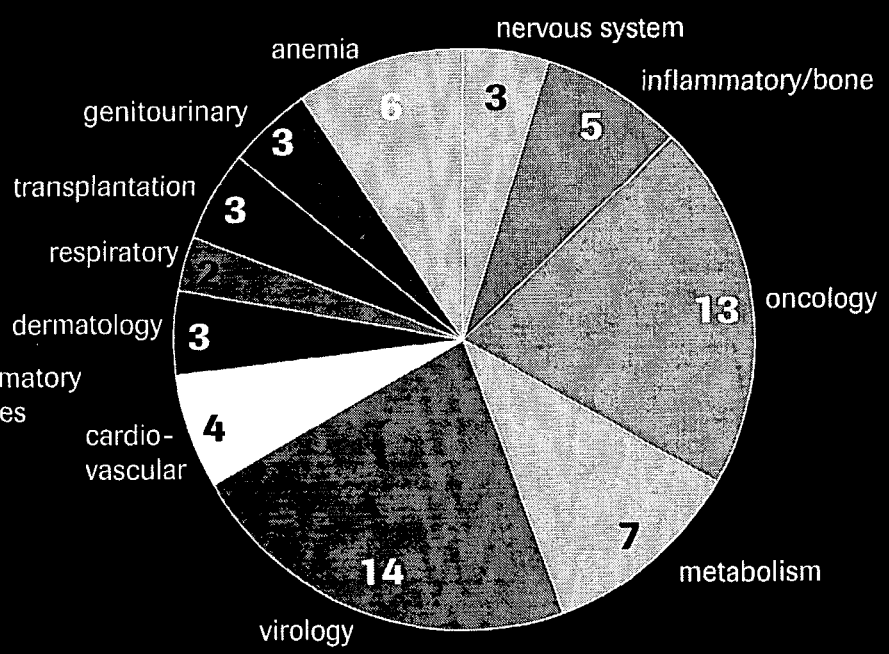
Pharmaceuticals

Research



156 projects

Development



63 projects with 40 different molecular entities

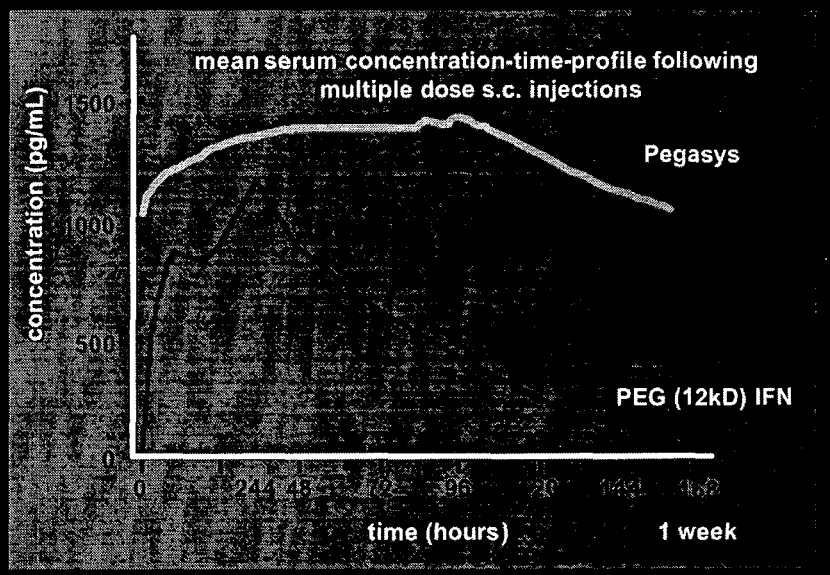
06/01

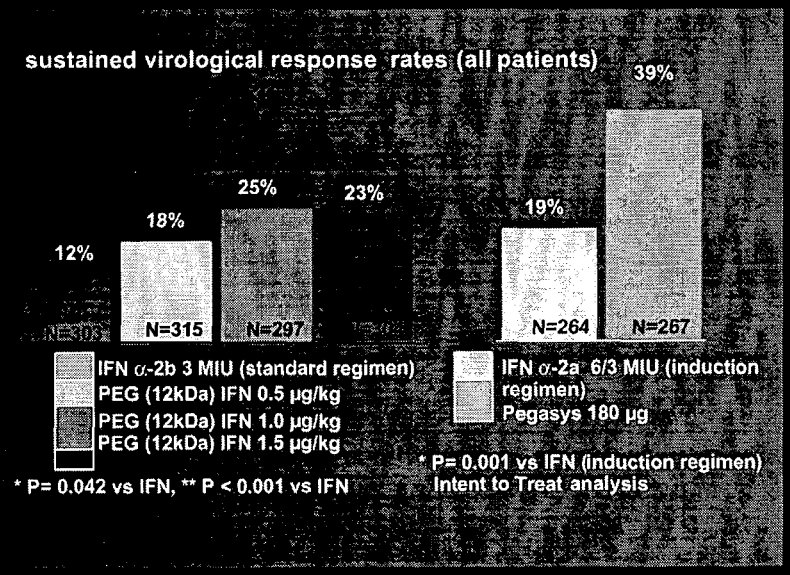
PEGASYS

Superior kinetics suggest superior efficacy

Roche

Pharmaceuticals





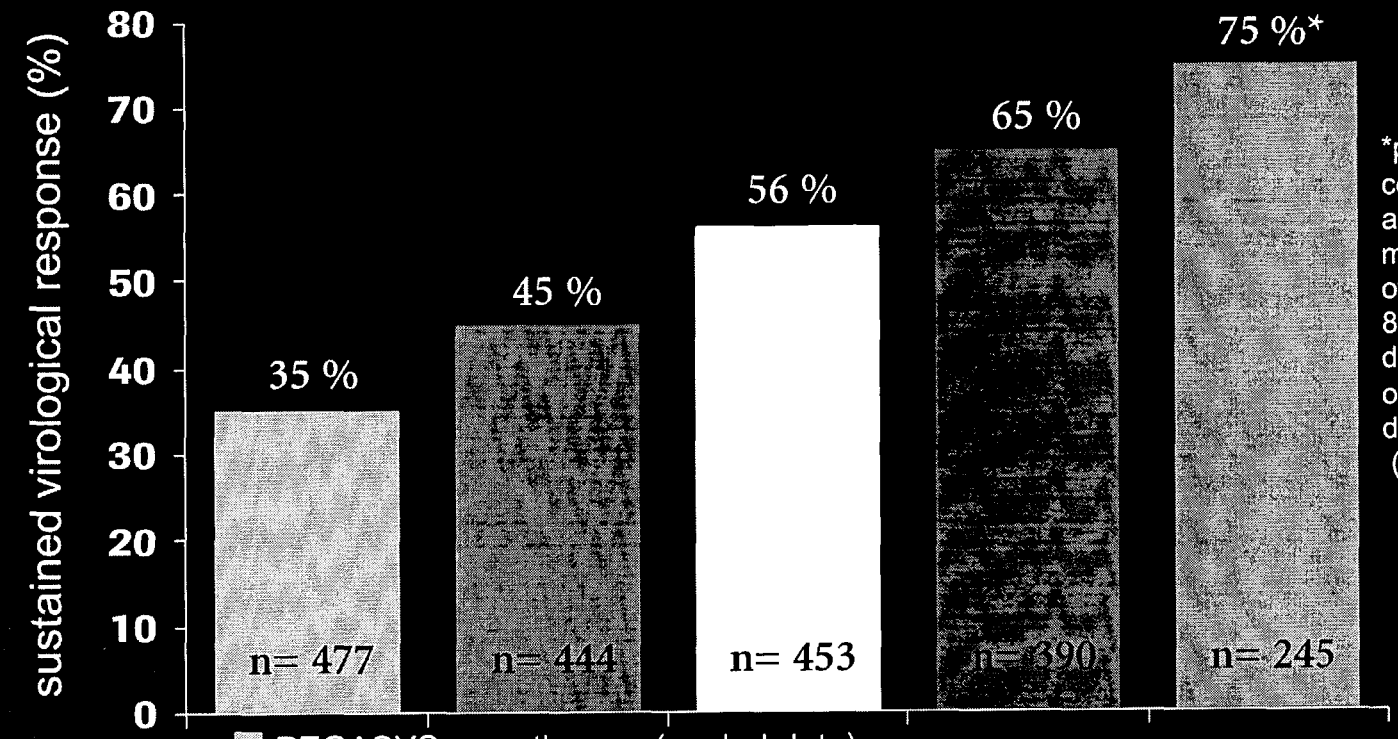
06/01

Pegasys and ribavirin combination[1].

Highest response rates ever in chronic hepatitis C

Roche

Pharmaceuticals



*patients are considered adherent if administering 80 % of Pegasys and 80 % of ribavirin doses for 80 % of treatment duration ("80/80/80")

- PEGASYS monotherapy (pooled data)
- Intron-A + ribavirin ('Rebetron') : all patients
- PEGASYS + ribavirin : all patients
- PEGASYS + ribavirin : all patients with early response (12 weeks)
- PEGASYS + ribavirin : all patients with early response and adherent* (80/80/80)

[1] phase 3 data presented at Digestive Disease Week, 22 May 2001

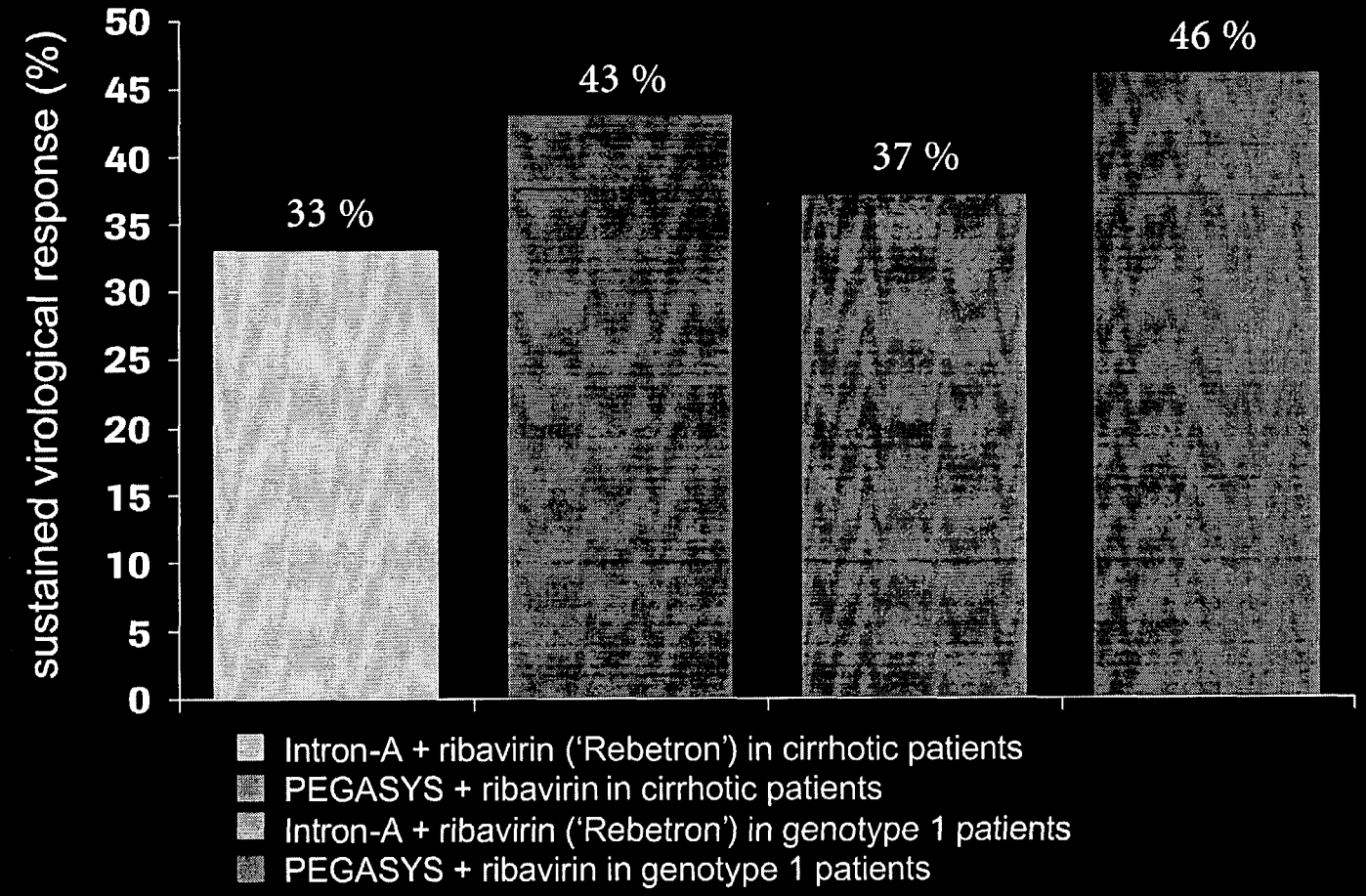
06/01

Pegasys and ribavirin combination[1].

Highest response rates ever in 'difficult to treat' patients

Roche

Pharmaceuticals



[1]. phase 3 data presented at Digestive Disease Week, 22 May 2001

06/01

Pegasys and ribavirin combination[1.]

Improved safety and convenience over standard therapy

Roche

Pharmaceuticals

10 % less flu-like symptoms than 'Rebetron'
10 % less depression than 'Rebetron'
40 % less injection site reactions than 'Rebetron'

ready to use vial/syringe
no dose adjustment

[1.] phase 3 data presented at Digestive Disease Week, 22 May 2001

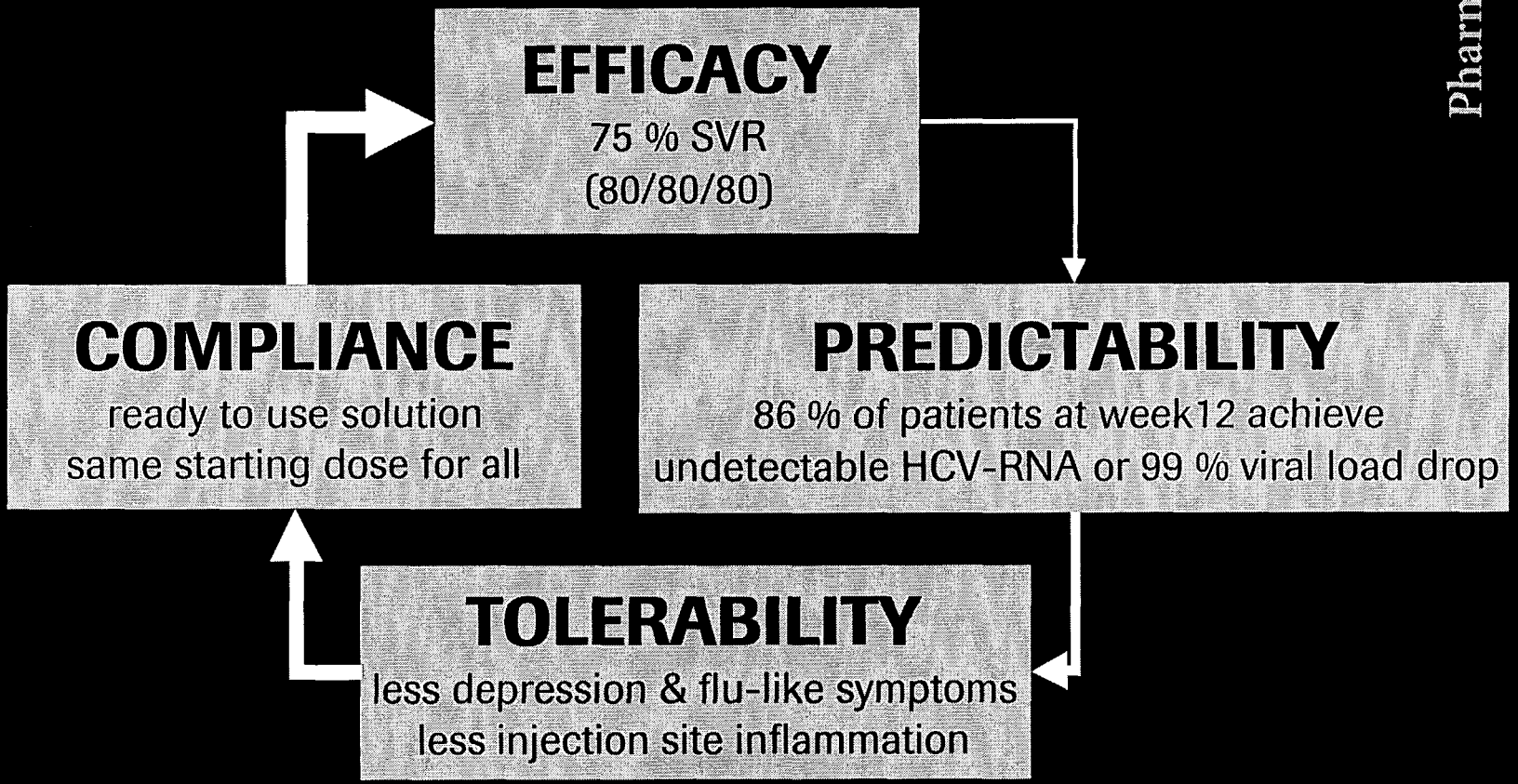
06/01

Pegasys and ribavirin combination[1].

A success cycle

Roche

Pharmaceuticals



[1]. Pegasys + ribavirin combination data (phase 3) in chronic hepatitis C presented at Digestive Disease Week, 22 May 2001

06/01

Ibandronate

Strong evidence from new osteoporosis data

Roche

Pharmaceuticals

- major phase 3 treatment trial recently completed: promising results with both daily and intermittent oral regimens
- high potency of ibandronate and new data provides foundation for development of innovative oral and intravenous intermittent regimens
- regulatory strategy and complementary programmes currently being evaluated

NDA filings

A strong near-term flow

Roche

Pharmaceuticals

carvedilol	severe CHF (EU)	
ibandronate		bone metastases in breast cancer (EU, USA)
ibandronate		osteoporosis treatment and prevention (EU, USA)
MabThera	int./high grade NHL (EU)	
NeoRecormon	once weekly dose (EU)	
Pegasys	chronic hepatitis C (EU)	chronic hepatitis C in combination with ribavirin (USA)
Tamiflu	influenza treatment and prevention (EU)	treatment of paediatric influenza (J)
Viracept	bd dosing in HIV/AIDS (EU)	
Xeloda	combination therapy in breast cancer (EU, USA) metastatic breast cancer (J)	
Xenical	type II diabetes* (USA)	

* precise claims to be defined with regulatory authorities

Launch roll-out

A strong near-term flow

Roche

Pharmaceuticals

CellCept	kidney transplant rejection in children (EU) treatment/prevention acute liver transplant rejection (EU)	kidney transplant rejection in children (USA)
Dilatrend		severe CHF (EU, USA)
Herceptin	metastatic breast cancer (EU)	metastatic breast cancer (Japan)
MabThera	low-grade NHL (Japan)	int./high-grade NHL (Japan)
NeoRecormon	hematological tumors (EU)	once weekly dosing (EU)
Pegasys		chronic hepatitis C (USA)

Launch roll-out

A strong near-term flow

Roche

Pharmaceuticals

Tamiflu	influenza prevention (USA) pediatric influenza (USA) influenza treatment (Japan)	
Valcyte	CMV retinitis treatment (USA)	
Viracept	BD dosage (EU)	
Xeloda	metastatic colorectal cancer (EU, USA)	combination therapy in breast cancer (EU, USA)
Xenical		type II diabetes* (USA)

* precise claims to be defined with regulatory authorities

06/01

Launch schedule 2002 - 2005

Nine NME's in four years

Roche

Pharmaceuticals

2002	2003	2004	2005
ibandronate *treat/prevention of osteoporosis*	NeoRecormon *radiotherapy-induced anemia*	Pegasys *chronic hepatitis B*	next generation EPO *anemia*
MabThera *int/high-grade NHL*	ibandronate *bone metastases in breast cancer*		insulin sensitiser *type 2 diabetes*
Pegasys + ribavirin *chronic hepatitis C*	T-20 *HIV/AIDS*		Pegasys *various malignancies*
Tamiflu *treat/prevent influenza (EU)*	Xenical *prevention of type 2 diabetes*		alpha 1 agonist *stress incontinence*
Valcyte *treatment CMV retinitis*			T-1249 *HIV/AIDS*
			CellCycle inhibitor *solid tumors*
			EGFR (OSI-774) *non-small cell lung cancer*

06/01

Clinical news expected in 2001

Roche

Pharmaceuticals

March
- Herceptin + chemotherapy survival data in NEJM
- Copernicus study (carvedilol) in severe CHF at ACC

May
- pegylated interferon + ribavirin in chronic hepatitis C at DDW

July
- Fortovase + ritonavir once daily v. Sustiva at IAS

September
- Family Intervention Trial (Tamiflu) at ICAAC

December
- Mabthera/Rituxan as first line therapy in low-grade NHL at ASH
- oral ibandronate in bone metastases in cancer

Pharmaceuticals Division

Summary

Roche

Pharmaceuticals

2000 - Rx suffered from patent expiry and flattening Xenical sales

- Genentech continued strongly
- margins maintained

2001 - return Xenical to growth

- build oncology, HIV/AIDS and transplantation franchises
- launch Pegasys
- seek strategic moves which fit (eg Kytril, OSI 774)

Roche

Pharmaceuticals

Roche and Genentech Pharmaceutical Development Pipeline

Major projects in phase 2 and 3 of clinical development

June 2001

04/01

Oncology pipeline

Roche

Pharmaceuticals

cell cycle inhibitor (R)	---	solid tumors	2
pegylated interferon (R)	Pegasys	solid & haematological tumors	2
oral ibandronate (R)	Bondronat	bone metastases in breast cancer	3
anti-VEGF (G)	---	solid tumors	3
erythropoietin (R)	NeoRecormon	anemia in haematological tumors	NDA approved (EU)
trastuzumab (R/G)	Herceptin	adjuvant breast cancer	3
trastuzumab (R/G)	Herceptin	various solid tumors	2
rituximab (R/G)	Mabthera	int/high-grade NHL	3
capecitabine (R)	Xeloda/Taxotere	metastatic breast cancer	NDA filed
EGFR inhibitor (R/G)	Tarceva	solid tumors	2

(R) = Roche (G) = Genentech

06/01

Virology pipeline

Roche

Pharmaceuticals

HIV fusion inhibitor T-20 (R)	---	HIV/AIDS	3
nelfinavir 625mg BID (R)	Viracept	HIV/AIDS	NDA filed
valganciclovir (R)	Valcyte	CMV prevention in transplants	3
valganciclovir (R)	Valcyte	CMV treatment in AIDS	NDA approved (USA)
pegylated interferon (R)	Pegasys	chronic hepatitis B	3
pegylated interferon (R)	Pegasys	chronic hepatitis C	NDA filed
pegylated interferon (R) with ribavirin	Pegasys	chronic hepatitis C	3
oseltamivir (R)	Tamiflu	treatment and prevention of influenza	NDA filed (EU)

(R) = Roche

06/01

Metabolism and cardiovascular pipeline

Roche

Pharmaceuticals

insulin sensitizer (R)	---	diabetes type II	2*
orlistat (R)	Xenical	diabetes type II (treatment)	NDA filed (USA)
orlistat (R)	Xenical	diabetes type II (prevention)	3
orlistat (R)	Xenical	paediatric indication	3
carvedilol (R)	Dilatrend	severe chronic heart failure	3
alteplase (G)	Activase	IV catheter clearance	NDA filed
tezosentan (G)	Veletri	acute heart failure	3
TNKase+IIb/IIIa (G)	---	acute myocardial infarction	2
bosentan (G)	Tracleer	chronic heart failure	NDA filed
TPO (G)	---	thrombocytopenia	3

* in preparation (R) = Roche (G) = Genentech

06/01

Other therapy area pipeline

Roche

Pharmaceuticals

rituximab (R)	MabThera	rheumatoid arthritis	2
LDP-02 antibody (G)	---	inflammatory bowel disease	2
oral ibandronate (R)	---	prevention of osteoporsis	3
oral ibandronate (R)	---	treatment of osteoporosis	3
anti-CD11a antibody (G)	Xanelim	moderate/severe psoriasis	3
alpha 1 agonist (R)	---	stress incontinence	2
INS 365 (G)	---	chronic bronchitis	2
anti-IGE antibody (G)	Xolair	allergic asthma; rhinitis	NDA filed
E26 (G)	---	asthma; allergy	2*

(R) = Roche (G) = Genentech * in preparation

06/01

Additional information

Roche

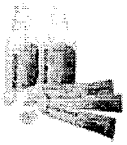
06/01

Roche Consumer Health

Major brand focus brings back growth

Roche

Pharmaceuticals

	2000 CHF m	growth in CHF	growth in loc. currency
 Aleve	200	52 %	37 %
 Supradyn	175	17 %	16 %
 Bepanthen	140	4 %	6 %
 Rennie	135	6 %	-2 %
 Redoxon	130	7 %	6 %

06/01

Rocephin® ceftriaxone

The world's leading injectable antibiotic

Roche

Pharmaceuticals

- Sales of CHF 1,710 m, -10 % growth
- Sales recover in H2 after weak H1
  - overstocked trade pipeline in USA
  - weak respiratory season
- outpatient parenteral antibiotic therapy (OPAT) strategy continued
  ↳ 20 % of US sales

- continue to support product capitalising on product strengths: favourable resistance profile, excellent safety and once daily use
- discourage overuse of new antibiotics → risk of early resistance
- patent expiry in USA 2005

06/01

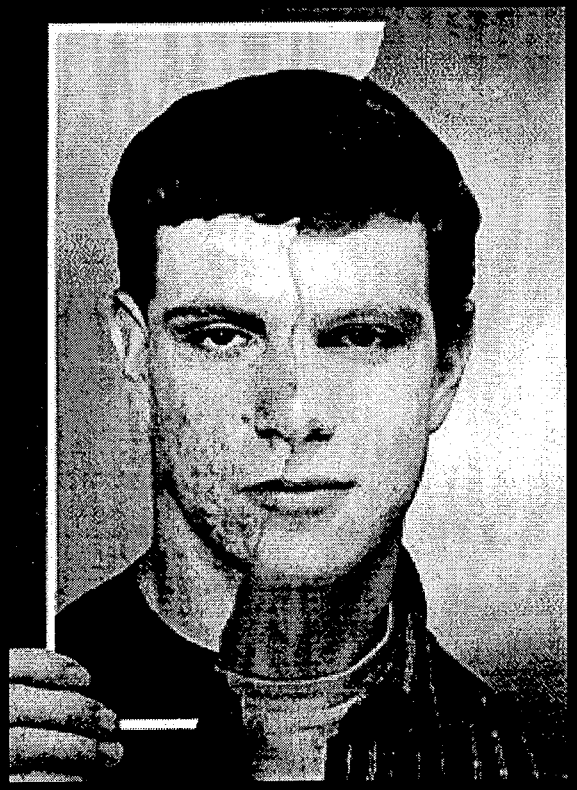
ROACCUTANE®

Roche

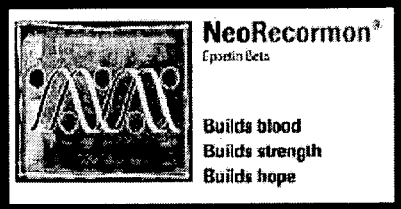
Pharmaceuticals

Uniquely effective treatment for severe acne

- strong sales performance
- accreditation of prescribers and patient registry
- patent expiry strategy in place



06/01



Building competitive position and new market potential

Roche

Pharmaceuticals

- sales of CHF 650m, 35 % growth
- launch of high-dose Reco-Pen for oncology: first EPO self-administration device
- launch of pre-filled syringe (6000 i.u.) with once-weekly dosing potential in renal anemia
- positive CPMP opinion in haematological tumor-associated anemia

- filing with CPMP (EU) of once-weekly dose in renal anemia
- launch of haematological tumor-associated anemia
- full development of needle-free injection system
- next generation EPO to phase 2



Roche

Pharmaceuticals

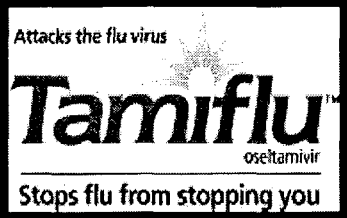
- sales of CHF 240m, 35 % growth
- COPERNICUS study in severe CHF[2] stopped due to significant survival benefit
- co-promotion rights in USA returned, and exclusive rights in Canada granted, to GSK

- registration and launch of severe CHF[2] indication

  ↳ broadest CHF[2] label of any drug in its class
- further potential in three major indications: hypertension, CAD[1], CHF[2]

[1] coronary artery disease [2] chronic heart failure

06/01



Roche

Pharmaceuticals

- 90 % prescription share of neurominidase inhibitors in USA in 2000-2001 season so far
- 30 countries have approval for treatment of influenza in adults
  - Japan approved and reimbursed
- prevention of influenza indication approved in USA
- paediatric formulation and indication approved in USA
- IMPACT study: Tamiflu taken within first 12 hours of symptoms halves illness duration

- NDA re-filing in EU for treatment and prevention indications Q1 2001
- get patients to the physician early
  - surveillance → quick physician alert
  - on/off DTC and PR → move patients to doctors
  - post-exposure prophylaxis → a short cut to early treatment

06/01

Integrated Health Care Solutions

Diagnostics influencing the use of therapeutics

- differentiated treatment according to disease subcategory
- efficacy enhancement and adverse events avoidance

- predisposition testing
- targeted surveillance
- prevention / earlier treatment

- therapy adjustment based on test results

Roche Holding Ltd

April 2001 - Roche Sale in Q1 2001

As Posted on Roche.com

Furnished Under Rule 12g3-2(b)
Roche Holding 82-3315


Roche
Roche Sales in Q1 2001

Group sales

January – March 2001

Sales January - March ①	2001 CHF m	2000 CHF m	percentage change in CHF	percentage change in local currencies ②
Pharmaceuticals	4,488	4,563	-2 %	0 %
Diagnostics	1,644	1,430	15 %	18 %
Vitamins and fine chemicals ③	888	855	4 %	4 %
Sales ③	7,020	6,848	3 %	4 %

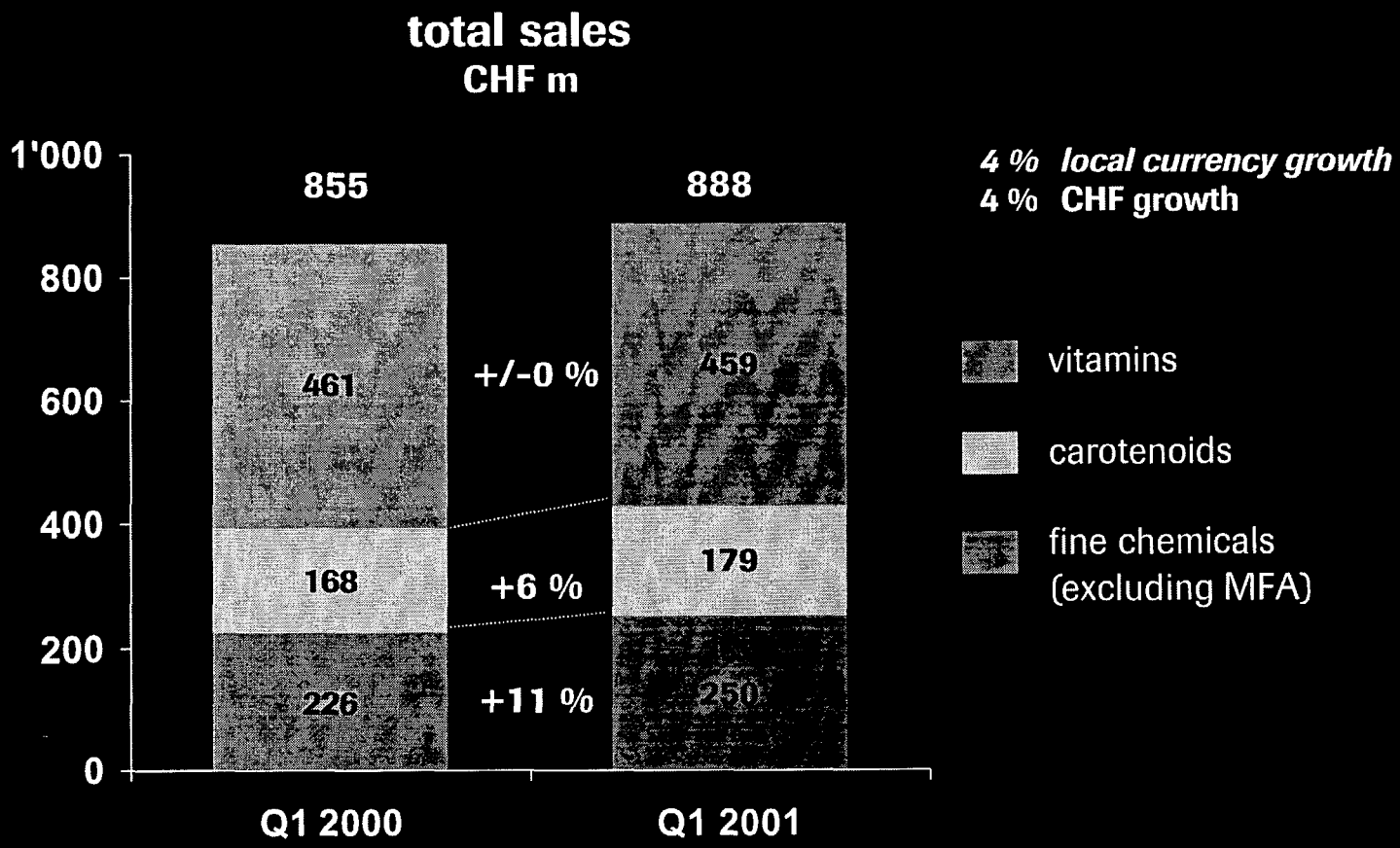
① adjusted sales

② effect of high-inflation currencies eliminated

③ the sales figure for 2000 excludes 3 months sales by the medicinal feed additives (MFA) business, divested in late April 2000. Including MFA sales for 2000, divisional sales declined 4% in local currencies and 5% in Swiss francs; on the same basis of comparison, Group sales rose 1% in Swiss francs and 3% in local currencies

Vitamins and Fine Chemicals Division

Sales Q1 2001

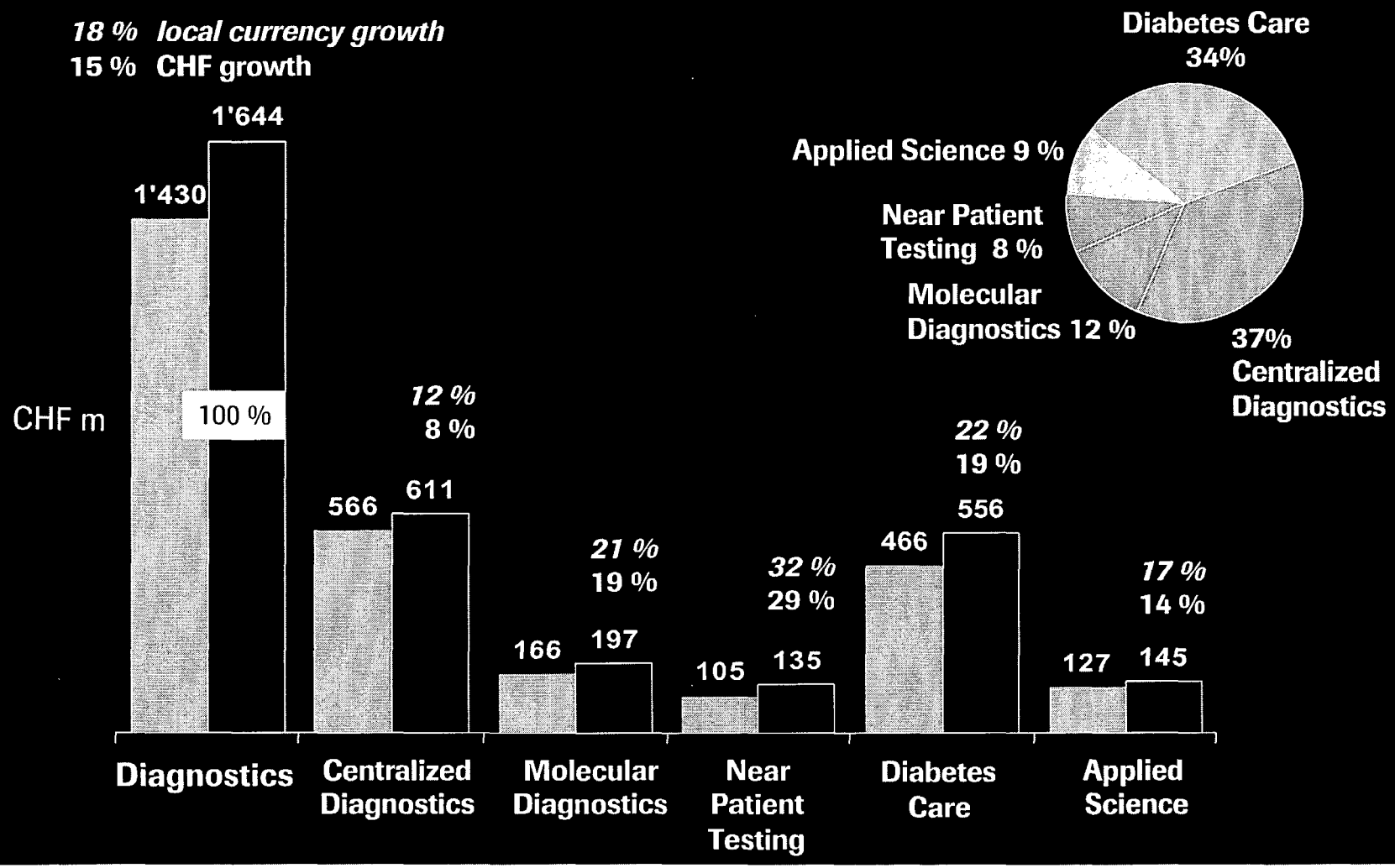


Diagnostics Division

Sales Q1 2001

Roche

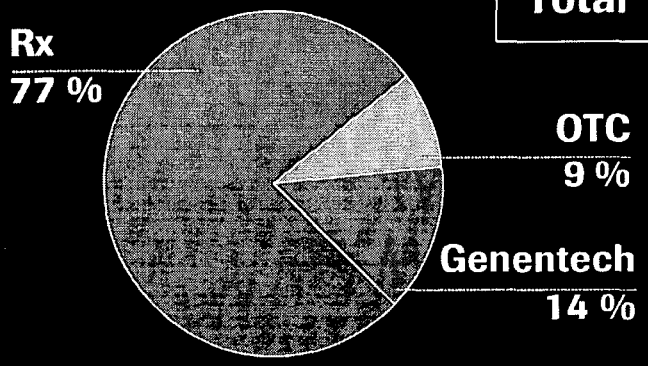
18 % ***local currency growth***
15 % CHF growth



Pharmaceuticals Division

Sales Q1 2001

	Q1 2001 CHF m	Q1 2000 CHF m	growth in local currencies
Rx	3,453	3,717	-5 %
OTC	409	418	1 %
Genentech	626	428	43 %
Total	4,488	4,563	0 %



Roche Rx & Genentech

Sales Q1 2001

Rocephin	420	-25 %	-25 %
Roaccutane/Accutane	360	7 %	7 %
Mabthera/Rituxan	350	111 %	109 %
Xenical	240	-3 %	-1 %
CellCept	230	3 %	4 %
NeoRecormon	180	17 %	21 %
Herceptin	170	44 %	44 %
Kytril	130	n/a	n/a
Nutropin/Protropin	100	4 %	2 %
Viracept	80	-18 %	-15 %
Neupogen	80	8 %	10 %
Pulmozyme	80	11 %	11 %
Cymevene	70	22 %	21 %
Lexotan	70	-6 %	-3 %
Rocaltrol	60	-13 %	-11 %
Furtulon	60	-6 %	2 %
Dilatrend	60	18 %	24 %
Tamiflu	60	25 %	31 %
Roferon-A	60	-9 %	-5 %
Madopar	60	3 %	8 %

Roche Holding Ltd

April 2001 -
Roche and Genetech Pharmaceutical Development Pipeline

As Posted on Roche.com

Furnished Under Rule 12g3-2(b)
Roche Holding 82-3315

Roche and Genentech Pharmaceutical Development Pipeline

Major projects in phase 2 and 3 of clinical development

April 2001

04/01

Oncology pipeline

Roche

Pharmaceuticals

cell cycle inhibitor (R)	---	solid tumors	2
pegylated interferon (R)	Pegasys	solid & haematological tumors	2
oral ibandronate (R)	Bondronat	bone metastases in breast cancer	3
anti-VEGF (G)	---	solid tumors	3
erythropoietin (R)	NeoRecormon	anemia in haematological tumors	NDA approved (EU)
trastuzumab (R/G)	Herceptin	adjuvant breast cancer	3
trastuzumab (R/G)	Herceptin	various solid tumors	2
rituximab (R/G)	Mabthera	int/high-grade NHL	3
capecitabine (R)	Xeloda/Taxotere	metastatic breast cancer	NDA filed
EGFR inhibitor (R/G)	---	solid tumors	2

(R) = Roche (G) = Genentech

04/01

Virology pipeline

Roche

Pharmaceuticals

HIV fusion inhibitor T-20 (R)	---	HIV/AIDS	3
nelfinavir 625mg BID (R)	Viracept	HIV/AIDS	NDA filed
valganciclovir (R)	Valcyte	CMV prevention in transplants	3
valganciclovir (R)	Valcyte	CMV treatment in AIDS	NDA approved (USA)
pegylated interferon (R)	Pegasys	chronic hepatitis B	3
pegylated interferon (R)	Pegasys	chronic hepatitis C	NDA filed
pegylated interferon (R) with ribavirin	Pegasys	chronic hepatitis C	3
oseltamivir (R)	Tamiflu	treatment and prevention of influenza	NDA filed (EU)

(R) = Roche

04/01

Metabolism and cardiovascular pipeline

Roche

Pharmaceuticals

insulin sensitizer (R)	---	diabetes type II	2*
orlistat (R)	Xenical	diabetes type II (treatment)	NDA filed (USA)
orlistat (R)	Xenical	diabetes type II (prevention)	3
orlistat (R)	Xenical	paediatric indication	3
carvedilol (R)	Dilatrend	severe chronic heart failure	3
alteplase (G)	Activase	IV catheter clearance	NDA filed
tezosentan (G)	Veletri	acute heart failure	3
TNKase+IIb/IIIa (G)	---	acute myocardial infarction	2
bosentan (G)	Tracleer	chronic heart failure	NDA filed
TPO (G)	---	thrombocytopenia	3

* in preparation (R) = Roche (G) = Genentech

04/01

Other therapy area pipeline

Roche

Pharmaceuticals

rituximab (R)	MabThera	rheumatoid arthritis	2
LDP-02 antibody (G)	---	inflammatory bowel disease	2
oral ibandronate (R)	---	prevention of osteoporsis	3
oral ibandronate (R)	---	treatment of osteoporosis	3
anti-CD11a antibody (G)	Xanelim	moderate/severe psoriasis	3
isotretinoin (R) (new formulation)	Accutane	severe/nodular acne	NDA filed (USA)
alpha 1 agonist (R)	---	stress incontinence	2
INS 365 (G)	---	chronic bronchitis	2
anti-IGE antibody (G)	Xolair	allergic asthma; rhinitis	NDA filed
E26 (G)	---	asthma; allergy	2*

(R) = Roche (G) = Genentech * in preparation

04/01

Roche Holding Ltd

March 2001 - Annual Presentation to Investors

As Posted on Roche.com

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Roche Holding 82-3315



Annual Presentation to Investors

2001

3/01

Group Financial Results 2000

Anton Affentranger

Chief Financial Officer

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- Actual results
- Adjusted operating results
- Adjusted non-operating results
- Cash flow
- Balance sheet
- Summary

Key figures 2000
Record results

	2000 CHF m	1999 CHF m	change in CHF m	change in %
sales	28,672	27,567	+1,105	4
EBITDA	11,126	8,874	+2,252	25
% of sales	*38.8*	*32.2*		
operating profit	7,131	6,421	+710	11
% of sales	*24.9*	*23.3*		
net income	8,647	5,764	+2,883	50
% of sales	*30.2*	*20.9*		

Actual income statement 2000

Influenced by exceptionals ...

