



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

Mail Stop 3030

June 2, 2010

Christopher F. Tirotta
President
American Scientific Resources, Incorporated
1112 Weston Road, Unit 278
Weston, FL 33326

**Re: American Scientific Resources, Incorporated
Amendment to Registration Statement on Form S-1
Filed May 10, 2010
File No. 333-164517**

Dear Dr. Tirotta:

We have reviewed your filing and have the following comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Registration Statement Cover Page

1. We note your response to comment 1; however, your registration statement beginning on page F-1 continues to use the name "American Scientific Resources, Inc." We therefore reissue our comment.

Prospectus Cover Page

2. Given the lack of an established market for your securities, a statement that selling stockholders will sell "at a prevailing market price" is insufficient to

satisfy your disclosure obligation. Please refer to our prior comment 2 which we reissue. Revise accordingly.

Prospectus Summary, page 4

About Us, page 4

3. We note your disclosure that you provide a broad range of healthcare and medical products. It would appear that this disclosure may overstate the diversity of the products that you provide. Specifically, we note that you appear to provide health and safety products for babies. Please revise your disclosure accordingly.
4. In that regard, please note that the registration statement should not include marketing language. For instance, we note your reference to “innovative medical products and healthcare supplements sourced from around the globe.” Revise your prospectus to eliminate marketing language, which is inappropriate in a disclosure document.
5. We reissue comment 4 because your summary does not include a discussion of the healthcare supplements that you refer to in the second paragraph of this section. To make your disclosure more accessible to investors, you may also wish to revise the second paragraph to use a separate bullet point for each product.
6. Please reconcile your disclosure in the second paragraph of this section with your newly filed exhibit 10.59, which indicates that the DVDs were developed by Ms. Tirotta.
7. Given the significance of the risk presented, revise the summary to disclose that you are in default on your notes and that noteholders may foreclose on your assets and commence legal action to recover the amounts due.

Summary of the Shares..., page 5

8. Please reconcile the number of shares outstanding after the offering with the number of shares offered and outstanding prior to the offering.

Risk Factors, page 5

Additional financing will be necessary..., page 6

9. Please expand this risk factor to specifically address the risk that repeated defaults on credit obligations may raise serious concerns with potential lenders regarding your creditworthiness.

We have numerous past due..., page 6

10. We note your added disclosure in response to comments 12 and 13 and reissue both comments. Please revise your disclosure to provide expanded discussion of each risk under separate risk factors. With respect to both comments, also revise to ensure that your risk factor headings clearly identify the risk discussed.
11. Please clarify what you mean by “other terms” in the second sentence.

We are reliant on a single customer..., page 7

12. Please expand this risk factor to address whether your agreements with Babies R Us are long-term or terminable at-will. In addition, please disclose your reliance on any other significant customers or, alternatively, confirm that you do not have any other significant customers.

We will incur increased costs..., page 9

13. Please disclose the substance of the last sentence of your response to comment 16.

If we are unable to favorably assess..., page 10

14. We note the penultimate sentence in this risk factor. Please clarify when you will be required to provide a report on internal controls.

Selling Security Holders, page 11

15. We note your response to comment 19; however, it is unclear how the issues you cite relate to the availability of Rule 415(a)(1)(i) and therefore reissue our comment. Please refer to Securities Act Rules Compliance and Disclosure Interpretations 612.09 available at <http://www.sec.gov/divisions/corpfin/guidance/securitiesactrules-interps.htm>.
16. Regarding your response to comment 20, please tell us when the services that form the consideration for each issuance listed in this section were completed. We note from your disclosure in footnote (16) on page 15, for example, that the services are for a three year period commencing April 2008.
17. We note your response to comment 23 and reissue. It is unclear how including beneficial ownership information in the selling stockholders table provides clear and unambiguous disclosure regarding the shares being offered by each selling shareholder. In addition, please tell us why Granite Financial is selling more shares than beneficially owned.

Description of Business, page 18

18. We note your response to prior comment 27. However, please further revise your disclosure to clarify the anticipated costs to fund the marketing activities, product development and other projects that you identify.
19. Refer to the second sentence of the fifth paragraph under this section. Please clarify which products you manufacture.
20. We note your response to prior comment 29. Expand your discussion of the development of the Kidz-Med business. We note that you do not disclose subsequent developments after your decision in April of 2007 to focus on the Kidz-Med line.

Principal Products by Company, page 18

21. We note your disclosure in the first paragraph in this section that you develop the products described. Please clarify which products you are specifically referring to given that the descriptions that follow indicate that you are primarily a distributor.

Kidz-Med Thermofocus 5-in-1, page 18

22. Regarding the study you mention in the first paragraph, please also tell us:
 - how you confirmed that this study reflects the most recent available information;
 - whether the study is publicly available;
 - whether you paid for the compilation of the study;
 - whether the study was prepared for your use in the registration statement; and
 - whether the authors of the study consented to your use of such data in the registration statement.If you were affiliated with the preparation of any of the study, please ensure that your disclosure clearly indicates the nature of all such affiliations.
23. We note that your response to prior comment 38 is not responsive to all of the subparts of that comment. For instance, you have disclosed the anticipated unit cost but not the aggregate estimated cost. Similarly, you have not disclosed the purpose of identifying a Chinese factory when final assembly and packaging will be done domestically. We reissue the prior comment.
24. Please clarify the status of your distribution of the Thermofocus product between the termination date of the agreement with Tecnimed and the settlement.
25. Please tell us which exhibit relates to the contract with the Chinese factory that you mention in the first paragraph on page 19.