	2000		1999		change
	CHF m	% sales	CHF m	% sales	in %
sales	28,672	100.0	27,567	100.0	4
gross profit	19,509	68.0	18,693	67.8	4
M & D	-8,746	-30.5	-7,813	-28.3	12
R & D	-3,950	-13.8	-3,782	-13.7	4
administration	-1,242	-4.3	-1,174	-4.3	6
amortization	-1,474	-5.1	-1,207	-4.4	22
impairment	-1,147	-4.0	-	-	-
OOI(E)	232	0.8	14	0.1	>100
gain GNE shares	3,949	13.8	4,461	16.2	-11
vitamin case	-	-	-2,426	-8.8	-100
GNE legal settlem.	-	-	-345	-1.3	-100
operating profit	7,131	24.9	6,421	23.3	11

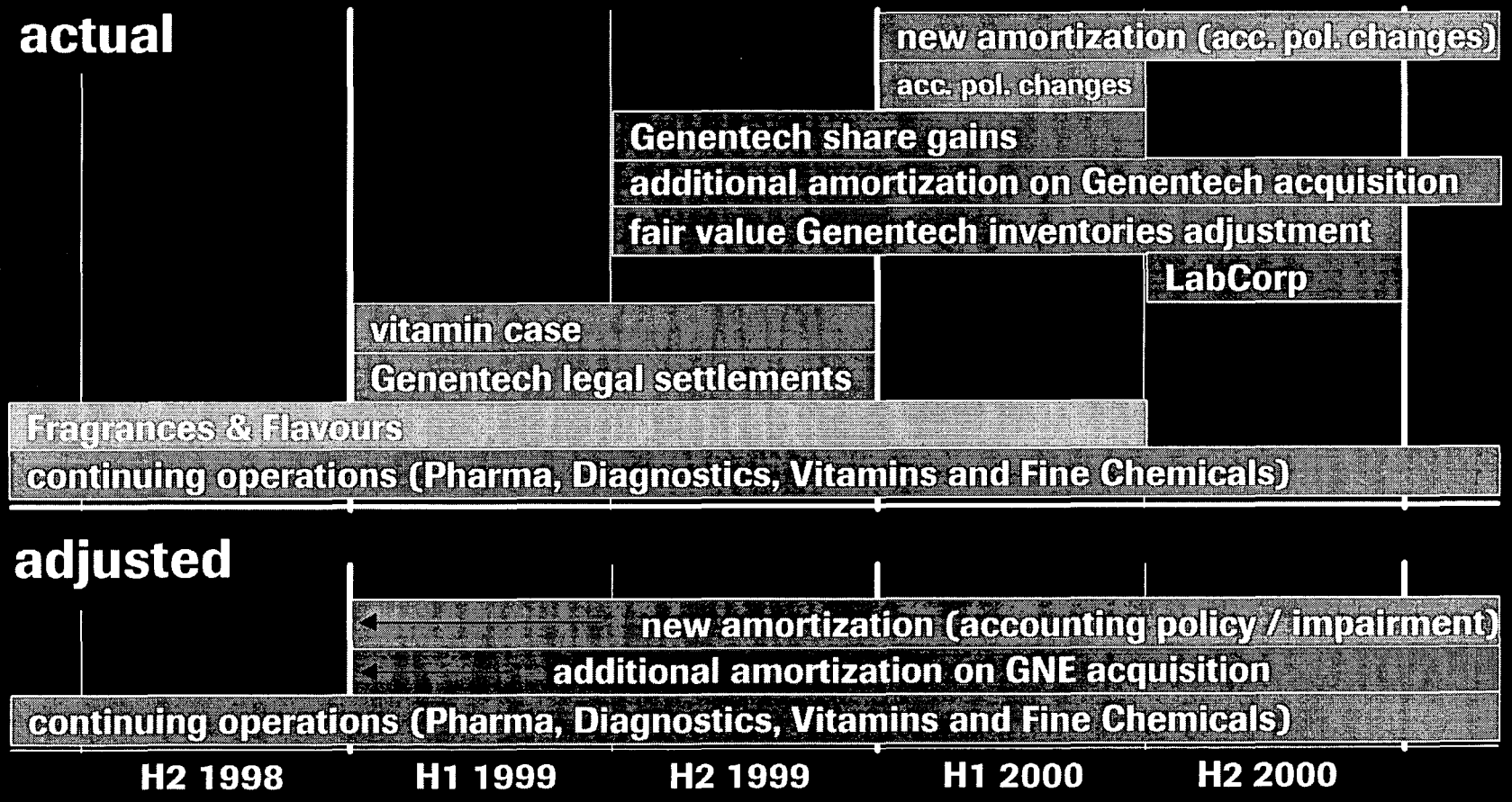
Actual income statement 2000

... and strong financial income

	2000		1999		change
	CHF m	% sales	CHF m	% sales	in %
operating profit	7,131	24.9	6,421	23.3	11
net financial income	2,337	8.1	1,134	4.1	106
result before taxes	9,468	33.0	7,555	27.4	25
income taxes	-2,272	-7.9	-1,902	-6.9	19
result after taxes	7,196	25.1	5,653	20.5	27
accounting policy	1,395	4.9	27	0.1	>100
minority interests	33	0.1	88	0.3	-63
assoc. companies	23	0.1	-4	-0.0	-
net income	8,647	30.2	5,764	20.9	50

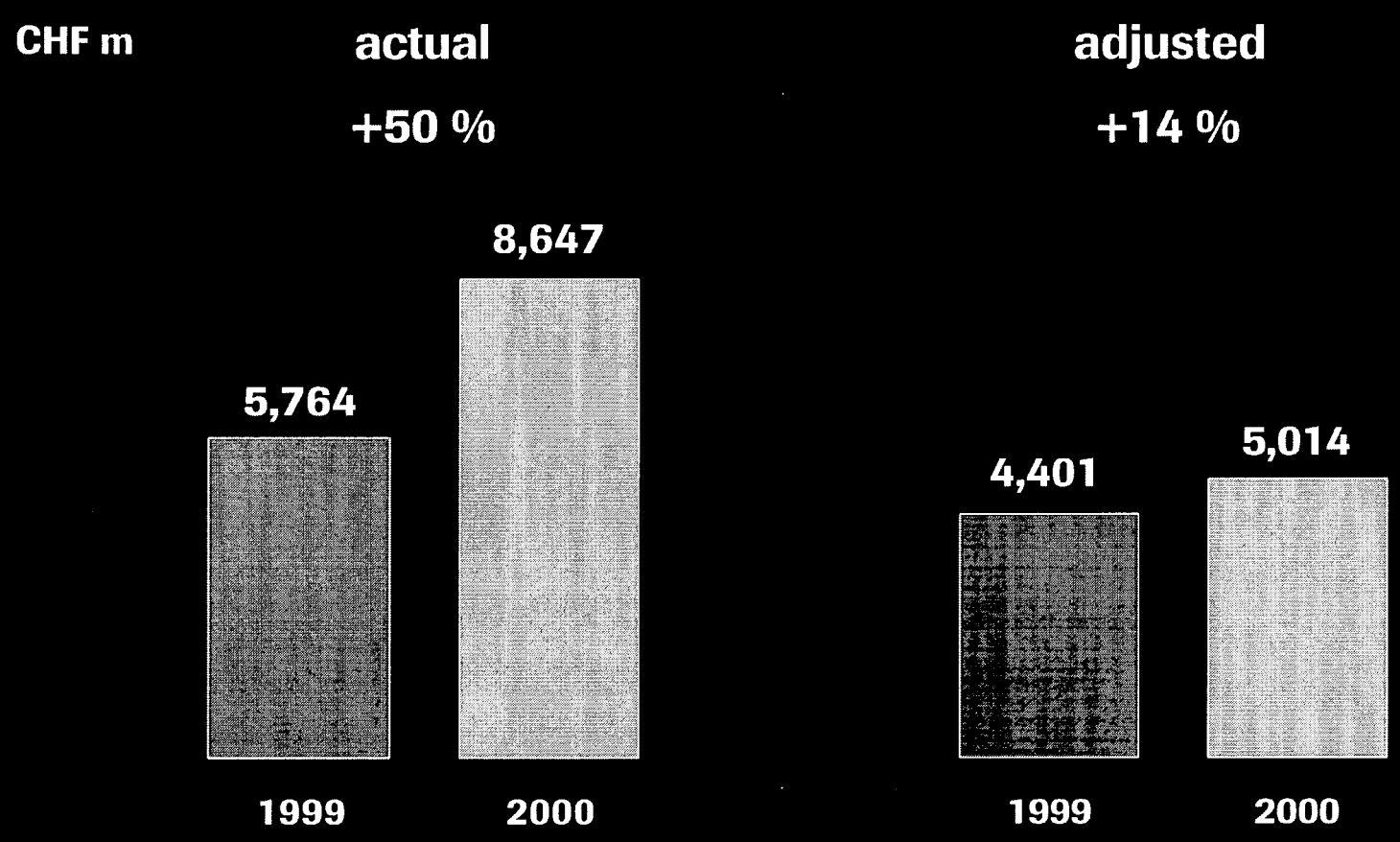
The adjusted result

Givaudan spin-off, special items and accounting policy changes



Net income 2000

Record results



Adjusted key figures 2000

Double-digit bottom line growth

	2000 CHF m	1999 CHF m	change in CHF m	change in %
sales	27,543	25,496	+2,047	8
EBITDA	7,068	6,647	+421	6
% of sales	*25.7*	*26.1*		
operating profit	4,301	4,094	+207	5
% of sales	*15.6*	*16.1*		
net income	5,014	4,401	+613	14
% of sales	*18.2*	*17.3*		

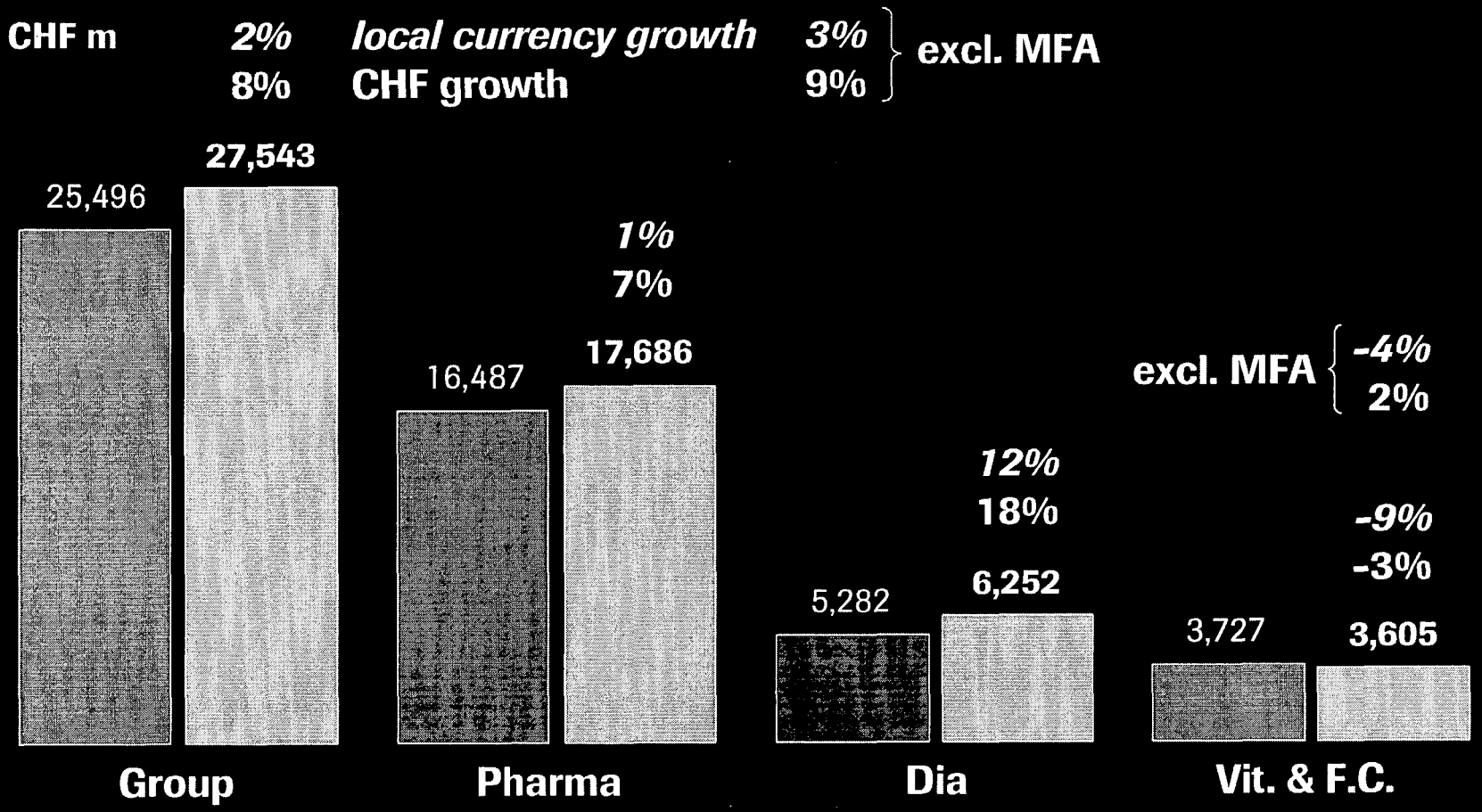
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Adjusted income statement 2000

Growth of 8% in sales, 5% in operating profit

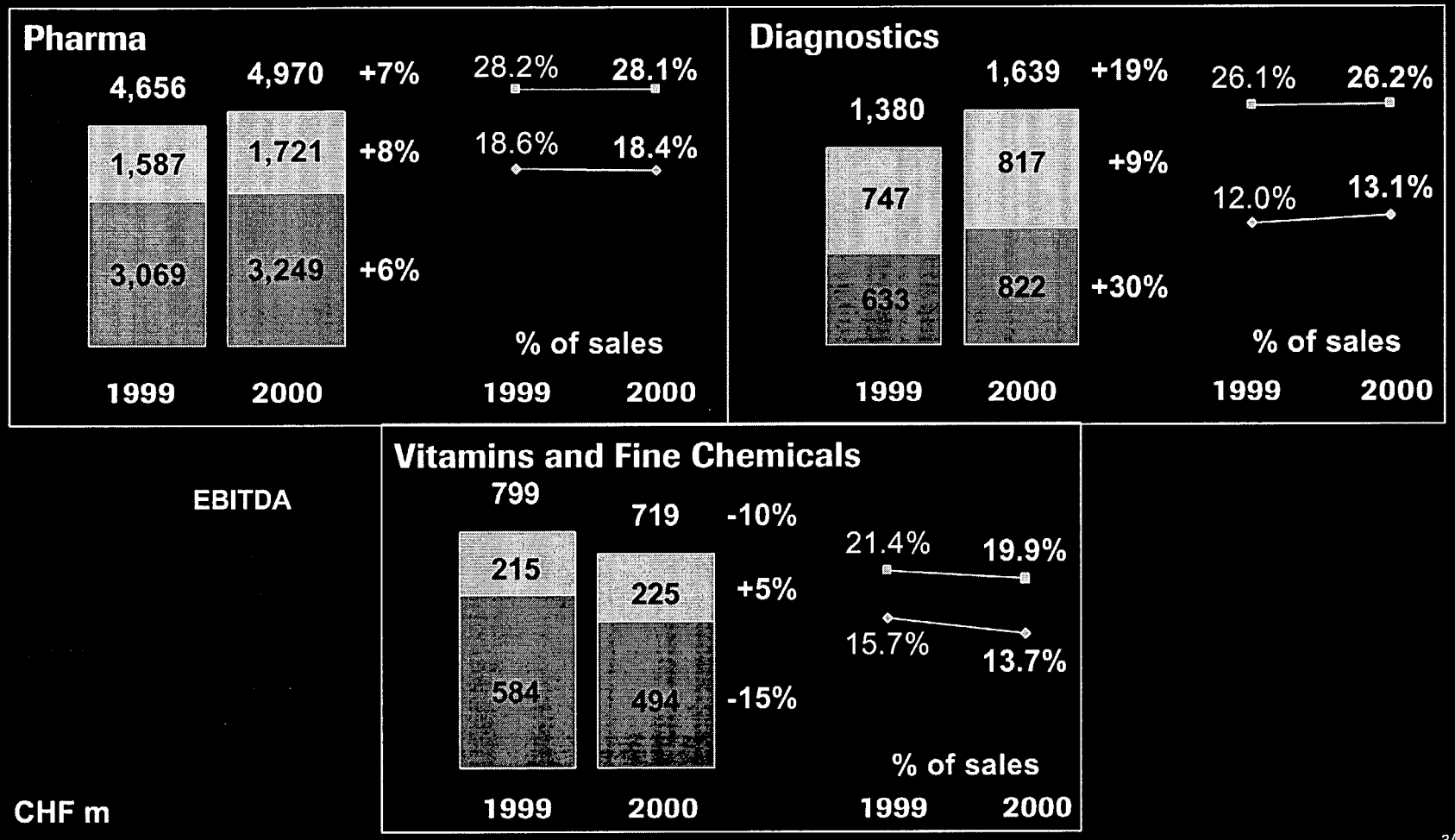
	2000		1999		change
	CHF m	% sales	CHF m	% sales	in %
sales	27,543	100.0	25,496	100.0	8
gross profit	19,098	69.3	17,683	69.4	8
M & D	-8,507	-30.9	-7,377	-28.9	15
R & D	-3,919	-14.2	-3,732	-14.6	5
administration	-1,201	-4.4	-1,103	-4.3	9
amortization	-1,439	-5.2	-1,371	-5.4	5
impairment	14	0.1	-	-	-
OOI(E)	255	0.9	-6	-0.1	-
operating profit	4,301	15.6	4,094	16.1	5

Divisional sales 2000 (adjusted)



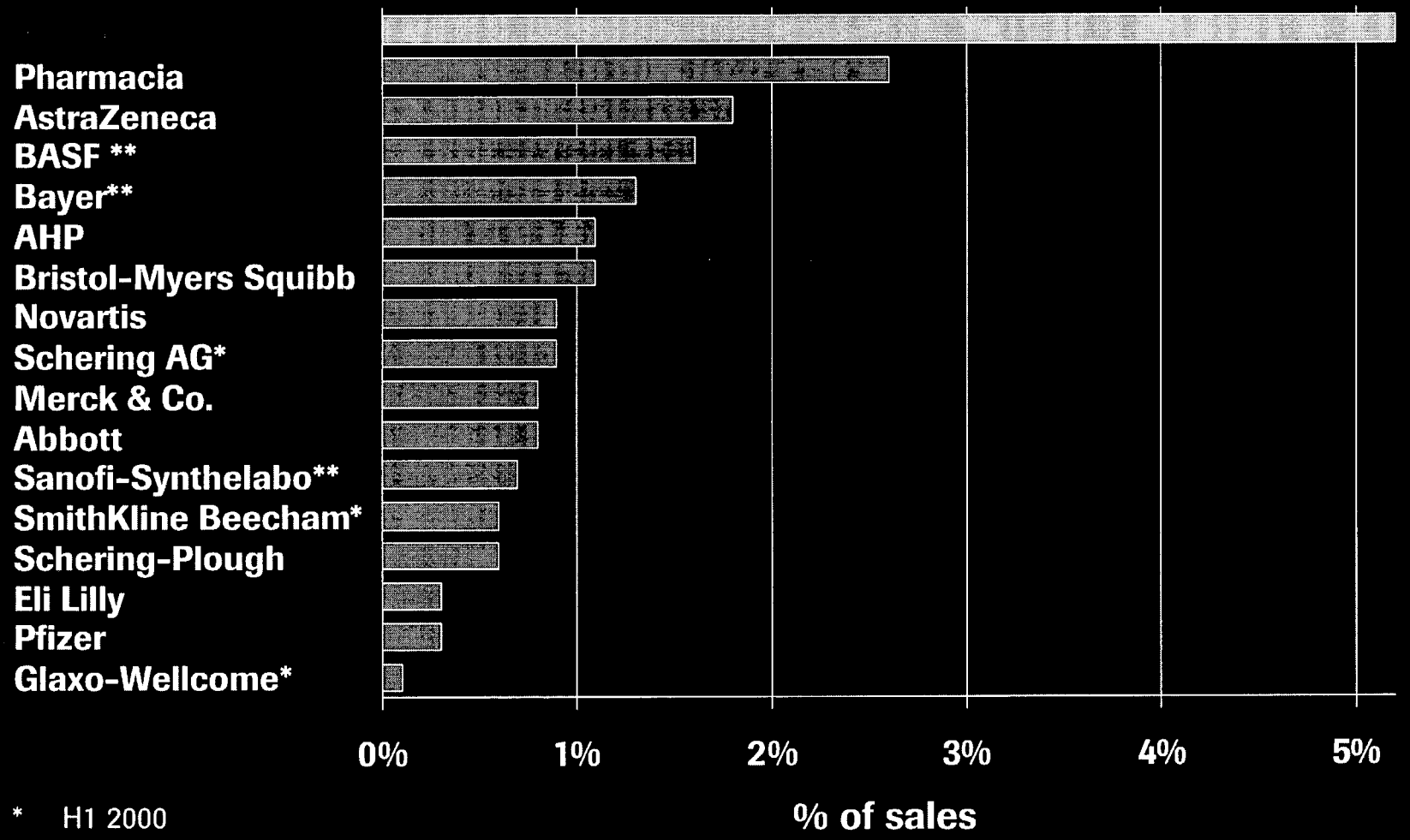
Divisional profitability 2000 (adjusted)

Stable Pharma margins, improving Diagnostics margins



Amortisation

A high charge from acquisition history & IAS policy



* H1 2000
** 1999

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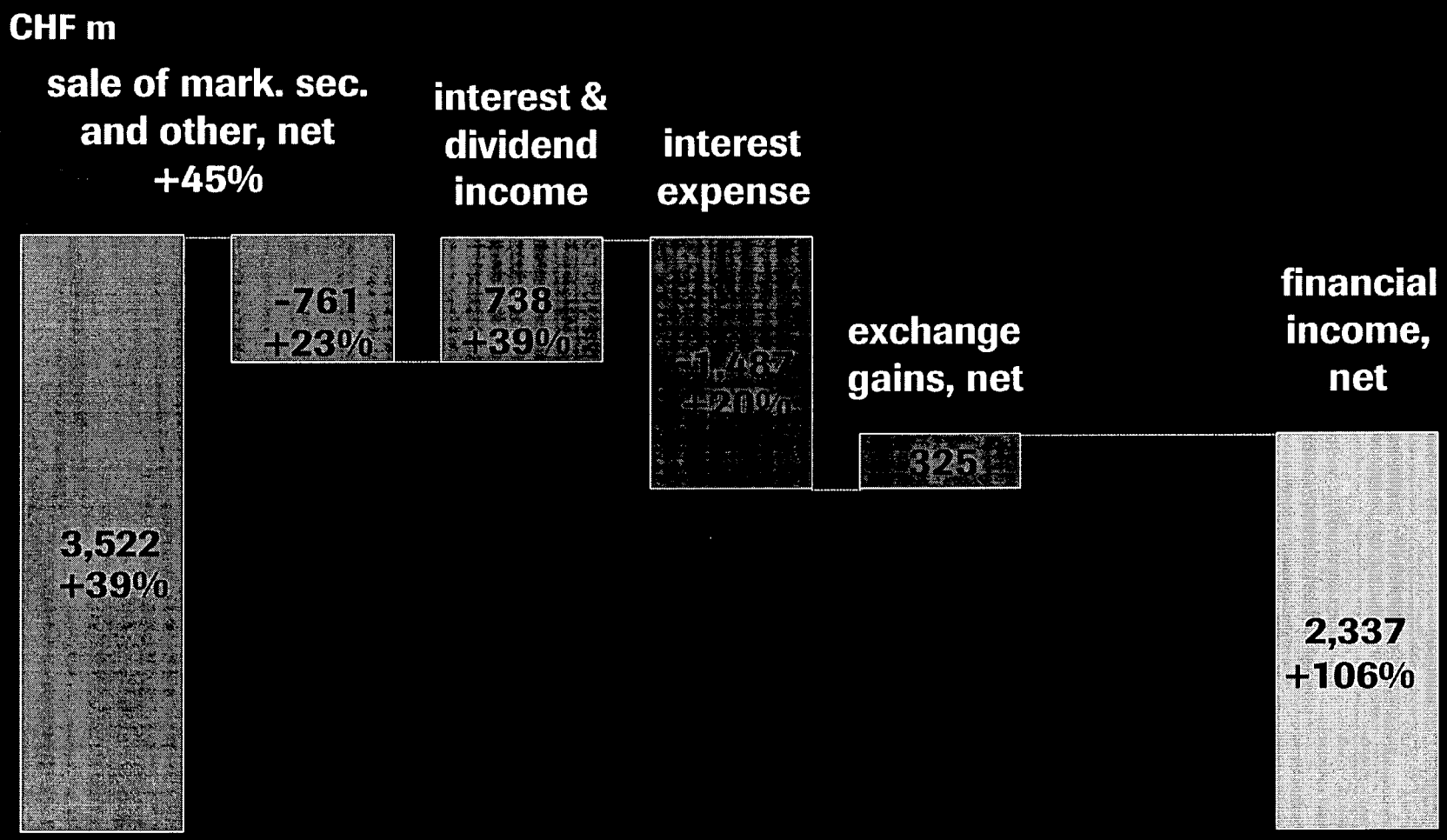
Adjusted income statement 2000

14% growth in net income

	2000		1999		change
	CHF m	% sales	CHF m	% sales	in %
operating profit	4,301	15.6	4,094	16.1	5
net financial income	1,723	6.3	1,242	4.8	39
result before taxes	6,024	21.9	5,336	20.9	13
income taxes	-1,026	-3.8	-992	-3.9	3
result after taxes	4,998	18.1	4,344	17.0	15
minority interests	-7	-0.0	61	0.3	-
assoc. companies	23	0.1	-4	-0.0	-
net income	5,014	18.2	4,401	17.3	14

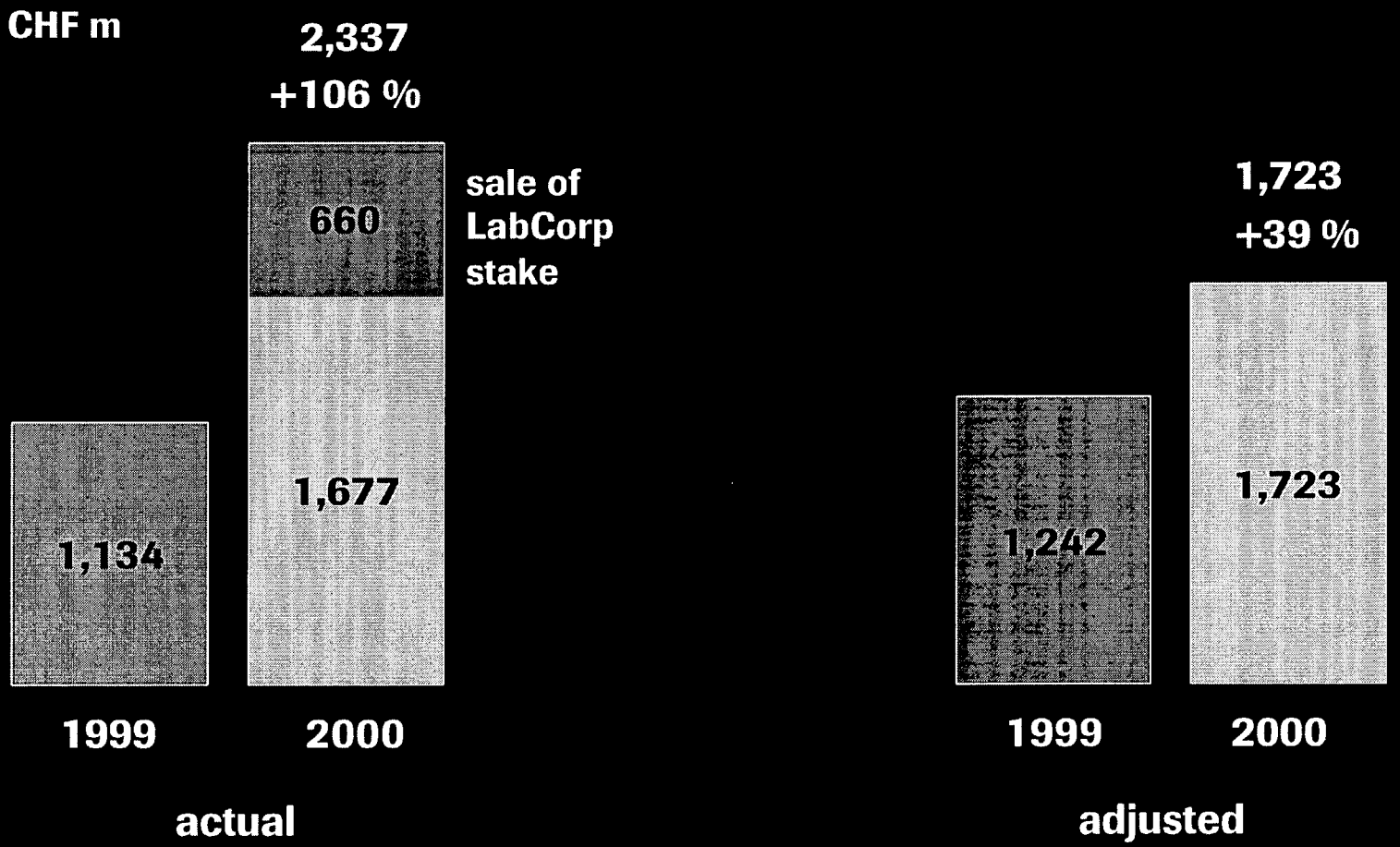
Financial income 2000

Driven by gains on marketable securities



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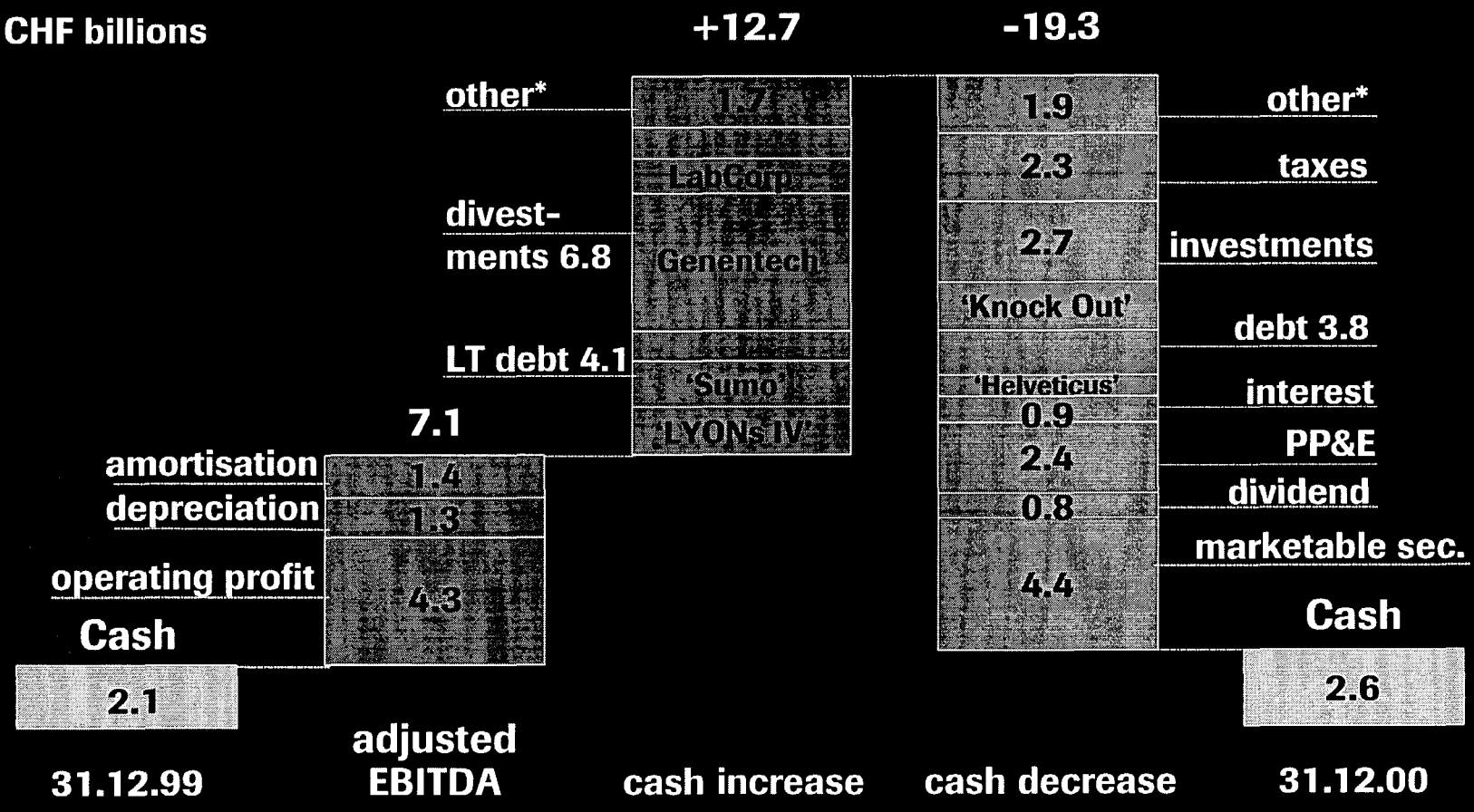
Financial income 2000
Reduced stake in LabCorp



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Cash flow 2000

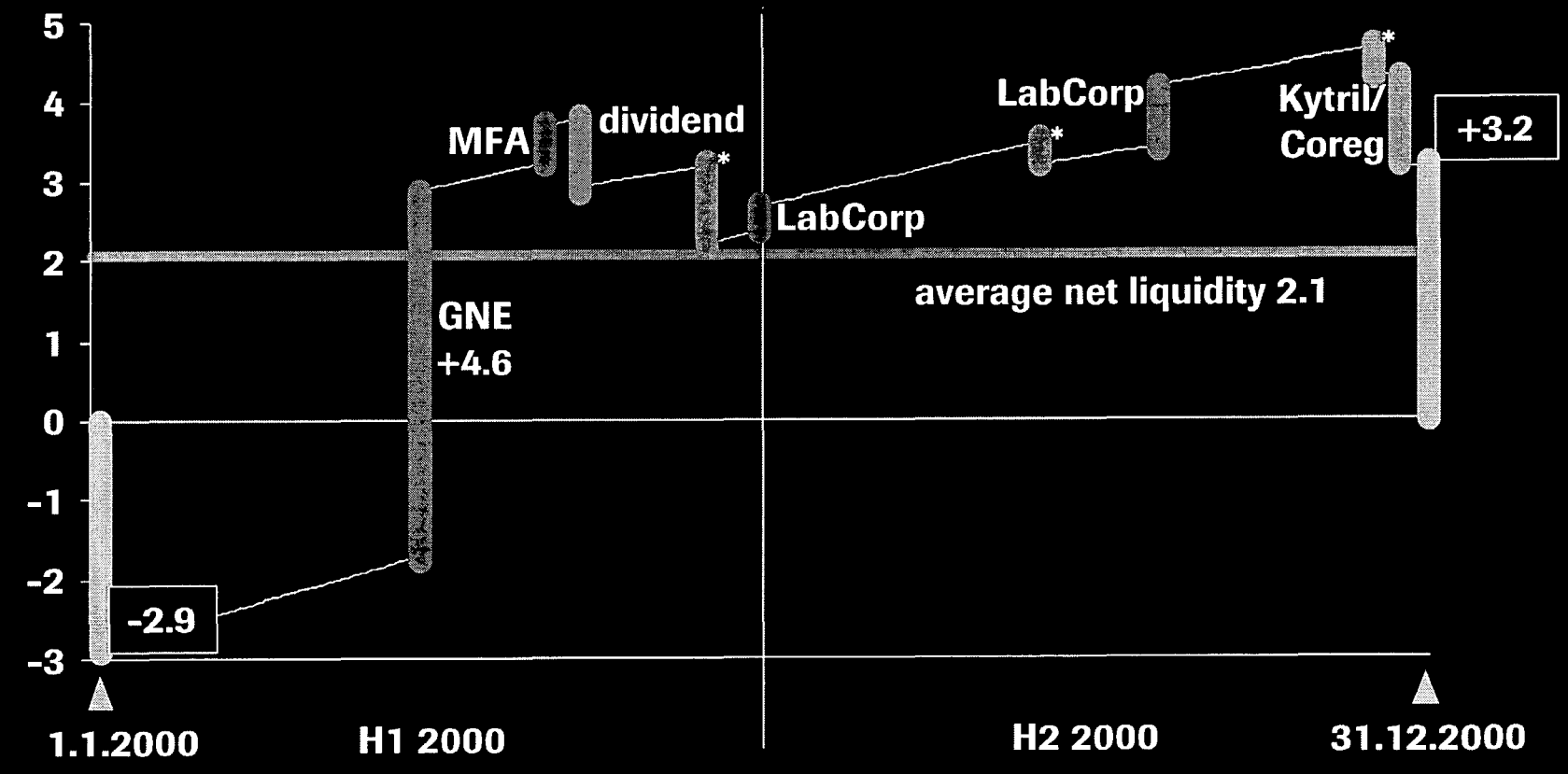
Strong cash generating capacity



* other cash increasing: eg interest/dividends received; other cash decreasing: eg restructuring

Net liquidity 2000

Return to net liquidity from substantial cash generation

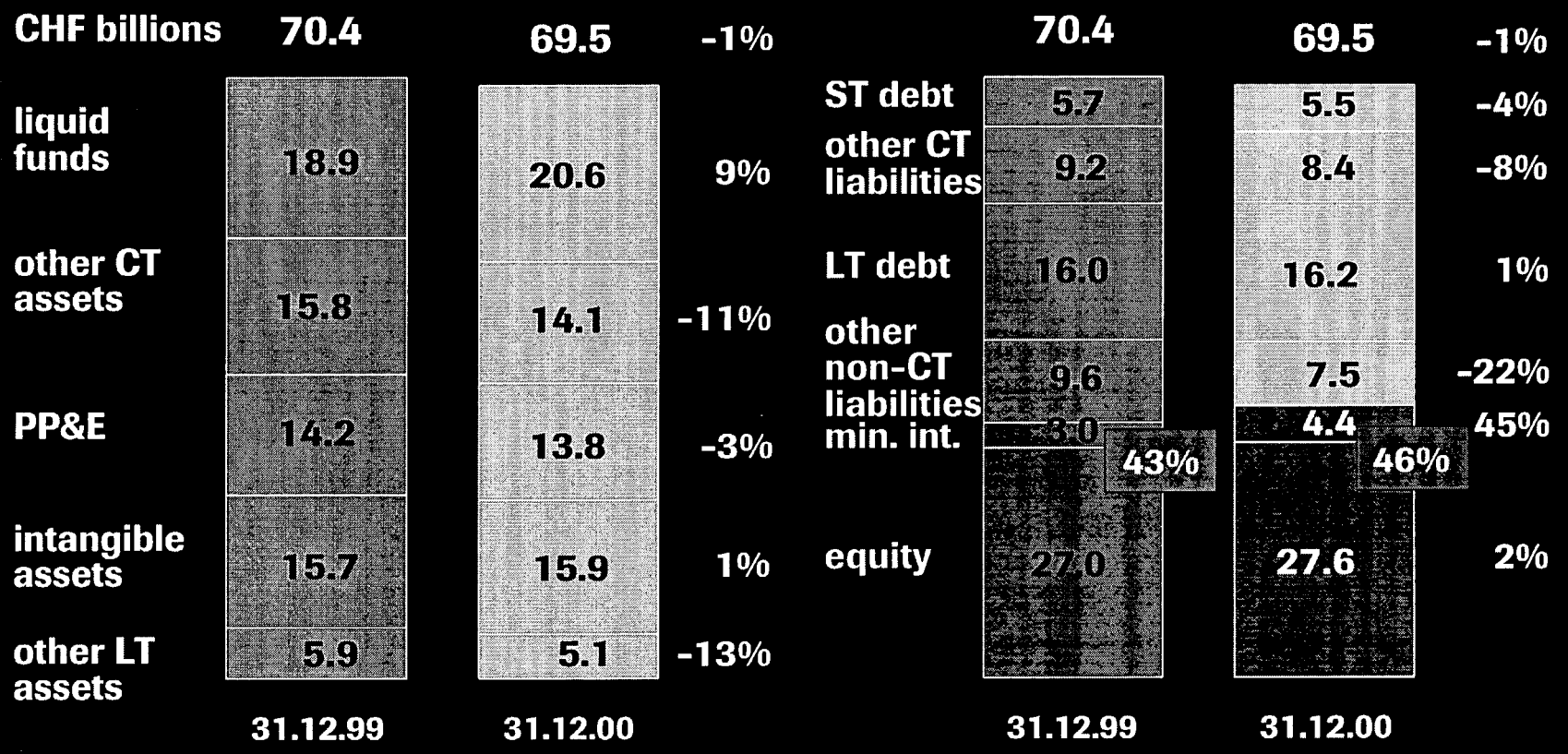


* eg taxes on GNE share sale, AVL, vitamin case

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Balance sheet 2000

High liquid funds, improved equity ratio

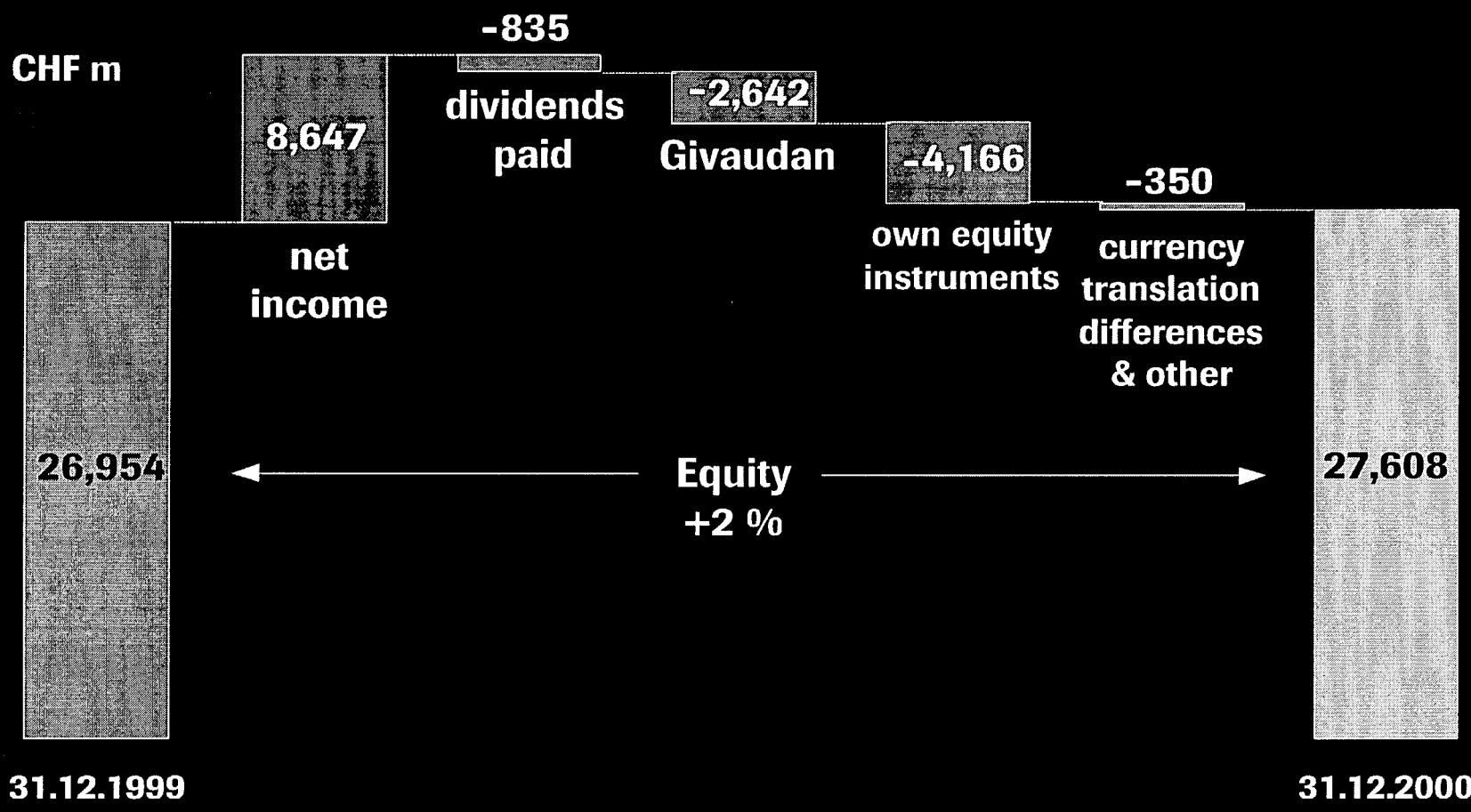


CT: current ST: short-term LT: long-term

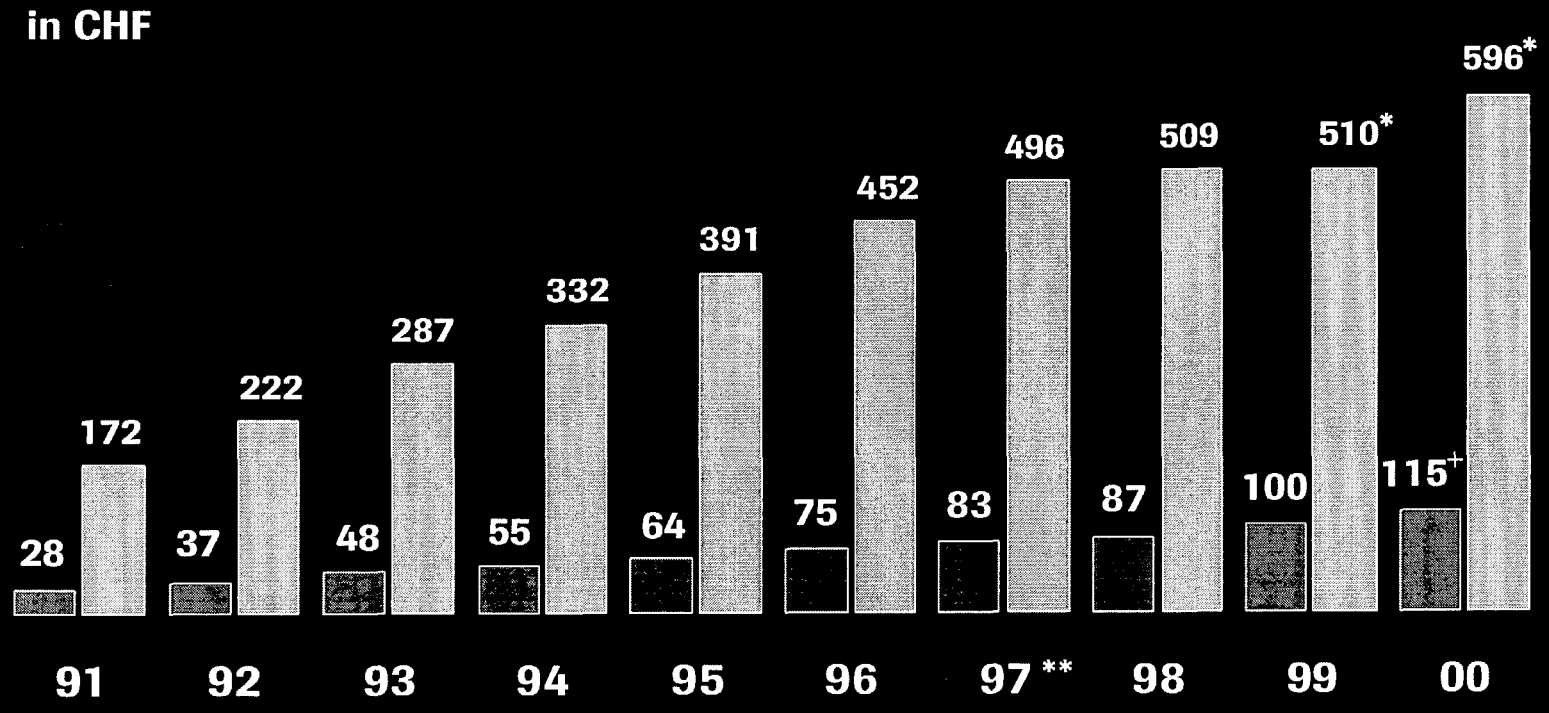
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Equity movement 2000

Growth influenced by Givaudan / IAS changes



Dividend and EPS
Consistent growth



EPS: net income per share and non-voting equity security in CHF
* adjusted ** EPS before special charges + subject to shareholder approval

Share and non-voting equity security split

Roche

Shares and non-voting equity securities (NES) to be split 1:100*

Attractive for retail investors

Liquidity expected to increase

Simple 1:1 exchange ratio with ADRs

* proposal subject to shareholder approval and to the change in the Swiss Code of Obligations (new minimum nominal value of CHF 0.01 per share as compared to today's CHF 10.00 per share)

Group financial results 2000

Summary

- Record actual results
- Growth of EBITDA and operating profit
- Strong financial result
- Financial position strengthened
- Adjusted net income growth of 14%
- Share and non-voting equity security split 1:100

Vitamins and Fine Chemicals

Dr Markus Altwegg

Head of Vitamins and Fine Chemicals

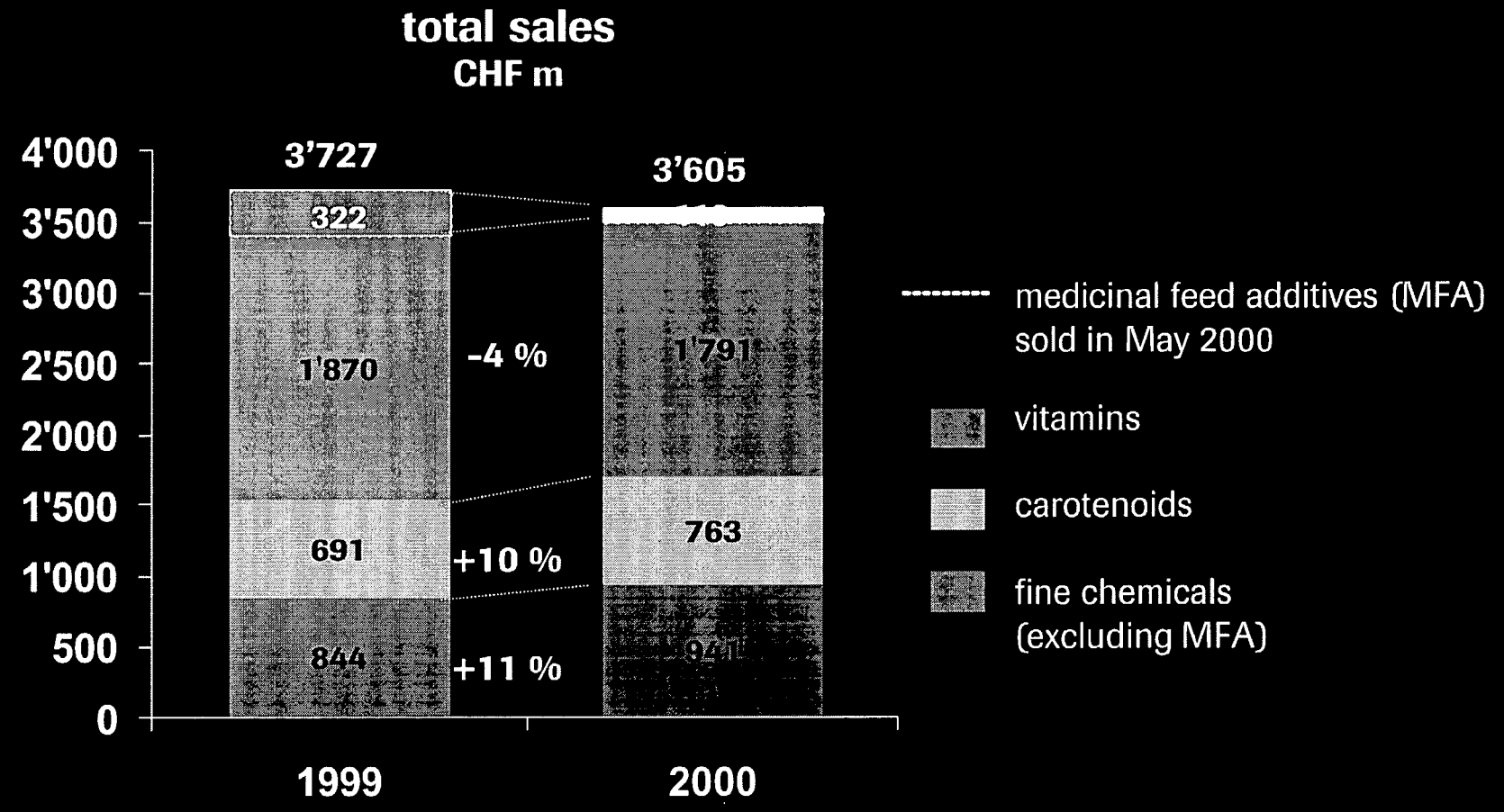
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Sales development by segment

Double-digit growth in carotenoids and fine chemicals

Roche

Vitamins



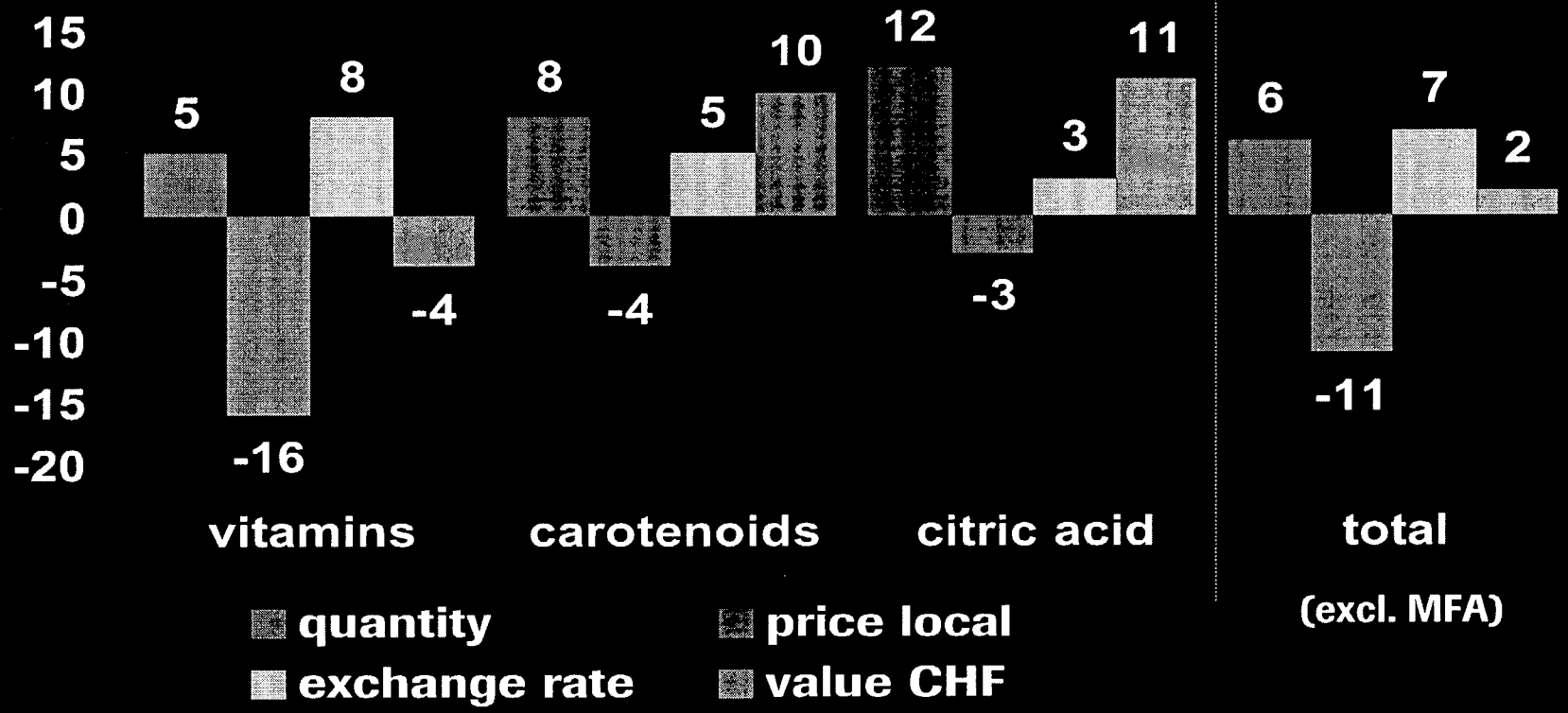
Top line drivers

Quantity and exchange rate gains offset price impact

Roche

Vitamins

deviation from 1999 in %



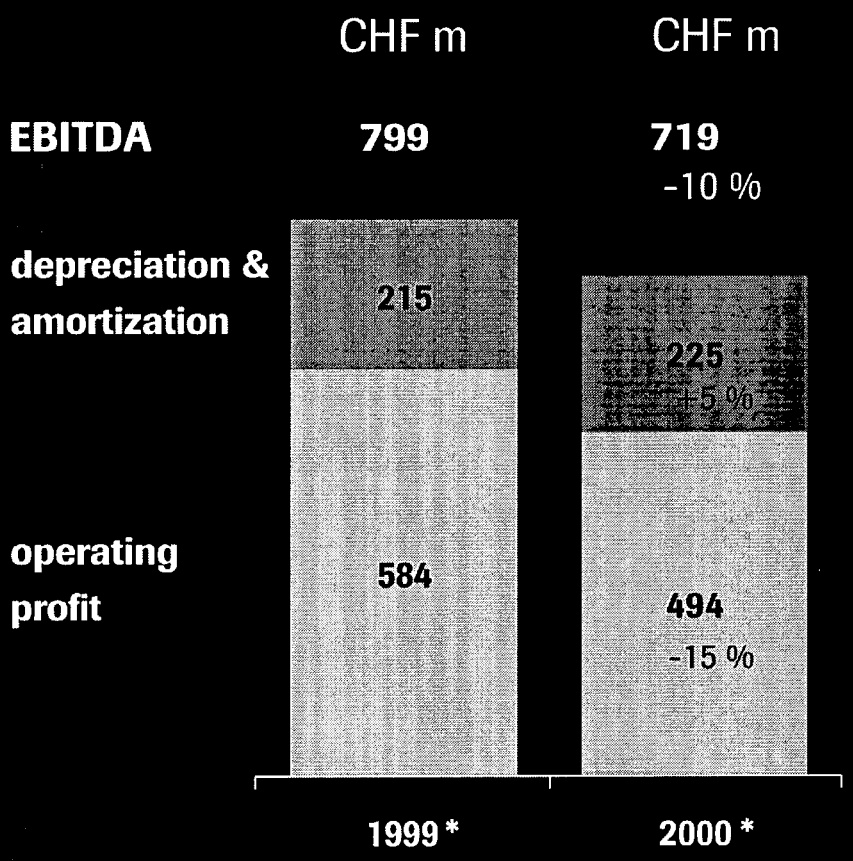
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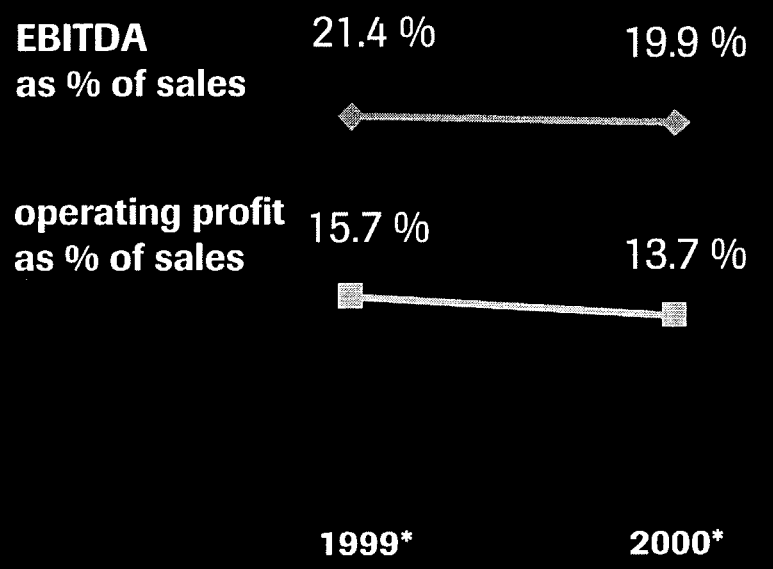
EBITDA and operating profit

Quantity and productivity increases limit margin decline

Roche

Vitamins





* on an adjusted basis (see Annual Report 2000)

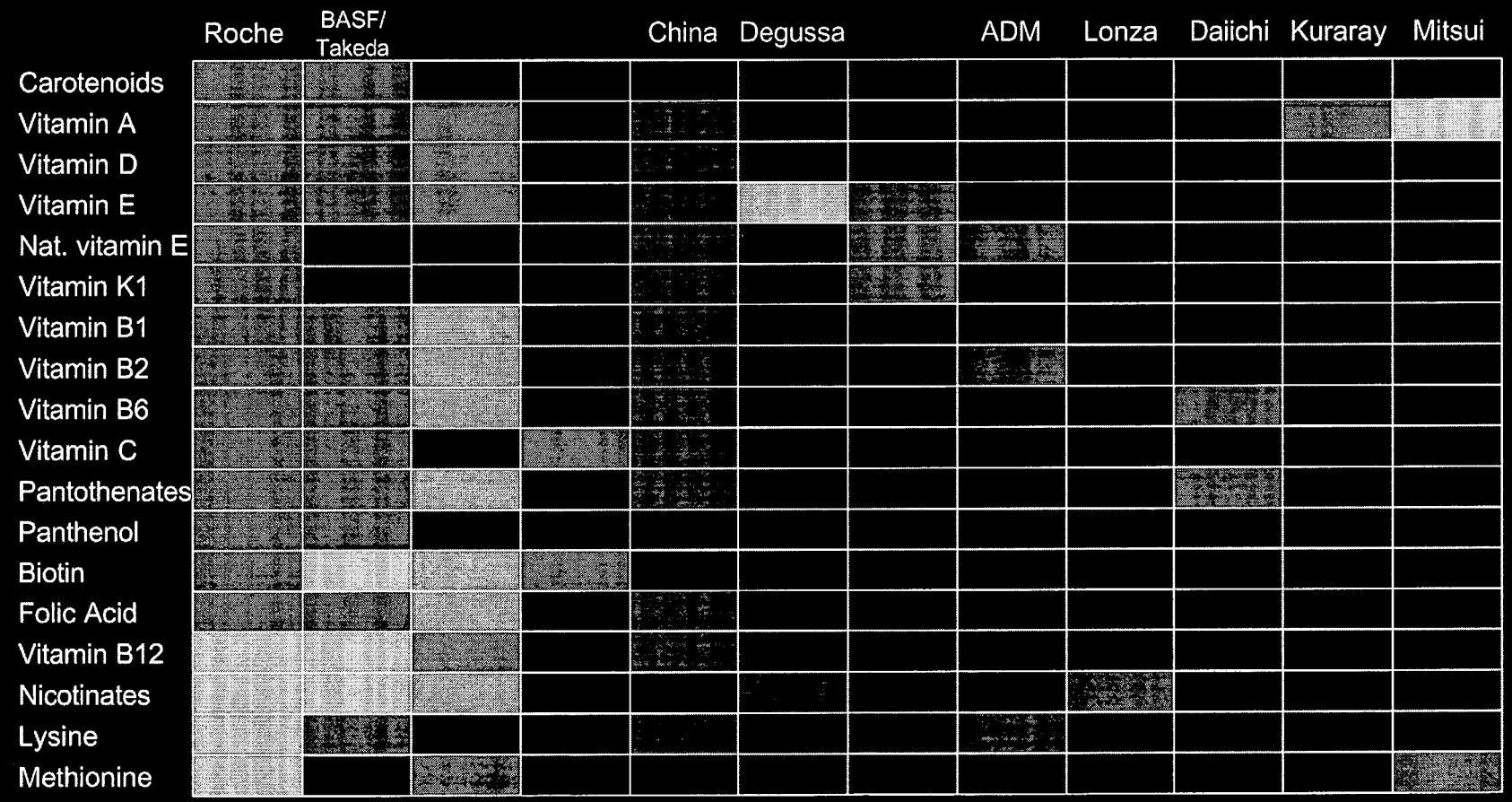
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A changing business environment

Aventis, Merck and Eisai leaving the market

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Vitamins



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Trends in a CHF 11 billion market

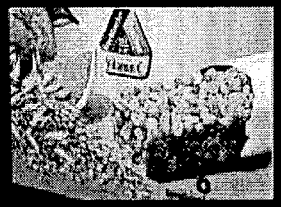
Expected market growth in the range of 3-5%

Roche

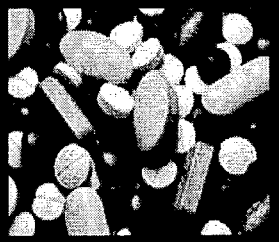
Vitamins



continued reliance on core vitamins; increased demand for natural health and performance enhancers:



changing life-styles trigger demand for health beneficials:



greater health awareness offers wide opportunities



high demand for innovative product concepts:

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The way forward

Strengthening a leading position

Roche

Vitamins

goals

outperform market growth!

strategy for growth

strategy for growth and profitability

increase margins and remain the industry benchmark!

strategy for profitability

goals

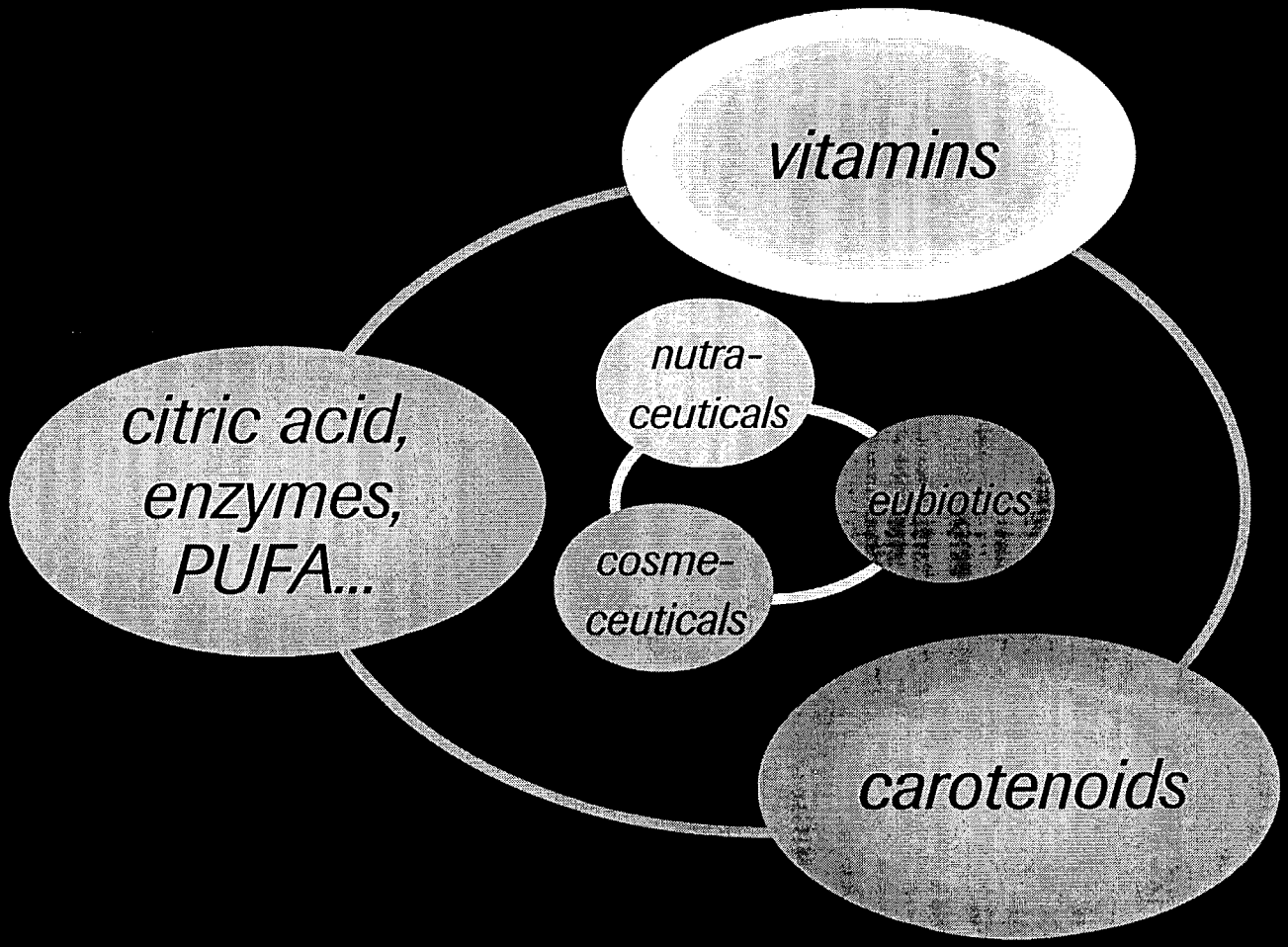
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Growth

Expand the core

Roche

Vitamins



Profitability

Key drivers to achieve profitability targets

Roche

Vitamins

Quantum leaps in process improvements

- half of R&D resources committed to production innovation
  ⇨ 50 % cost reduction target for key vitamins in next 10 years

Newplants for low cost production

- invest only to pursue lowest cost position
  ⇨ key projects: vitamins E and C

Operational excellence in all business processes

- reduce production costs
  ⇨ plan 500
- reduce operating costs
  ⇨ cost saving program in Europe

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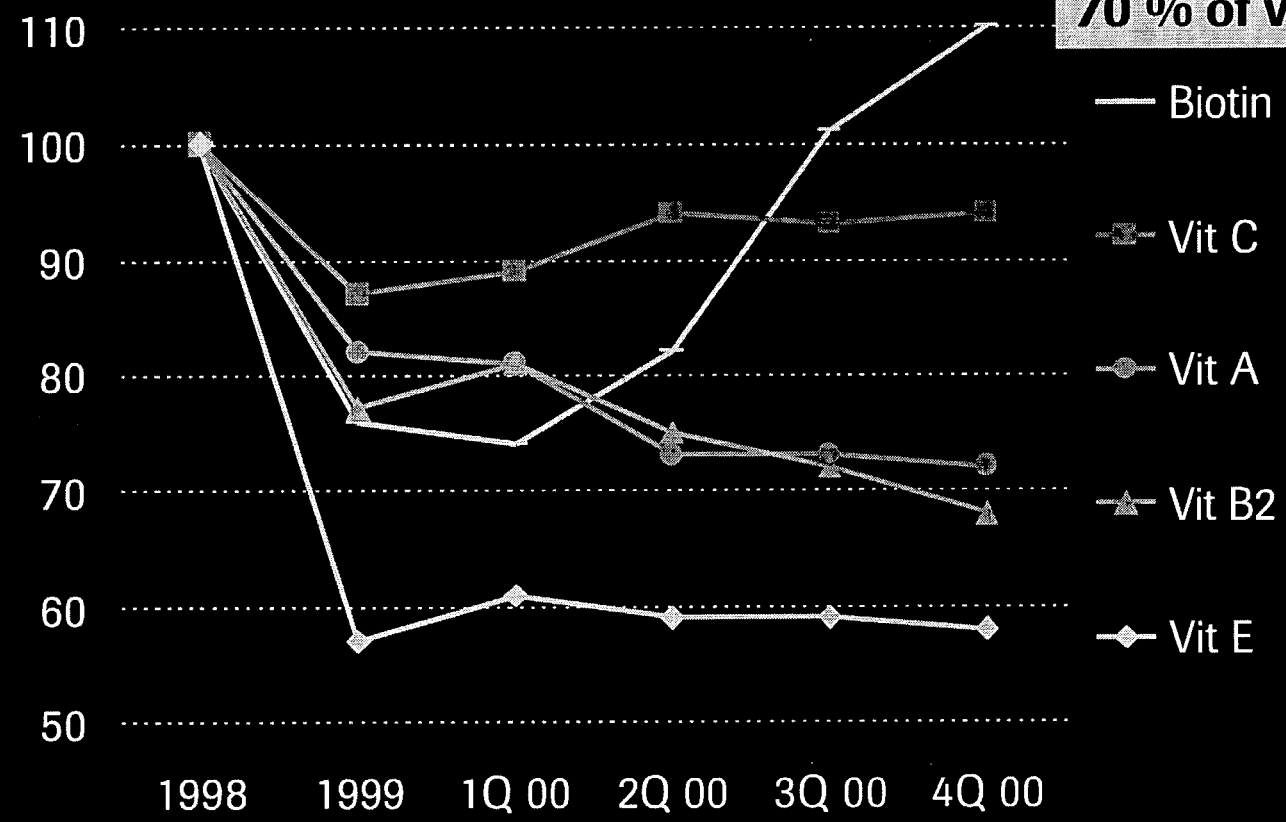
Profitability

Prices of major vitamins stabilising in 2000

Roche

Vitamins

price development 1998-2000
(at constant USD/Euro)



products represent
35 % of divisional sales
70 % of vitamins sales

Vitamins and Fine Chemicals Division

Summary

Roche

Vitamins

- Significant volume growth in all major product segments
- Efficiency gains and a rigorous focus on costs partly offset pressure on profitability
- The way forward
  ⇨ strengthening our leading position

Diagnostics

Heino von Prondzynski

Head of Diagnostics

Roche

Diagnostics

Performance 2000

Near-term business drivers

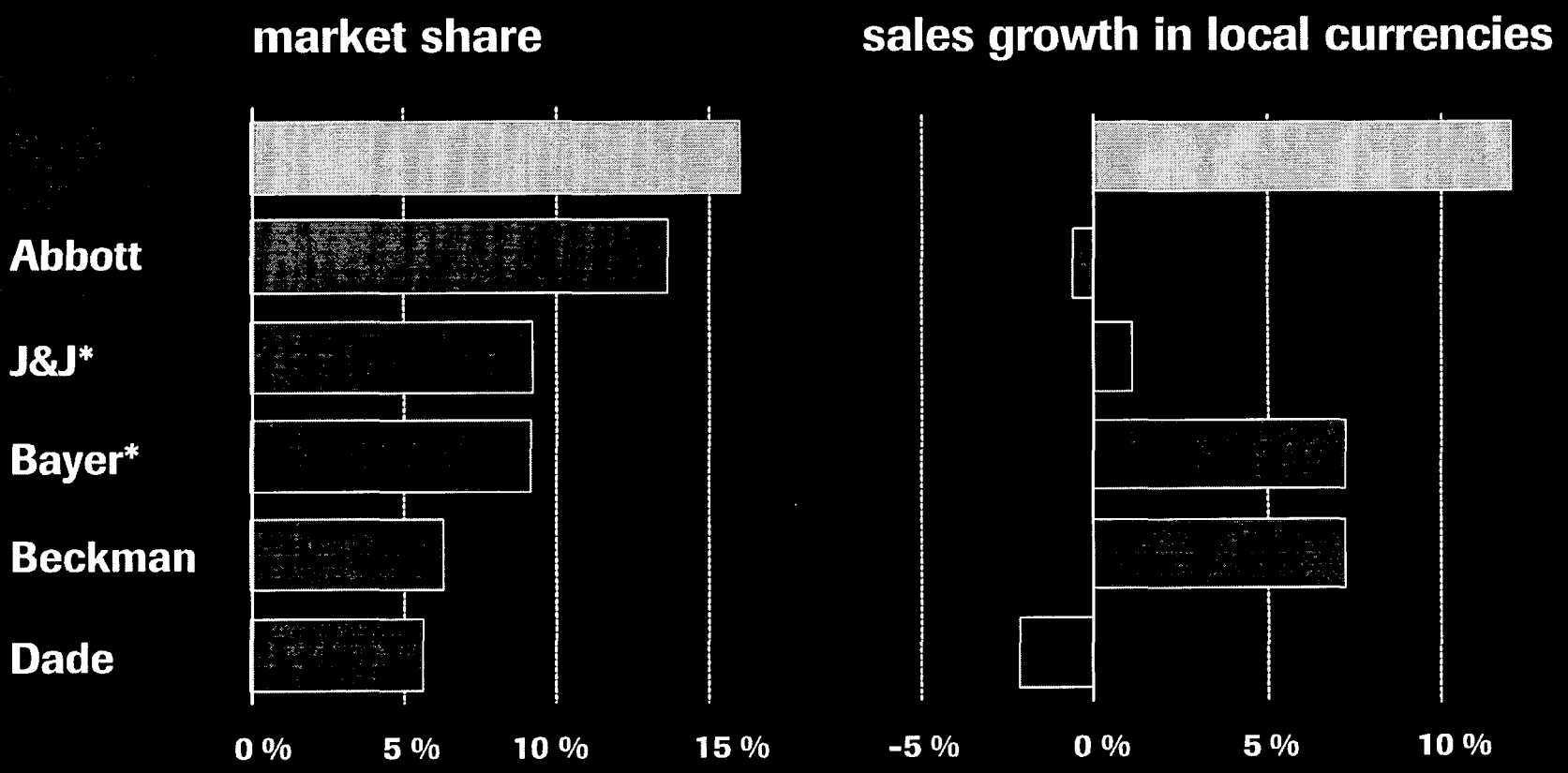
Longer-term vision

Diagnostics sales 2000

Increasing global IVD market leadership

Roche

Diagnostics



Source: company reports 2000 full year or 9 months (*), Roche Analysis, Boston Biomedical Consultants

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Roche Diagnostics

Broadest product portfolio in industry

Roche

Diagnostics

Research		Professionals				Consumers	
research lab	univ. hospital	commercial lab	hospital	POL	GP	patient	consumer

Molecular Biochemicals



Molecular Systems





Laboratory Systems



Patient Care





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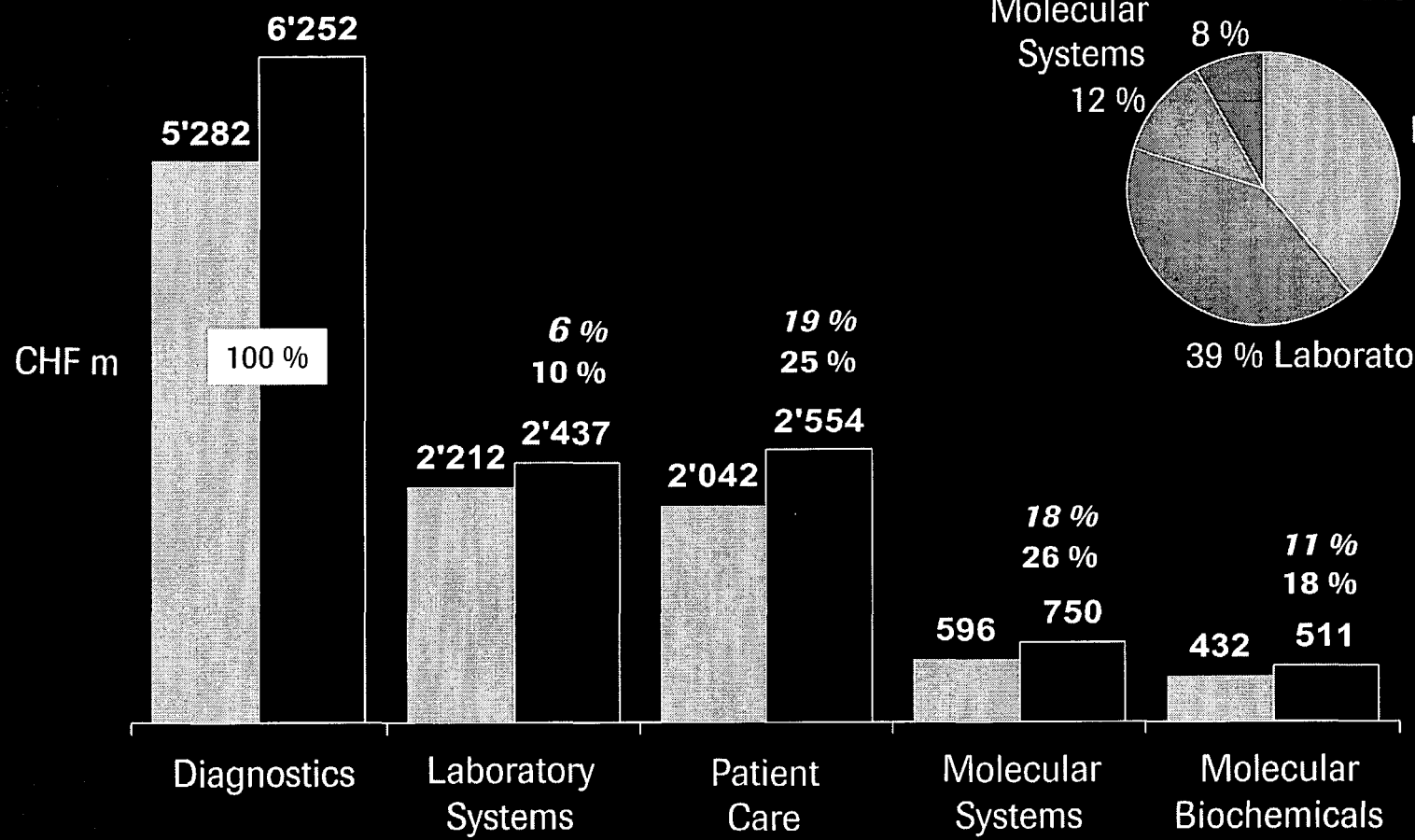
Diagnostics sales 2000

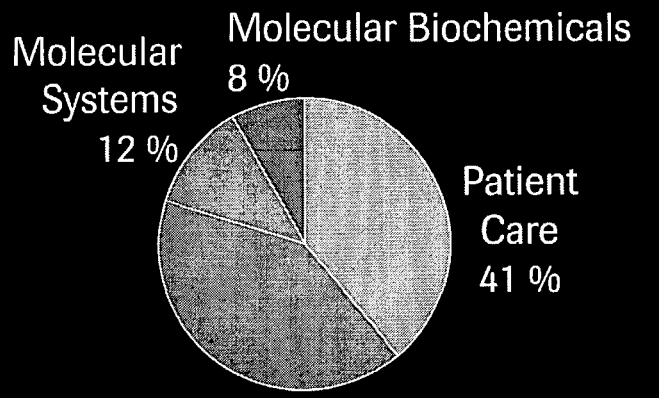
Double-digit growth in high margin businesses

Roche

Diagnostics

12 % ***local currency growth***
18 % CHF growth





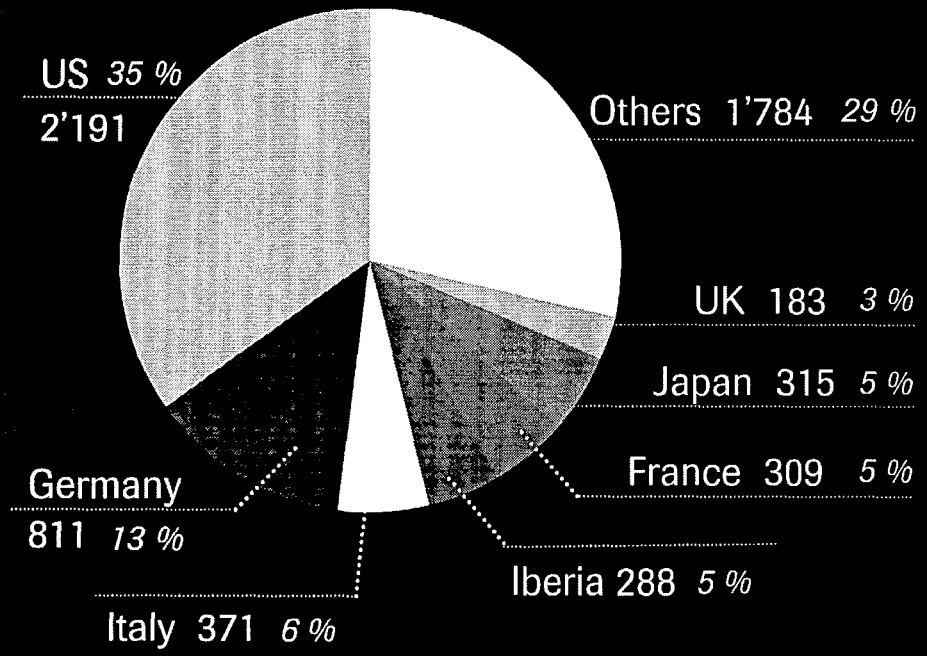
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Diagnostics sales 2000
Sales by major market

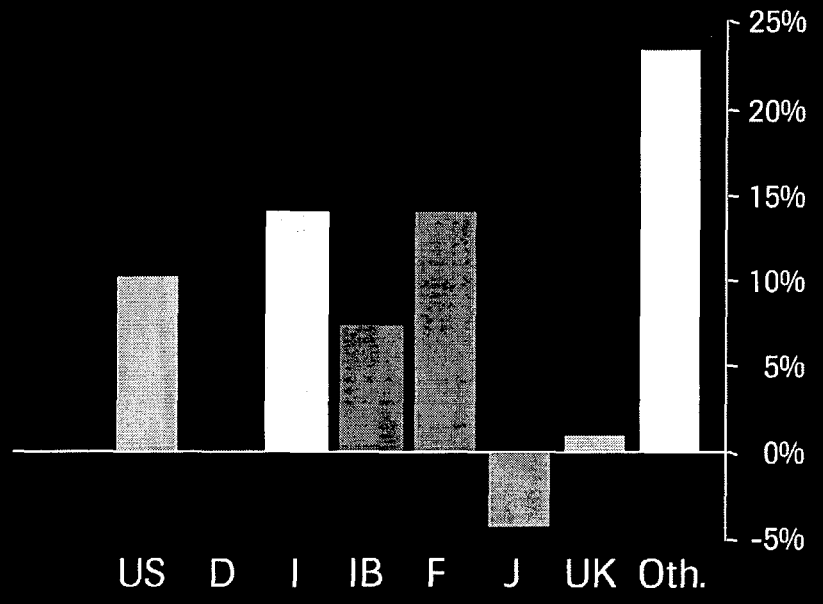
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Diagnostics

sales : CHF 6,252m ***100 %***



local sales growth

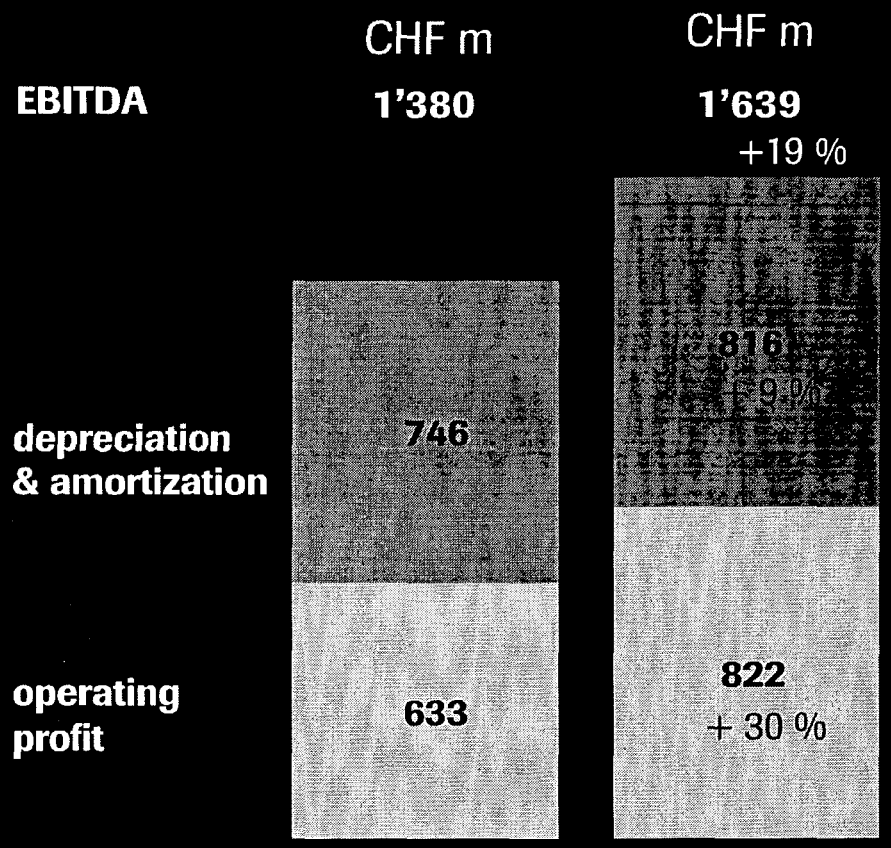


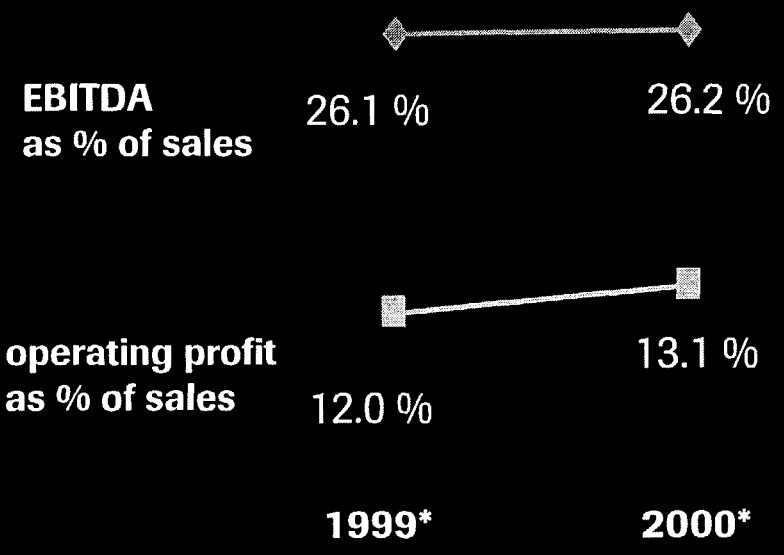
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Diagnostics profitability 2000
Further improvement of margins

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Diagnostics





* on an adjusted basis (see Annual Report 2000)

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Major achievements in 2000
Strengthened leadership position

Roche

Diagnostics

- in sales and profitability
- in all segments to > 16 % worldwide
- (Near-Patient Testing / Point of Care, menu completion)
-
  - MagNa Pure® system — sample prep, genetics, PCR
  - RTS 500® system — protein generator, proteomics
  - Cobas Integra® 800 system — analyzer, laboratory systems
  - AccuChek Comfort Curve® — diabetes monitoring
  - Accutrend Glucotrend® 15 sec strip — diabetes monitoring
- with Chiron (HCV, HIV) and Perkin Elmer (PCR markets)
-

Roche

Diagnostics

Performance 2000

Near-term business drivers

Longer-term vision

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Platforms/products to be launched in 2001

Extending our leadership

Roche

Diagnostics

•	LS	worldwide 1st immunology analyzer integrated into clinical chemistry system
•	MS	automated sample preparation, PCR
•	MB	protein generator, proteomics, high throughput
•	PC	near-patient testing
•	PC	diabetes monitoring
•	PC	diabetes monitoring
•	PC	diabetes monitoring

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Patient Care: diabetes monitoring

Customer segment-specific innovations

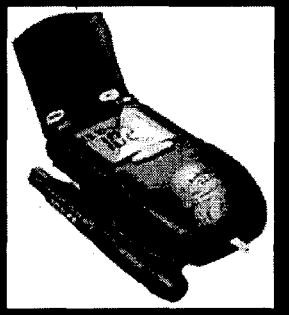
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Diagnostics

- 5 second test
- infrared communication
- extremely accurate
- launch Q2 2001



- less items to carry
- no strip handling
- automatic coding
- infrared communication
- first launch in Nov. 2000 (NL)



- diabetes monitoring for professional testers
- value added features and analysis tools included



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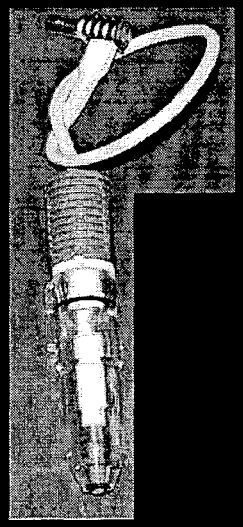
Patient Care: new sensor technology

Chip based electro-chemical electrodes

Roche

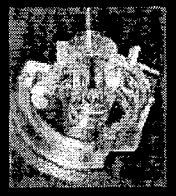
Diagnostics

pH - electrode



parameters
pH, O_2, CO_2

K^+ electrode



K +, Ca, Li, Cl, Na

multi system solution

K^+ electrode for OMNI



K +, Ca, Li, Cl, Na
and blood-gas (new)
in one measuring cell

integrated system

PTF - electrode (2001)



"12 in one"

Glu, Lac, UREA,
Cl, Ca, K, Na,
(Bloodgas, pH
Crea, Mg)

- combination of biosensors with electrolyte- and blood-gas sensors
- 1st time bedside testing

COGS / parameter

100 ---> 33 ---> 13

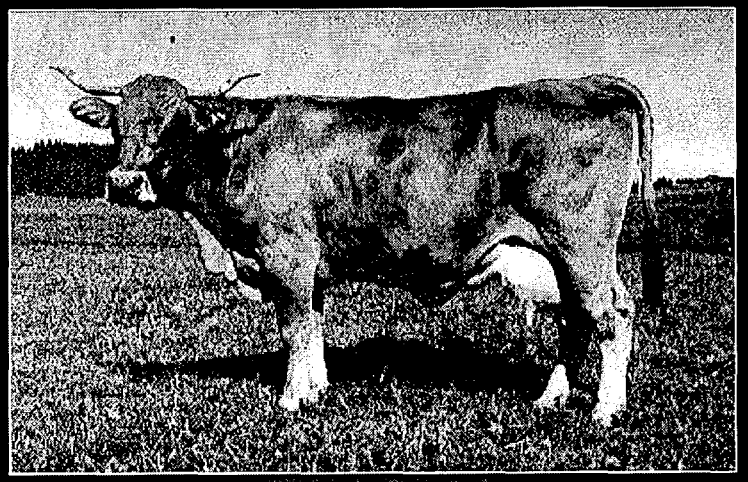
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Molecular Biochemicals: testing for BSE*

*Prionics Check®** sold by Roche since 1 February 2001*

Roche

Diagnostics



Roche BSE tests: worldwide exclusive rights***

- testing for prions will become a profitable new area within diagnostics, starting with BSE
- mandatory testing of slaughtered cattle > 30 months old:
  Germany, France: effective 1 January 2001
  Rest of Europe: effective 1 July 2001
- testing of cattle > 24 months old announced by German government: 26 January 2001
- **28 million** slaughtered cattle / year (thereof **10 millions** older than 30 months)
- spending on testing **> CHF 210 million / year** (thereof ca. 30-50 % on reagents)

* BSE = bovine spongiform encephalopathy
** Prionics Check® is a trademark of Prionics AG, Switzerland
*** exclusive marketing rights, Prionics AG, excl. few selected countries

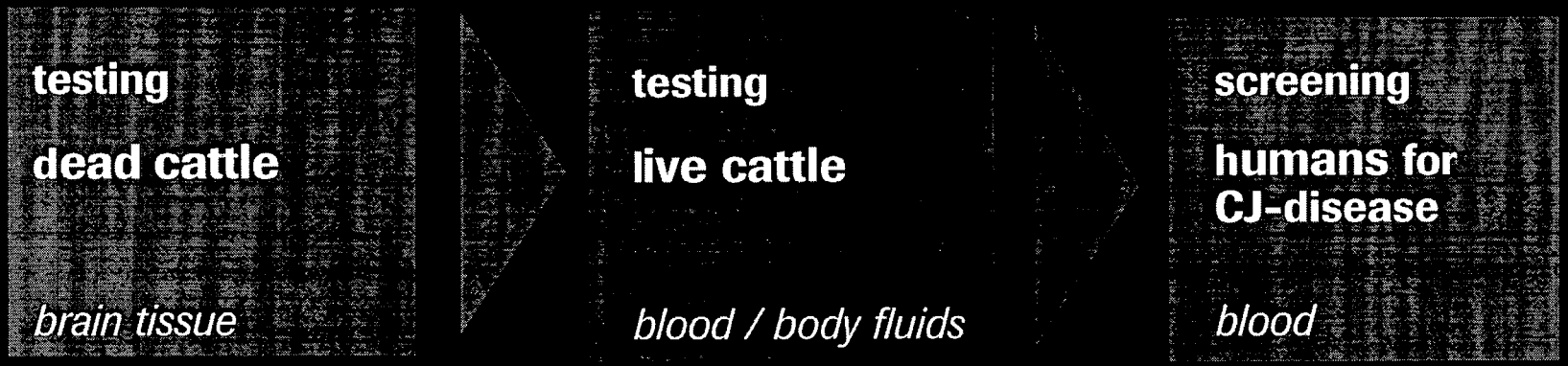
3/01

Development of BSE product program

Prionics Check®: the most sensitive BSE tests

Roche

Diagnostics



OEM supply and distribution agreement

- test: Prionics Check®
- worldwide distribution rights (excl. selected countries)
- effective **1 February 2001**

development cooperation (with Prionics AG, Zurich)

highly sensitive test in **living cattle**

IVD test in **humans** for both screening and diagnosis

expertise of Roche in . . .

- development of IVD test kits
- analysis of blood samples
- systems integration
- worldwide distribution facilities
- service and training infrastructure
- biotech manufacturing sites

3/01

Roche

Diagnostics

Performance 2000

Near-term business drivers

Longer-term vision

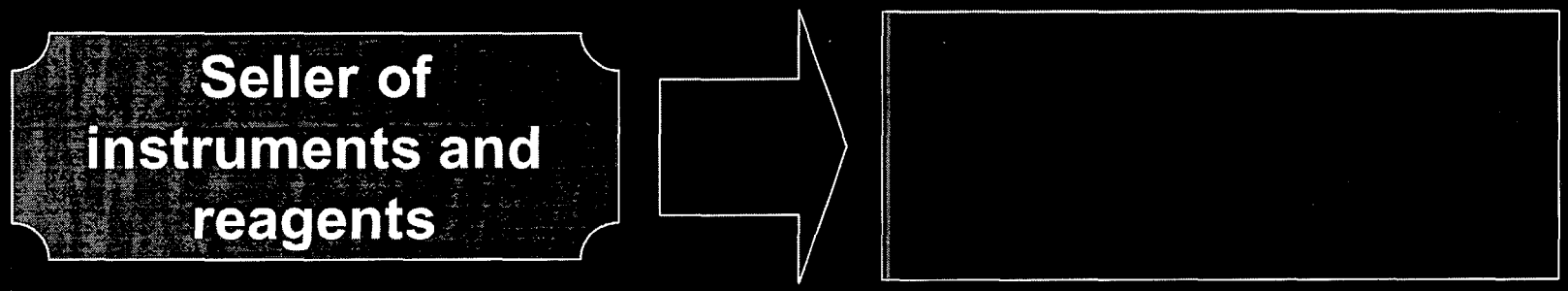
3/01

Roche Diagnostics

Expanding the role in the future

Roche

Diagnostics



Industrial age model

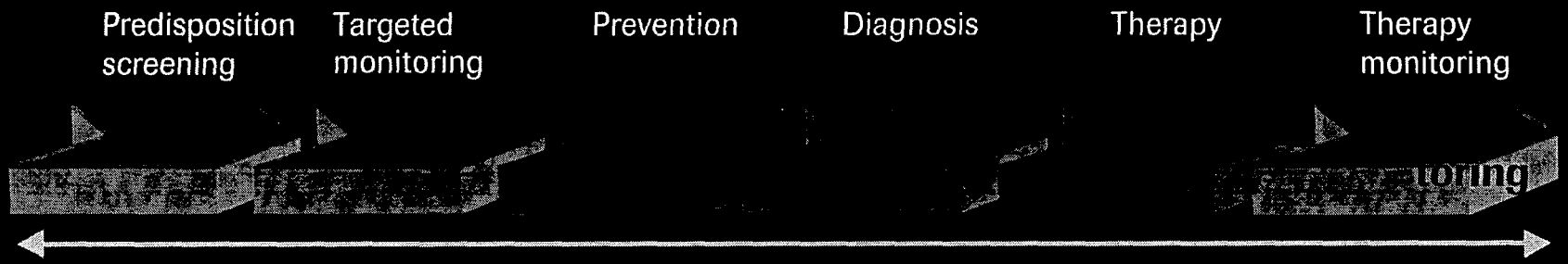
Information age paradigm

3/01

Expanding the business perspective
More breadth

Roche

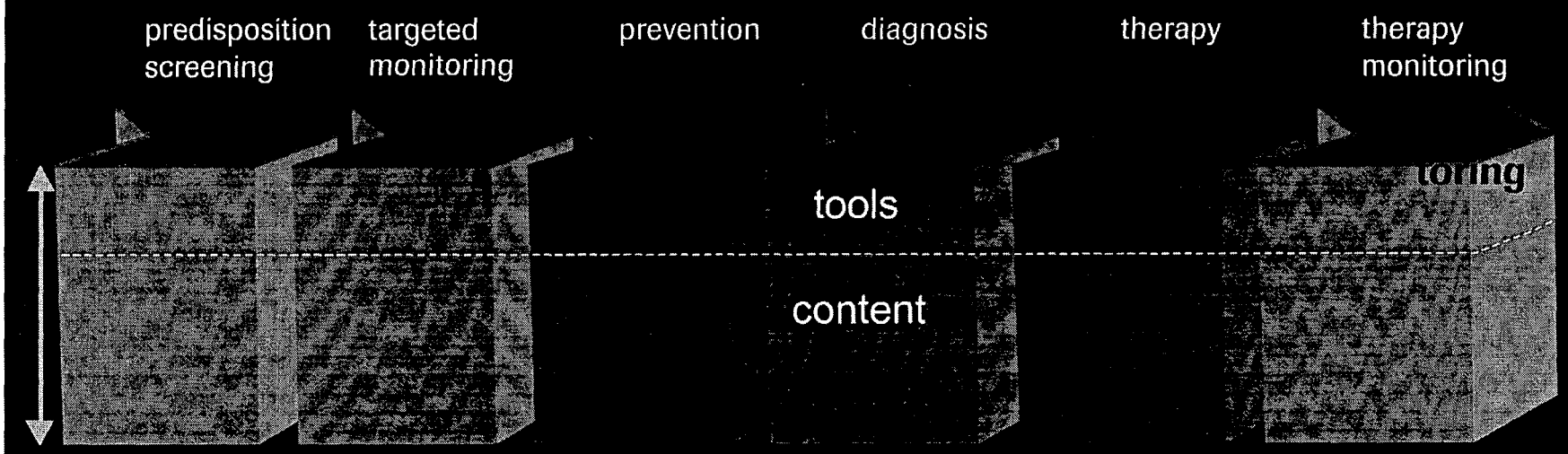
Diagnostics



Expanding the business perspective
More depth

Roche

Diagnostics

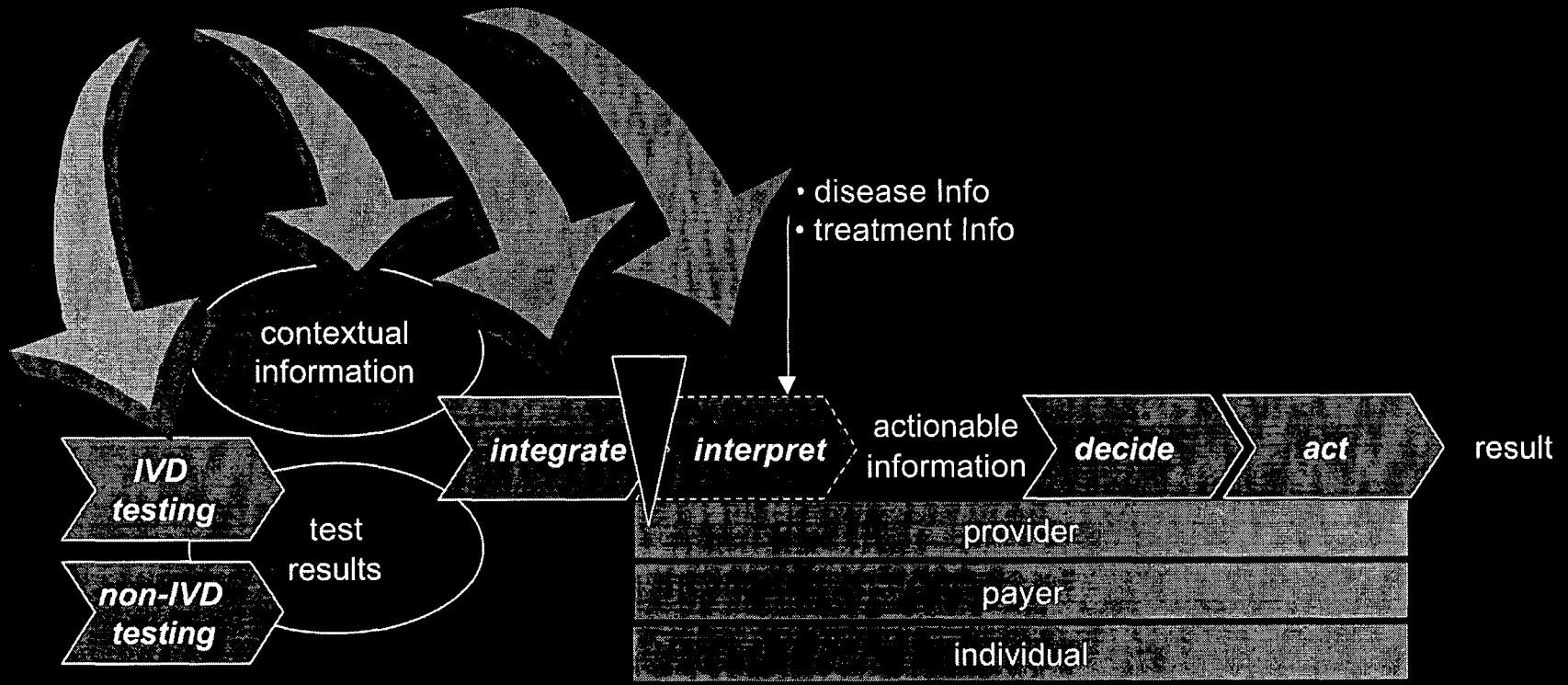


Disaggregation of health care process

Providing new business opportunities

Roche

Diagnostics

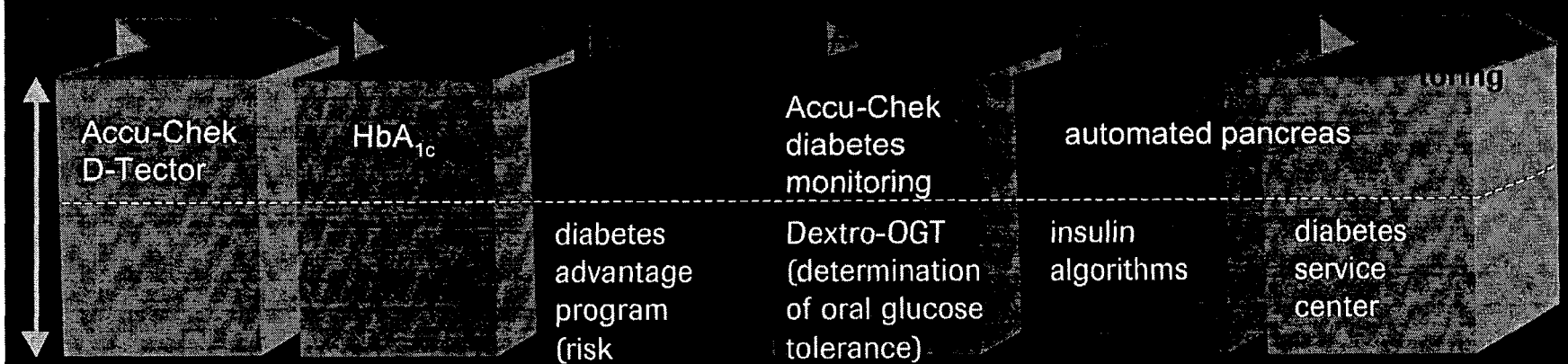


3/01

Expanding the business perspective
Examples from Diabetes Care

Roche

Diagnostics



		diabetes advantage program (risk stratification)	Dextro-OGT (determination of oral glucose tolerance)	insulin algorithms	diabetes service center
				training programs for patients	CAMIT patient data management
				diabetes-world.net (01.03.01)	CAMIT PRO patient surveillance program

3/01

Diagnostics
Summary

Roche

Diagnostics

- Increasing global IVD market leadership
- Double-digit growth in high-margin businesses
- Further improvement of margins
- Strong R&D pipeline enables future growth
- Strategic vision

Roche

Pharmaceuticals

Pharmaceuticals Division

William M Burns

Head of Pharmaceuticals

3/01

Roche

Pharmaceuticals

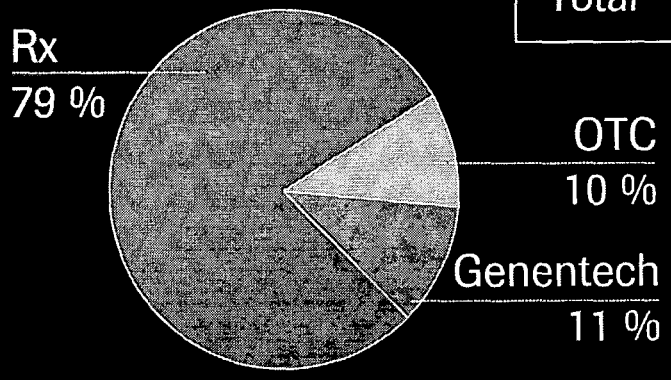
- Results in 2000
- Major in-market franchises
- Integrated Health Care Solutions
- Development pipeline
- NDA filings and launches
- Summary

Pharmaceuticals sales 2000

Roche

Pharmaceuticals

	2000 CHF m	1999 CHF m	growth in local currencies
Rx	13,910	13,379	-2 %
OTC	1,694	1,585	4 %
Genentech	2,082	1,523	22 %
Total	17,686	16,487	1 %

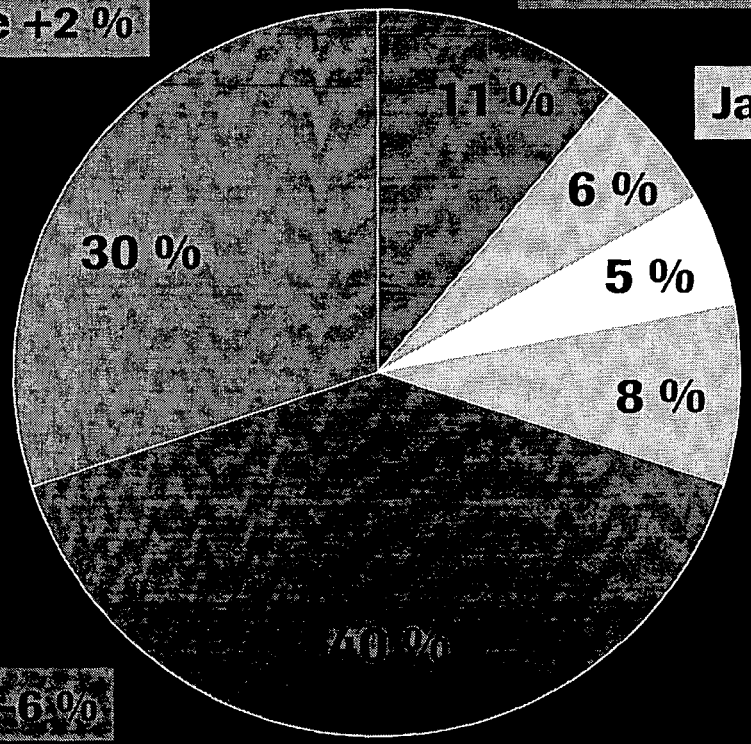


Roche Rx and Genentech sales 2000

Sales by region

Roche

Pharmaceuticals

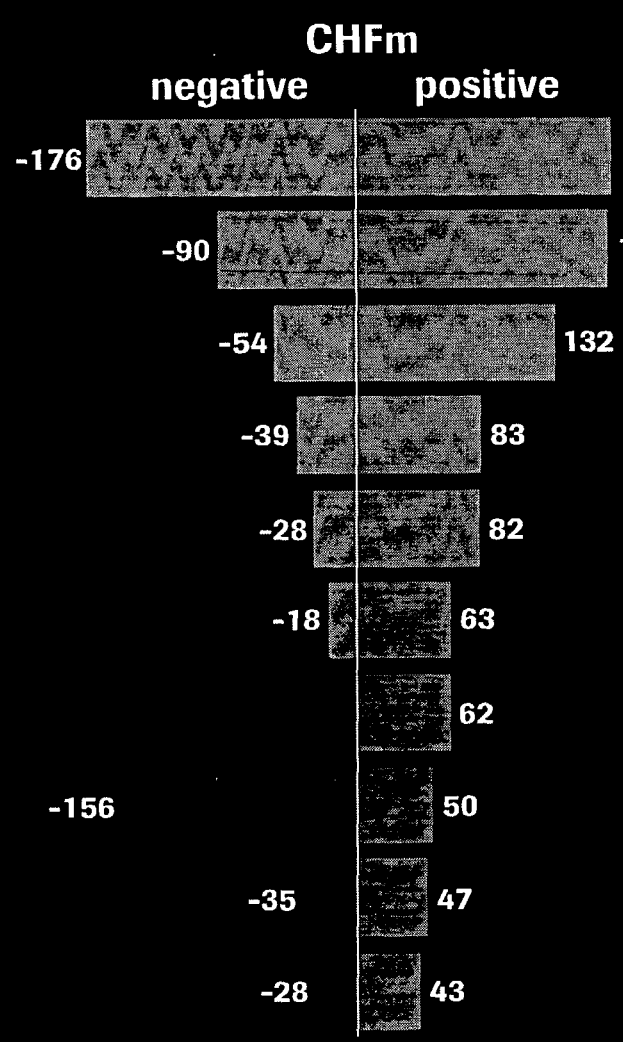


all growth rates in local currencies

Roche Rx sales deviations 2000

Roche

Pharmaceuticals



3/01

Roche Rx & Genentech sales 2000

Eight products with sales >CHF 500m

Roche

Pharmaceuticals

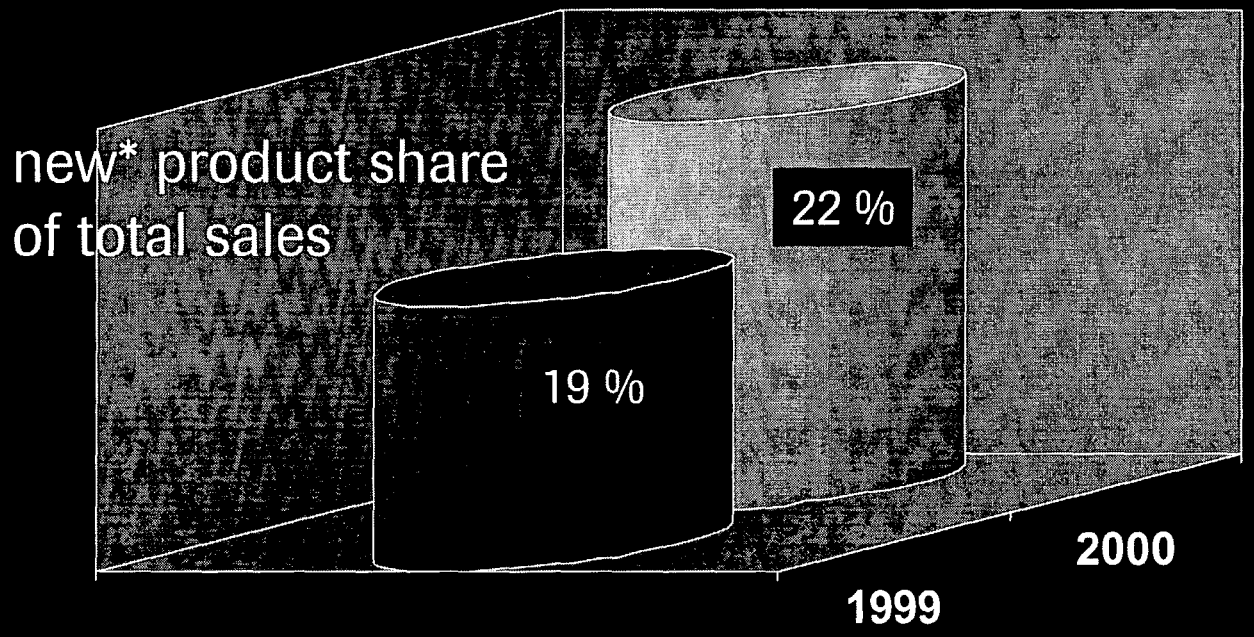
Rocephin	1,710	-3 %	-10 %
Roaccutane/Accutane	1,280	23 %	13 %
Xenical	950	1 %	-4 %
Mabthera/Rituxan	900	84 %	68 %
CellCept	790	40 %	30 %
NeoRecormon	650	34 %	35 %
Herceptin	540	77 %	61 %
Viracept	500	15 %	15 %
Dormicum/Versed	470	-45 %	-49 %
Nutropin/Protropin	390	16 %	4 %
Furtulon	340	23 %	4 %
Activase	330	-16 %	-25 %
Neupogen	300	19 %	17 %
Pulmozyme	300	15 %	7 %
Lexotan	290	2 %	-2 %
Fortovase/Invirase	280	-20 %	-26 %
Rocaltrol	280	13 %	3 %
Roferon-A	260	-9 %	-10 %
Madopar	250	4 %	1 %
Dilatrend	240	36 %	35 %

Roche Rx & Genentech sales 2000

Growing importance of new products*

Pharmaceuticals

Local currency growth of new* products +20 %



* launched between 1996 - 2000

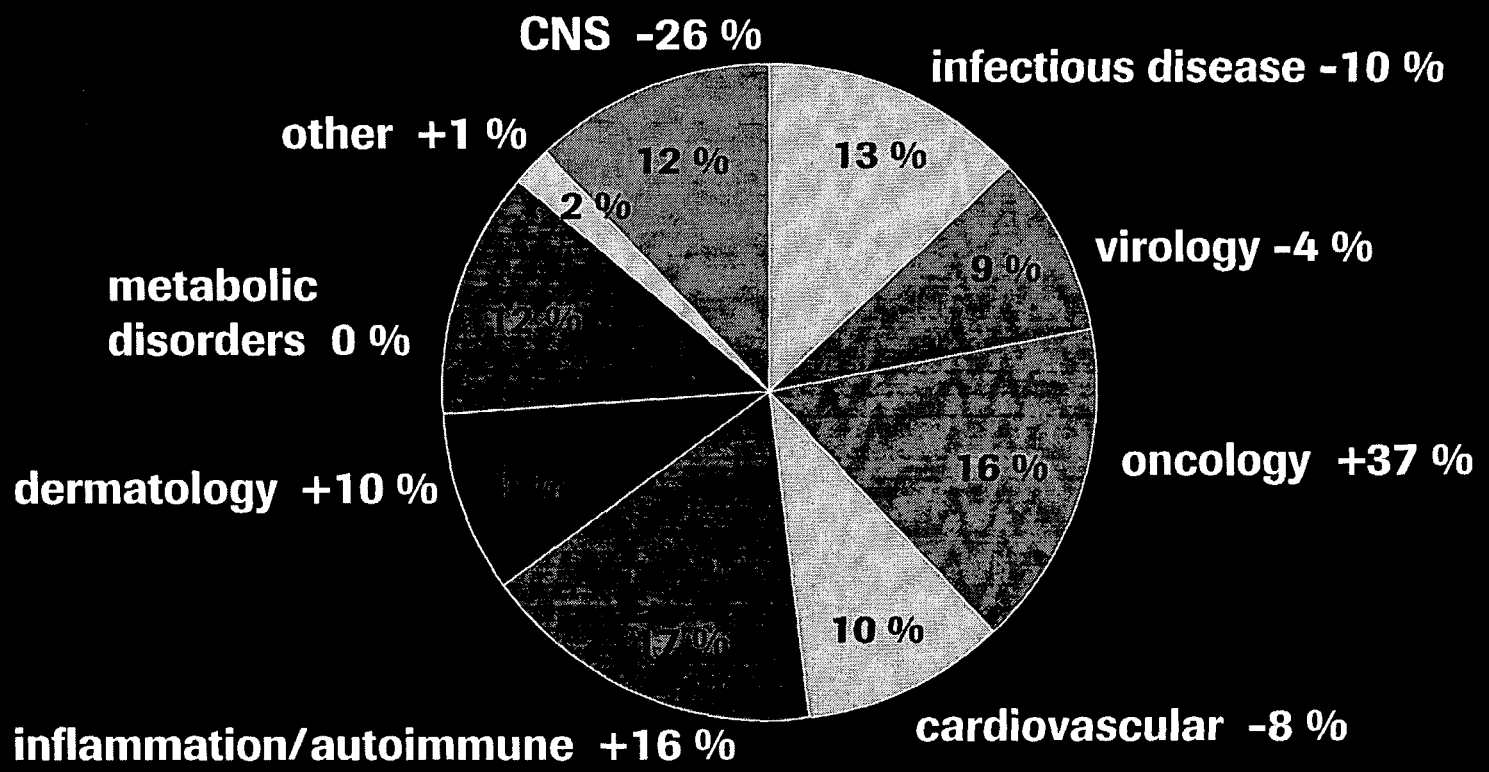
3/01

Roche Rx and Genentech 2000

Sales by therapy area

Roche

Pharmaceuticals



all growth figures are in local currencies

3/01

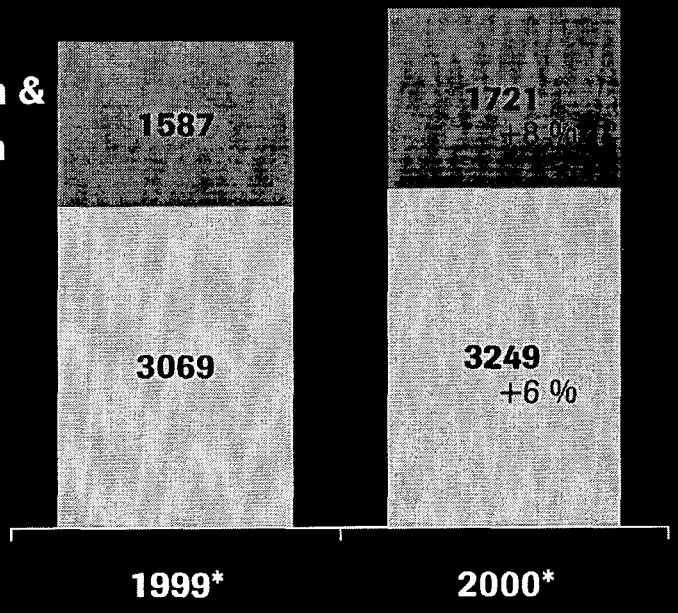
Pharmaceuticals profitability 2000

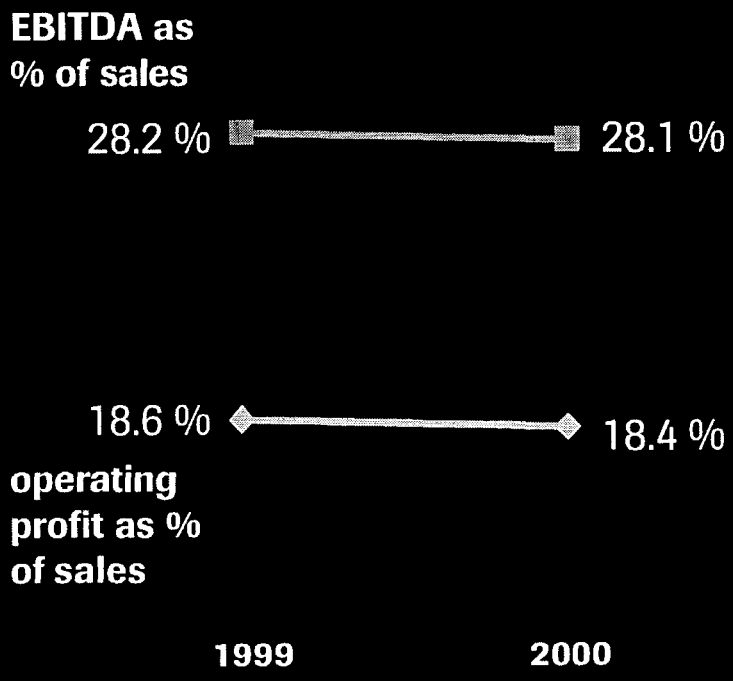
Margins maintained

Roche

Pharmaceuticals

	CHF m	CHF m
EBITDA	**4,656**	**4,970** +7 %





* on an adjusted basis (see Annual Report 2000)

3/01

Roche oncology
Substantial progress in 2000

Roche

Pharmaceuticals

Herceptin®
Trastuzumab
anti-HER2 monoclonal antibody

- Roche sales of CHF 110m, 383 % growth
- EU launch for HER-2 overexpressing metastatic breast cancer

MABTHERA®
RITUXIMAB

- Roche sales of CHF 170m, 95 % growth
- MabThera + CHOP showed major survival improvement in int/high grade NHL: first improvement in therapy in 20 years

Xeloda®
(capecitabine)

- Sales of CHF 150m, 59 % growth
- Xeloda and Taxotere in metastatic breast cancer → survival advantage over standard therapy in first/second line therapy
- approvable letter from FDA for first-line therapy in metastatic colorectal cancer; EU approval in Feb 2001

KYTRIL®
granisetron HCl
tablets and injection

- sales of CHF 490 (for SKB), -9 % growth
- successfully acquired from GSK

Roche oncology
Expectations for 2001

Roche

Pharmaceuticals

Herceptin®
Trastuzumab
anti-HER2 monoclonal antibody

- EU launch roll-out
- Japan NDA approval and launch
- expand market through increased HER-2 testing
- initiate adjuvant breast cancer study

MABTHERA®
RITUXIMAB

- EU filing and approval of combination therapy in int./high grade NHL
- phase 2 data in rheumatoid arthritis
- Japan launch with Zenyaku Kogyo

Xeloda®
(capecitabine)

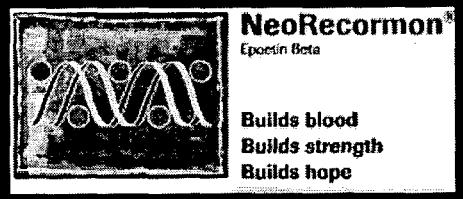
- EU launch roll-out of first line therapy in metastatic colorectal cancer
- USA approval of first line therapy in metastatic colorectal cancer
- NDA filing and approval in EU and USA of combination therapy in first/second line therapy for metastatic breast cancer
- NDA filing in Japan for monotherapy as third line therapy in metastatic breast cancer
- complete recruitment for global adjuvant colorectal cancer study

Roche oncology

Expectations for 2001

Roche

Pharmaceuticals



- NDA approval in EU for haematological tumors (NHL, CLL, MM)



- NDA filing in EU and USA for treatment of bone metastases in breast cancer



- NDA filing in USA for post-operative nausea and vomiting (PONV)
- significantly increase marketing and development support

EGFR antagonist (OSI774)

- successfully in-license with Genentech from OSI
- implement full phase 3 programme

pegylated GCSF

- in phase 3 for neutropenia with Amgen
- Roche to partner in markets outside US and Japan

3/01

HIV/AIDS

Maintaining a substantial franchise .....

Roche

Pharmaceuticals

VIRACEPT

- sales of CHF 500m, 15 % growth in 2000
- leadership of protease inhibitor market maintained
- positive opinion on BID dosing expected H1 2001 in EU
- clinical data demonstrates that first-line use does not compromise future treatment options

FORTOVASE

- Sales of CHF 170m, -5 % growth in 2000
- DHHS (USA) guidelines list Fortovase/ritonavir in "strongly recommended" 'A' category (Feb 2001)
- high-dose Fortovase and low-dose ritonavir shows strong clinical potential with opportunity to increase revenue
- Fortovase/ritonavir v. Crixivan/ritonavir
- Fortovase/ritonavir v. Sustiva

} data expected H2 2001

HIV/AIDS

..... and then growing it

Roche

Pharmaceuticals

- first agent clinically developed to act by stopping virus entering the human cell
- good safety profile demonstrated and anti-viral activity confirmed (phase 2 data)
- good activity demonstrated in drug-resistant viruses
- phase 3 studies now recruiting → study completion expected H1 2002

- highly potent antiviral activity demonstrated
- phase 2 to run through 2002

CellCept®

Building the next cornerstone of immunosuppressive therapy

Roche

Pharmaceuticals

- sales of CHF 790m, 30 % growth
- 'all organ' indication approved in Australia
- significantly superior for long-term survival compared to azathioprine in renal transplantation
  ↳ long term follow-up study in > 66,000 patients[1]

- launch roll-out of liver transplant indication in USA and Europe
- launch roll-out of paediatric renal transplant indication in USA and Europe
- launch roll-out of renal rejection prevention indication in Japan
- data establishing CellCept as cornerstone of immunosuppressive regimens
- further demonstration of improved long term patient and graft survival

[1] Ojo et al, 'Transplantation', June 2000

3/01

XENICAL
orlistat
Lose Weight. Gain Life

Learning from the market place

A unique marketing challenge

Roche

Pharmaceuticals

- minority of doctors active in weight management
- more interested in long-term health risks than in today's "well-being"

- key demand drivers
- unrealistic expectations
- more interested in today's problems than tomorrow's health risks
- they need support

- important player in the system
- under-utilised

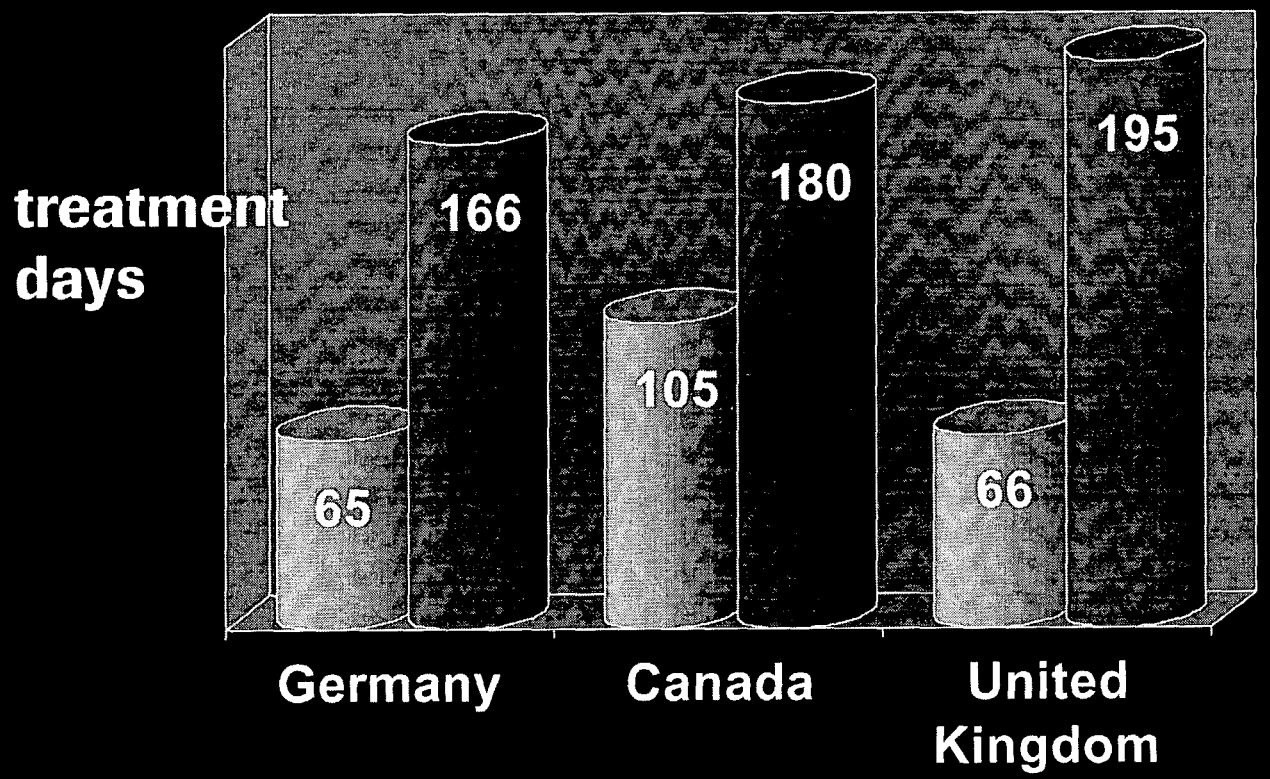
XENICAL® orlistat
Lose Weight. Gain Life

Patients must be supported

Quality support increases duration of therapy, drug performance, and patient satisfaction

Roche

Pharmaceuticals



3/01

XENICAL
orlistat
Lose Weight. Gain Life

In type 2 diabetes

Compelling new data to expand the market

Roche

Pharmaceuticals

- currently 140 million people worldwide (300 million by 2025)
- 4 out of 5 people with type 2 diabetes are overweight or obese
- most anti-diabetic medications cause weight gain
- weight loss and maintenance difficult to achieve by diet and exercise alone

- weight loss is 3-4 times greater that through diet alone
- significant improvements in blood sugar control (↓ fasting blood glucose, ↓ HBA_{1c})
- improved lipid (LDL cholesterol) profile
- reduction in anti-diabetic medication use

3/01

XENICAL®
orlistat
Lose Weight. Gain Life

Returning to growth

Roche

Pharmaceuticals

- focus activities on target doctors
- increase duration of therapy
- communicate new data in type 2 diabetes

3/01

Research and clinical milestones in 2000

Roche

Pharmaceuticals

- DeCode identifies genetic basis of osteoporosis, PAOD, schizophrenia, stroke, Alzheimer's
- Xenical-assisted weight loss 3-4 times greater than diet alone
- 'Copernicus' study stopped early as interim analysis shows significant survival benefit for carvedilol-treated patients
- Tamiflu, if taken within first 12 hours of symptoms, halves illness duration
- PEG (40 kD) IFN offers promise of substantial improvement in therapy over standard interferon
- Mabthera + CHOP as first-line therapy in int./high-grade NHL delivers the first improvement in overall survival in 20 years
- Xeloda + Taxotere becomes the first combination therapy to show significantly superior survival rates compared to standard monotherapy in patients with metastatic breast cancer

3/01

Integrated Health Care Solutions

Diagnostics influencing the use of therapeutics

Roche

Pharmaceuticals

- flu surveillance for
- enzyme marker test for
- early response prediction for
- EU label for requires HER2 status diagnosis
- pre-clinical IHC managers now developing IHCS concepts at every Pharma research site

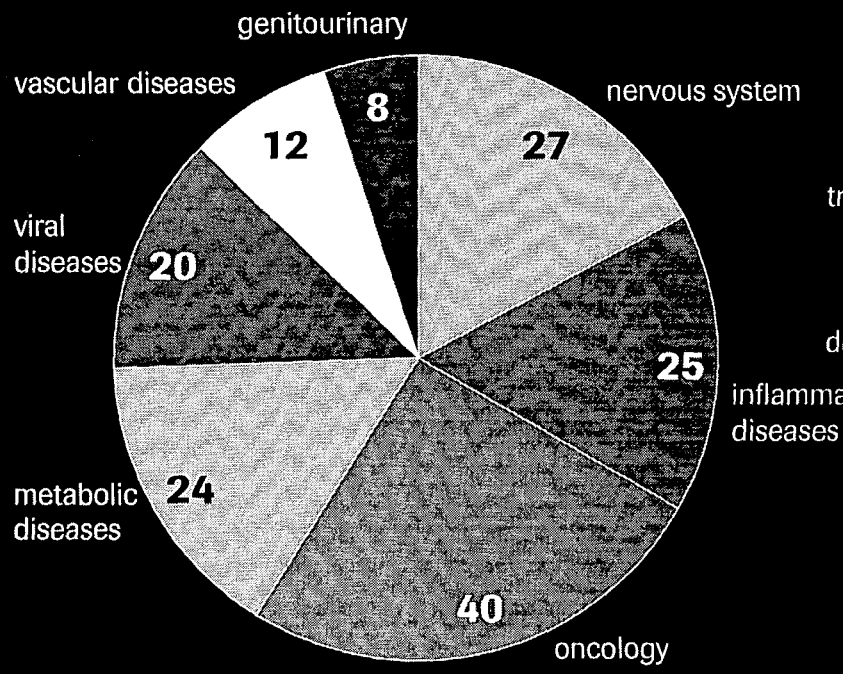
Roche Research & Development Pipeline

A strong foundation

Roche

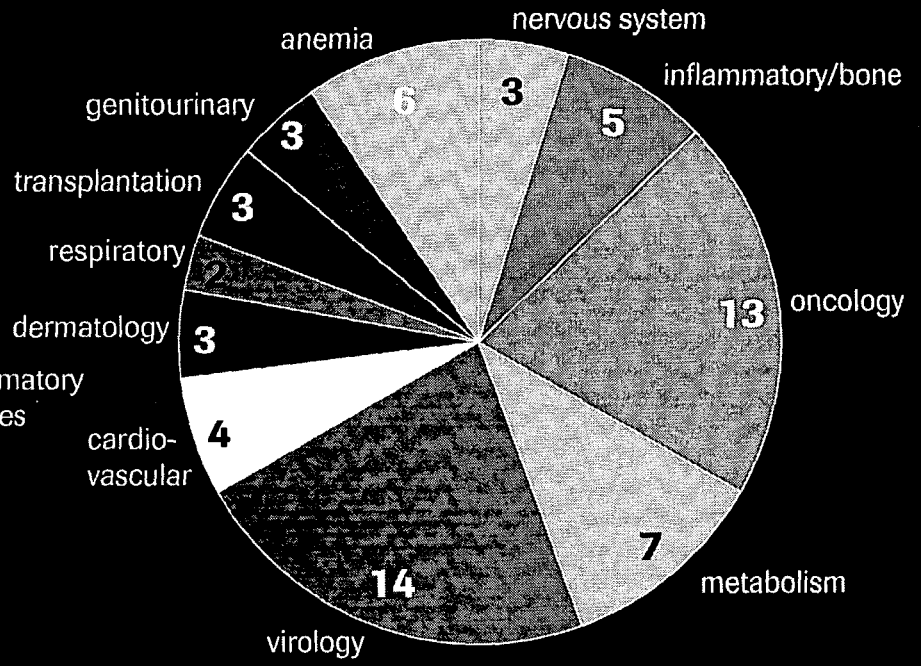
Pharmaceuticals

Research



156 projects

Development



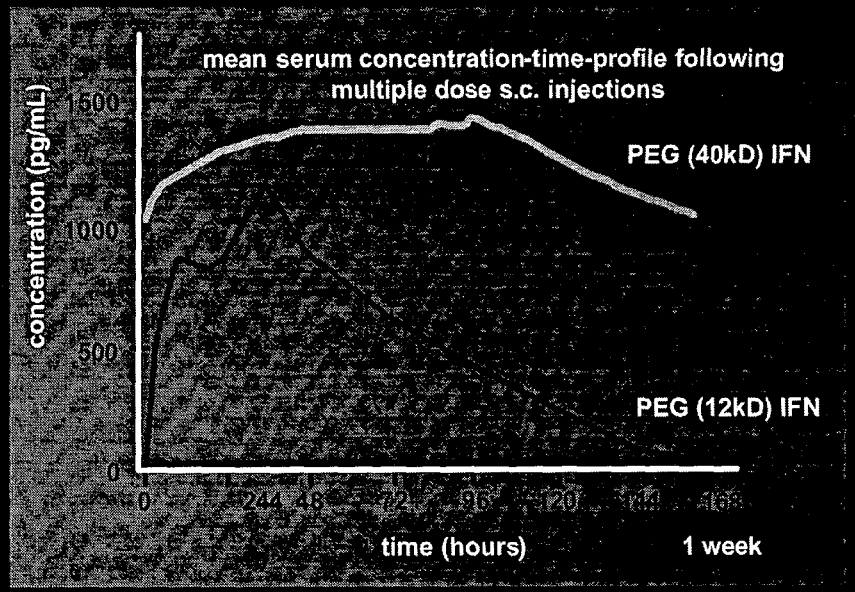
63 projects with 40 different molecular entities

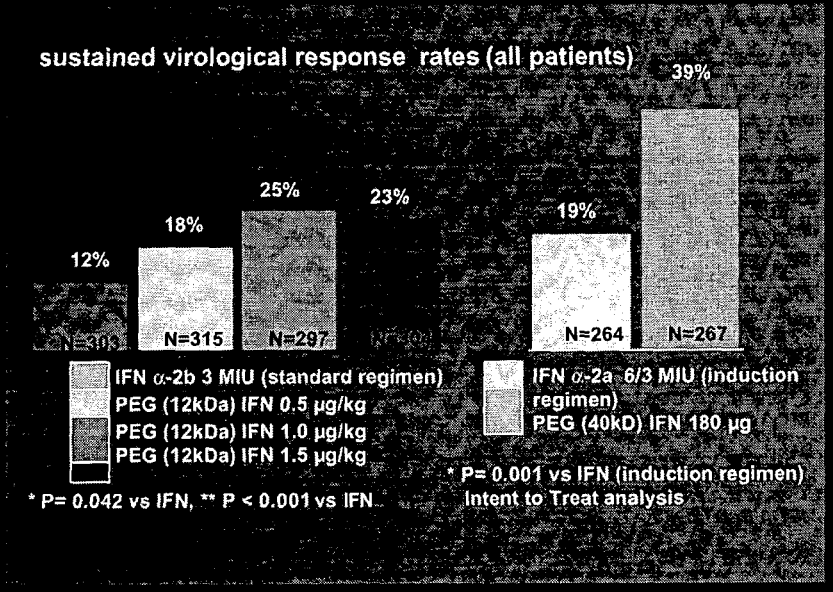
3/01

The 40 kD pegylated interferon
Superior kinetics suggest superior efficacy

Roche

Pharmaceuticals





3/01

The 40 kD pegylated interferon

Significantly improved efficacy across all patient groups

Roche

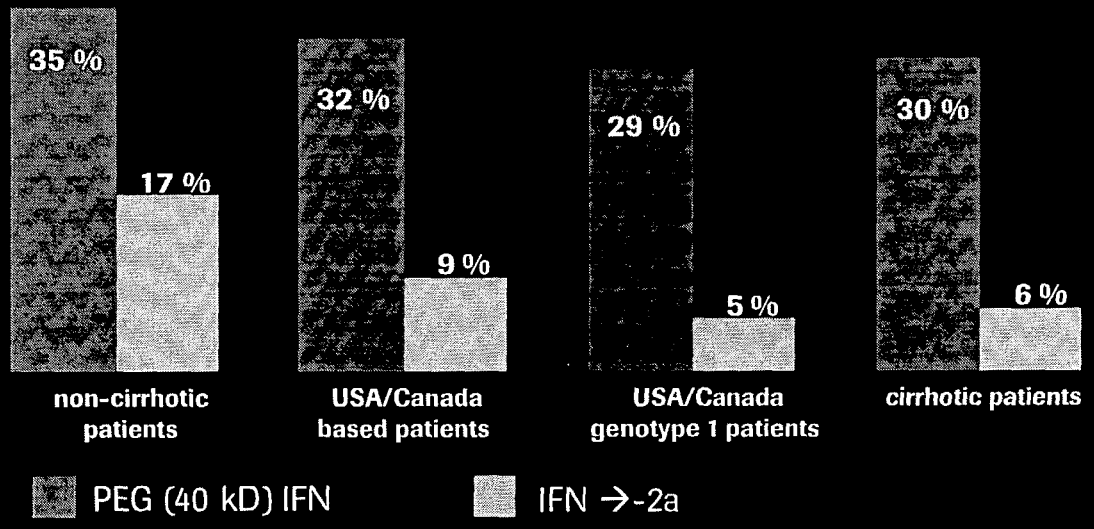
Pharmaceuticals

Global meta-analysis of all trials

Number of patients treated in PEG (40 kD) IFN program > 1600

- 691 patients were treated in USA/Canada
- number treated @ 180 µg > 600 patients
- approx. 30 % of these patients were cirrhotic

Sustained response rates for PEG (40 kD) IFN @ 180 µg were:



3/01

The 40 kD pegylated interferon

An optimised cornerstone for hepatitis C therapy

Roche

Pharmaceuticals

- **Optimal once weekly pharmaco-kinetic profile**
- **39 % sustained viral response in pivotal trial**
  - 28 % (global) 29 % (US/Canada) in genotype 1
  - 30 % in patients with cirrhosis
- **Statistically improved liver histology**
- **Statistically improved quality of life**
- **Similar safety profile as standard interferon**
- **No dose-adjustment needed**
  - cirrhotics, elderly, renally-impaired or body weight
- **Ready to use solution, not a powder**

3/01

Ibandronate

Strong evidence from new osteoporosis data

Roche

Pharmaceuticals

- major phase 3 treatment trial recently completed: promising results with both daily and intermittent oral regimens
- high potency of ibandronate and new data provides foundation for development of innovative oral and intravenous intermittent regimens
- regulatory strategy and complementary programmes currently being evaluated

NDA filings
A strong near-term flow

Roche

Pharmaceuticals

carvedilol	severe CHF (EU)	
ibandronate		bone metastases in breast cancer (EU, USA)
ibandronate		osteoporosis treatment and prevention (EU, USA)
MabThera	int./high grade NHL (EU)	
NeoRecormon	once weekly dose (EU)	
PEG (40 kD) IFN	chronic hepatitis C (EU)	chronic hepatitis C in combination with ribavirin (USA)
Tamiflu	influenza treatment and prevention (EU)	treatment of paediatric influenza (J)
Viracept	bd dosing in HIV/AIDS (EU)	
Xeloda	combination therapy in breast cancer (EU, USA) metastatic breast cancer (J)	
Xenical	type II diabetes* (USA)	

* precise claims to be defined with regulatory authorities

3/01

Launch roll-out

A strong near-term flow

Roche

Pharmaceuticals

Accutane	new formulation (USA)	
CellCept	kidney transplant rejection in children (EU) treatment/prevention acute liver transplant rejection (EU)	kidney transplant rejection in children (USA)
Dilatrend		severe CHF (EU, USA)
Herceptin	metastatic breast cancer (EU)	metastatic breast cancer (Japan)
MabThera	low-grade NHL (Japan)	int./high-grade NHL (Japan)
NeoRecormon	hematological tumors (EU)	once weekly dosing (EU)
PEG (40 kD) IFN		chronic hepatitis C (USA)

3/01

Launch roll-out
A strong near-term flow

Roche

Pharmaceuticals

Tamiflu	influenza prevention (USA) pediatric influenza (USA) influenza treatment (Japan)	
Valcyt	CMV retinitis treatment (USA)	
Viracept	BD dosage (EU)	
Xeloda	metastatic colorectal cancer (EU, USA)	combination therapy in breast cancer (EU, USA)
Xenical		type II diabetes* (USA)

* precise claims to be defined with regulatory authorities

3/01

Launch schedule 2002 - 2005

Nine NME's in four years

Roche

Pharmaceuticals

2002	2003	2004	2005
ibandronate *treat/prevention of osteoporosis*	NeoRecormon *radiotherapy-induced anemia*	PEG (40 kD) IFN *chronic hepatitis B*	next generation EPO *anemia*
MabThera *int/high-grade NHL*	ibandronate *bone metastases in breast cancer*		insulin sensitiser *type 2 diabetes*
PEG (40 kD) IFN + ribavirin *chronic hepatitis C*	T-20 *HIV/AIDS*		PEG (40 kD) IFN *various malignancies*
Tamiflu *treat/prevent influenza (EU)*	Xenical *prevention of type 2 diabetes*		alpha 1 agonist *stress incontinence*
Valcyt *treatment CMV retinitis*			T-1249 *HIV/AIDS*
			CellCycle inhibitor *solid tumors*
			EGFR (OSI-774) *non-small cell lung cancer*

3/01

Clinical news expected in 2001

Roche

Pharmaceuticals

March
- Herceptin + chemotherapy survival data in NEJM
- Copernicus study (carvedilol) in severe CHF at ACC

May
- pegylated interferon + ribavirin in chronic hepatitis C at DDW

July
- Fortovase + ritonavir once daily v. Sustiva at IAS

September
- Family Intervention Trial (Tamiflu) at ICAAC

December
- Mabthera/Rituxan as first line therapy in low-grade NHL at ASH
- oral ibandronate in bone metastases in cancer

[illegible] 2001
- oral ibandronate in treatment of osteoporosis (phase 3 data)

Pharmaceuticals Division

Summary

Roche

Pharmaceuticals

2000 - Rx suffered from patent expiry and flattening Xenical sales

- Genentech continued strongly
- margins maintained

2001 - return Xenical to growth

- build oncology, HIV/AIDS and transplantation franchises
- launch PEG (40 kD) IFN
- seek strategic moves which fit (eg Kytril, OSI 774)

Roche Holding Ltd

February 2001 - Sales of top 20 Pharma products 2000

As Posted on Roche.com

Furnished Under Rule 12g3-2(b)
Roche Holding 82-3315

Roche Rx & Genentech sales 2000

Eight products with sales >CHF 500m

Roche

Pharmaceuticals

Rocephin	1,710	-3 %	-10 %
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Dilatrend	240	36 %	35 %

3/01

English Translation of the Roche Notice in the Swiss Official Gazette of Commerce of 19.12.2000

Roche Holding AG

Roche Holding AG is a company listed at the Swiss Exchange with a share capital of CHF 160 million, divided into 1'600'000 bearer shares with a nominal value of CHF 100 each*. In addition there are 7'025'627** Genussscheine (non-voting equity securities) which are also in bearer form.

Shareholders have given notice pursuant to Article 20 and 51 of the Swiss Federal Act on Stock Exchanges and Securities Trading, that a contractually organised shareholders' group exists, which owns 800'200*** shares.
Members of this group are:

Mr. Dr. Lukas Hoffmann	(disposes personally of more than 390'000*** voting rights)
Ms. Vera Michalski-Hoffmann	
Ms. Maja Hoffmann	
Mr. André S. Hoffmann	
Ms Vera Oeri-Hoffmann	(disposes personally of more than 390'000*** voting rights)
Mr. Dr. Andreas Oeri	
Ms. Sabine Duschmalé-Oeri	
Ms. Catherine Oeri	
Ms. Beatrice Oeri	
Ms. Maja Oeri	

As previously announced Mr. Fritz Gerber will become a member and speaker of this shareholders' group as of 4 April 2001.

Roche Holding AG

14 December 2000

* After the 100 for 1 split effective 4 May 2001 160'000'000 shares with a nominal value of CHF 1 each.
** After the 100 for 1 split effective 4 May 2001 702'562'700 Genussscheine.
*** After the 100 for 1 split effective 4 May 2001 all share or voting rights numbers have to be multiplied by 100.

English Translation of the Roche Notice in the Swiss Official Gazette of Commerce of 11 June 2001

Disclosure of Shareholdings

Pursuant to the Swiss Federal Act on Stock Exchanges and Securities Trading Roche received the following notice:

- BZ Group Holding Joint Stock Company, Egglirain 24, 8832 Wilen (Switzerland): The company on 2 May 2001 fell below 5 per cent of the voting rights in Roche Holding AG.

- Novartis AG as economic owner and its subsidiary Novartis Holding AG, both Lichtstrasse 35, 4056 Basel (Switzerland), as direct purchaser, hold since 11 May 2001 32'000'000* bearer shares of Roche Holding AG and by this virtue 20% of the voting rights.

Roche Holding AG
Schaffhauserrheinweg 125
4070 Basel

* After the 100 for 1 split effective 4 May 2001 this corresponds to 3'200'000'000 shares.

Roche Holding Ltd

24 October 2000 - R& D Day

As Posted on Roche.com

Furnished Under Rule 12g3-2(b)
Roche Holding 82-3315

Roche

Pharmaceuticals

Healthcare Strategy

Jonathan Knowles

Head of Pharmaceuticals Research

R&D/00

Today's healthcare problems

Tomorrow's value from specificity and the molecular understanding of pathology

Roche

Pharmaceuticals

No drugs for certain disorders

Inter-individual differences in drug efficacy

Class of drug	Refractory/insufficient response
AT2-antag	10-25%
SSRI	10-25%
ACE-I	10-30%
Beta blockers	15-25%
Tricycl. AD	20-50%
HMGCoAR-I	30-70%
Beta-2-agonists	40-70%

Significant rate of adverse events

serious	6.7 %	2 m events
fatal	0.3 %	100,000 events

(JAMA 98;279:1200)

R&D/00

Integrated Health Care:
Diagnostics is the critical link

Roche

Pharmaceuticals

from today...



...into the future



R&D/00

Roche

Roche is best placed to capture the value from the Healthcare Revolution

R&D/00

Todays agenda of the Roche R&D day

Roche

Pharmaceuticals

- Progress in Roche Genetics
- Roche Diagnostics
  - Why take a look at Roche Diagnostics
  - Roche Molecular Systems and future of nucleic acid testing
  - New products in Roche Patient Care
- Roche Pharmaceuticals
  - Research productivity and quality medicines
  - A promising early stage pipeline
  - The growth drivers in the late stage pipeline

Roche

Pharmaceuticals

Roche *Genetics* and Integrated Healthcare

Klaus Lindpaintner

Director, Roche *Genetics* Europe

R&D/00

Genetics and Genomics

Key to more individualized healthcare

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Pharmaceuticals

Short/mid-term: pharmacogenetics

Mid-term: genetic epidemiology & pharmaco/toxicogenomics

Long-term: new drug target/pathway discovery

R&D/00

Roche Genetics
Goals and activities

Roche

Pharmaceuticals

- Matrix organization coordinating genetics/genomics/proteomics activities
  - linking Pharmaceuticals and Diagnostics Divisions
  - linking Research, Clinical Development, Business
  - major alliances (Affymetrix, Incyte, deCode, CuraGen, Myriad)
  - Roche Center for Medical Genomics

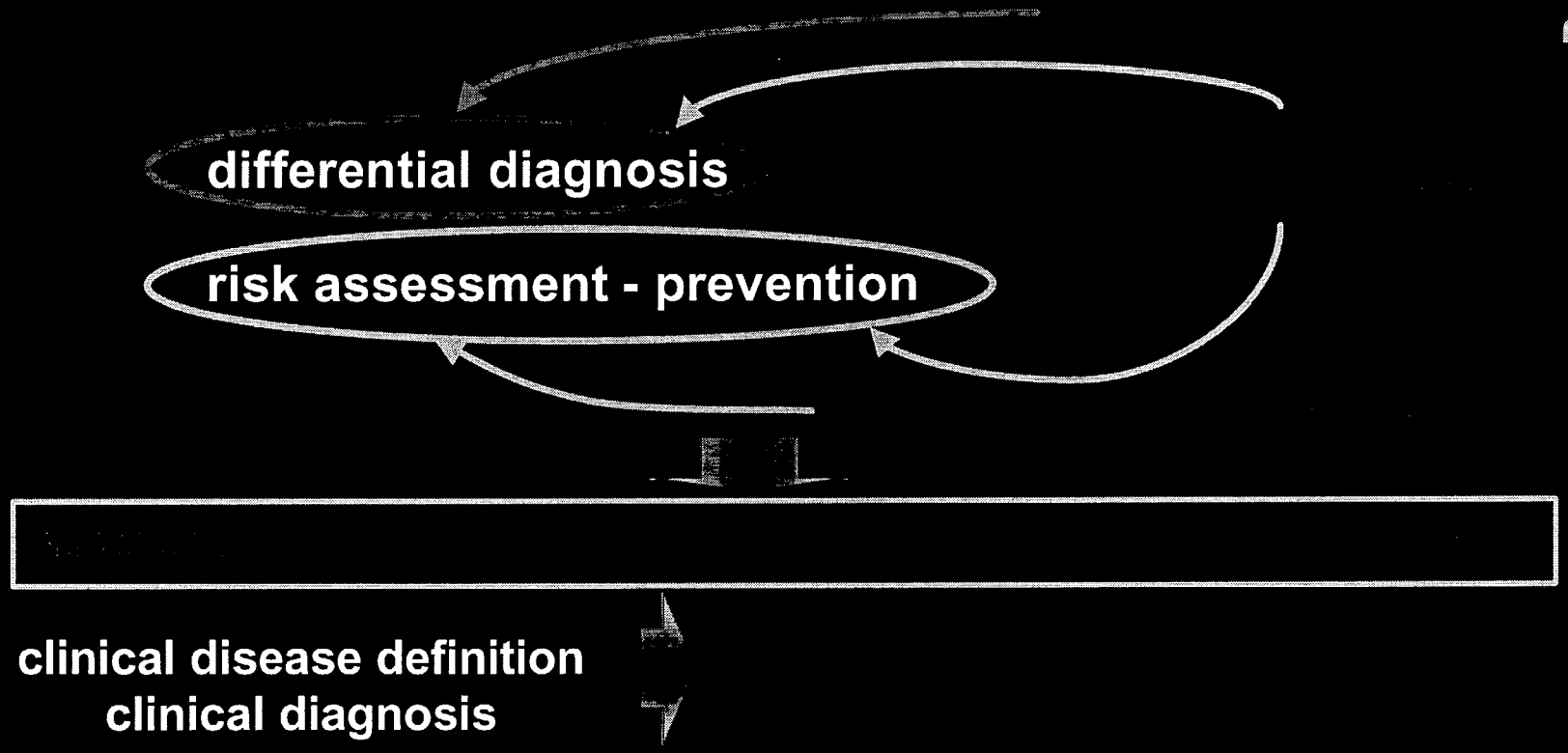
- Major areas of impact
  - basic research: new, causative targets
  - discovery: target validation, pharmaco/toxicogenomics
  - development: pharmacogenetics

R&D/00

Impact of genetics on medicine

Evolution, not revolution

Historical drivers of medical progress



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Pharmacogenetics: malignant melanoma

How to avoid treating non-responders to α- interferon

Roche

Pharmaceuticals

α-interferon is a mainstay of therapy, however:

only 20-30 % RESPONDERS benefit form INF-α therapy

70-80 % NON-RESPONDERS have no benefit, only potential side effects

only high-risk MM patients currently receives INF-α therapy

pre-treatment profiling for likely responders/non-responders would

- increase effectiveness and cost-effectiveness of treatment
- improve quality-of-life of non-responders

make use of INF-α compelling and standard practice at earlier stages

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Interferon in malignant melanoma

Pharmacogenetics approach to predict INF-α response

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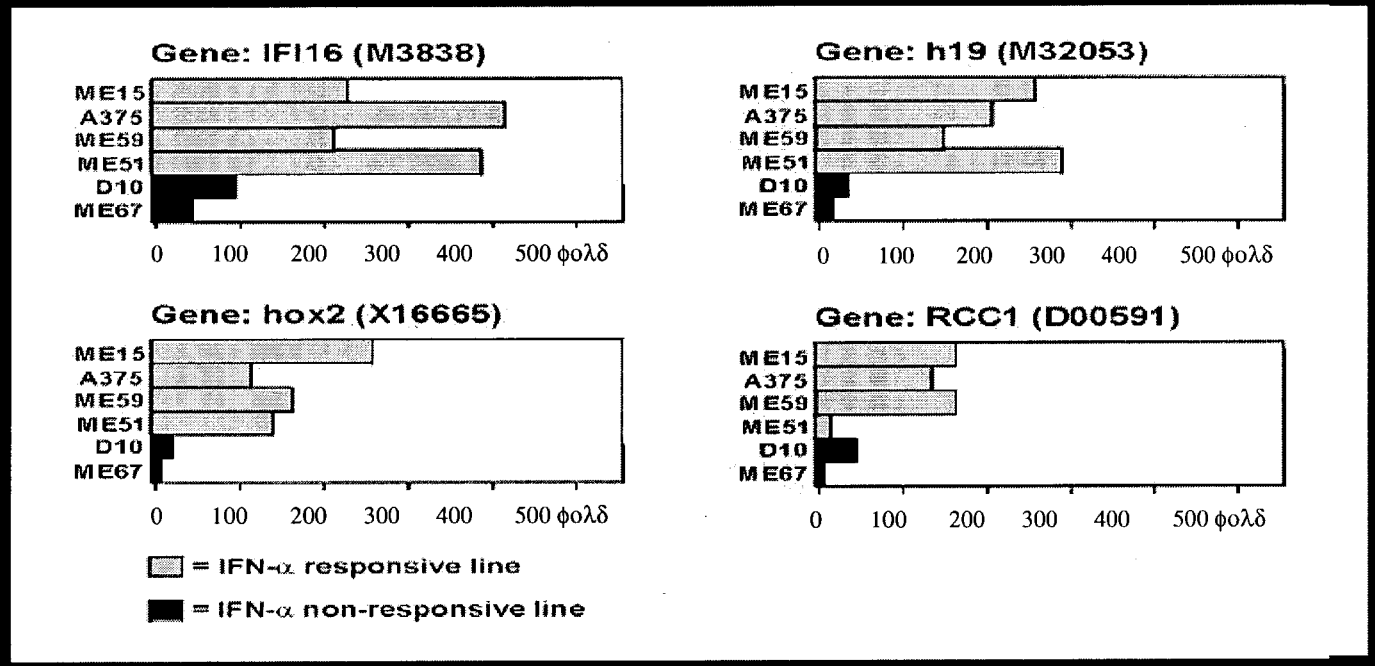
- Cultured cell lines from responders' and non-responders' tumors
- 4 responder and 2 non-responder cell lines obtained in collaboration with University Hospitals of Basel
- Measured comparative gene expression of ~10,000 genes using gene chip technology
- Analyzed for patterns of differential gene expression characteristic for the two sets of cell lines

Interferon in malignant melanoma

Differential gene expression predicts responders

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<u>Among 10,000 genes:</u>

4 genes in responders' cell lines overexpressed consistently with a highly significant difference

R&D/00

Roche Sample Repository

Insurance policy against surprises

Roche

Pharmaceuticals

To investigate potential role of gene variants to drug efficacy/toxicity if indicated by data

Implemented for all Roche clinical trials

>95 % successful participation of centers

>10,000 samples collected

Commitment to transparency, bioethical principles

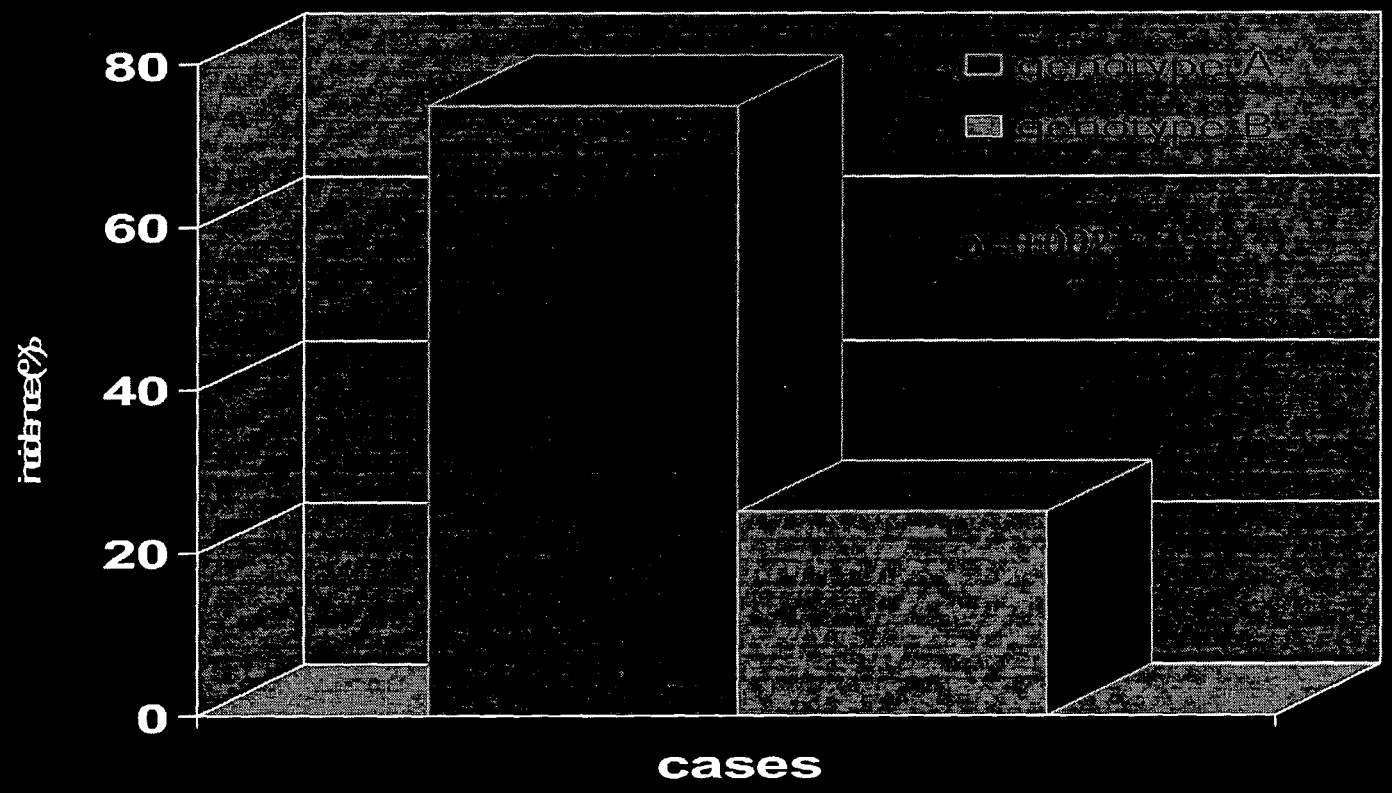
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TASMAR®: a SNP predicts liver enzyme increase

Successful application of pharmacogenetics

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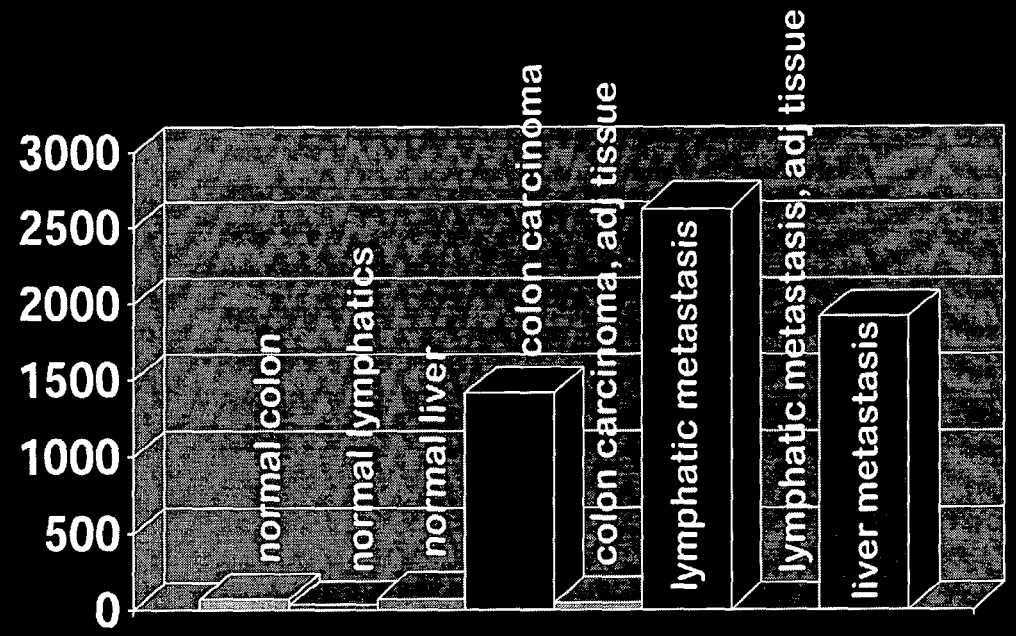
R&D/00

Target discovery with expression profiling

A novel receptor correlates highly with disease

Roche

Pharmaceuticals



Study

a large number of normal, colon cancer, lymphatic and hepatic metastatic, as well as adjacent tissues examined using gene chip expression profiling

Result

a novel G-protein coupled receptor correlates highly with disease (this receptor class has provided many of the most important targets)

R&D/00

Roche-deCODE alliance
On track to deliver the milestones

Roche

Pharmaceuticals

In 12 diseases, 4 indication areas:

- cardiovascular diseases
- inflammatory diseases
- metabolic diseases
- CNS-psychiatric diseases

Milestone driven

Commitment to rapid integration of discoveries into Roche projects

Results to date

- 3 milestones announced, 1999-2000: osteoarthritis, stroke, Alzheimer's disease
- several additional milestones still to be announced in 2000

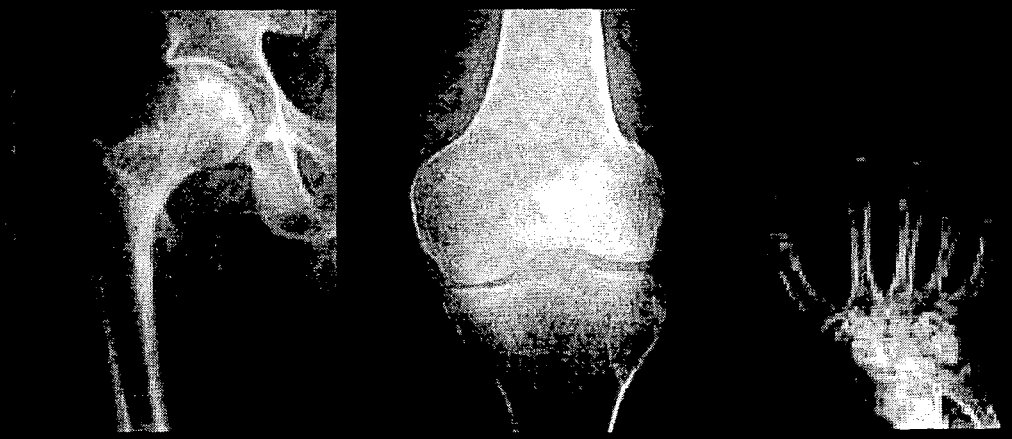
R&D/00

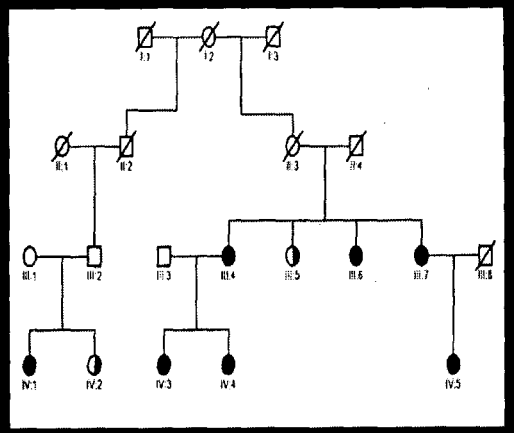
deCODE-Roche Discoveries

Molecular disease definition: osteoarthritis

Roche

Pharmaceuticals





Hip-, knee-, wrist-OA: one disease or separate diseases?

deCODE studies find 3 gene locations linked to OA

- 1 each specific for hip and wrist OA in some families;
- A third that appears to contribute to all 3 entities equally

Molecular diagnostic, not imaging, will be critical

R&D/00

Genetics, genomics, and portfolio impact

Roche

Pharmaceuticals

Tools	Application	Consequences for portfolio
SNP-Profiling	Pharmacogenetics	More patient-specific, more effective drug Rising importance of *in-vitro* diagnostics Integrated Health Care Products
Gene-Chips	Pharmacogenomics Toxicogenomics New target discovery	Earlier, better compound selection Earlier attrition of future failures New targets for diagnostics & therapeutics
Genetic Studies	New target discovery	New targets for diagnostics & therapeutics Integrated Health Care Products
Roche Center for Medical Genomics	New target functional assessment HGP data mining	"Validated" new targets for diagnostics & therapeutics for rapid portfolio entry

Roche

Diagnostics

Diagnostics

Heino von Prondzynski

Head of the Diagnostics Division

R&D/00

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Roche

Diagnostics

Innovation at Roche Patient Care

Innovation at Roche Molecular Systems

The future of nucleic acid testing

Why look at Roche Diagnostics?

Current perception of the diagnostics sector

Roche

Diagnostics

Size of market
(<1/10 of Pharma)

Growth rate
(5 % p.a.)

Profitability
(EBIT margin typically <14 %)

R&D/00

Why look at Roche Diagnostics?

Current perception of the diagnostics sector

Roche

Diagnostics

Broad product scope
No single "big seller"

From tools for advanced diagnostic research to "consumer goods" type monitoring devices

Broad customer scope
Multi-level relationship

- *From research institutes to large commercial organizations to general public*
- *Instruments, reagents, disposables, spare parts, service, training, leasing, ...*

Business environment

Regulatory requirements, public issues, compensation issues, ...

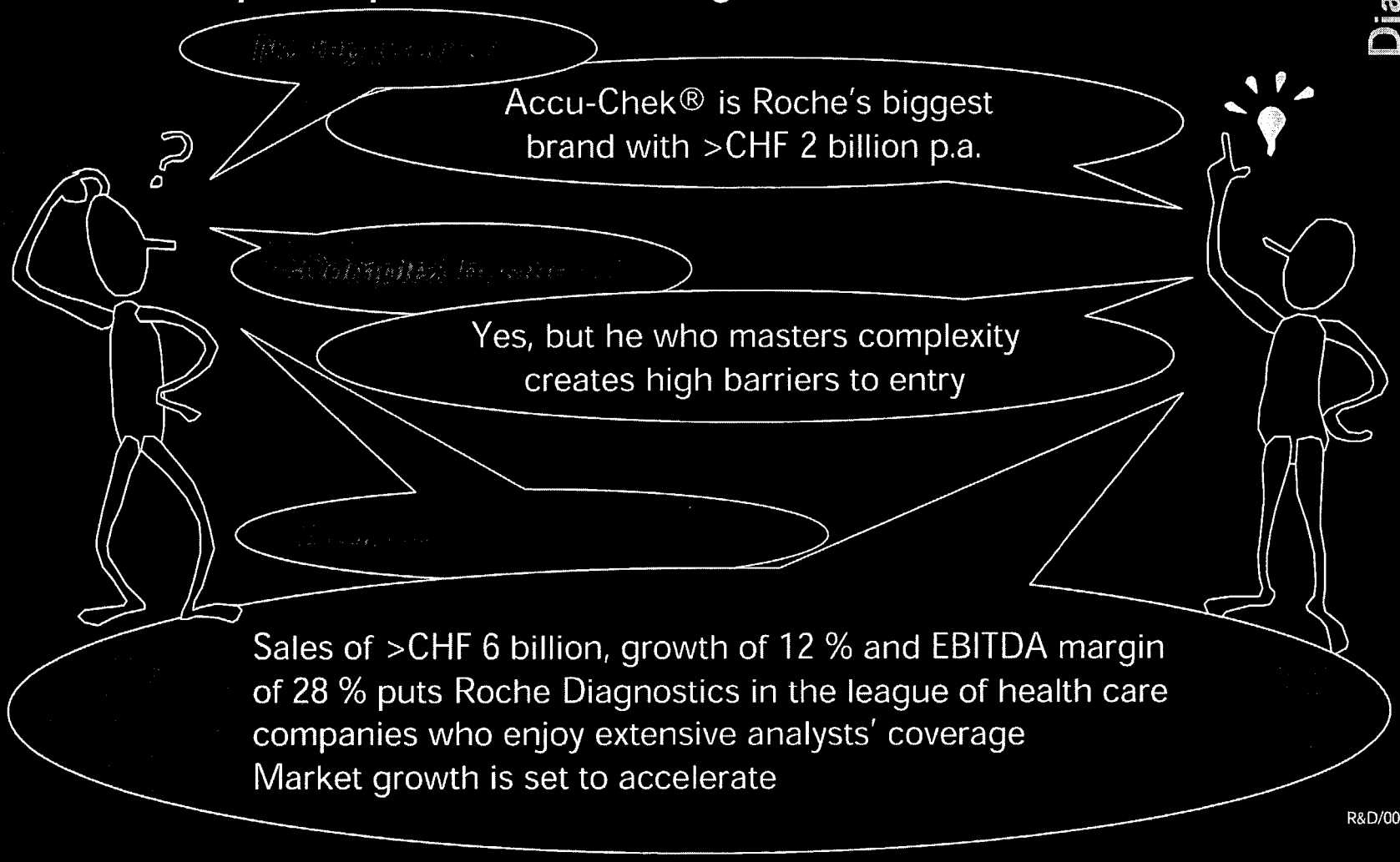
R&D/00

Why look at Roche Diagnostics?

Current perception is wrong for Roche

Roche

Diagnostics



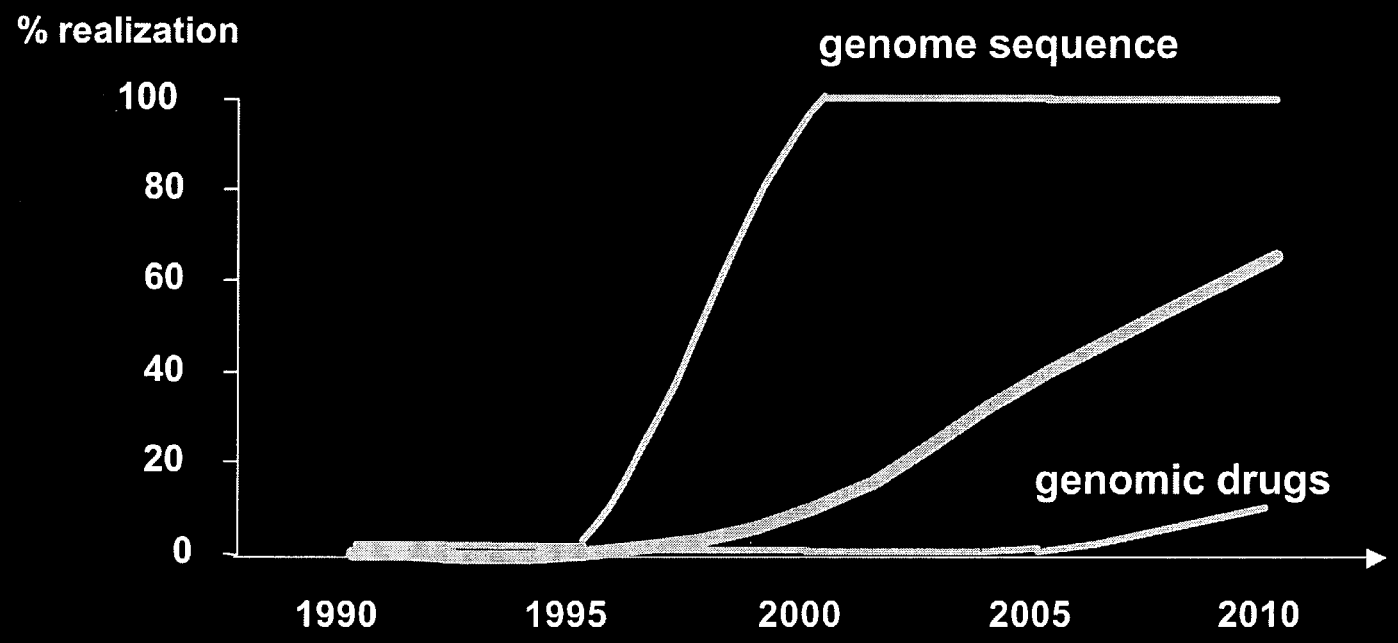
R&D/00

Drivers accelerating market growth

Genomics: diagnostics will precede drugs

Roche

Diagnostics



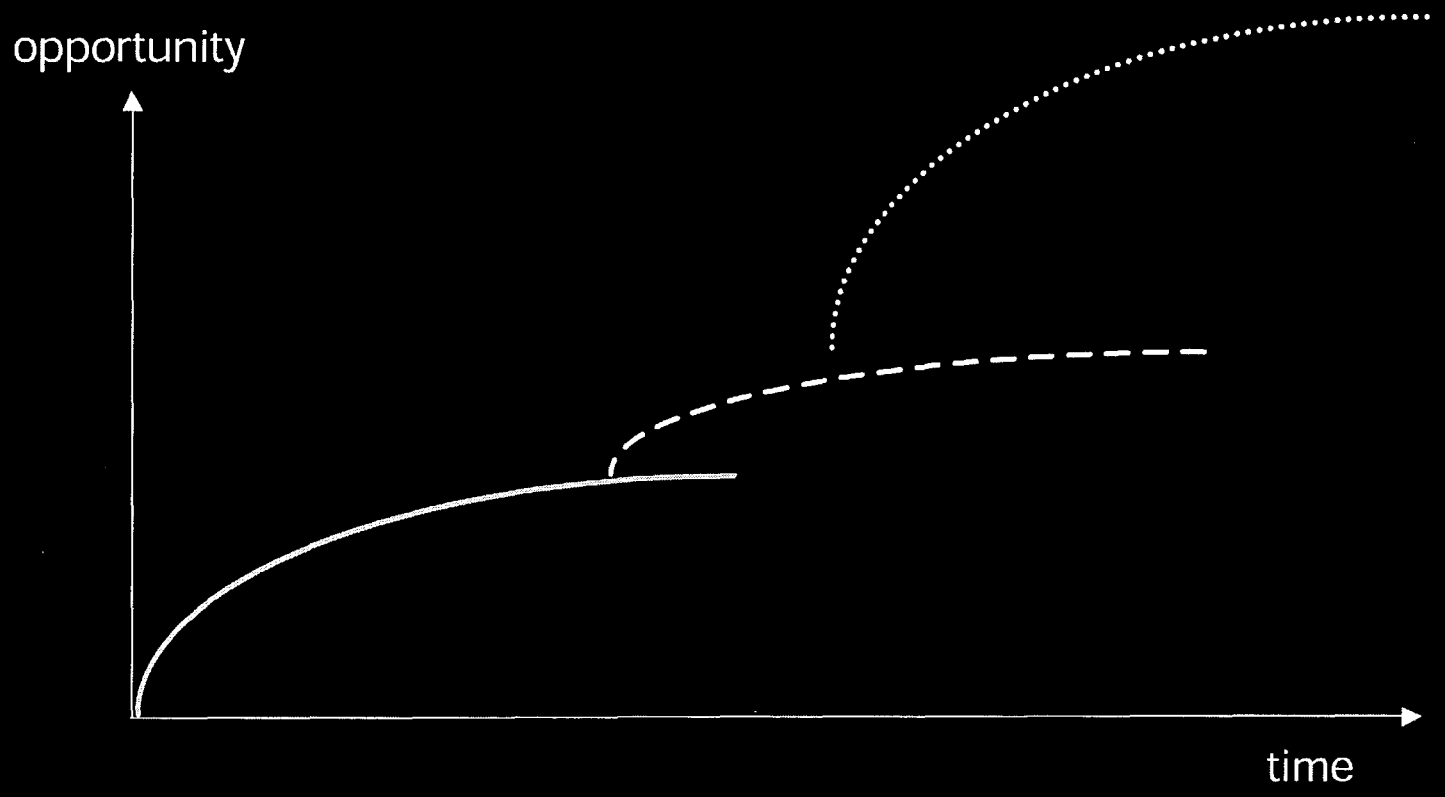
R&D/00

Drivers accelerating market growth

Nucleic acid testing set to create new markets

Roche

Diagnostics



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Integrated Health Care:
Diagnostics is the critical link

Roche

Pharmaceuticals

from today...

diagnosis → therapy → therapy moni-toring

...into the future

predis-position screening → targeted monitoring → prevention → diagnosis → therapy → therapy moni-toring

lifestyle

nutrition

medicines

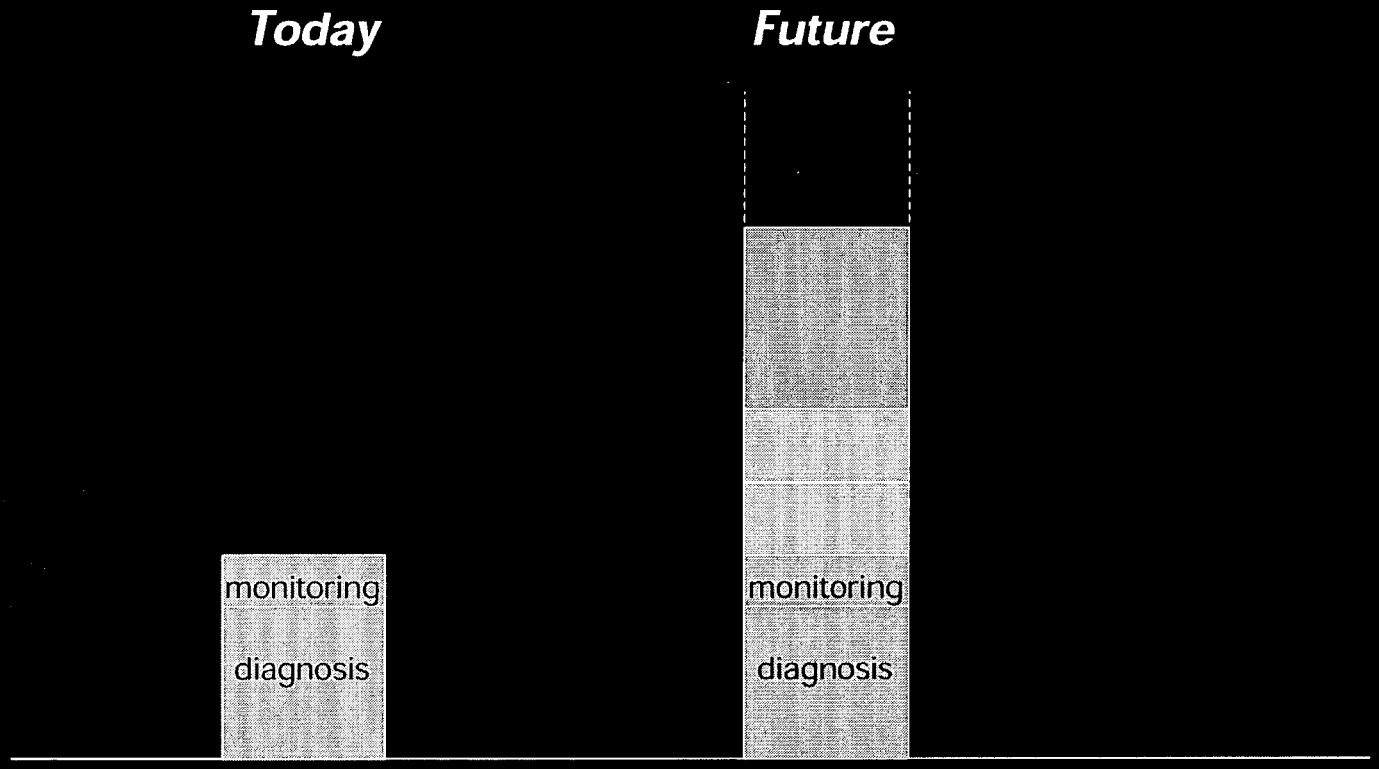
R&D/00

Roche Diagnostics

Expanding value creation on multiple levels ...

Roche

Diagnostics



"Tools for accurate, high quality data"

"Value beyond diagnostics" - convenience, peace of mind

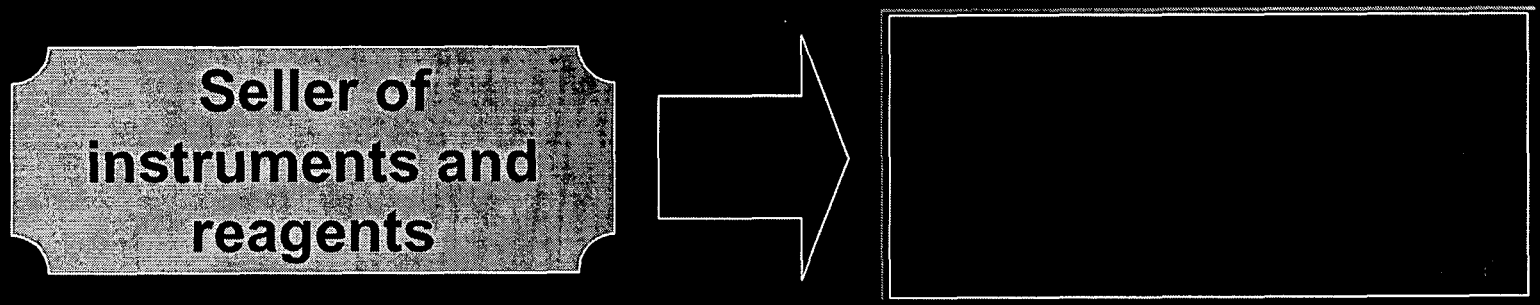
R&D/00

Roche Diagnostics

...and *moving towards a new strategic vision*

Roche

Diagnostics



R&D/00

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Diagnostics

Roche Patient Care

Innovation bringing the lab to the patient

Staffan Ek

Head of Roche Patient Care

R&D/00

Patient Care: we bring the lab to the patient

New technologies in diabetes care

Roche

Pharmaceuticals

short term

Minimize discomfort and inconvenience

- strip/meter integration (Accu-Chek Compact)

short to medium term

Differentiated invasive systems through miniaturization

- integrated less invasive devices

medium to long term

Successfully develop next generation technology

- continuous monitoring
- automated pancreas
- non-invasive screening

R&D/00

New technologies in diabetes care
Strip / meter integration

Roche

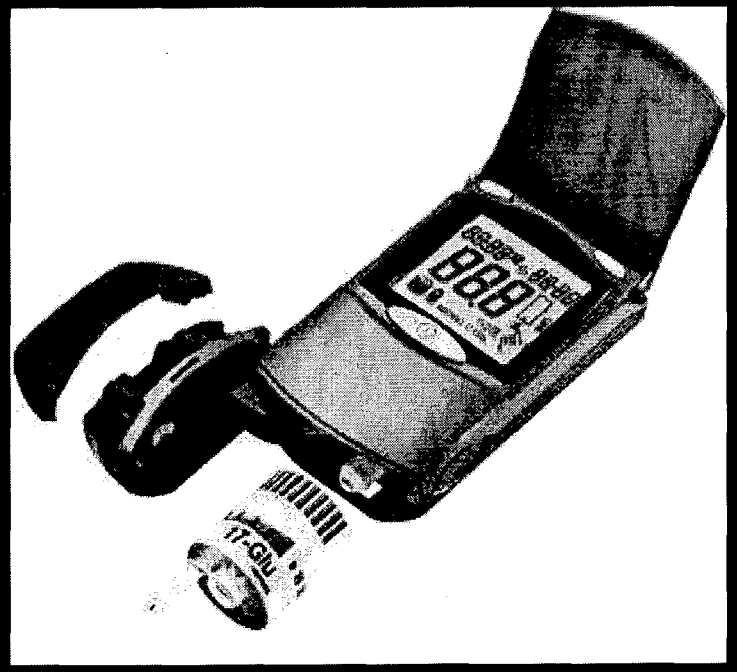
Diagnostics

New level of comfort: turn on - apply blood - done!

Convenient for people on the move

Excellent precision: lab standard

Market introduction: end 2000



R&D/00

New technologies in diabetes care
Miniaturization

Roche

Diagnostics

Micro lancing
- virtually pain-free micro skin incision producing very small sample size
- feasibility studies

Nanoliter measurements
- accurate quantification of glucose in a volume of down to 10 nanoliters (two orders of magnitude lower than present technologies)
- proof of principle demonstrated



R&D/00

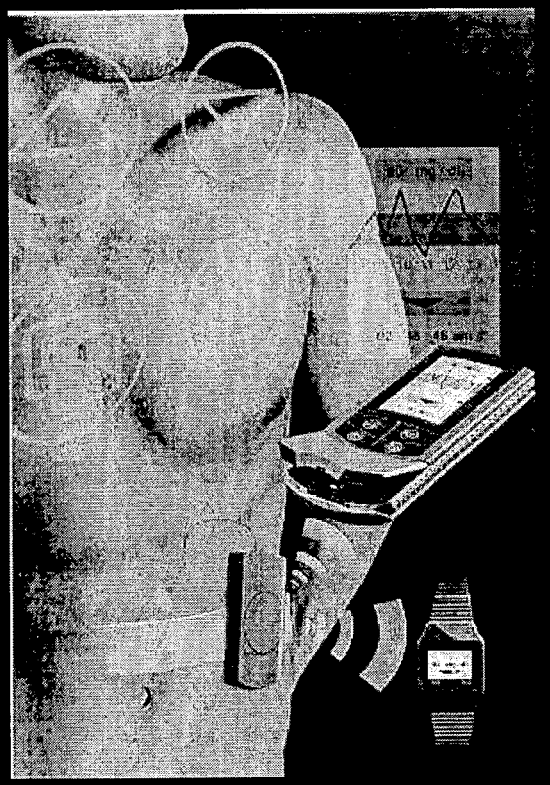
New technologies in diabetes care
Continuous glucose monitoring

Roche

Diagnostics

Continuous glucose measurement and display for better therapy guidance

- subcutaneous micro-dialysis sensor
- device containing reagent
- cartridge and electronics
- prototype status:
- single daily calibration, no drift
- market introduction:
- 2002 (first generation)



R&D/00

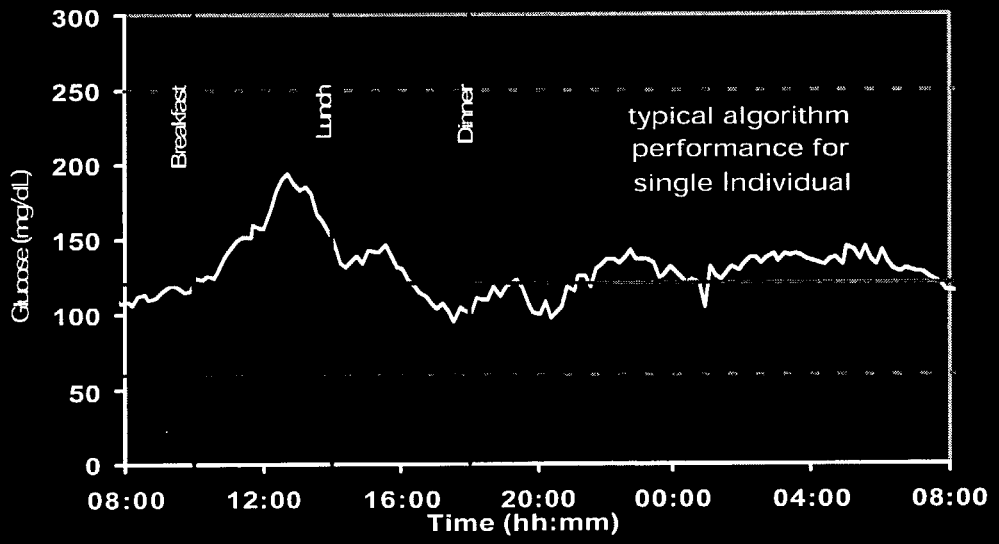
New technologies in diabetes care
Automated pancreas

Roche

Diagnostics

Integration of continuous monitoring system and insulin pump for automated insulin dosage

- subcutaneous glucose monitoring system
- commercial insulin pump
- algorithm to translate glucose levels in insulin dosages
- human experiments for basal algorithm finalized
- meal and exercise disturbance algorithms in human clinical trials (complete 2001)



R&D/00

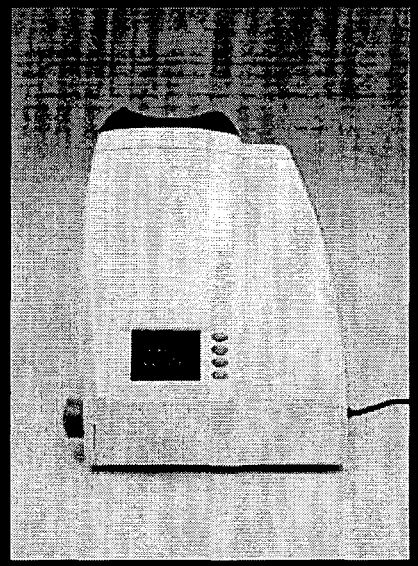
New technologies in diabetes care
Non-invasive diabetes screening

Roche

Diagnostics

Non-invasive eye examination device to detect undiagnosed type 2 diabetes

- detection of fluorescent componds (AGEs) in the lens of the eye caused by elevated glucose levels
- short (15 seconds) and
- safe procedure
- positive response from optometrist and diabetologists
- in preparation of FDA PMA filing





R&D/00

New Technologies in Diabetes Care

Non-invasive diabetes monitoring

Roche

Pharmaceuticals

: Glucose measurement through intact skin

Major obstacles

- Weak specifity of NI signals / strong interference from e.g. water and protein
- Insufficient sensitivity of current systems
- Irregular skin structure and glucose distribution
- Unstable optics-to-skin interface

Technologies

- Infrared spectroscopy
- Raman spectroscopy
- Spatially resolved diffuse reflectometry
- Miniaturized optics
- Optics/skin interfacing materials
- Algorithms for data reduction

Status

- Internal and external feasibility studies
- Promising results, e.g spatially resolved diffuse reflectometry
- Product for routine use at least 5 years from market introduction

R&D/00

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Roche Molecular Systems

Transforming medicine through PCR

Heino von Prondzynski

Head of Roche Diagnostics

R&D/00

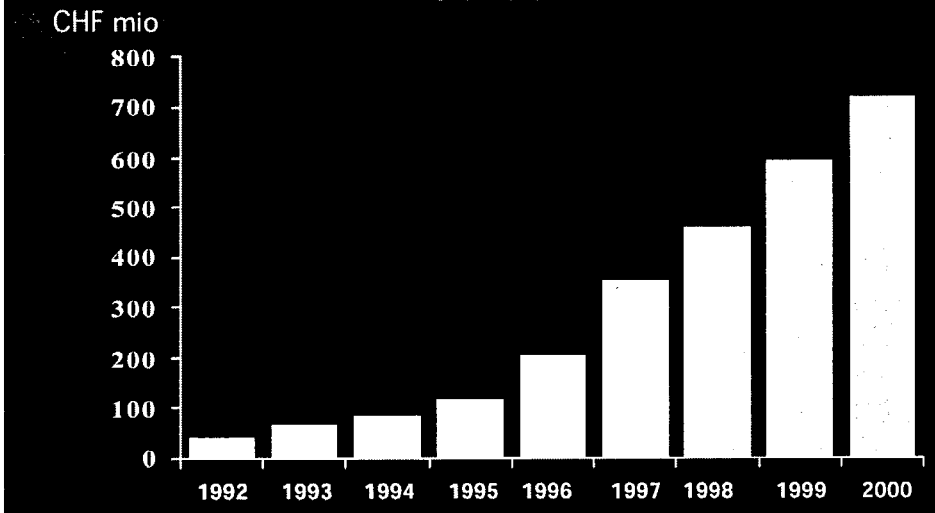
Roche PCR sales and market share

Leadership maintained in rapidly growing market

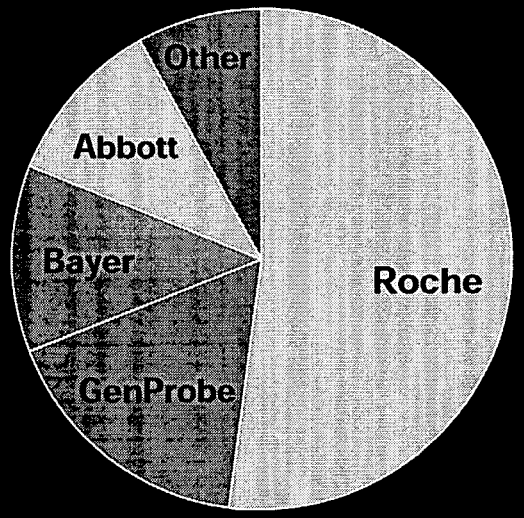
Roche

Diagnostics

Sales



PCR diagnostics market share



CHF 1.5 bn

- nine years since Roche acquired PCR technology
- routine tool for the research and diagnostic labs
- the PCR business continues to grow 20 %

R&D/00

Roche PCR business strategy

Five aspects of leadership

Roche

Diagnostics



- ensure PCR remains the "gold standard" in gene amplification
- provide innovative tools for biomedical research
- maintain leadership with automation of infectious disease testing
- help protect the world's blood supply
- develop new diagnostics for individualized medicine

R&D/00

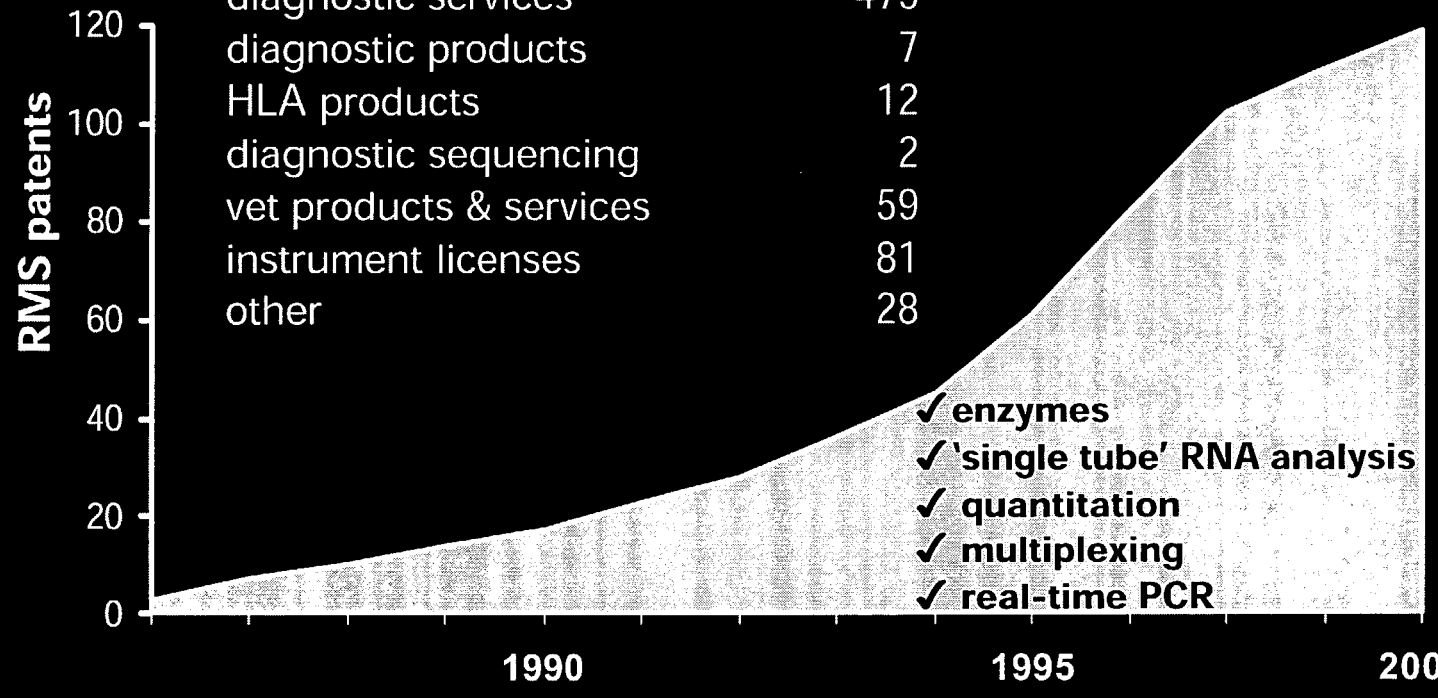
PCR gold standard of gene amplification

Over CHF 1.5 billion in products & services

Roche

Diagnostics

Field	# licenses
research (Taq)	27
diagnostic services	475
diagnostic products	7
HLA products	12
diagnostic sequencing	2
vet products & services	59
instrument licenses	81
other	28



R&D/00

PCR research market

Innovative tools for sequencing and biomedical research

Roche

Diagnostics

- Roche has leading (40 %) share of research market
- AmpliTaq FS® is used by government and private laboratories for most genome sequencing
- Continued growth market expected due to opportunities for new PCR and sequencing enzymes and kinetic assay components



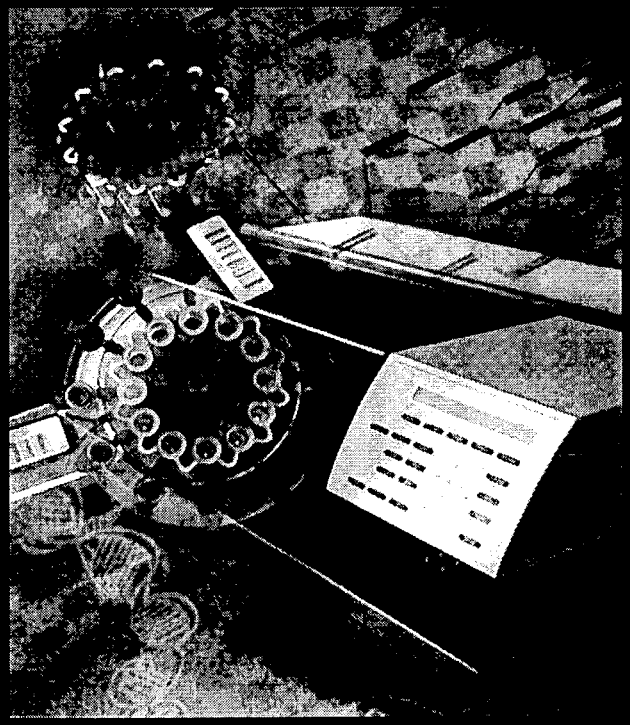
R&D/00

Cobas Amplicor®

Automation for infectious disease testing

Roche

Diagnostics



- Launched in 1995
- First fully automated system for amplification and detection
- Broad menu - both qualitative and quantitative assays
- 3,000 placements by end of 2000

	sample preparation	✓	amplification	✓	detection

R&D/00

Why isn't the competition more successful?

Roche

Diagnostics

Roche is way ahead of the competition because ...

- carryover control
- internal control to detect inhibition
- quantitative standard: accuracy
- ultrasensitivity
- international units
- continual upgrades of performance

Automation for IVD

- COBAS AMPLICOR - 1995
- COBAS AMPLIPREP - 2001

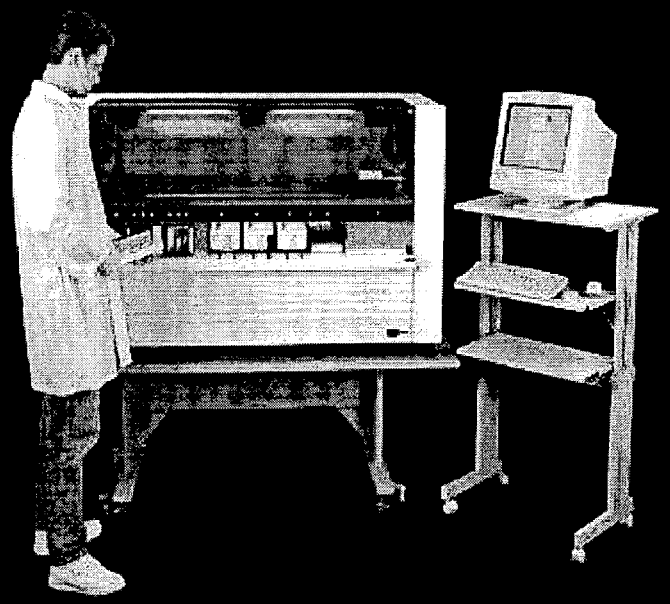
R&D/00

The new Cobas AmpliPrep™

Fully automated PCR sample preparation

Roche

Diagnostics



- minimum instrument set up
- up to 4 tests and 72 samples on-board
- throughput: 20-24 samples/hour (~144 samples/day)

✓ **sample preparation** ✓ **amplification** ✓ **detection**

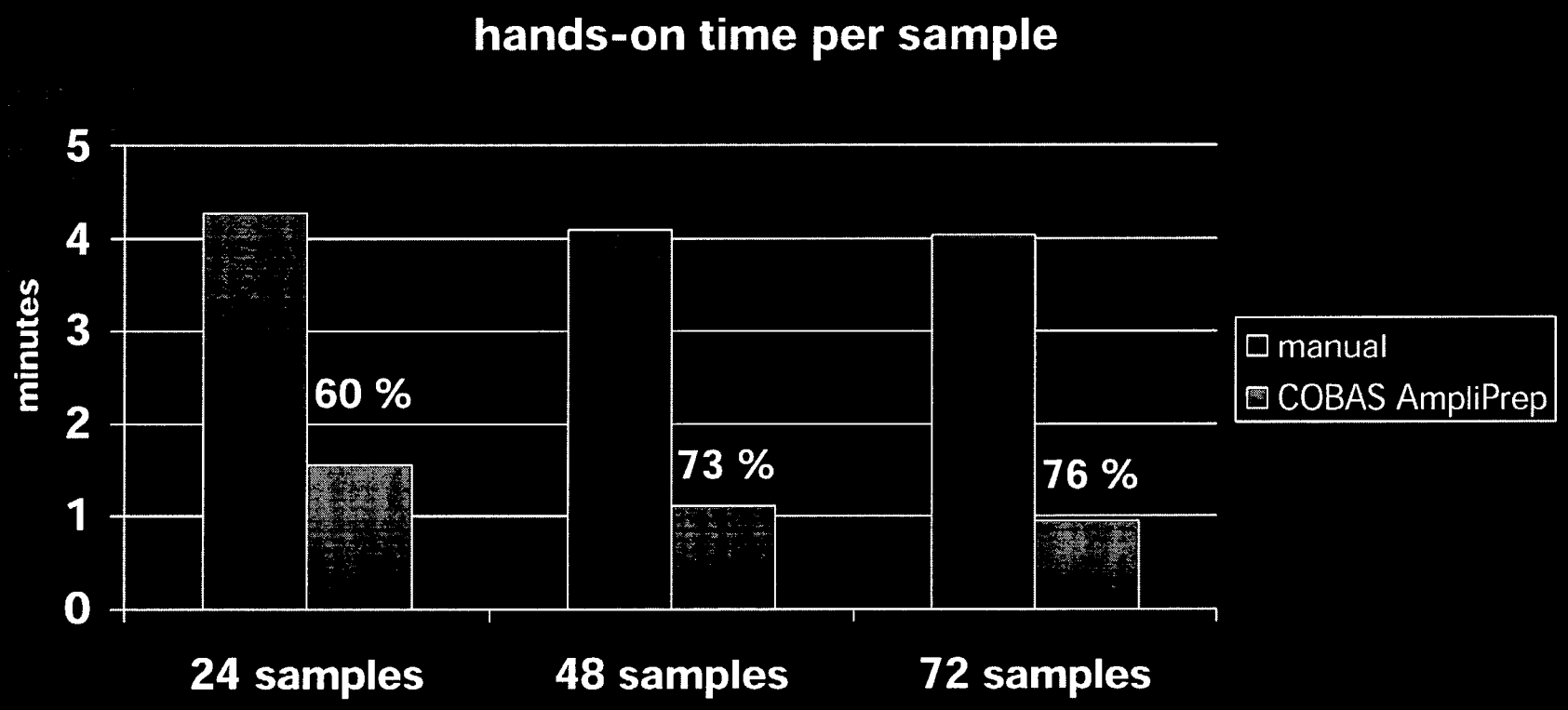
R&D/00

COBAS AmpliPrep

Substantial time and cost savings vs. manual method

Roche

Diagnostics



Data from Dr. D. Jungkind, TJUH, Philadelphia on HCV Monitor Assay

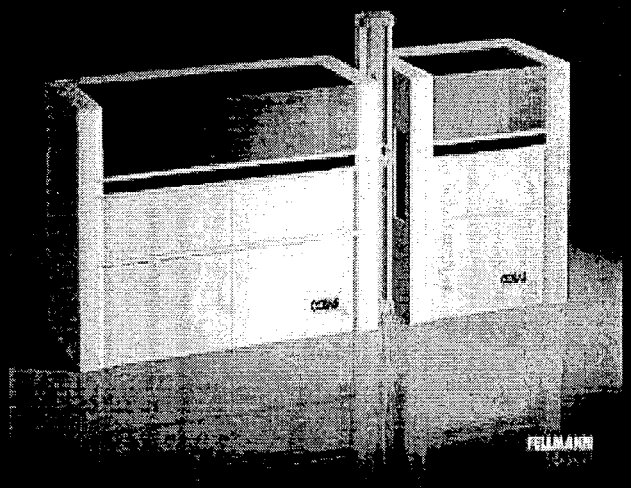
R&D/00

Cobas TaqMan
First "walk away" automation

Roche

Diagnostics

- Homogenous assay format for "kinetic" PCR, with real time detection
  - simultaneous amplification and detection for faster results, increased throughput
  - inherently quantitative; broad dynamic range
- Multiplex capability
  - up to 4 targets on one sample
- Integration with Cobas AmpliPrep
  - fully automated processing from sample input to result output
- Clinical trials to commence Q4 2001



R&D/00

Roche blood screening

PCR demonstrates value in clinical trials

Roche

Diagnostics

60 million blood/plasma units tested globally per year

market size depends on transition from pooling

window cases identified with Roche NAT products

N. America	HCV	5.5 Million	24	23
N. America	HIV	2.0 Million	24	1
Japan	HCV	4.5 Million	50	16
Japan	HIV	4.5 Million	50	2
Japan	HBV	4.5 Million	50	50
total window cases through August				**92**

R&D/00

The building blocks for genomic diagnostics
Best positioned to capture the potential

Roche

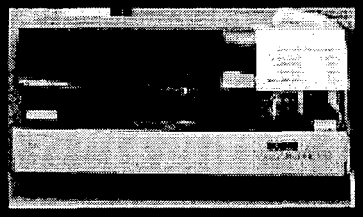
Diagnostics

- *Identify* the clinically relevant information from 50 - 150,000 human genes

  Roche has developed high volume genotyping and gene expression techniques to target relevant genes



- *Configure* new diagnostic tests incorporating the medically relevant information on test platforms that accommodate the complex genetic information







- *Validate* and commercialize new tests, educating healthcare providers/insurers and patients about benefits of genomic medicine



R&D/00

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Roche

Diagnostics

Roche *Genetics*

The future of nucleic acid testing

Klaus Lindpaintner

Director, Roche *Genetics* Europe

R&D/00

Roche Diagnostics

Genetics & Genomics

Roche

Diagnostics

- Diagnostics require a dedicated R&D effort; not simply a byproduct of therapeutic target research
- Diagnostic assays use peripheral samples for greatest impact on health care
- Individual / patient stratification is paramount to more individualized health care
- Surrogate marker development for more rapid therapeutic clinical development and approval translates to widely used diagnostic assays

Roche is the only company which has embraced these fundamental principles, has requisite experience, and has all necessary tools to lead paradigm shift in healthcare

R&D/00

How surrogate markers will be used in therapeutics and diagnostics

Critical experience from HIV and HCV viral load testing

Roche

Diagnostics

In drug development

- Earlier decision making
- More conclusive decisions
- Permits smaller trials

In medical practice (translational medicine)

- Surrogate marker use as diagnostic validated in Rx trials
- Dx market application simultaneously

R&D/00

Roche Diagnostics Genetics

Unique technical advantages

Roche

Diagnostics

- Powerful technology at our disposal
  - Rapid, flexible, high throughput SNP-typing
  - Rapid, flexible, sensitive, and accurate gene expression determination
  - PCR expertise
- Unique enzymes at low cost:
  competitive advantage for significantly more feasible and affordable large scale screening of genetic markers
- Access to pertinent samples and to Roche Pharmaceuticals clinical expertise
- Experience in commercial diagnostic assay and surrogate marker development

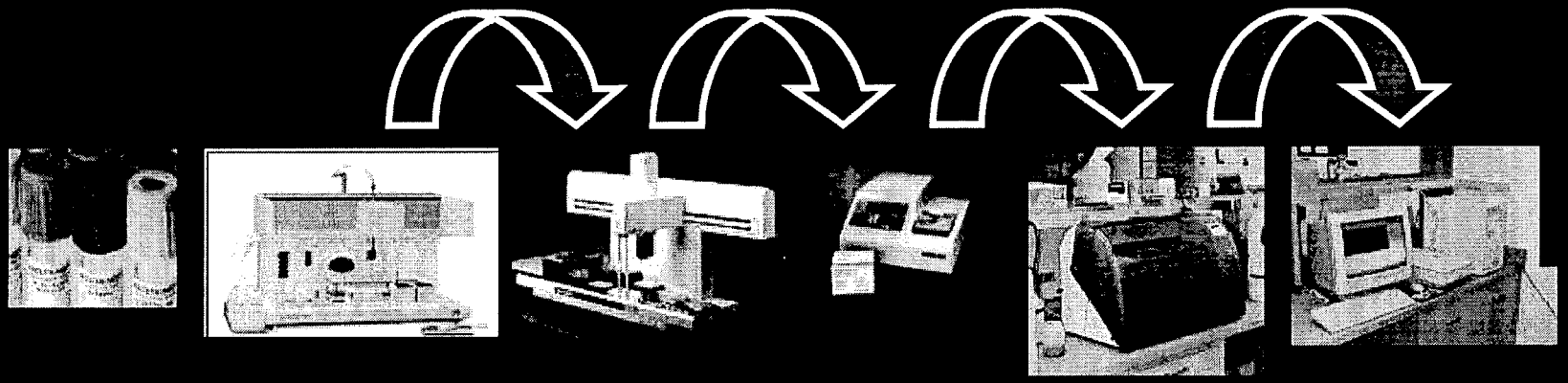
R&D/00

SNP-typing at Roche

Unrivalled experience and degree of automation

Roche

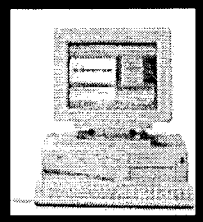
Diagnostics



Whole Blood | DNA Extraction | Reaction Assembly | PCR | Linear Array and Chip Detection | Scan

Candidate gene approach

Genotyping and Clinical Database



R&D/00

SNP-typing at Roche

Unrivalled accuracy and cost-effectiveness

Roche

Diagnostics



DNA sample

Multiplex PCR



Only Roche can reproducibly amplify more than 50 SNPs in a single reaction

Multiplex Detection

(Analysis with Linear Arrays and chips)

Mechanism-based studies accelerate identification of disease-relevant SNPs.





R&D/00

Automated SNP-typing for the Roche Sample Repository

The fast track to testing SNP-drug response associations

Roche

Diagnostics

- 500,000 SNPs typed / laboratory technician/ year
- $0.35 per SNP (DNA extraction to analysis) … additional automation will further reduce cost
- Customized inventory, tracking, and analysis software
- Multiple SNP-detection technologies and approaches available extend flexibility
- Advanced application of statistical analysis and data mining methods

R&D/00

Coagulation Factor V variant screening

SNPs are highly predictive of clinical outcome

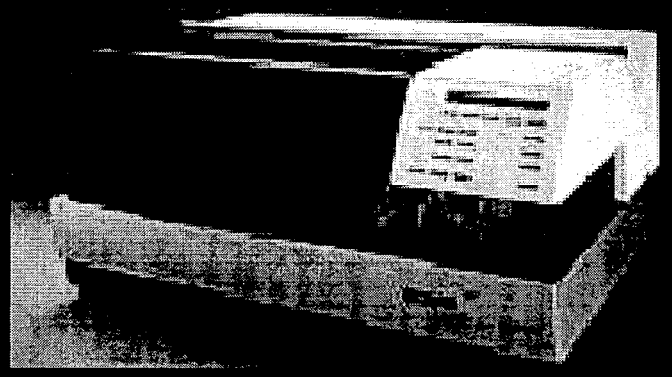
Roche

Diagnostics

SNP-typing for thromboembolic risk assessment

- major surgery
- oral contraceptives
- pregnancy

Prototype Cobas Amplicor assay developed



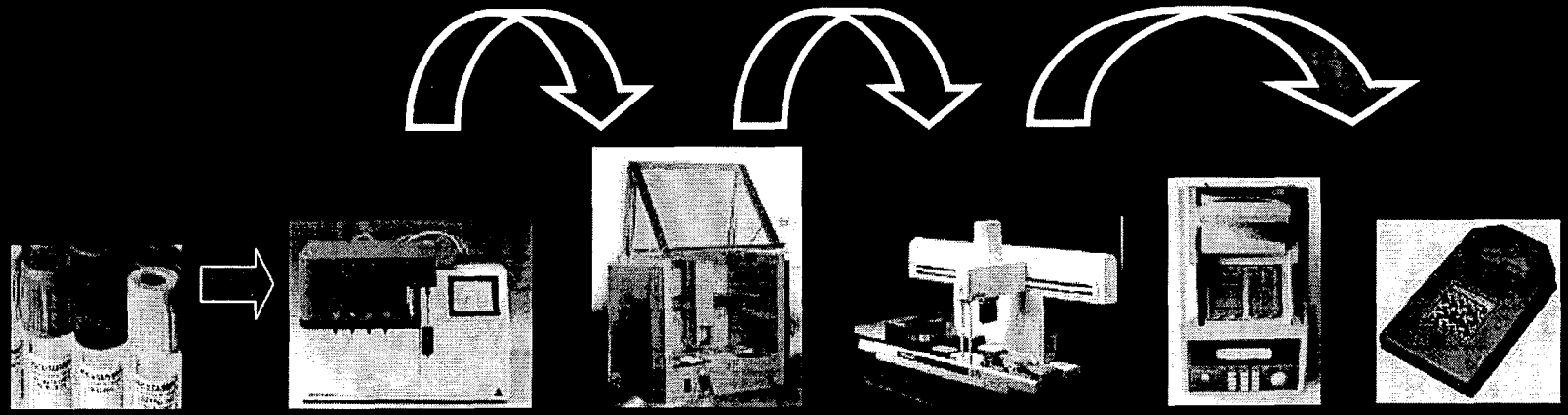
R&D/00

Expression profiling at Roche

Vast experience, novel technology, and automation

Roche

Diagnostics



Whole Blood

Routine Cell Enrichment

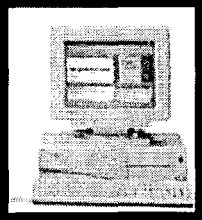
RNA Extraction

Reaction Assembly

Kinetic PCR

Microarray

Expression Profiling-Clinical Database



R&D/00

Expression profiling and molecular classification of disease

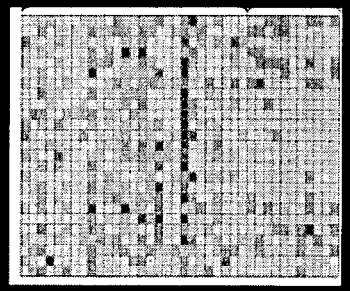
Unique technical capabilities

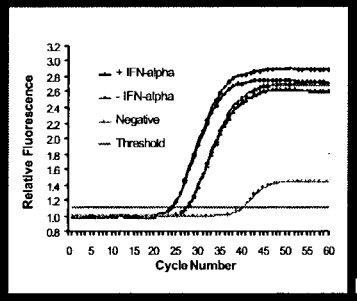
Roche

Diagnostics

Complemetary: chips/Line Arrays and single gene PCR profiling

- Pioneer in applied expression array profiling
  - permits simultaneous expression measurements of many genes
- Unique approaches and prototype instrumentation for single gene expression profiling
  - faster and more cost-effective
  - facilitates focused subsequent studies





R&D/00

mRNA-based surrogate markers in Therapeutics and Diagnostics

Feasible and commercially attractive

Roche

Diagnostics

Feasibility

- mRNA stable in routinely collected and stored samples
- mRNA patterns stable for greater than 2 weeks in an individual

Commercially attractive

- Repeat testing as key to monitoring disease progression and drug response

R&D/00

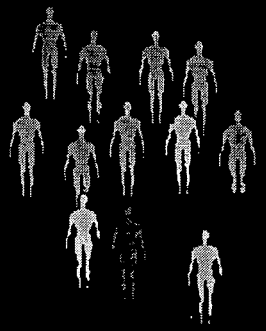
Roche has established unique access to pertinent samples

Roche

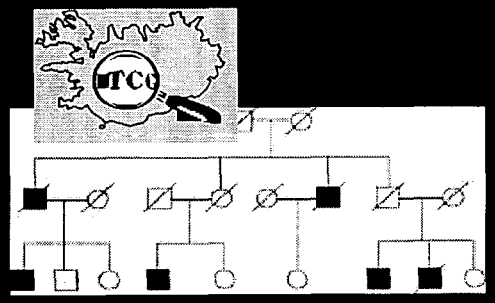
Diagnostics



Roche clinical trials (RSR)



Case-control cohorts



Family studies (e.g.deCODE)



Population studies

Time onset of disease
Identify specific organ/tissue/joint involvement
Predict severity of disease
Determine differential disease progression
Monitor therapeutic efficacy
Predict / avoid adverse events

R&D/00

Roche Diagnostics – Genetics

Uniquely positioned to capitalize on genomic advances

Roche

Diagnostics

- Vast unmet clinical need for diagnostics for common complex disease
- Diagnostic opportunities and applications will unfold rapidly
- Roche has sharply-focused and carefully-prioritized diagnostic research
  - high throughput, lowest-cost SNP-typing (genotyping)
  - high throughput expression profiling
- Most extensive PCR expertise
- Unique access to samples (deCODE, clinical trials, disease cohorts)
- Experience in translational medicine and diagnostic test development

R&D/00

Roche

Pharmaceuticals

Enhancing the productivity of Roche Pharma Research

Jonathan Knowles

Head of Pharmaceuticals Research

R&D/00

Roche R&D productivity

The past and the future

Roche has produced a steady stream of new medicine candidates in diverse therapeutic areas

Significant improvements in technologies and decision-taking processes are now leading to increased productivity

Roche

Pharmaceuticals

Xeloda (capecitabine)

FORTOVASE

Tamiflu oseltamivir

XENICAL orlistat

PEGASYS

R&D/00

Improving the productivity of R&D
We must have:

Roche

Pharmaceuticals

- A from Research to Market, addressing

  - to identify the best drug targets
  - to discover and develop medicines rapidly
  - to create and capture knowledge

→ Improved in late stages through increased attrition at earlier stages

R&D/00

Research actions from Focus for Growth

Focus the research portfolio, spin-off, and out-license

Roche

Pharmaceuticals

Previous Research Areas

CNS
genitourinary
pain
oncology
inflam/bone
metabolic
virology
cardiovascular
anti-infectives
anti-fungals

Current Research Areas

CNS
genitourinary
oncology
inflam/bone
metabolic
virology
vascular diseases

Spin-off (with Roche opt-in)

oral psoriasis	entry into phase II
eczema	phase II
beta-lactam	phase I
anti-fungal (2)	lead optimization
DHFR inhibitor	lead optimization

Out-license
ET antagonist

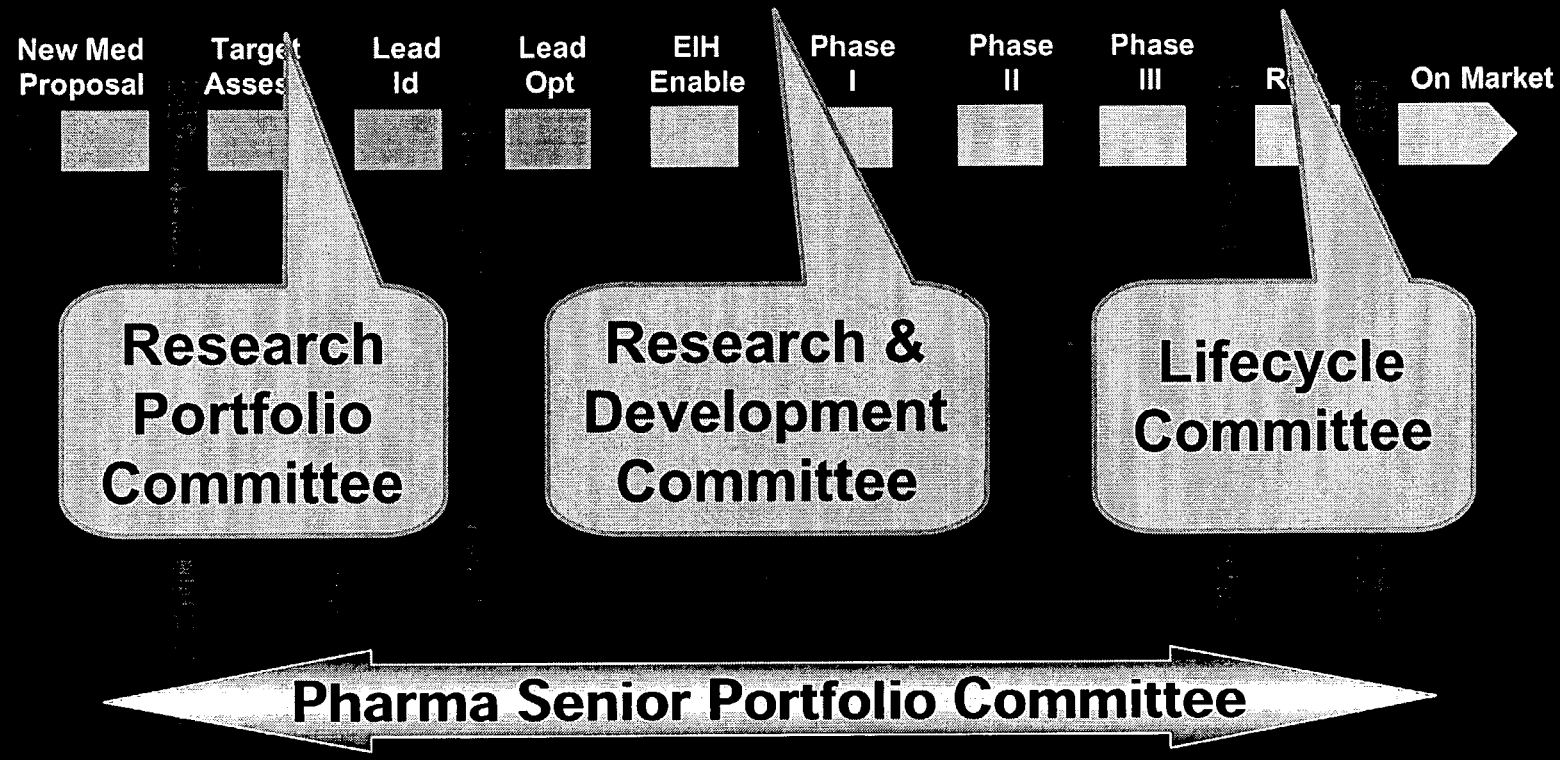
R&D/00

Portfolio Management

Seamless process from research to market

Roche

Pharmaceuticals

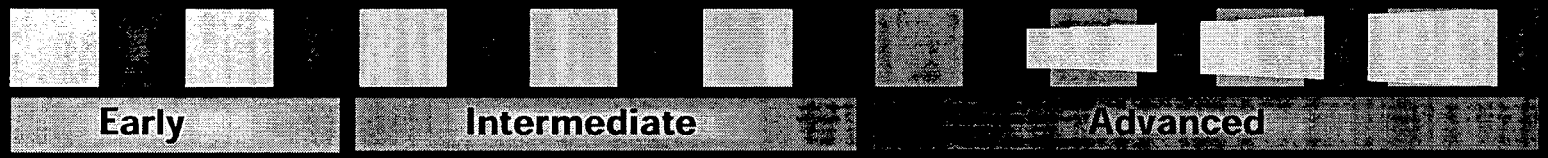


R&D/00

Optimizing research
Key improvements from

Roche

Pharmaceuticals



Early	Intermediate		Advanced
genetics genomics proteomics **Frontiers Program**	high throughput chemistry & screening	prognostic tools ("tox" chip) **MDO***	surrogate markers & genetic diagnostics

Advanced Global Informatics

strategic research alliances and collaborations

*multi-dimensional drug optimization

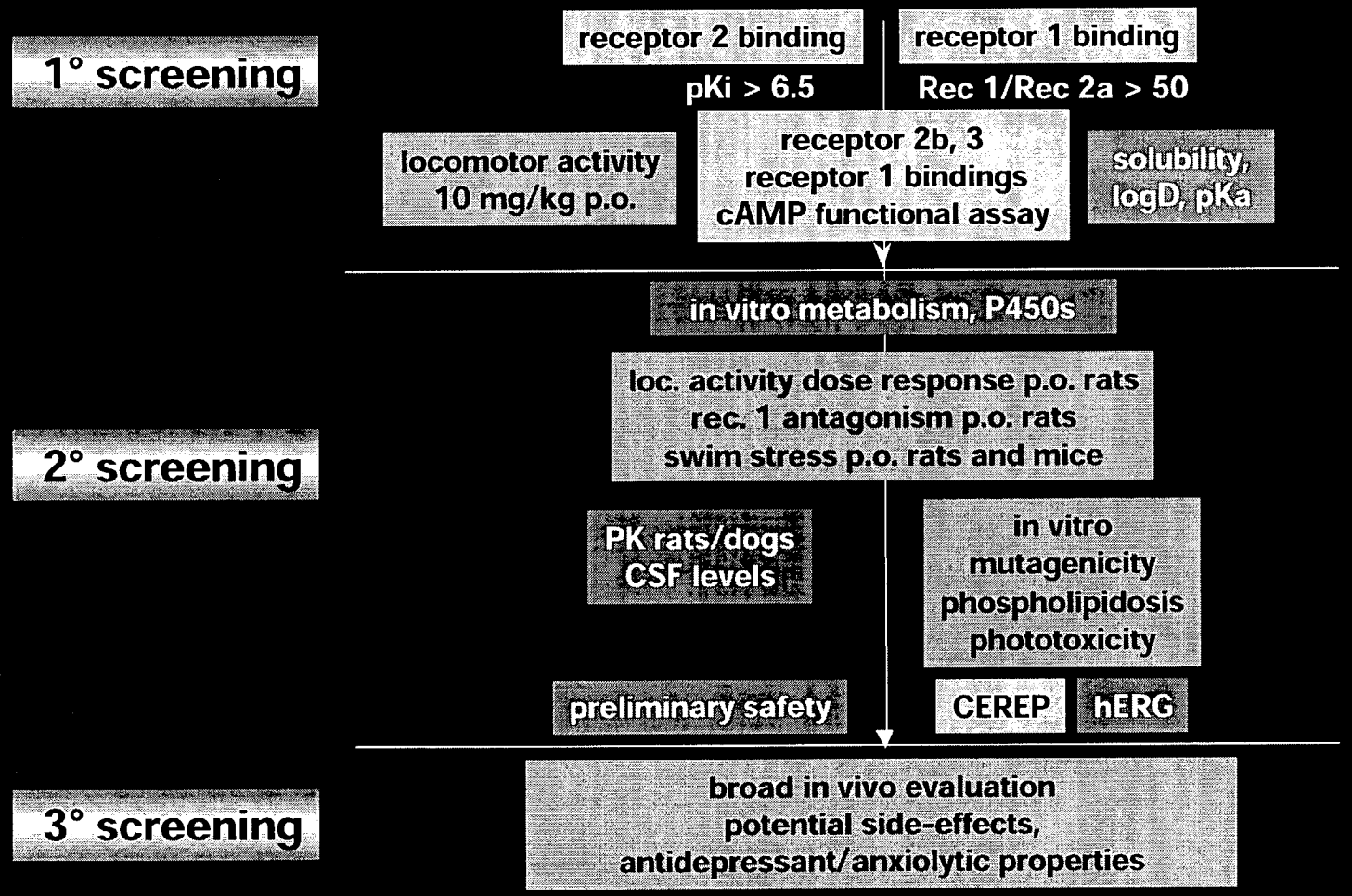
R&D/00

MDO screening cascade

Rapid selection of the winner

Roche

Pharmaceuticals



R&D/00

More effective tools
Multi-dimensional drug optimization

Roche

Pharmaceuticals

Description

high-throughput testing earlier in the discovery process to select compounds with low likelihood for toxicity or PK problems

Impact

higher success rate with regard to SAFETY

Expectation

doubling in # of launches in the mid-term

shift in portfolio shape

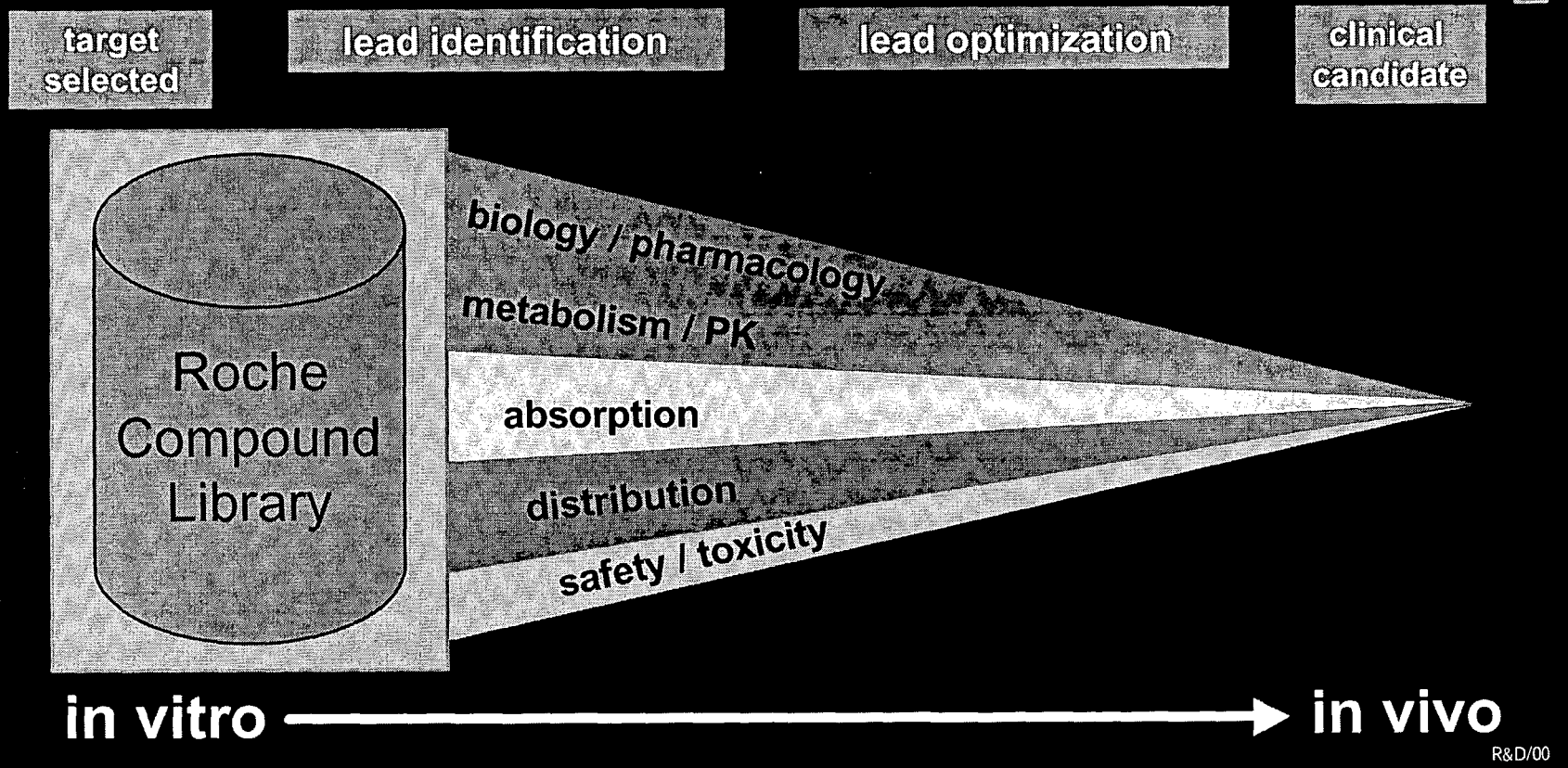
R&D/00

High-throughput parallel assays

MDO is leading to better clinical candidates

Roche

Pharmaceuticals



R&D/00

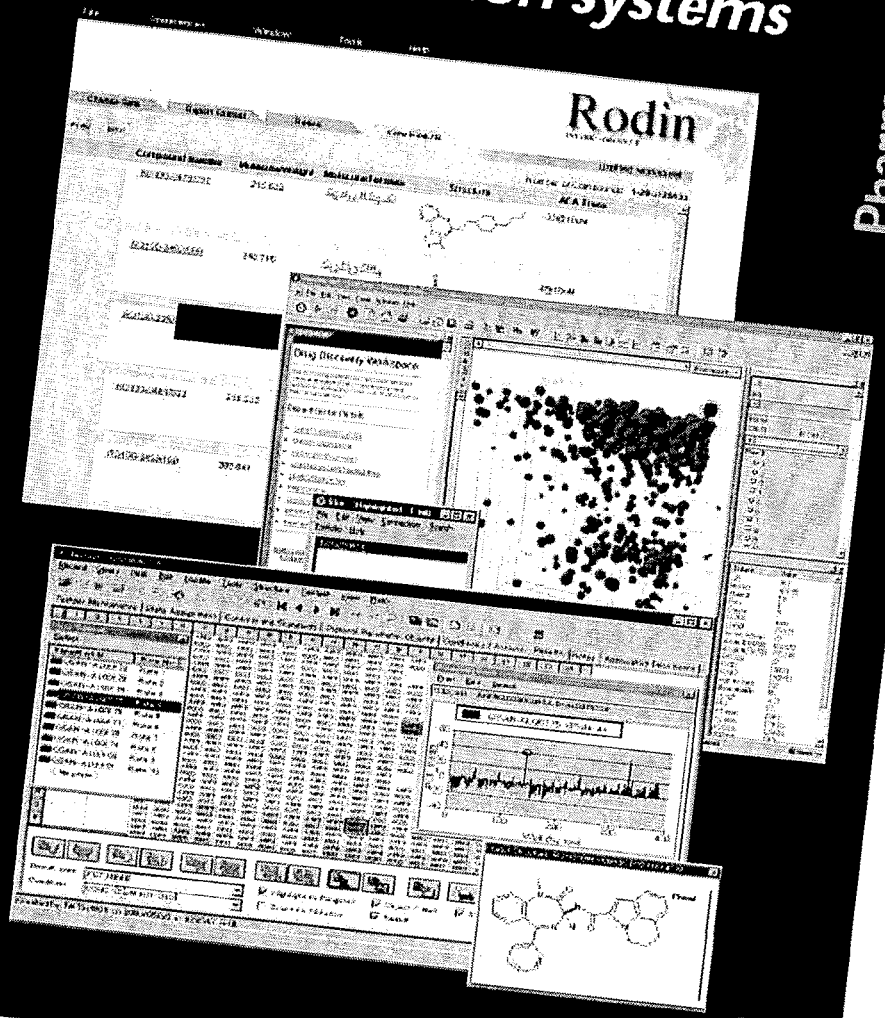
Advanced global informatics

Leading the way in critical R&D information systems

Roche

Pharmaceuticals

- New information systems supporting new discovery technologies and processes
- Global installation & networks
- Information sharing across all Research Centres
- Generation of critical new knowledge



R&D/00

18 NMEs to enter pre-clinical development by end 2001

New processes and tools starting to deliver

Roche

Pharmaceuticals

5HT agonist	metabolic diseases	obesity
G-protein coupled receptor antagonist	metabolic diseases	obesity
G-protein coupled receptor antagonist	CNS	depression
glutamate receptor antagonist	CNS	Alzheimer's
G-protein coupled receptor antagonist	CNS	depression
p53 antagonist	oncology	solid tumors
tumor selective cytotoxic	oncology	solid tumors
nuclear receptor agonist	inflam / bone	osteoporosis
protease inhibitor	virology	HIV
9 NCE back-up compounds	various	various

R&D/00

Summary

Implementing significant productivity improvements

Roche

Pharmaceuticals

Structure and process

- focus for growth
- seamless process from research to market

Cutting edge tools

- multi-dimensional drug optimization
- advanced global informatics

The outcome

- promising development candidates in phase 1/2

Roche

Pharmaceuticals

Pharma Development

Benchmarking and Early Pipeline

Ed Holdener

Head of Global Drug Development

R&D/00

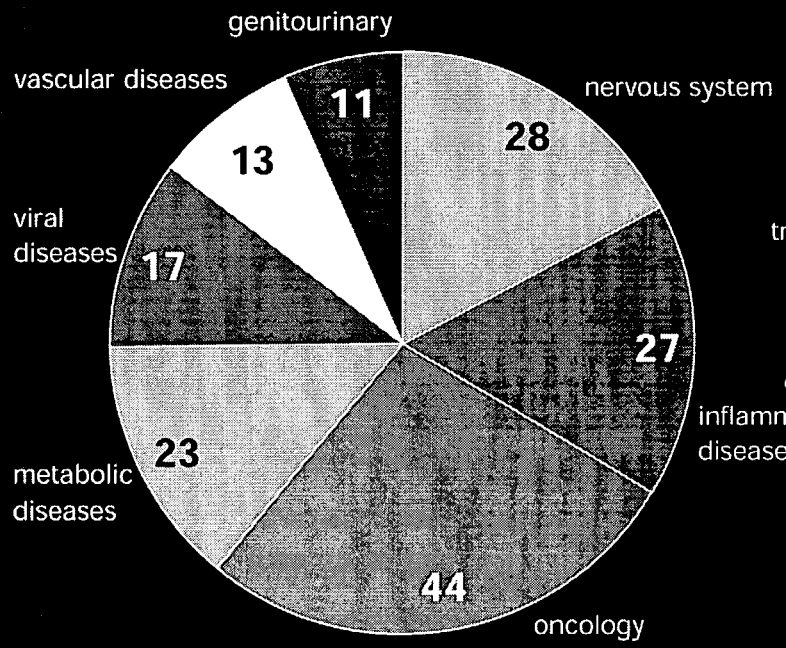
Roche research & development pipeline

A strong foundation

Roche

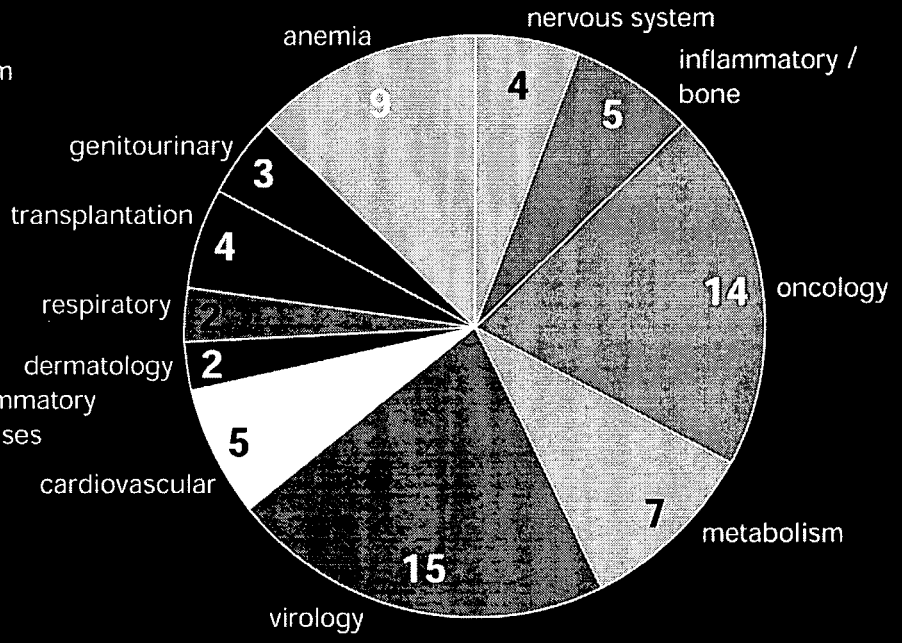
Pharmaceuticals

Research



163 projects

Development



70 projects with 35 different molecular entities

R&D/00

Therapeutic area: genitourinary

Two indications with big unmet medical needs

Roche

Pharmaceuticals

Development portfolio

overactive bladder	selective muscarinic rec. antagonist (phase 1*)
	prostacyclin receptor antagonist (phase 1*)
stress incontinence	alpha 1 agonist (phase 2)

*** in preparation**

R&D/00

Therapeutic area: central nervous system

NCE's related to key targets in major indications

Roche

Pharmaceuticals

Development portfolio

depression/anxiety	NK-1 (in phase 1)
stroke	NMDA antagonist (phase 1*)

*** in preparation**

R&D/00

Therapeutic area: oncology
A rich early pipeline in a core franchise

Roche

Pharmaceuticals

	Development portfolio
solid tumors	cell cycle inhibitor (phase 2*)
	PEGASYS (incl. hematological malignancies; phase 2)
	Xeloda Xtra (Xeloda plus DPD inhibitor; phase 1)
supportive cancer care	NK1 in emesis (phase 1*)
	second generation EPO (phase 1)

*** in preparation**

R&D/00

Therapeutic area: metabolism
New and improved treatment options

Roche

Pharmaceuticals

Development portfolio

obesity	Xenical 2nd generation (phase 1)
diabetes type 2	insulin sensitizer (phase 2*)
	kinase activator (phase 1*)

*** in preparation**

R&D/00

Therapeutic area: inflammation and bone

Encouraging data in two major indications

Roche

Pharmaceuticals

rheumatoid arthritis	Mabthera (phase 2)
osteoporosis	PTHrP (phase 2*)

*** in preparation**

R&D/00

Therapeutic area: respiratory disease

New ways of treating chronic respiratory diseases

Roche

Pharmaceuticals

Development portfolio

asthma	integrin antagonist (phase 1*)
emphysema/COPD	nuclear receptor agonist (phase 1*)
	elastase inhibitor (phase 1)

*** in preparation**

R&D/00

Therapeutic area: vascular diseases

Two "established" indications with room for improvement

Roche

Pharmaceuticals

Development portfolio

peripheral vascular disease	enzyme inhibitor in deep venous thrombosis (phase 1*)
lipid modulation	enzyme inhibitor in dyslipidemia (phase 1*)

*** in preparation**

Roche Pharma Development
Well placed to deliver

Roche

Pharmaceuticals

- Disease area focus aligned between Research, Development and Business starting to deliver new projects
- Early phase pipeline rich in quality and quantity
- Roche is one of the fastest developers in the industry with improved processes in place to ensure quality

R&D/00

Roche

Pharmaceuticals

Pharma late stage pipeline

Overview

Life Cycle Team Organization

Pam Kirby

Head of Business Development and Strategic Marketing

R&D/00

Roche's vision for market-driven life cycle management

Roche

Pharmaceuticals

Mobilize Roche resources to maximize the value of our key products in the marketplace

Roche

Ensure that market driven decisions guide our project strategy

Capture global scale and local best practices

R&D/00

Late stage NCE's and line extensions with major commercial impact

A good mid-term outlook

Roche

Pharmaceuticals

Xeloda	colorectal cancer (US&EU), breast cancer
Mabthera	intermediate / high grade non-Hodgkin's lymphoma
Herceptin	launch (EU); adjuvant breast cancer
Neorecormon	hematological tumors (filed)
ibandronate	bone metastases in breast cancer
HIV fusion inhibitor	Aids / HIV
Pegasys	treatment of chronic hepatis C
Pegasys & ribavirin	treatment of chronic hepatis C
Tamiflu	prevention (US), treatment and prevention (J)
Dilatrend	severe CHF, post-MI
Xenical	treatment and prevention of type 2 diabetes
ibandronate	treatment and prevention of osteoporosis

Genentech late stage projects

One of the strongest pipelines in biotechnology

Roche

Pharmaceuticals

	Activase	catheter clearance
	anti-CD11a antibody	psoriasis
Roche	**anti-VEGF**	colorectal cancer
Roche	**Pulmozyme**	early intervention in cystic fibrosis
Roche	**Rituxan**	intermediate / high grade non-Hodgkin's lymphoma
Roche	**Herceptin**	adjuvant breast cancer
	TPO	thrombocytopenia
	TNKase (IIa/IIIa combination)	myocardial infarction
	tezosentan	acute heart failure
	Xolair (anti-IgE 25)	allergic asthma; allergic rhinitis

Roche developed and/or marketed with Roche or opt-in candidate

R&D/00

Roche

Pharmaceuticals

Pharma late stage pipeline

Tamiflu: IMPACT data

Daniel O'Day

Life Cycle Leader Tamiflu

R&D/00

Tamiflu™ oseltamivir

Influenza

Roche

Pharmaceuticals

Every year is an influenza year

Influenza causes considerable burden on

- healthcare systems
- business
- society
- individuals and their households

Tamiflu will play a key role in influenza management

R&D/00

Tamiflu™ oseltamivir

Proven benefit in treatment

Roche

Pharmaceuticals

Effective against all clinically relevant virus strains (including potentially pandemic strains)

Consistently reduces the duration and severity of influenza illness in all patient populations including children 1-12 years old

Does not impair the natural immune response

Prevents influenza-related complications by up to 50 percent

- bronchitis and pneumonia in adults and the elderly
- acute otitis media in pre-school age children

Treatment benefit is maximised by early intervention

R&D/00

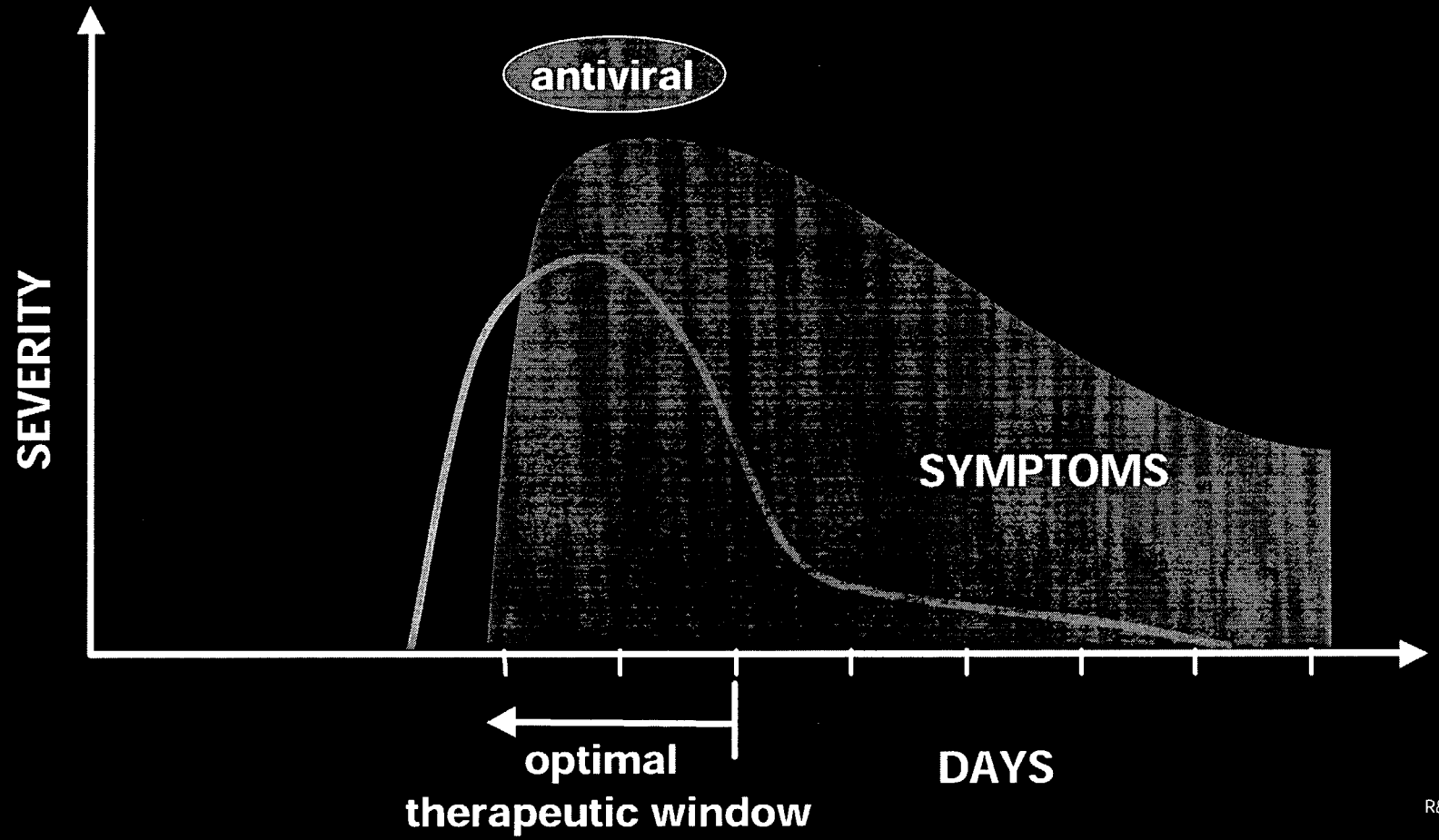
Tamiflu™ oseltamivir

Virus replication and symptoms

The importance of early intervention

Roche

Pharmaceuticals



R&D/00

Tamiflu oseltamivir

Initial clinical studies

Early treatment increases efficacy

Roche

Pharmaceuticals

	duration of illness (median)	reduction of duration
treatment within 36h		
placebo	116.5 h	
oseltamivir 75mg bid	87.4 h	30 % (p=0.017)
treatment within 24h		
placebo	117.7 h	
oseltamivir 75mg bid	74.5 h	40 % (p=0.02)

Nicholson et al. Lancet 2000

R&D/00

Tamiflu oseltamivir

IMPACT study

IMmediate Possibility to ACcess oseltamivir Treatment

Roche

Pharmaceuticals

Study design

Multicentre, prospective,open-label, exploratory study during influenza season 1999/2000

Inclusion criteria

- ³ 13-70 years of age
- presenting within 48h of the onset of fever
- ³ 37.8°C, ³ 100°F
- and at least two of: cough, sore throat, coryza, myalgia, headache, fatigue, chills/sweats

Primary endpoint

Total duration of illness (from time of fever onset to time of alleviation of all symptoms) in infected patients (laboratory-confirmed)

R&D/00

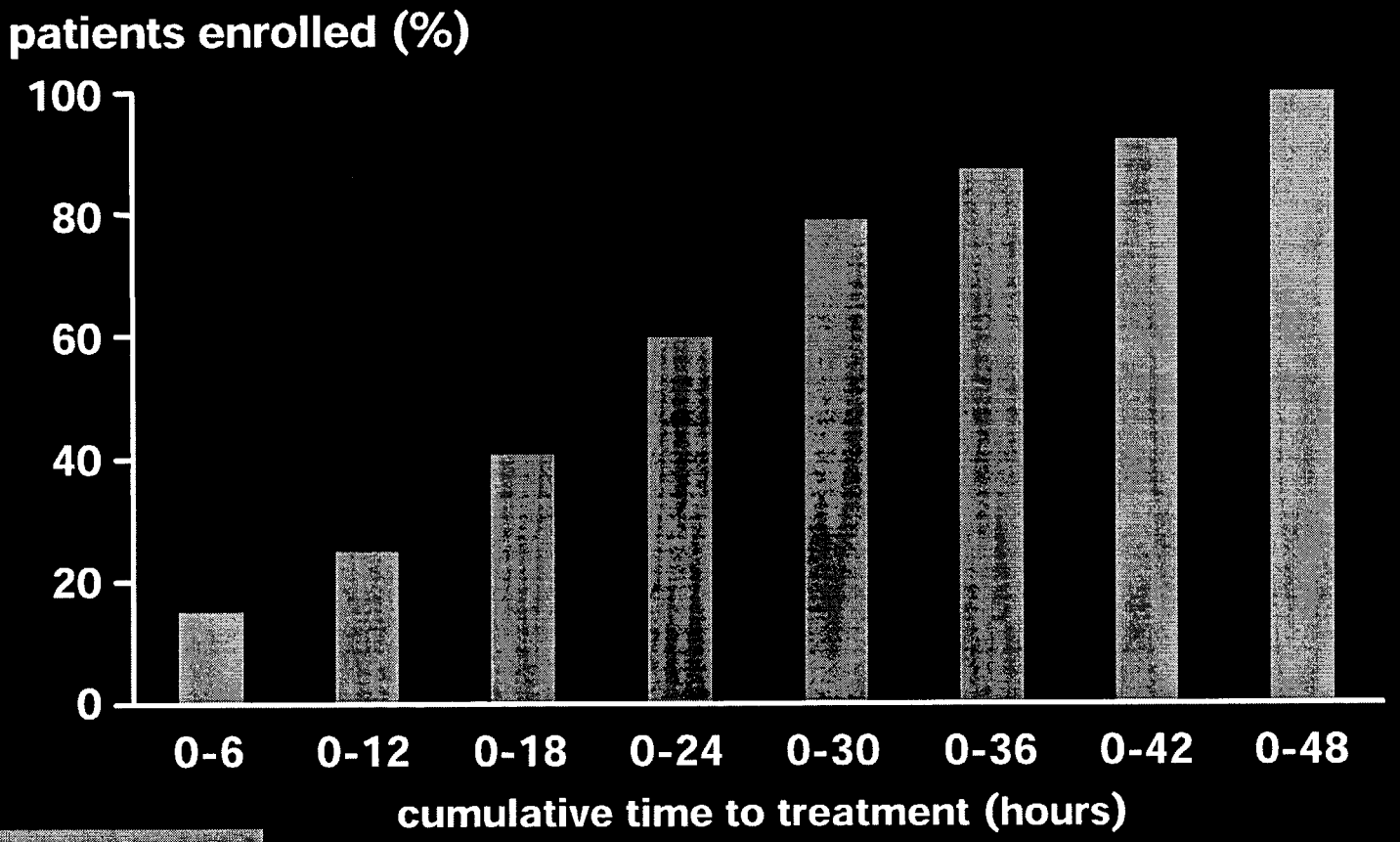
Tamiflu™ oseltamivir

IMPACT: ITT* infected population

Patients do present early

Roche

Pharmaceuticals



Aoki et al. ICAAC 2000

* intent-to-treat

R&D/00

Tamiflu™ oseltamivir

IMPACT findings

Dramatic efficacy increase with early treatment

Roche

Pharmaceuticals

Tamiflu, taken within the first 12 hours of symptom onset, reduced the total duration of illness by greater than three days compared to treatment at 48 hours

There is an incremental benefit of approximately 10 hours for every 6 hours treatment is initiated earlier

With knowledge of a local outbreak, influenza was easy to diagnose

Side effect incidence (nausea and vomiting) was low and consistent to that seen in previous studies. Taking Tamiflu with food reduces the incidence of these events

R&D/00

Tamiflu™ oseltamivir

Tamiflu: regulatory update

Major line extensions and roll-outs on track

Roche

Pharmaceuticals

'Prevention of influenza' indication - anticipated approval and launch in USA Q4 2000

Paediatric formulation and indication - anticipated approval and launch in USA Q4 2000

Anticipated approval and launch of 'treatment' and 'prevention' indication in Japan Q4 2000

Re-filing in the European Union Q4 2000/Q1 2001

R&D/00

Tamiflu™ oseltamivir

Proven benefit

for all patient populations in treatment and prevention

Roche

Pharmaceuticals

Treatment with Tamiflu has been shown to be effective

- in all patient populations
- in all strains of the influenza virus investigated

Tamiflu is highly effective in the prophylaxis of influenza

- post- exposure prophylaxis
- long-term prevention
- use in vaccinated population

In the 99/00 season, Tamiflu was well tolerated by >700,000 patients for influenza treatment and in the US gained 60 % of the neuraminidase inhibitor market

R&D/00

Roche

Pharmaceuticals

Pharma late stage pipeline

AIDS Franchise

David Reddy

Life Cycle Leader AIDS portfolio

R&D/00

Total sales AIDS franchise 1999

Lead position in protease inhibitor segment

Roche

Pharmaceuticals

	CHF mio
Viracept	435
Saquinavir	351
Hivid	43
Cymevene (including transplant)	213
total	1,042

R&D/00

VIRACEPT Positioning and strategy

Confident to maintain position as lead protease inhibitor

Roche

Pharmaceuticals

Continue to communicate the established benefits of Viracept (sequencing, convenience, safety)

Further improve acceptability of Viracept dosing regimen

- BID
- hardened tablets
- film coated tablet
- tablet/capsule with higher drug loading (2x625mg tablets BID)

Clinical studies

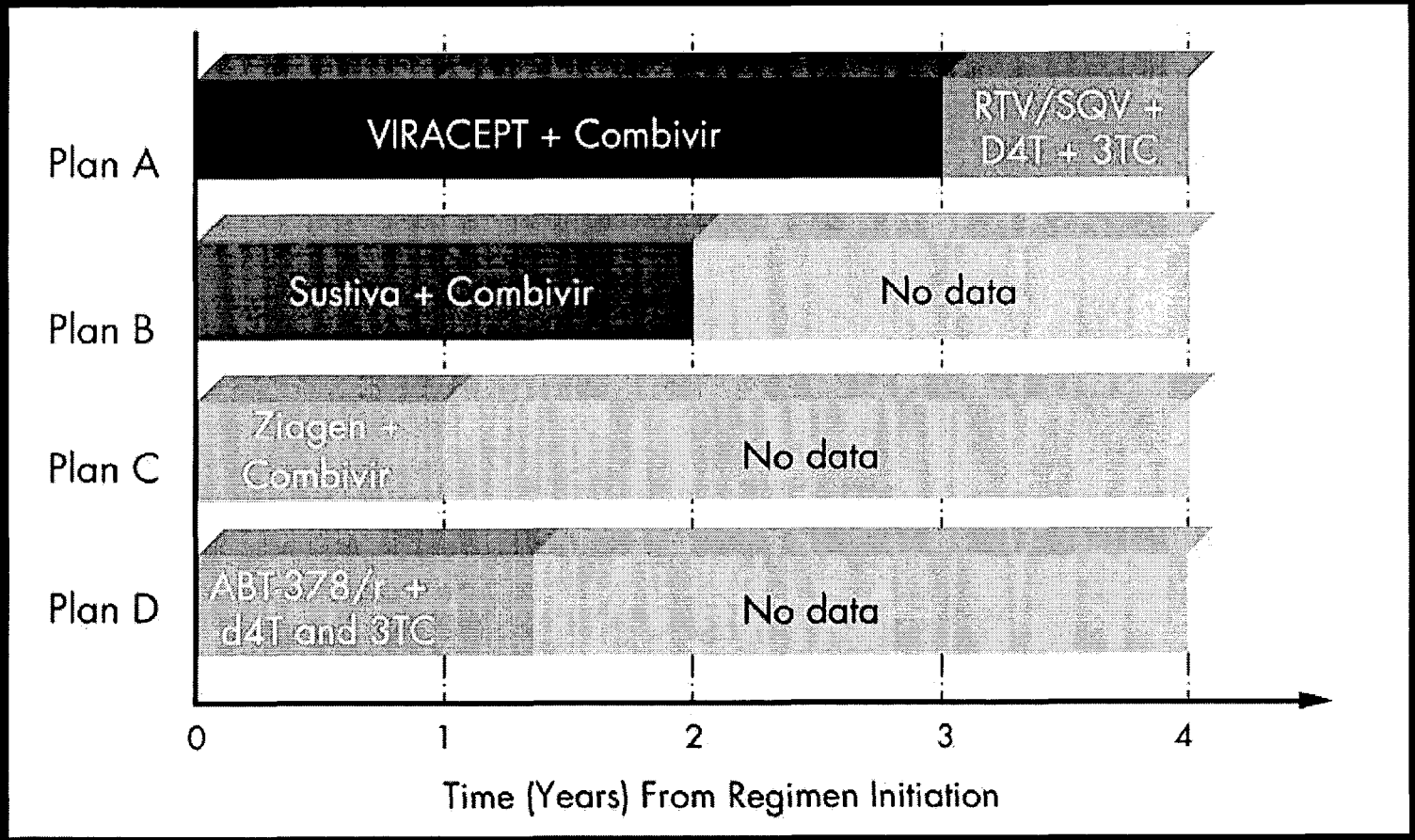
- confidence underlined by head-to-head study versus Sustiva

R&D/00

VIRACEPT *Durability and ability to maintain subsequent treatment options*

Roche

Pharmaceuticals



R&D/00

FORTOVASE In pre-treated patients

Roche

Pharmaceuticals

Delivering the full therapeutic potential of saquinavir to maintain leadership in extensively pre-treated patients

- By exploiting ritonavir (RTV) 'booster' strategy
  - move to higher doses of Fortovase with 'baby doses' of RTV
  - max-C-min
    - Fortovase 1000mg BID + RTV 100mg BID
    - reduce ritonavir associated adverse events and metabolic disturbances whilst maintaining dramatic boosting of saquinavir
    - builds upon existing published data
- Move into less extensively pre-treated patients
  - once daily Fortovase
    - healthy volunteer study completed: comparative efficacy study ongoing
    - Fortovase 1600mg + RTV 100mg once daily vs. Sustiva

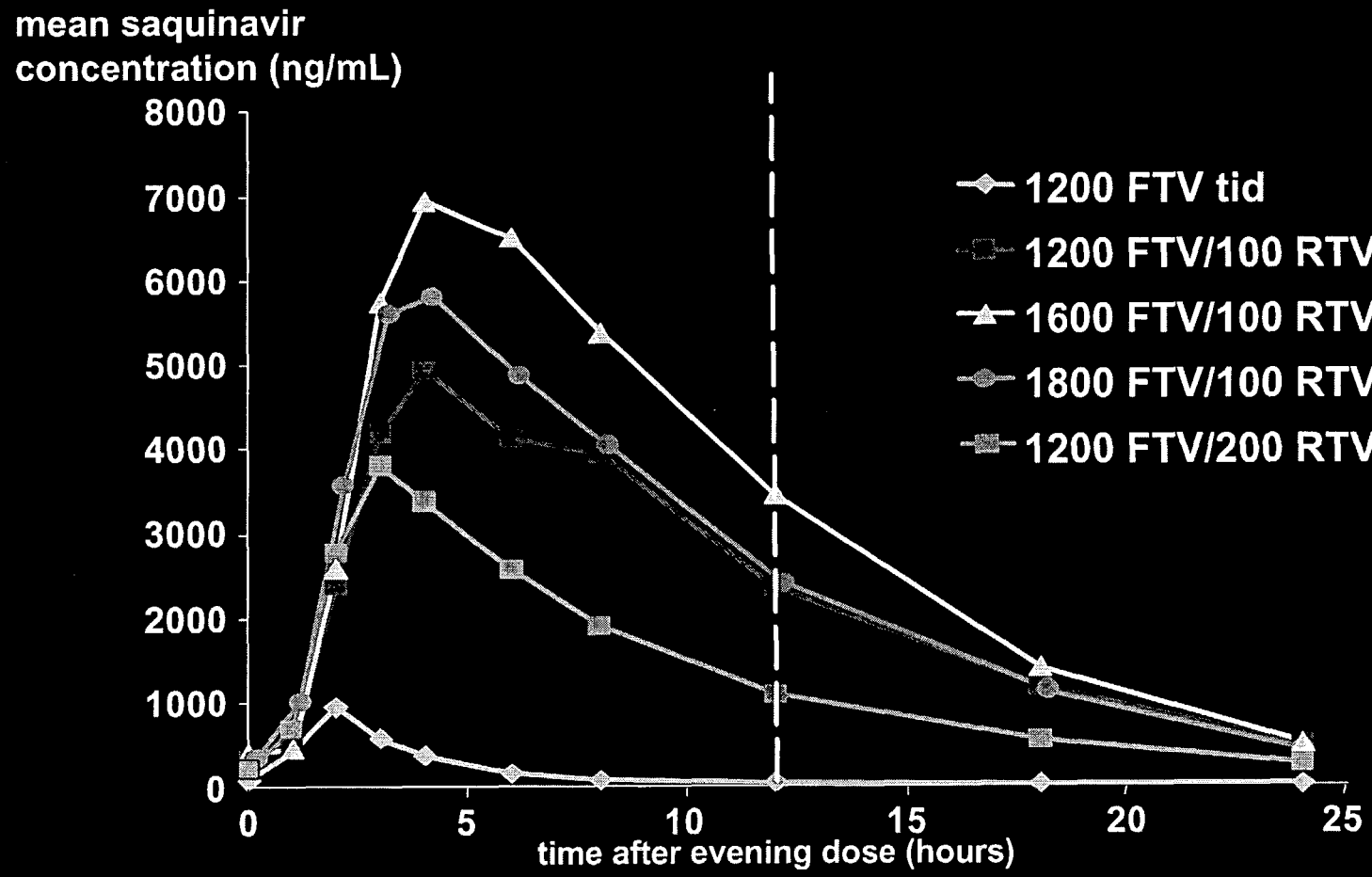
R&D/00

Mean steady-state FORTOVASE concentration*

Enormous therapeutic window with clear once daily dosing potential

Roche

Pharmaceuticals



FTV = Fortovase; RTV = ritonivir

*Day 13 data. Saag et al. ICAAC 1999

Fortovase+ritonavir vs. efavirenz QD* trial

Encouraging preliminary results

Roche

Pharmaceuticals

FTV/RTV* QD	31	4.85	355	10	–2.7	+154
EFV* QD	31	4.70	337	16	–2.9	+140

FTV = Fortovase; RTV = ritonavir; EFV = efavirenz; * QD = once daily

Montaner et al, CAHR, 2000

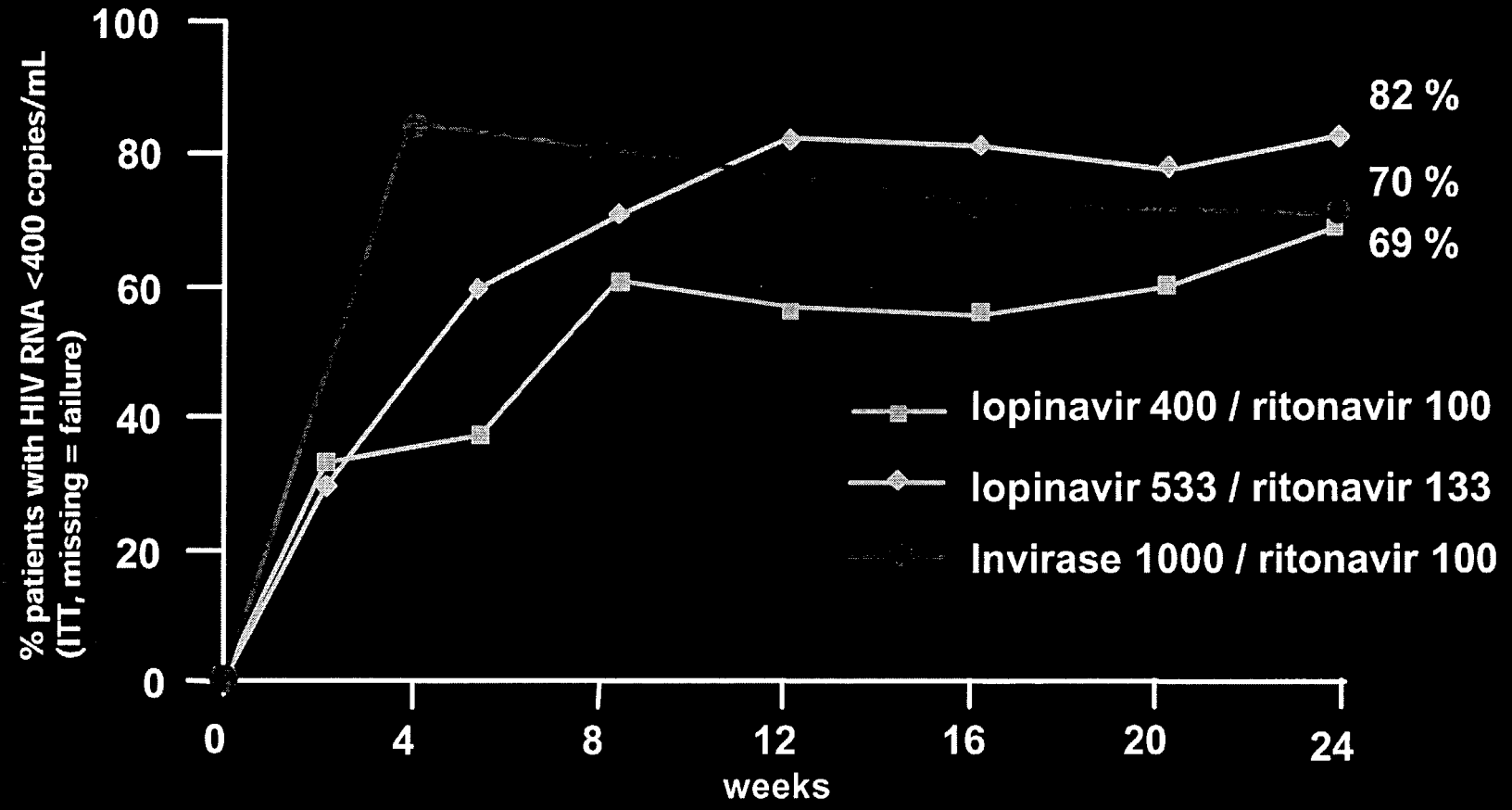
R&D/00

Ritonavir boosted INVIRASE vs lopinavir*

Cross study comparison suggests comparable efficacy

Roche

Pharmaceuticals



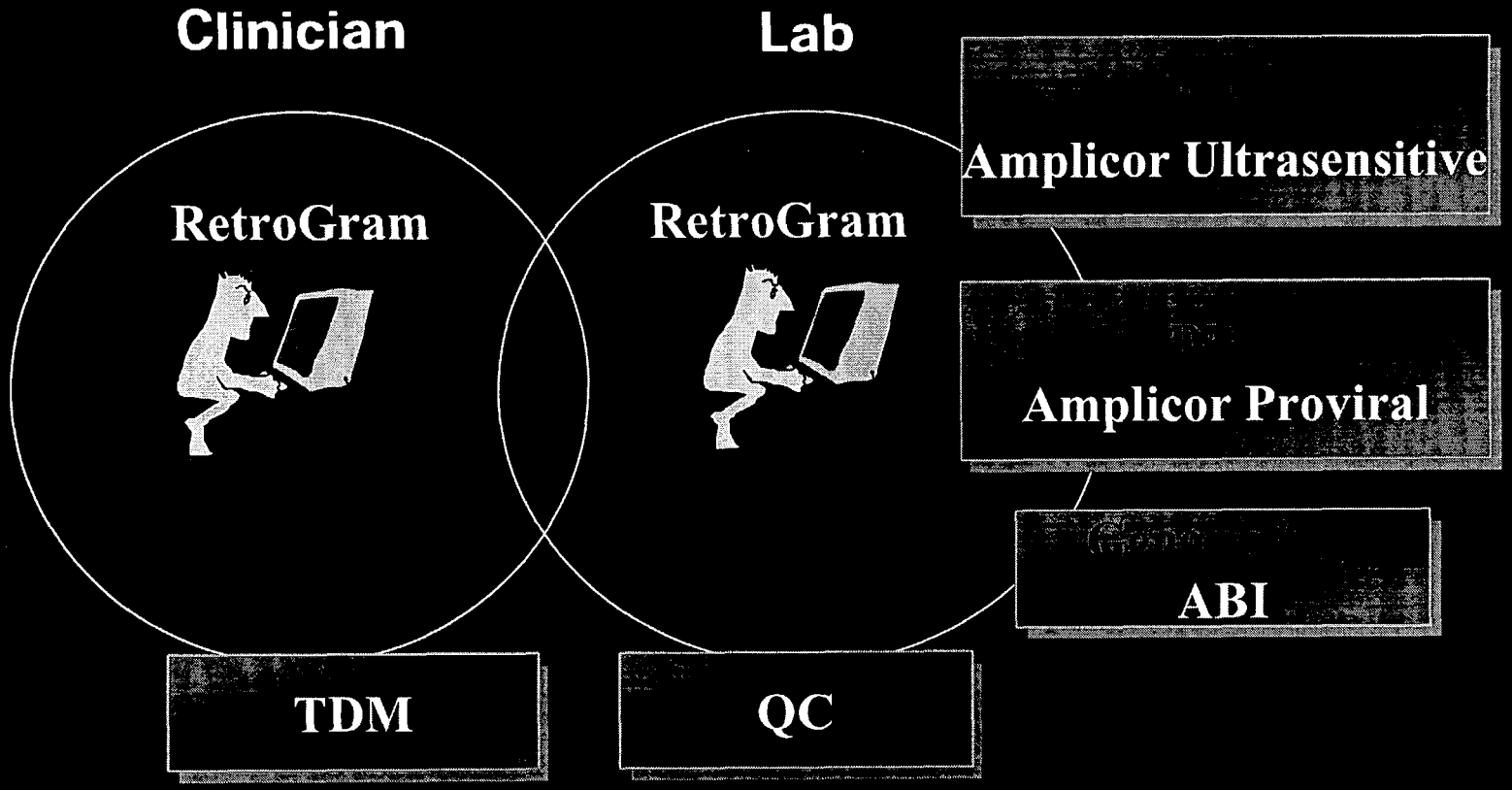
* In combination with efavirenz + RTIs in PI-failed patients

GREAT Study

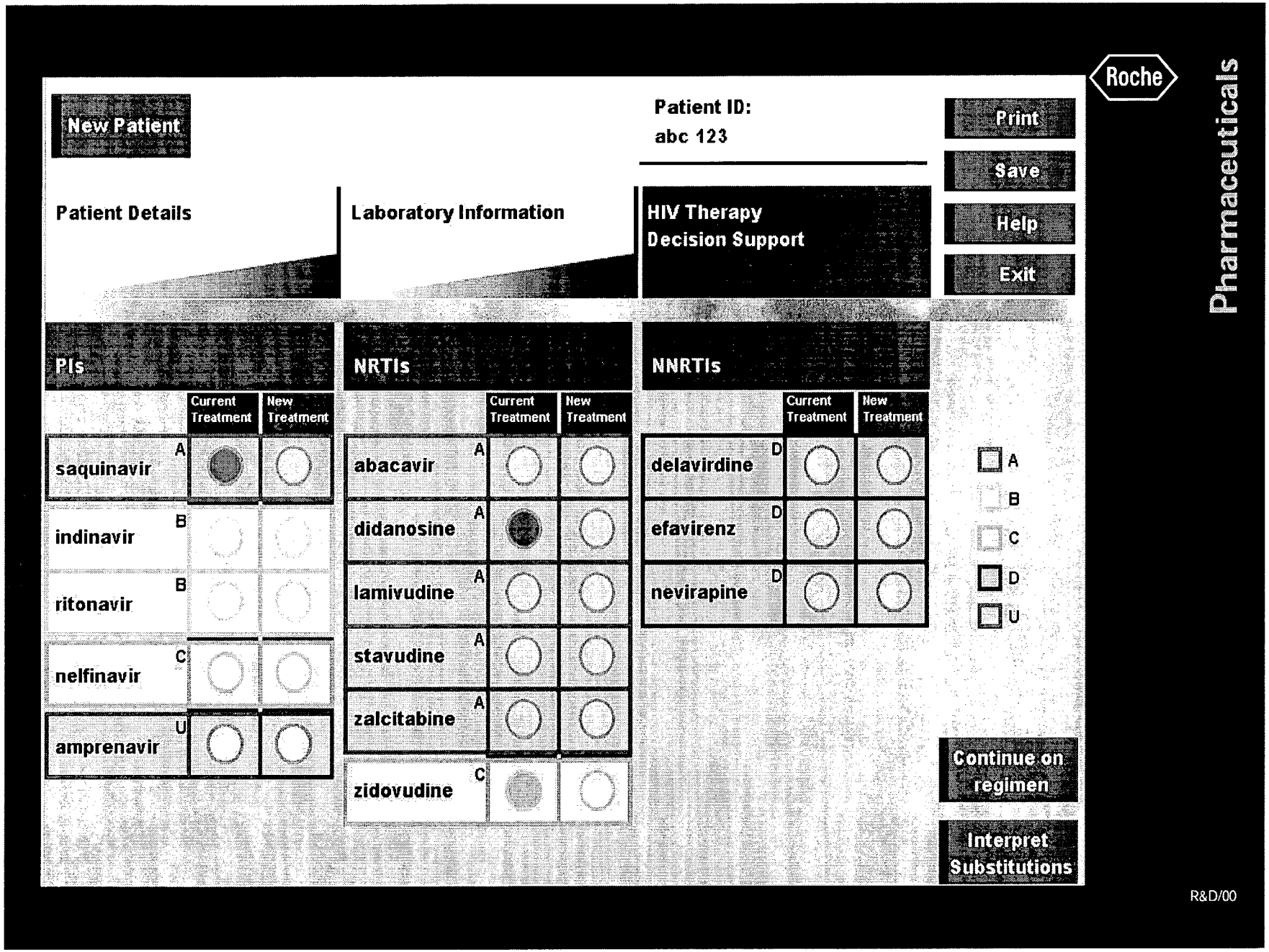
Leveraging our diagnostics capabilities to individualize therapy

Roche

Pharmaceuticals



R&D/00


New Patient
Patient ID:
abc 123
Print
Save
Help
Exit
Patient Details
Laboratory Information
HIV Therapy
Decision Support
PIs
Current Treatment
New Treatment
saquinavir A
indinavir B
ritonavir B
nelfinavir C
amprenavir U
NRTIs
abacavir A
didanosine A
lamivudine A
stavudine A
zalcitabine A
zidovudine C
NNRTIs
delavirdine D
efavirenz D
nevirapine D
A
B
C
D
U
Continue on regimen
Interpret Substitutions
Roche
Pharmaceuticals
R&D/00

FortoGENE - Fortovase genotyping surveillance registry

Full integration of Roche's capabilities in HIV

Roche

Pharmaceuticals

optimal use of therapies, "preserving options"

better care of your patients, "state of the art" technology in a simple program

increased value of the lab, stronger links to clinicians

optimal and cost-effective use of drugs and resources

data to support best practice use of Fortovase

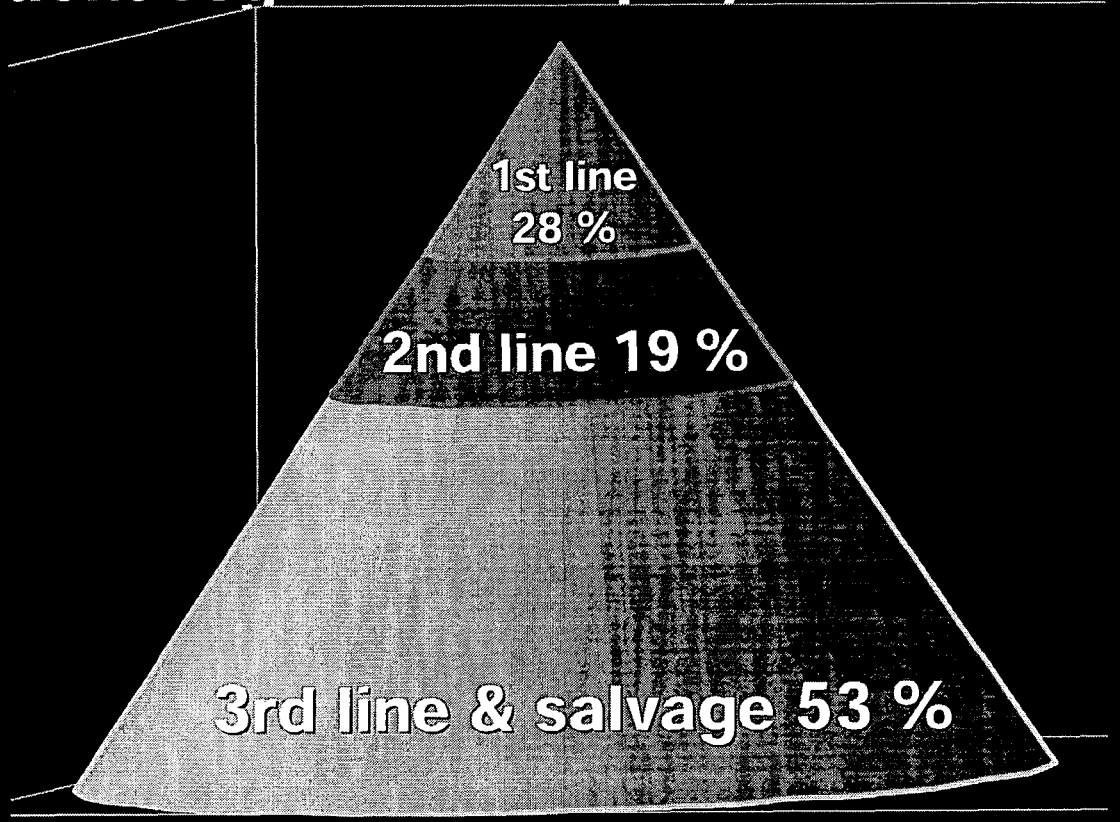
R&D/00

Urgent need for novel drugs to overcome drug resistant HIV

Roche

Pharmaceuticals

Patient segmentation projected for 2002



R&D/00

T-20: the first HIV fusion inhibitor
Potent activity against drug resistant HIV

Roche

Pharmaceuticals

- 36 aa peptide which binds to GP41
- Administered by subcutaneus injection (100mg BID)
- Phase II data shows activity similar to potent protease inhibitor
- Activity versus multi-class resistant HIV
- Generally well tolerated
- Entering phase III October 2000

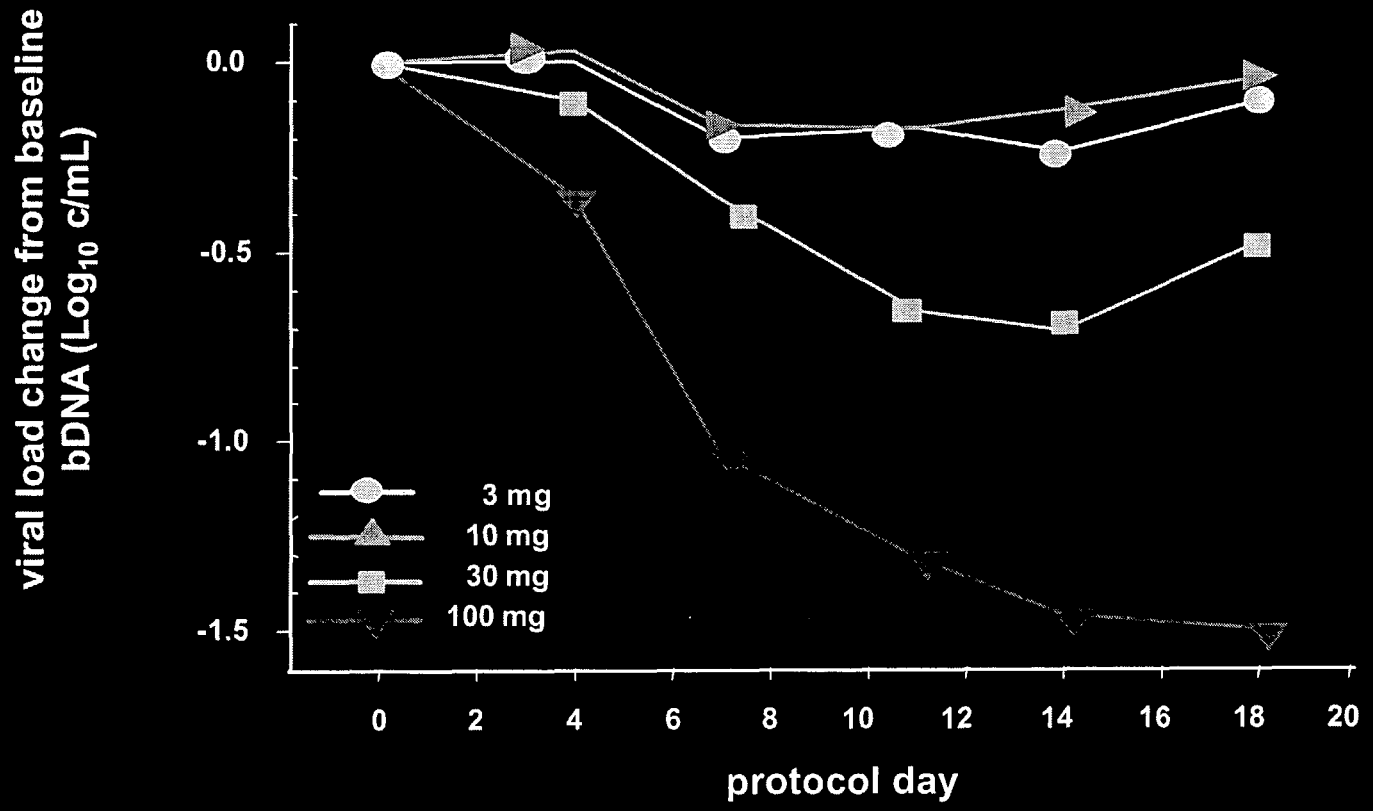
R&D/00

T-20 monotherapy after extensive pre-treatment

Viral load reduction similar to a potent protease inhibitor

Roche

Pharmaceuticals



R&D/00

T-1249

Establishing a strong fusion inhibitor portfolio

Roche

Pharmaceuticals

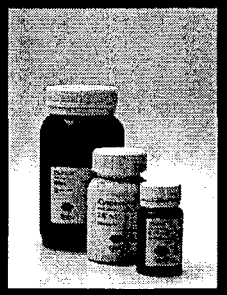
- Follow up to T-20
- 39 aa peptide
- Highly potent inhibitor of HIV fusion
- In vitro data suggest
  - resistance appears slow to emerge
  - activity against T-20 resistant virus (*in vitro* data)
- PK/PD supports once daily administration (50mg/day)
- Phase I

R&D/00

Roche's Integrated HIV Portfolio

Roche

Pharmaceuticals





- Viracept®
- Invirase®/Fortovase®
- HIVID®
- Cymevene® / valgan. (CMV)
- Roferon®-A / Pegasys™ (HCV)

- AMPLICOR® PCR assays
  - HIV-1, CMV, and HCV
  - HIV-1, CMV, and HCV MONITOR™
  - HIV-1 MONITOR™ Ultra Sensitive
  - HIV-1 MONITOR™ Proviral DNA
- COBAS® CORE II immunoassays
- TOA/Sysmex Hematology Analyzers
- Future: HIV resistance assay system

R&D/00

Roche

Pharmaceuticals

Pharma late stage pipeline

Pegasys

Joe Hoffman

Clinical Team Leader Pegasys

R&D/00

PEGASYS ® peg-interferon (40 kDa) α-2a

Roche

Pharmaceuticals

Indications

HCV: scope of the problem

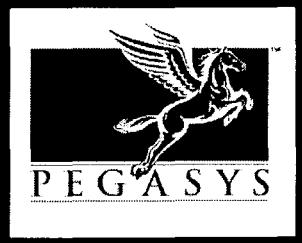
Current treatment approaches in hepatitis C

PEGylated interferons

Clinical data on PEGASYS®



R&D/00



Indications

Roche

Pharmaceuticals

Lead indication - chronic hepatitis C

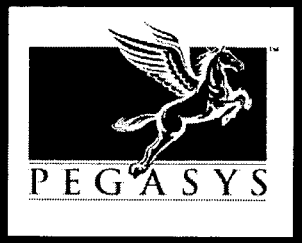
monotherapy program: treatment-naïve, including patients with cirrhosis and advanced fibrosis

combination program with ribavirin: treatment-naïve including HIV-HCV co-infected and normal ALT patients

combination program with Maxamine® *(Maxim)*: difficult-to-treat patients such as non-responders to previous treatment; genotype 1 infection

other combinations

R&D/00



Indications

Roche

Pharmaceuticals

Hepatitis B

wild-type infection

pre-core mutants

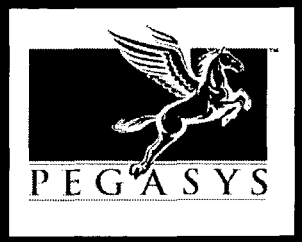
Oncology

chronic myelogenous leukemia

malignant melanoma

renal cell carcinoma
(including combination with Maxamine®)

R&D/00



Pegasys in hepatitis C
Scope of the problem

Roche

Pharmaceuticals

170 million patients world-wide

11 million patients in USA, EU and Japan

17 % diagnosed; 25 % treated

10,000 hepatitis C related deaths/year in USA;
expected to triple over the next 20-30 years

treatment acceptance is increasing

- understanding of disease seriousness
- success of treatment

R&D/00

Current treatment approaches

Roche

Pharmaceuticals

Currently marketed interferons (eg Roferon®)

virologic sustained response rates (SRR) of 10 -15 %

Addition of ribavirin to interferons

raises the SRR to 35 - 40 %

Problem: number of non-responders ≥ 60 %

genotype 1 patients

cirrhotic patients

New therapies needed

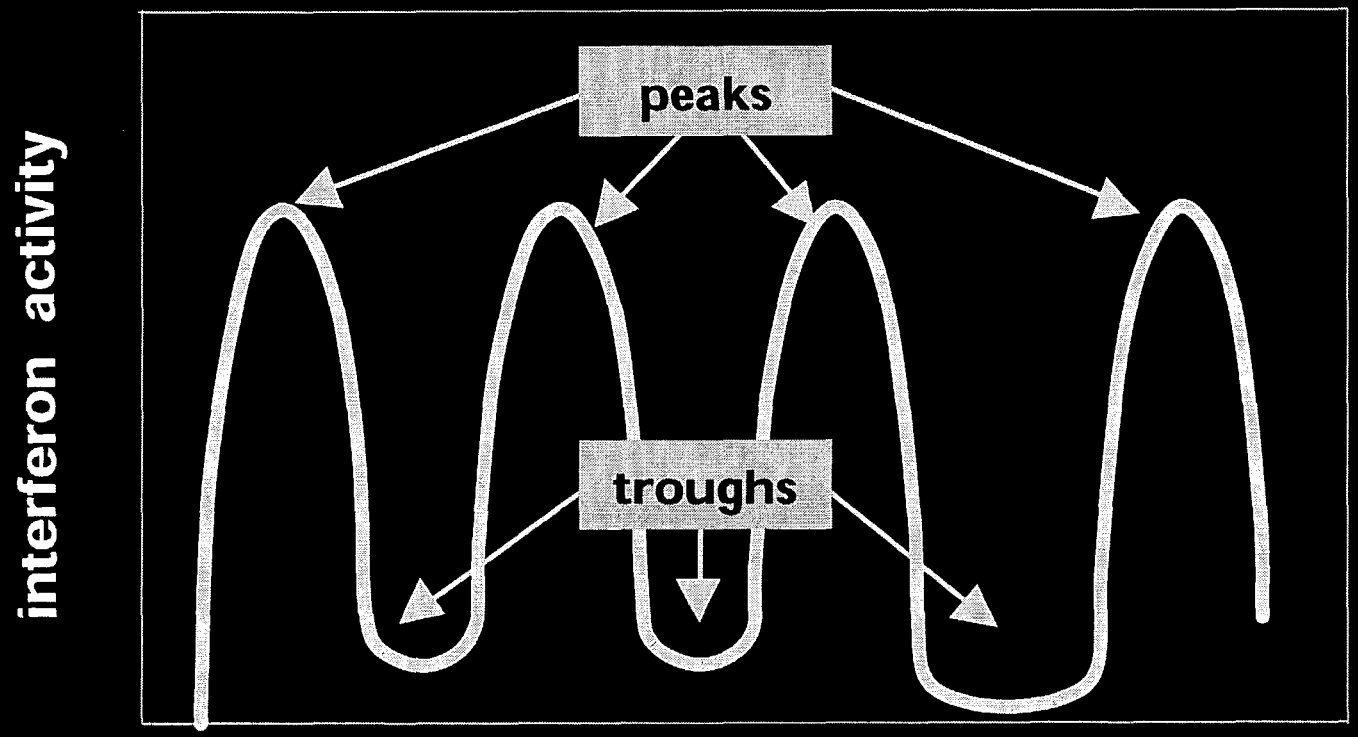
interferon will remain the "backbone of therapy"

R&D/00

Limitations of approved interferons

Roche

Pharmaceuticals



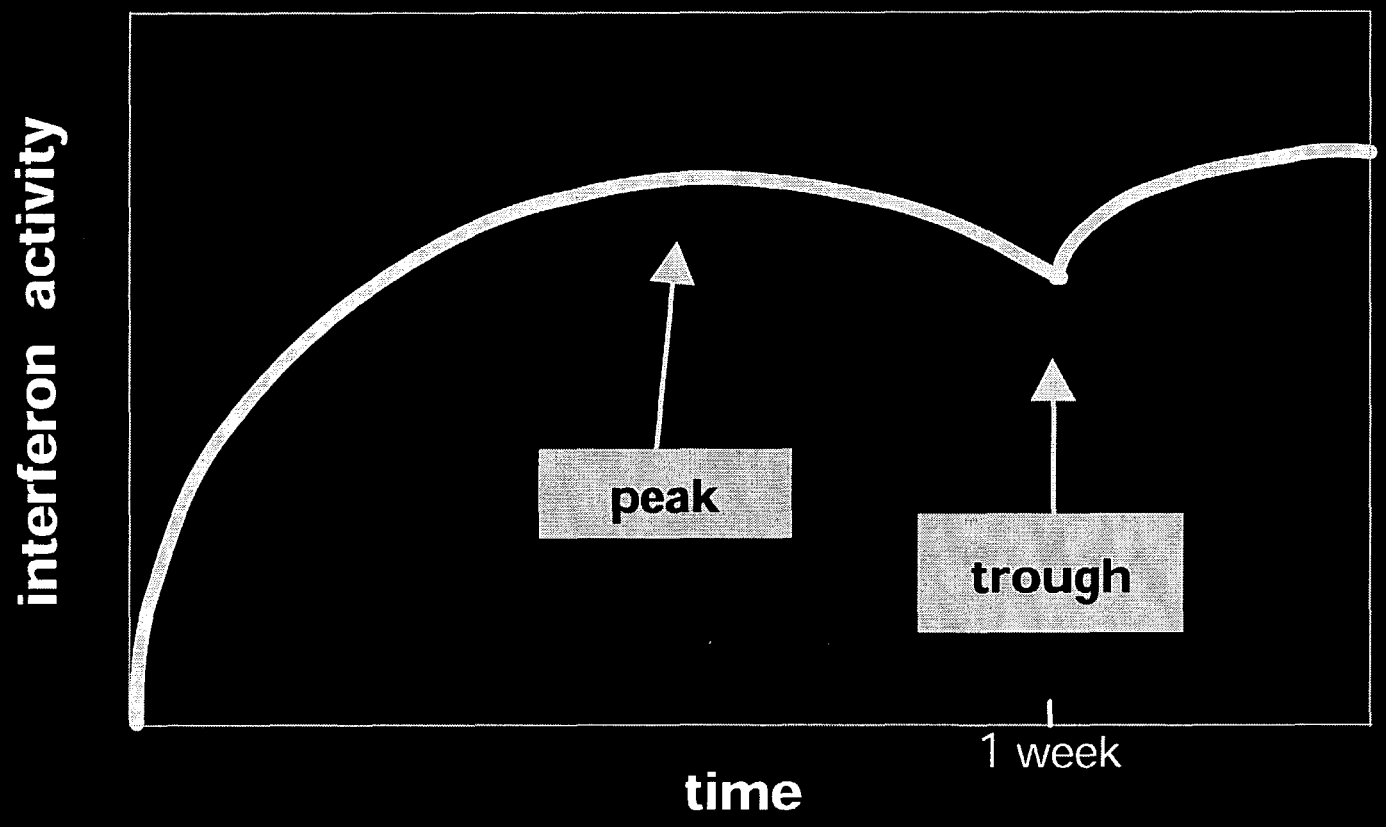
- short half-lives of standard interferons
- disappearance from blood between dosing
- "troughs" in activity allow virus to recover
- may facilitate emergence of resistant forms

R&D/00

Optimized interferon alfa

Roche

Pharmaceuticals



R&D/00

An optimized interferon alfa

Roche

Pharmaceuticals

Superior efficacy compared to standard interferon

especially in difficult to treat patients (genotype 1, cirrhotics)

Enhanced histological benefit over standard interferon

Increased tolerability over standard interferon

No dose adjustments for sub-populations

cirrhotics, elderly, renally-impaired, body weight

Quality of life benefit

compared to baseline as well as to standard interferon treatment

Increased convenience

once weekly dosing, fixed dose administrations, ready-to-use solution

R&D/00

PEGylated interferons

The next dimension in hepatitis C treatment

Roche

Pharmaceuticals

What is pegylation ?

process of attaching one or more chains of polyethylene glycol (PEG) to another base molecule (e.g., a protein)

Why is pegylation beneficial ?

increased duration of drug exposure (with 40 kDa branched PEG > 168 h)

constant viral suppression leading to increased sustained response rate

once weekly application

reduction of peak-to-trough fluctuations experienced with standard interferon (possible to reduce side-effects, increase tolerability)

Every PEG is different - PEG size and bonding matters

PEGASYS has branched 40 kDa PEG covalently bonded to interferon

real differences exist between PEGylated interferons

R&D/00

PEGASYS

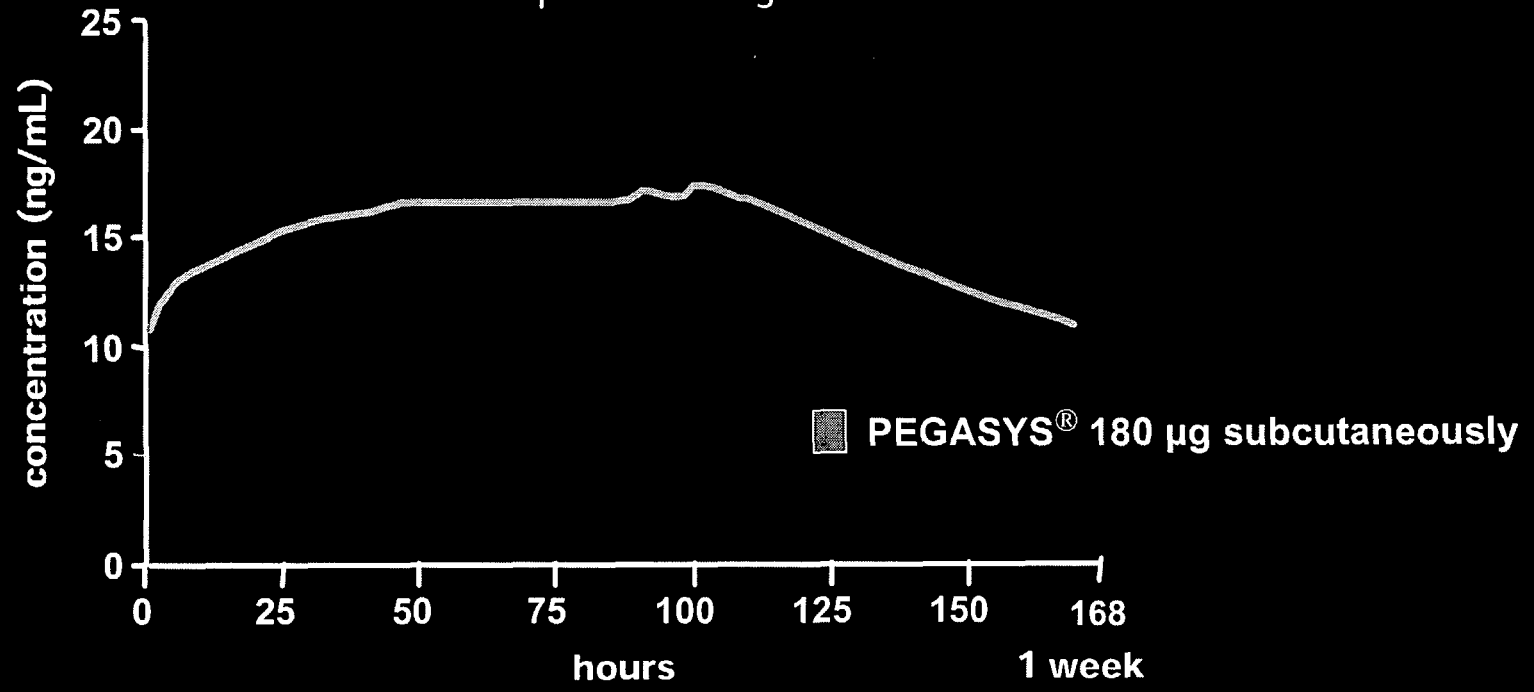
The pharmacokinetics

A true once weekly pegylated interferon

Roche

Pharmaceuticals

mean serum concentration-time profile following multiple-dose injections



Algranati et al., AASLD 99, Poster120

R&D/00



Summary of clinical pharmacology

Consistent with an optimized interferon

Roche

Pharmaceuticals

Rapid initial absorption: ~ 80 % of Cmax in first 24 hours

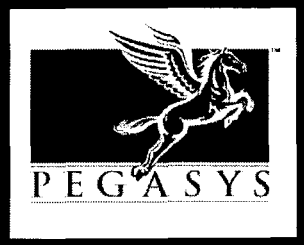
Sustained absorption combined with decreased clearance results in consistent effect beyond one week

Steady-state achieved between treatment weeks 4 and 8; no accumulation of drug thereafter

As with most drugs, cleared primarily by liver

No dose adjustments needed for compensated cirrhosis, moderate renal disease, advanced age, increased body weight

R&D/00



Monotherapy registration program
More than 1600 chronic HCV patients

Roche

Pharmaceuticals

Four clinical trials were performed with PEGASYS

Standard Hepatitis C population

First dose-finding study (45, 90, 180 and 270 µg)

Second dose-finding study (135 and 180 µg)

Pivotal study (180 µg) - reported here

Cirrhotic hepatitis C population

Pivotal study (90 and 180 µg)

Approx. 30 % of patients had advanced liver disease

All studies were reported by intent to treat analyses

Results as reported to Health Authorities

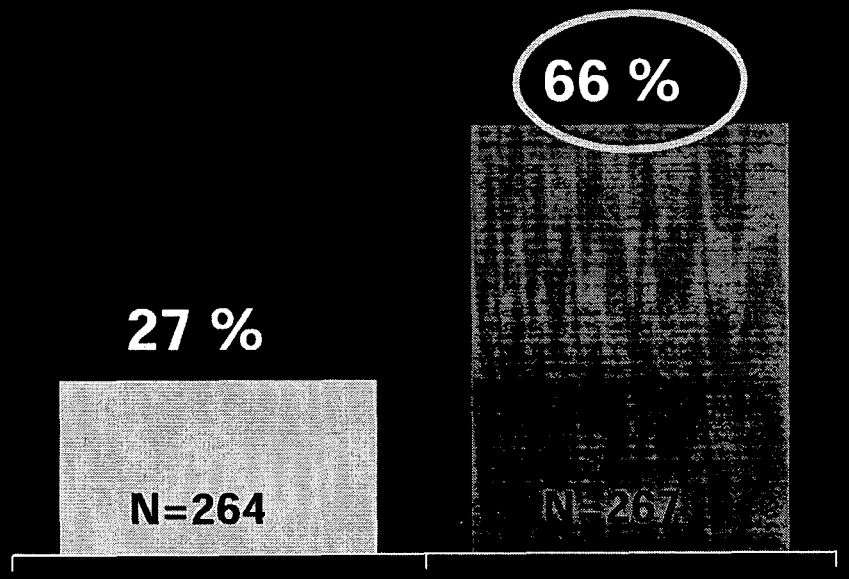
R&D/00

Key phase III efficacy data in monotherapy

Vastly improved end of treatment response

Roche

Pharmaceuticals



Zeuzem et al. EASL 2000

R&D/00

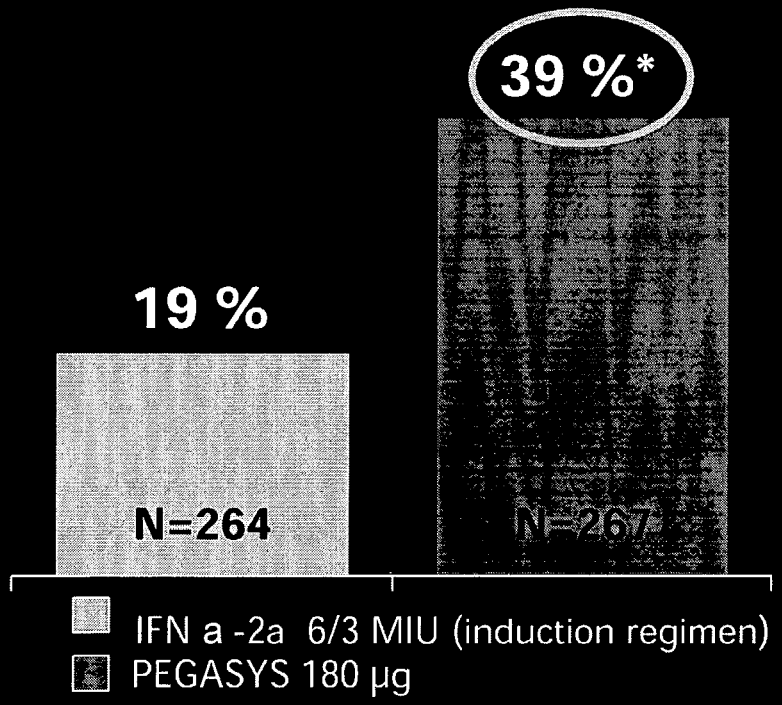
PEGASYS

Key phase III data in monotherapy

A breakthrough in sustained response rates

Roche

Pharmaceuticals



Zeuzem et al. EASL 2000

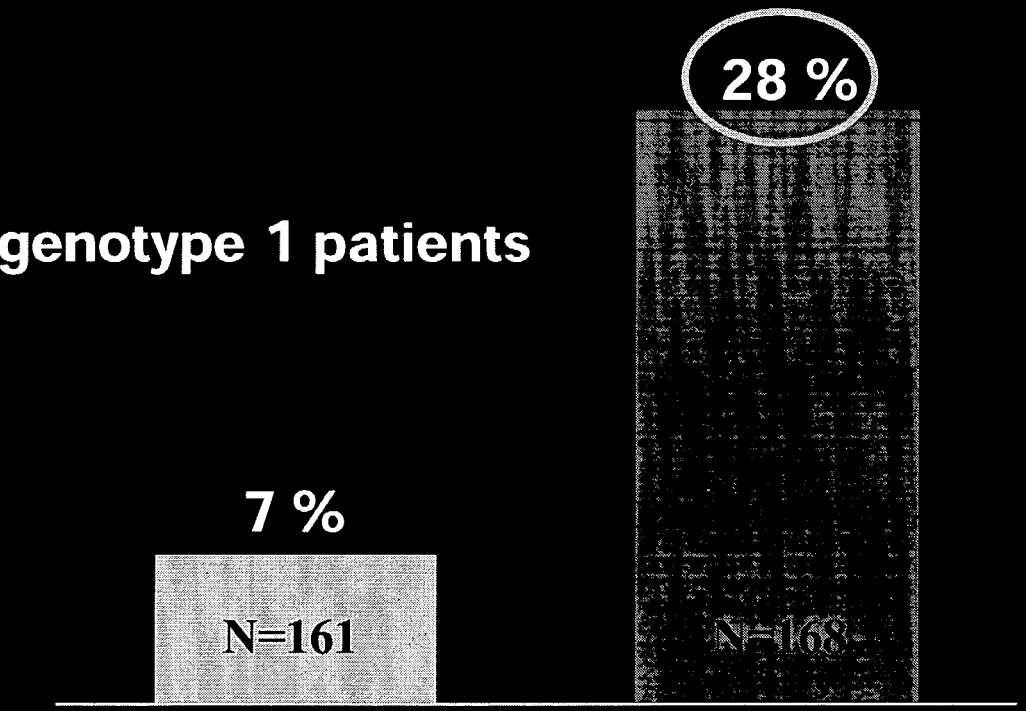
R&D/00

HCV genotype 1 infection

New hope for patients with genotype 1

Roche

Pharmaceuticals



genotype 1 patients

* P= 0.001
intent to treat analysis

Zeuzem et al. EASL 2000

R&D/00

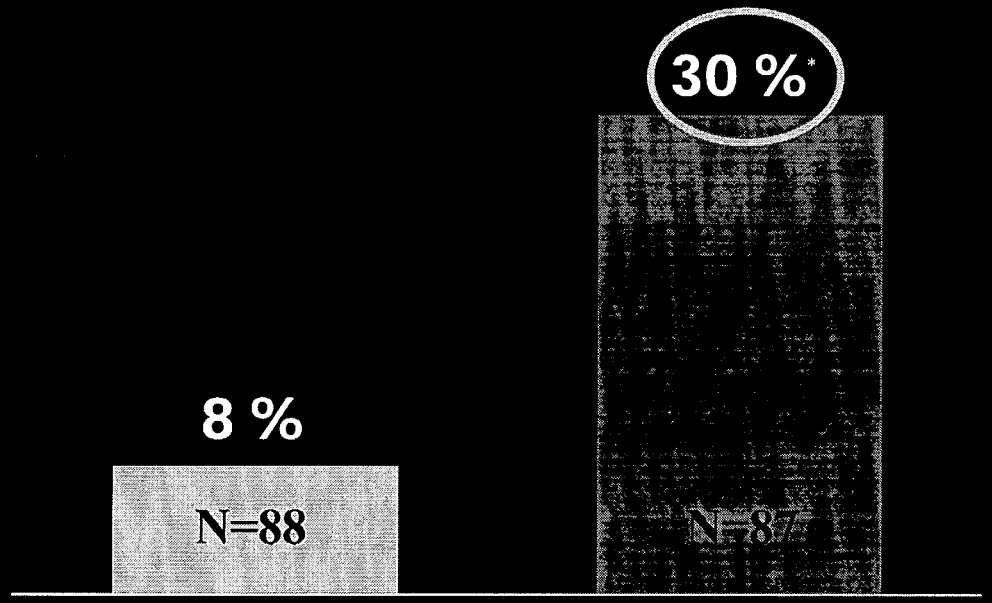
Key efficacy results

High sustained response in difficult to treat patients

Roche

Pharmaceuticals

cirrhosis or transition to cirrhosis patients



* P= 0.001
intent to treat analysis

Heathcote et. al. AASLD 1999

R&D/00

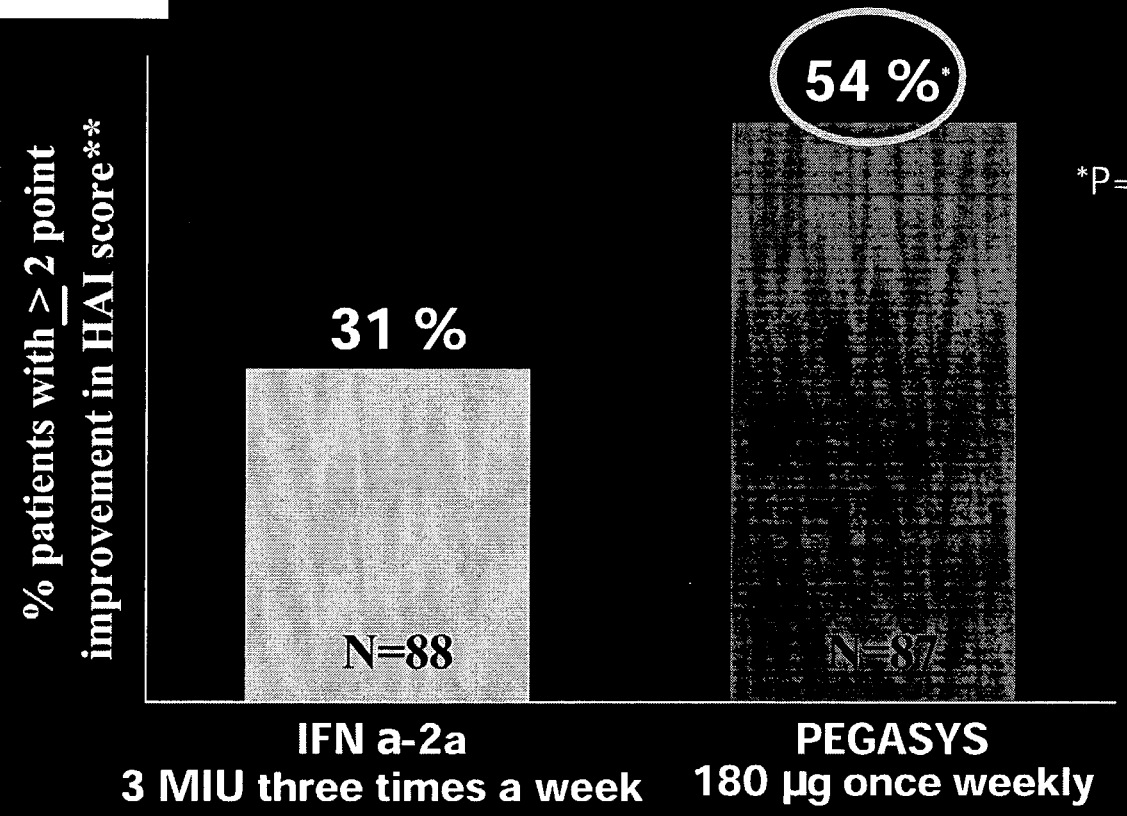
PEGASYS

Liver histology in cirrhotics

New hope for patients with advanced disease

Roche

Pharmaceuticals



*P= 0.02 vs IFN a-2a

**HAI = Histological Activity Index; ≥ 2 points improvement considered clinically relevant

Balart et. al., DDW 2000 R&D/00

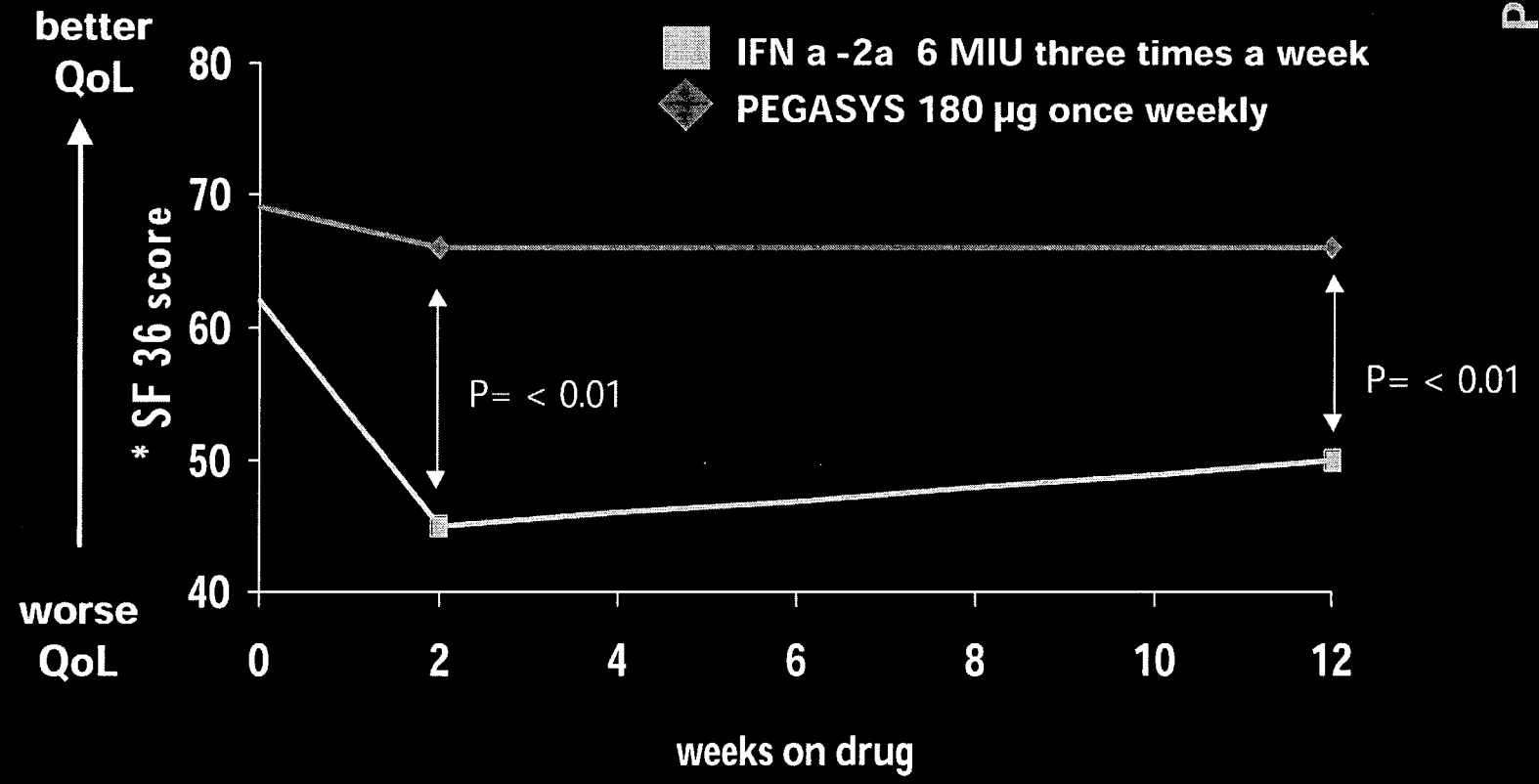
PEGASYS

Improved quality of life in phase III

Clinically and statistically significant improvement

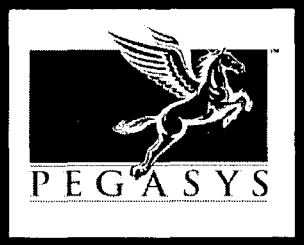
Roche

Pharmaceuticals



QoL = quality of life * SF 36 = patient-completed QoL questionnaire

R&D/00



Safety and tolerability profile

Roche

Pharmaceuticals

Types and frequencies of adverse events (AE) similar to IFN 3 MIU tiw; AEs generally less frequent than 6/3 MIU tiw

No major differences in AE profiles for general HCV population and patients with advanced liver disease

Dose adjustments and premature discontinuations similar to treatment with traditional interferon therapy

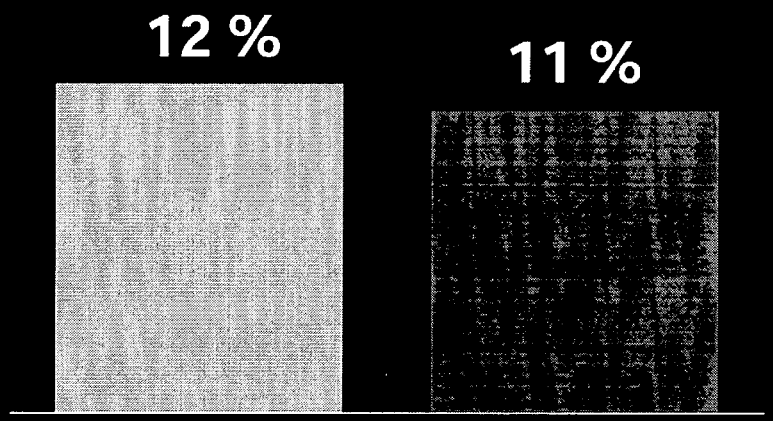
Only 1-2 % of patients discontinued for laboratory abnormalities

Dose reductions in phase III

Pegasys is well tolerated

Roche

Pharmaceuticals



IFN a -2a 6/3 MIU (induction regimen)

PEGASYS 180 µg

Foster, EASL 2000

R&D/00

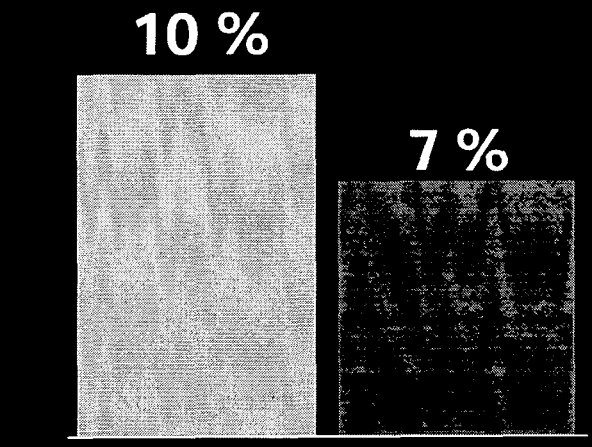
PEGASYS

Patient withdrawals in phase III

Pegasys is well tolerated

Roche

Pharmaceuticals

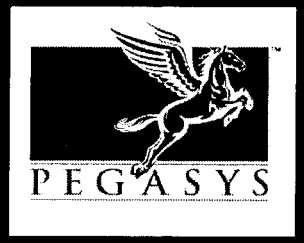


IFN a -2a 6/3 MIU (induction regimen)

PEGASYS 180 µg

Zeuzem et al. EASL 2000

R&D/00



An optimized interferon alfa

Roche

Pharmaceuticals

Superior efficacy compared to standard interferon

especially in difficult to treat patients (genotype 1, cirrhotics)

Enhanced histological benefit over standard interferon

Increased tolerability over standard interferon

Quality of life benefit

compared to baseline as well as to standard interferon treatment

No dose adjustments for sub-populations

cirrhotics, elderly, renally-impaired, body weight

Increased convenience

once weekly dosing, fixed dose administrations, ready-to-use solution

R&D/00



PEGylated interferons

Roche

Pharmaceuticals

Each compound needs to be evaluated on its own merits

There are as yet no direct head-to-head comparisons

Consider the following:

- Does the PK profile support consistency of effect through one week and once weekly dosing?
- Is the formulation convenient for patients?
- Are dose adjustments needed based on baseline characteristics?
- How many large, clinical trials have been performed and reported to Health Authorities?

R&D/00



PEGylated interferons

Roche

Pharmaceuticals

And consider the following:

What are the sustained virological responses in difficult to treat patients with genotype 1 infection and/or cirrhosis?

Were intent-to-treat analyses performed?

Were patients and investigators blinded as to who was on the experimental therapy and who was on the control regimen?

Was there statistically significant improvement in liver histology over standard interferon therapy?

Was there statistically significant improvement in QoL over traditional interferon therapy at therapeutic doses?

R&D/00



Summary

Roche

Pharmaceuticals

1. *Hepatitis C: a huge unmet medical need*
2. *Pegasys: a quantum leap in interferon therapy*
3. *Roche: committed to market leadership*

Roche

Pharmaceuticals

Pharma late stage pipeline

Oncology Franchise

Mabthera

Urs Schleuniger

Life Cycle Leader Mabthera

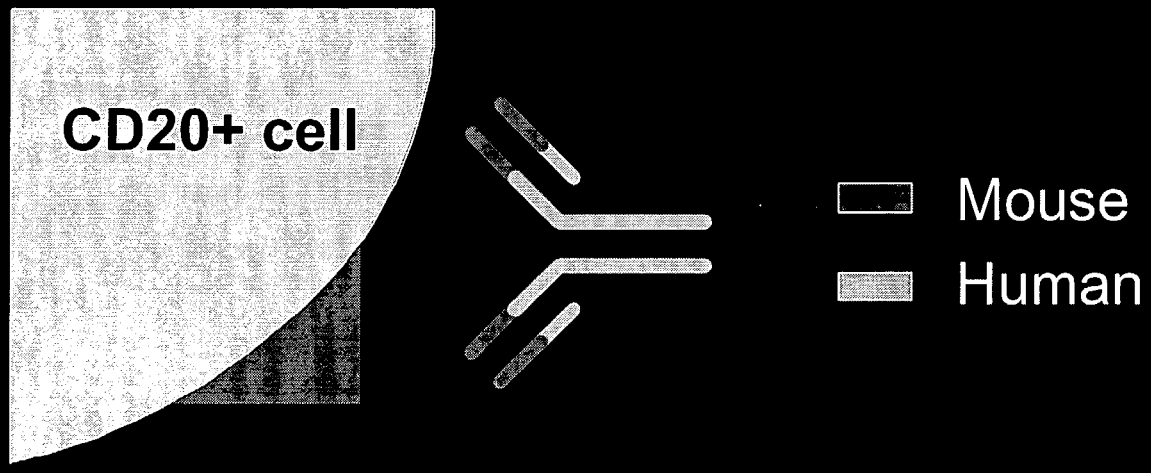
R&D/00

MabThera/Rituxan

On track to move from last line to standard front line therapy

Roche

Pharmaceuticals



- chimeric monoclonal antibody targeting CD20 antigen on B-cells
- registered for relapsed low grade non-Hodgkin`s Lymphoma
- very large product potential

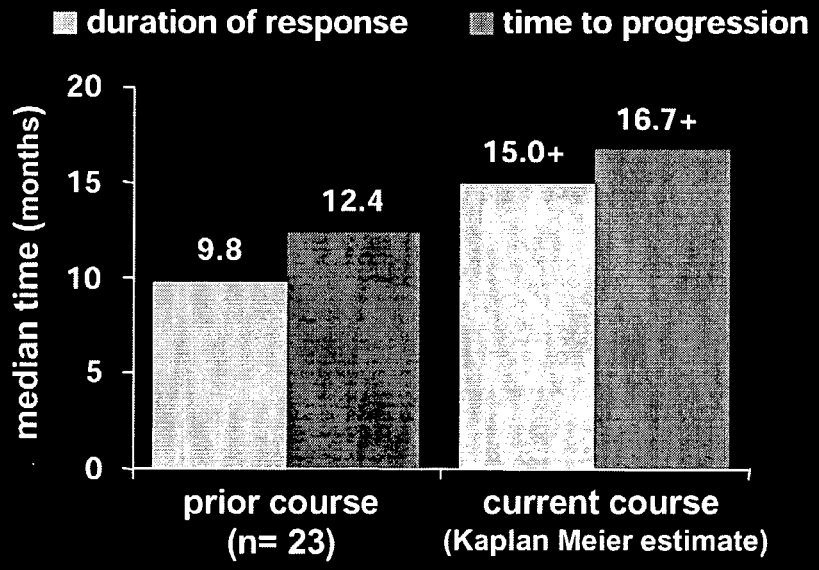
Relapsed/resistant low grade NHL
Substantial potential in approved indication

Roche

Pharmaceuticals

- Goal 1: double current market penetration of 20 % to 40 %
- Goal 2: expand the market by re-treatment approaches

- 40 % of patients respond to re-treatment
- response is longer in re-treatment than in previous treatment



R&D/00

First line treatment in intermediate/high grade NHL

Strong response rates in phase II

Roche

Pharmaceuticals

- Intermediate/high grade NHL > than 50 % of all B-cell lymphomas
- CHOP as standard chemotherapy cures 50 % of patients
- Approaches to improve over CHOP have failed for the last 20 years

Phase 2 of MabThera + CHOP

- 33 patients, CHOP day 1 and 3 x 6 cycles (median follow up 17 months)
- 97 % response rate (complete = 64 %, partial = 33 %)
- median duration of response > 11 months
- only 5 patients progressed

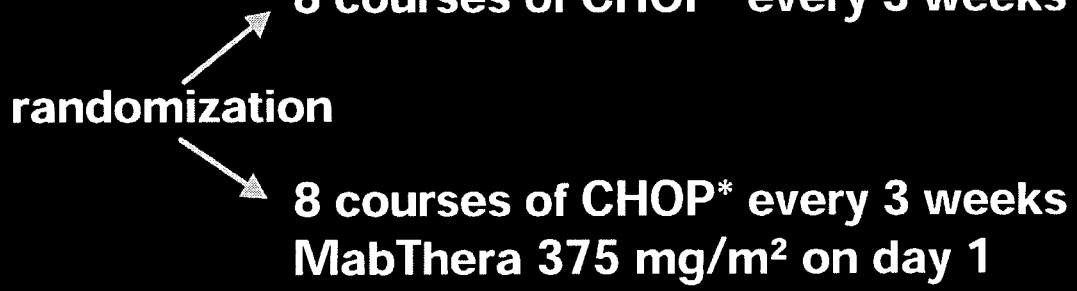
R&D/00

MabThera in intermediate/high grade NHL

Phase III well on track

Roche

Pharmaceuticals



- 400 patients recruited since July 1998 (1½ years earlier than expected)
- interim analysis results will be presented at ASH in December

*cyclophosphamide 750 mg/m², doxorubicin 50 mg/m², oncovin 1.4 mg/m², prednisone 40 mg/m² x 5, G-CSF d 5-12

R&D/00

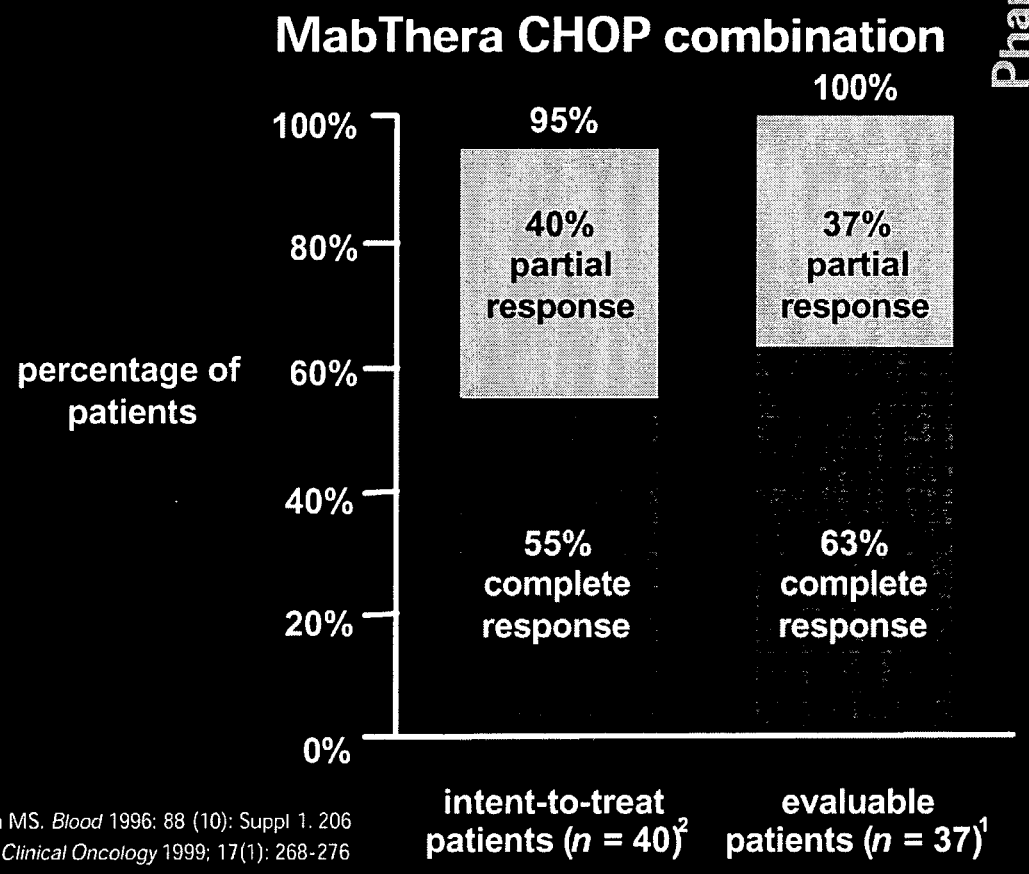
First line treatment with chemo in low grade NHL

Strong response rates in phase II

Roche

Pharmaceuticals

- Low grade NHL represents 45 % of all B-cell lymphomas
- No widely accepted standard treatment and no cure
- Multiple treatments



- 1. Czuczman MS. *Blood* 1996: 88 (10): Suppl 1. 206
- 2. Czuczman MS. et al. *Journal of Clinical Oncology* 1999; 17(1): 268-276

R&D/00

First line treatment with chemo in low grade NHL

Pronounced effect of MabThera on hard endpoints in phase II

Roche

Pharmaceuticals

Median duration of response not reached at 39.7+ months

Median progression free survival not reached at 41.1+ months

Twenty four patients still in remission beyond 36+ and up to 54.5+ months

7 of 8 bcl-2 positive patients converted to PCR negativity in the blood and marrow (molecular complete remissions)

Of these 7 patients, 6 remain in complete remission and 5 remain PCR negative

Czuczman M et al. *Blood* 1999;94 (10): Suppl 1. Abstract 432

Future outlook

Roche

Pharmaceuticals

Market fundamentals: NHL patient pool will double within next 10 years (fastest growing tumor after lung and melanoma)

MabThera short term potential:

- considerable additional potential in current indication
- line extension for intermediate/high grade NHL in 2002

MabThera medium/long term potential:

- line extension for rheumatoid arthritis
- line extension for 1st line low grade NHL→ changing treatment paradigm?

Roche

Pharmaceuticals

Pharma late stage pipeline

Oncology Franchise

Herceptin

Willem Verhoofstad

Life Cycle Leader Herceptin

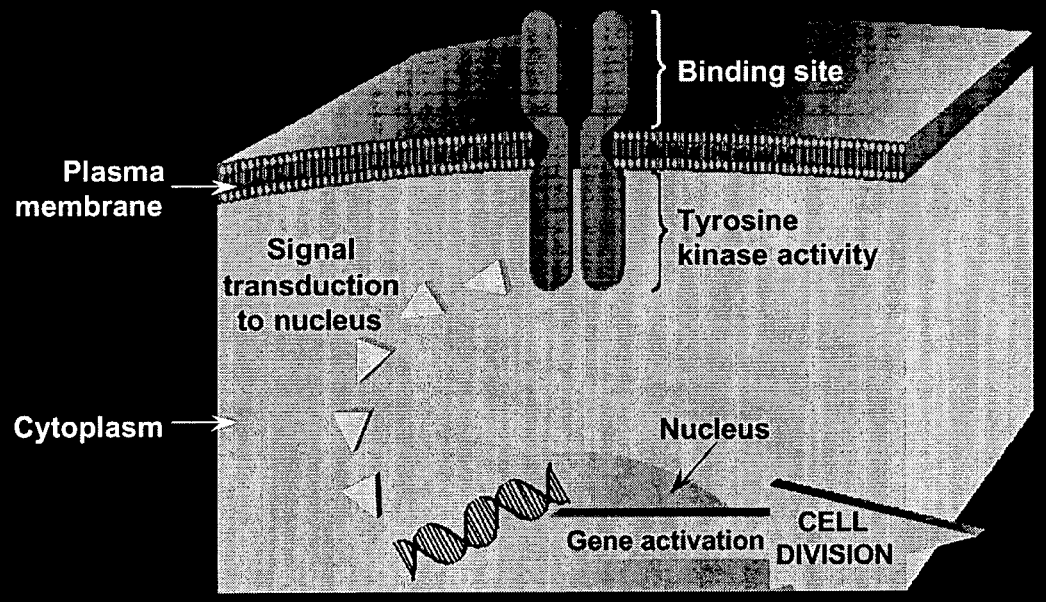
R&D/00

HER2 receptor

Provides an extra cellular therapeutic target

Roche

Pharmaceuticals



Herceptin selectively binds to the overproduced receptors, blocking the mechanism by which the cancer cells grow ( ), and induces cell killing by the immune system ( ).

R&D/00

Breast cancer epidemiology in Europe
Substantial market opportunity

Roche

Pharmaceuticals

- Over 250'000 cases diagnosed annually
- Over 100'000 deaths annually (370'000 worldwide)
- One in ten women will develop breast cancer in her lifetime
- Leading cause of death in women 35 to 55 (second leading cause of death in all women)
- HER2 is prognostic factor (15 to 20 % of women with BC strongly overexpress HER2 receptor), associated with *higher incidence of metastases*, *drug resistance* and *shorter survival* (7 → 3 years)

Herceptin®

Survival benefit in combination therapy

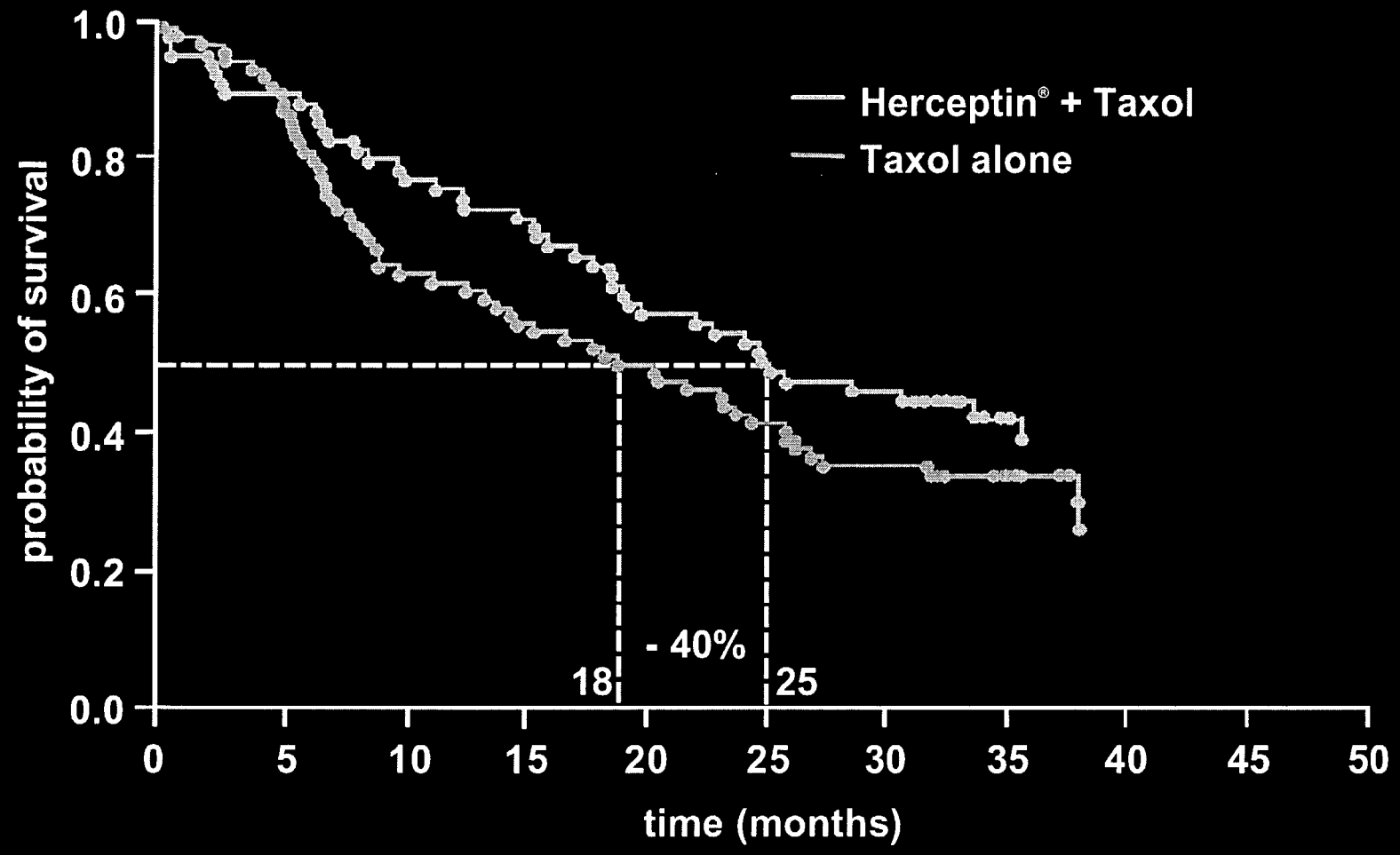
Roche

Pharmaceuticals

	Taxol	Taxol & Herceptin
median time to progression	3.0 months	7.1 months
response rate	17 %	49 %

R&D/00

Pivotal phase III combination trial – overall survival in HER2 3+ patients



Roche

Pharmaceuticals

R&D/00

Herceptin®

Outstanding efficacy as single agent

Roche

Pharmaceuticals

Herceptin monotherapy - 2nd / 3rd line

18 % response rate

duration of response 9 months

median survival 16.4 months

Herceptin monotherapy - 1st line

35 % response rate

duration of response 16 months

median survival 24.4 months

R&D/00

Herceptin® lifecycle management

Optimising the use in metastatic breast cancer

Roche

Pharmaceuticals

Approved in over 40 countries

Optimizing penetration in metastatic breast cancer

- combination with other anticancer agents, eg hormonal therapy
- treatment beyond progression

R&D/00

Herceptin® lifecycle management

Adjuvant breast cancer (ABC)

largest line extension opportunity

Roche

Pharmaceuticals

- Three large ABC studies ongoing
  - adriamycin/cyclophos. → Taxol + Herceptin (US) - start Q1 00
  - standard chemotherapy → Herceptin (ex US) - start Q1 01
- First approval expected 2006

R&D/00

Herceptin® lifecycle management

Other solid tumors explored and studies ongoing

Roche

Pharmaceuticals

	over-expression (%)	incidence Europe	incidence global
NSCLC	15 – 25	399'900	1'252'000
colorectal	11 - 15	376'500	1'025'100
bladder	40	121'700	332'100
gastric	24	164'400	763'200
pancreas	15 – 25	72'600	201'200
ovarian	11 - 14	65'300	206'600

studies ongoing in all indications
NSCLC expected to reach market in 2005

R&D/00

Roche

Pharmaceuticals

Pharma late stage pipeline

Oncology Franchise

Xeloda

Bruno Osterwalder

Clinical Team Leader Xeloda

R&D/00

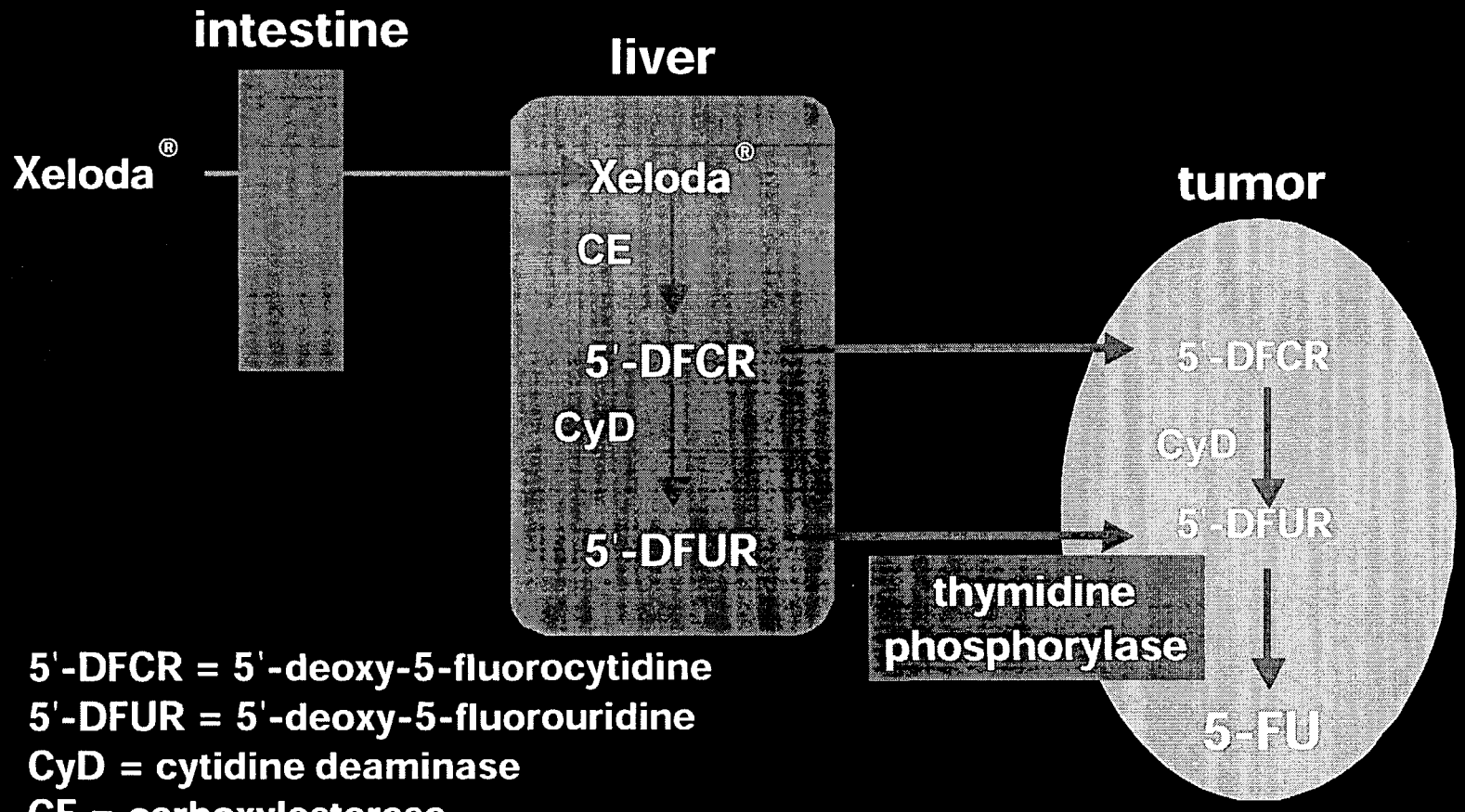
Xeloda® (capecitabine)

Capecitabine

The leading oral fluoropyrimidine

Roche

Pharmaceuticals



5'-DFCR = 5'-deoxy-5-fluorocytidine
5'-DFUR = 5'-deoxy-5-fluorouridine
CyD = cytidine deaminase
CE = carboxylesterase

R&D/00

Xeloda (capecitabine)

Development status
Roll-out well on track

Roche

Pharmaceuticals

Entry into humans: June 1994

Approval in pretreated breast cancer patients by FDA April 1998

Approved in >40 countries worldwide

NDA for colorectal cancer 1st line filed September 1999

Approval for first-line treatment in colorectal cancer in Canada, New Zealand, Australia, Chile, Honduras, Russia, Yugoslavia, (Switzerland)

Pending approvals in USA and EU

Preparation for breast cancer combination treatment filing 2001

NDA planned in Japan 2001

Xeloda® (capecitabine)

First-line in colorectal cancer

Improved tumour response rate

Roche

Pharmaceuticals

	Xeloda® (n=603)	5-FU/LV (n=604)	
investigator			
partial + complete response (%)	**25.7**	**16.7**	p<0.0002
stable disease (%)	47.8	52.2	
Institutional Review Board			
partial + complete response (%)	22.4	13.2	p<0.0001
stable disease (%)	52.9	57.6	

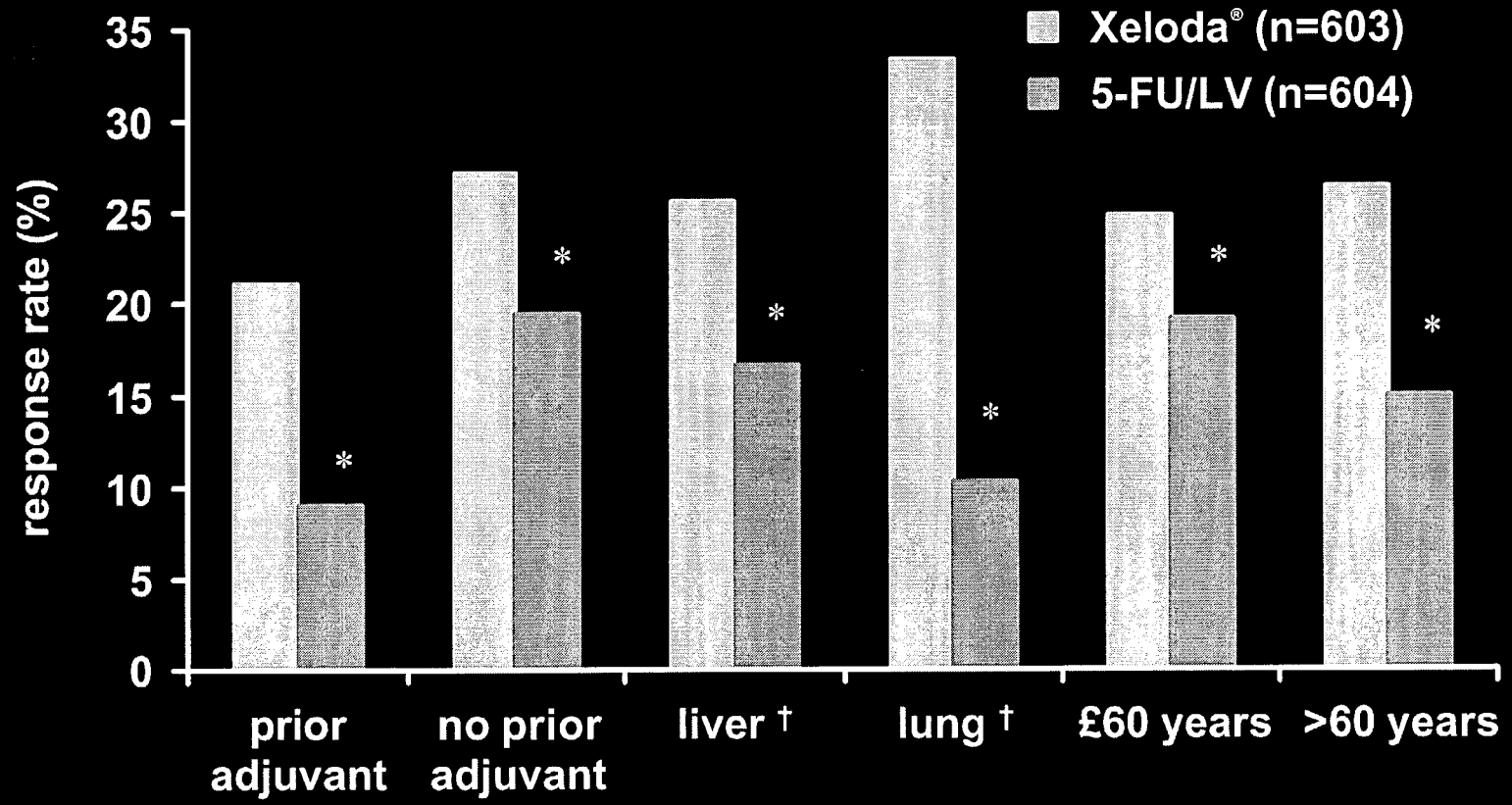
R&D/00

Response rates in metastatic colorectal cancer

Improvement in all sub-populations

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† predominant site of metastases

* p <0.05

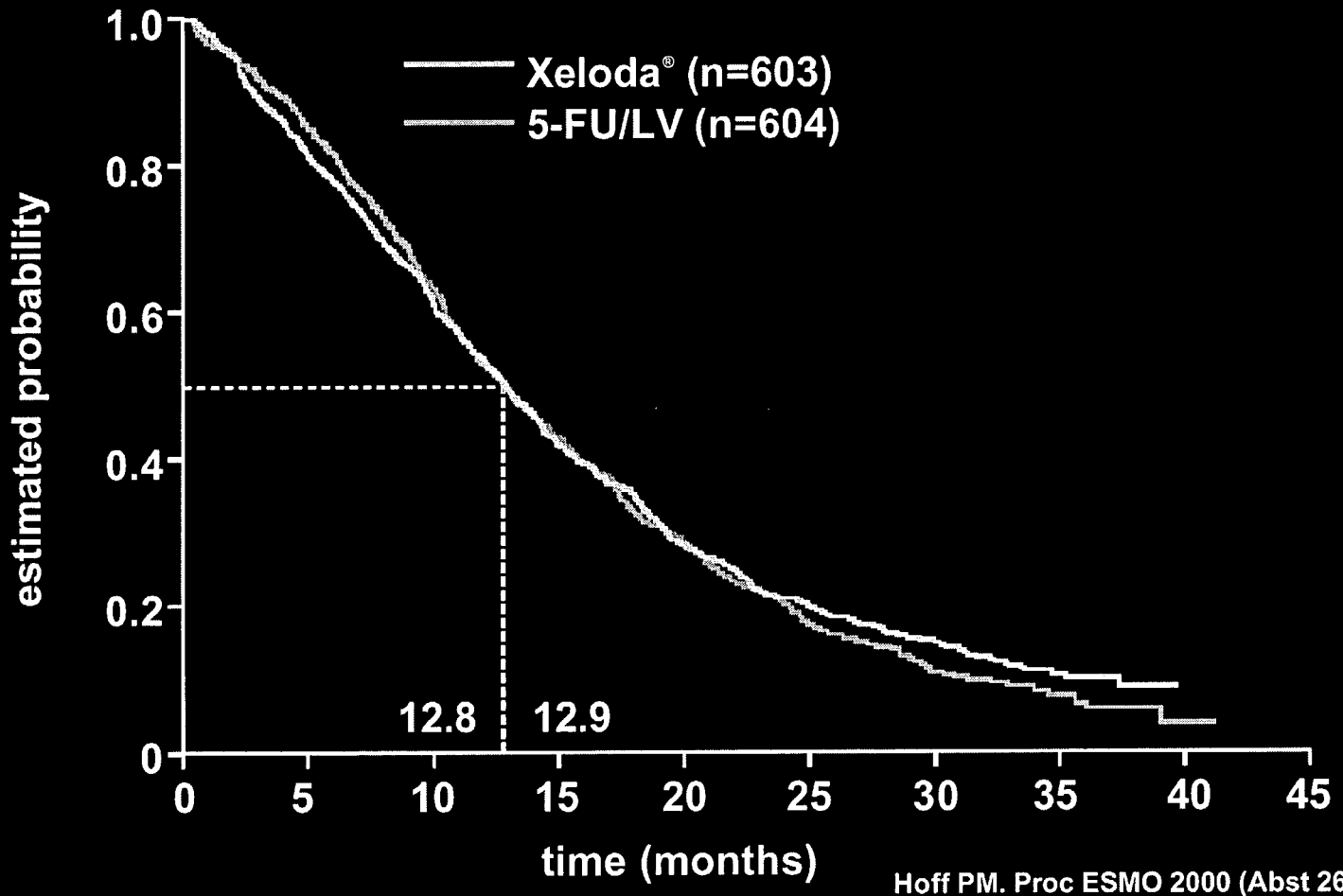
R&D/00

Overall survival in metastatic colorectal cancer

Oral therapy equivalent to standard

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Hoff PM. Proc ESMO 2000 (Abst 263)

R&D/00

Xeloda (capecitabine)

Versus standard therapy

Clinically relevant safety advantages

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Significantly less diarrhoea, stomatitis and nausea

Low rate of myelosuppression

Significantly less alopecia

Significantly more hand-foot skin reaction

Significantly reduced hospitalizations and requirements for treatment of adverse events

Fewer consultations required for treatment administrations

R&D/00

Cancer patient preference for oral treatment

Xeloda (capecitabine)

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89 % of patients surveyed preferred oral therapy versus intravenous infusions [1]

A randomized trial showed that the principal reasons for this preference were oral administration, ability to self-administer medication and continue daily activities [2]

Self-administered therapy is associated with improved quality of life for patients compared with hospital-based care [3]

There is a clear need for an effective oral, outpatient therapy

[1] Liu G et al. J Clin Oncol 1997;15:110–5 [2] Borner et al, Proc Am Soc Clin Oncol 2000, 19, 191 a (abst #741)
[3] Payne SA. Soc Sci Med 1992;35:1505–9

The Roche X-ACT study

Exploring potential in the adjuvant setting

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1,956 Dukes' C colon cancer patients

Open-label, randomized, multicentre, phase III trial

Xeloda® 1,250mg/m^2 twice daily, days 1–14 every 3 weeks x 8 versus 4-weekly Mayo regimen x 6

Disease-free survival as primary endpoint

Secondary endpoints: overall survival, safety, quality of life, health economics, measurement of biochemical markers in selected centers

R&D/00



In colorectal cancer

Moving forward with combination therapy

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Combination treatment of irinotecan and oxaliplatin with 5-FU/LV improves response rates, time to progression and survival (irinotecan)

Phase I/II combination therapy studies of Xeloda® with irinotecan and oxaliplatin: combination is safe, feasible and has promising anti-tumour activity

"all oral" combinations with oral irinotecan and cell cycle inhibitor provide new treatment options especially for the adjuvant setting

Xeloda® may replace 5-FU as sensitizer for radiotherapy

R&D/00

Xeloda® (capecitabine)

In metastatic breast cancer
Moving from last line to first line

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Approved in patients failing anthracyclines and taxanes

Second line treatment:

Xeloda® versus paclitaxel in patients pretreated with anthracyclines (n=42): similar response rates, duration of response and time to progression as paclitaxel (1)

First line treatment:

Xeloda® versus cyclophosphamide, methotrexate and 5-FU in women >55 years (n=95): at least similar response rate, longer time to disease progression and survival (2)

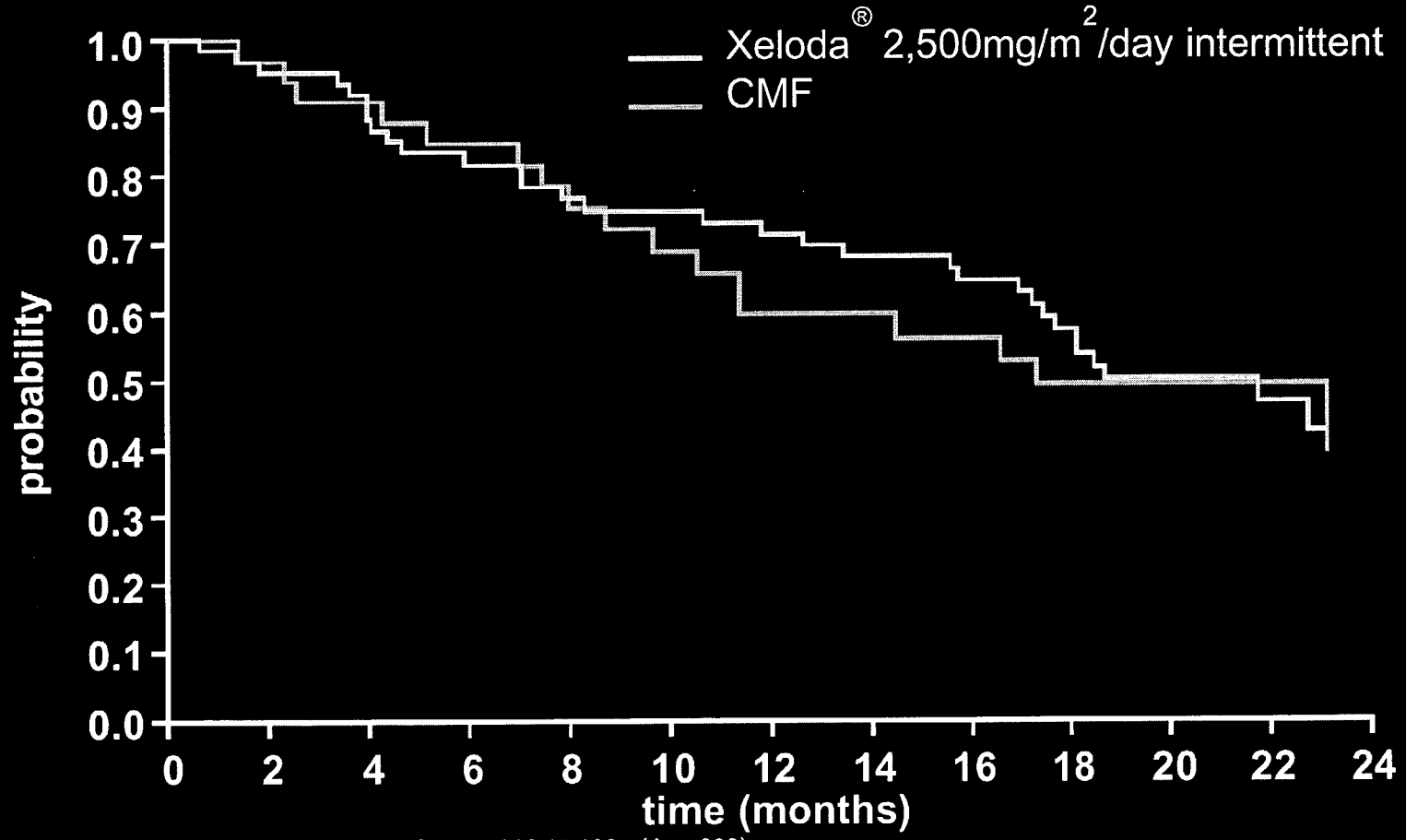
(1) O'Reilly SM et al. Proc Am Soc Clin Oncol 1998;17:163a (Abs 398)
(2) O'Shaughnessy J et al. Proc Am Soc Clin Oncol 1998;17:103a (Abs 398)

Xeloda® (capecitabine) vs CMF in elderly breast cancer patients

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Data suggest improved survival



O'Shaughnessy J et al. Proc Am Soc Clin Oncol 1998;17:103a (Abs 398)

R&D/00

Positioning in breast cancer

From last to first line and to adjuvant

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Position Xeloda® in earlier lines of treatment

Position Xeloda® in earlier disease stages with adjuvant therapy

Develop combination regimens with other commonly used or novel breast cancer therapies (Herceptin, taxanes, anthracyclines, Navelbine, Gemzar)

Develop "all oral" regimens by combining Xeloda® with other oral agents (cyclophosphamide)

Combination with Taxotere in Phase III (versus Taxotere) in anthracycline failures → filing in 2001

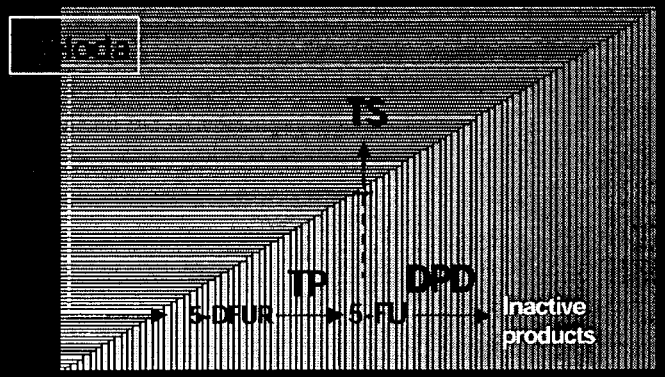
R&D/00

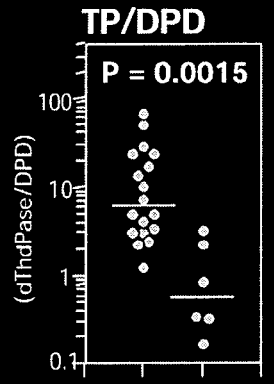
IHCS program on Xeloda

Patient stratification based on enzyme patterns

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Impact on business: faster/higher market shares (better response rates)
extension of indication („molecular responder profiles")

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Summary

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Effective and safe oral chemotherapy

First-line monotherapy in colorectal cancer:

- Superior response rates and safety profile, equivalent time to tumor progression and overall survival compared to standard 5-FU/LV (Mayo regimen)

Only agent with proven activity after taxane treatment failure in metastatic breast cancer

Good combination partner due to low rate of stomatitis, myelosuppression, neurotoxicity and very low levels of alopecia

Preferential bio-activation to 5-FU by thymidine phosphorylase in tumor tissues



In additional indications

Extensive clinical activities in many solid tumors

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colorectal cancer
- metastatic: combinations
- adjuvant

breast cancer
- metastatic: combinations
- adjuvant

gastric cancer

esophageal cancer

pancreatic cancer

head and neck tumors

hepatic and bile duct cancer

cervical cancer

prostate cancer

renal carcinoma

Xeloda the leading oral fluoropyrimidine

R&D/00

Roche R&D day for investors 2000
Summary

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World class competence in pharmaceutical research

World class competence in pharmaceutical development

Growth drivers approaching the market

Roche R&D day for investors 2000
Summary

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Roche is best placed to capture value from the healthcare revolution

Roche Genetics: leading towards more individualised healthcare

Roche Diagnostics is under-recognised