26. Please tell us how you can be certain that because the Never Touch 5-in-1 does not incorporate any aiming lights it will not infringe on the Thermofocus patent.

Kidz-Med Portable Ultrasonic Nebulizer, page 19

27. We note your response to prior comment 41. You disclose that this product is only sold on your website. Please clarify the basis for this statement. For example, do you have an exclusive distribution agreement? If so, does it apply worldwide? Also, clarify why you are looking for a new supplier and why you are be able to obtain the product from a supplier and not the manufacturer.

Kidz-Med Mommy Recorder, page 19

28. Please disclose the terms of any distribution rights you have with respect to this product and file the relevant agreements. Provide equivalent disclosure for the Wee Target product.
29. We note your response to prior comment 43. However, the term “sourced” continues to appear throughout the registration statement. Revise to clarify its meaning.

Dr. Bip DVDs, page 19

30. Please clarify in your disclosure the license arrangement with Ms. Tirotta as it relates to this product as well as the royalty amount and any other material terms.

The Disintegrator, page 19

31. Please expand the description of the development and current status of this product based on your response to comment 96.
32. We note your response to comment 47. Please submit, on a supplemental basis, the brochure you refer to in the second paragraph of your response.

Kidz-Med, Inc., page 20

33. We note your response to prior comment 49. Please clarify the meaning of the term “introduced” in this context. Do you mean that Ulster’s products were novel and unique? If so, please substantiate.
34. We note your response to prior comment 51. However, it appears that neither the Mommy Recorder nor the Wee Target products can be purchased on your website. Please advise and revise your disclosure accordingly.

Competition, page 20

35. We note your disclosure in the first bullet. Please tell us what you mean by “aggressively market.” Note also that your disclosure should address the expected costs of such marketing and how you intend to pay those costs.
36. We reissue the last part of comment 53 because you did not disclose the effects that competing with Tecnimed’s product may have on your revenues.
37. We reissue comment 54 because you did not disclose the full names of the companies mentioned in our comment.

Description of Property, page 21

38. Please reconcile the \$5,000 monthly fee paid to Alodote with the amount specified in exhibit 10.65.

Legal Proceedings, page 21

39. You disclose in the fourth paragraph on page 35 that you are currently involved in litigation where your directors and officers have been named. Please disclose which current proceedings involve your officers and directors.
40. We note the addition of the Exergen lawsuit in this section. Please disclose the nature of the false advertising allegations and the current status of the lawsuit. Also, for this and the lawsuit mentioned in the immediately preceding paragraph, disclose the relief sought.
41. Disclose the terms of the February 2010 settlement with Shrink Nanotechnologies.

Purchase of Disintegrator Patent, page 23

42. Please revise to disclose all material terms of this transaction, including relevant incentive targets. Also, please disclose the name of the individual referred to in the fourth paragraph of this section. In addition, please confirm, if true, that you have filed all material agreements related to this transaction.

Results of Operations, page 23

43. Please disclose the reason, if known, that Walgreens stopped ordering your products.

Convertible Promissory Notes, page 24

44. We note your response to prior comment 6. Please tell us which exhibit relates to the agreement you refer to in the second sentence of this section. It appears that the terms in exhibits 4.8 and 10.20 are for 1,500,000 shares of common.
45. We note your response to prior comment 71. Please clarify how you determined the amount of additional securities that would be issued to investors in offering A described in the first paragraph of this section. In addition, with a view towards disclosure, please tell us why you believe that issuing additional shares to these investors would help you attract potential future investors. We may have further comment after we review your response.

Convertible Redeemable Debentures, page 25

46. We note your response to prior comment 73 and reissue the comment. Please revise to clarify your disclosure related to the convertible debentures and securities sale agreement.

Executive Compensation, page 31

Summary Compensation Table, page 31

47. We note your revisions in response to comment 82; however, we reissue our comment because the third full paragraph on page 30 indicates that Mr. Tirotta does not receive compensation for his services as director while footnote (1) on page 33 indicates that he does.
48. Refer to the last sentence of the first paragraph on page 32 and footnote 6 to the financial statements. Please tell us why Mr. Roth's 2009 compensation is not included on your table.

Employment Agreements, page 31

49. Regarding your additional disclosure in this section, please indicate the terms of the warrants mentioned in the last paragraph. For example, what is the exercise price and duration?

Certain Relationships and Related Transactions..., page 34

50. Please disclose the certain copyrighted and trademarked print and videos material that you refer to in the sixth paragraph of this section.

Financial Statements

51. Please update the financial statements. Refer to Rule 8-08 of Regulation S-X.

Note 6. Acquisition of Patent, page 14

52. We see that you have determined that the arrangement to grant Mr. Roth additional warrants based on sales of the Disintegrator and other products introduced by Mr. Roth should be accounted for as “contingent compensation.” We also see that you have concluded that a portion of these warrants will be earned and you estimated the fair value of the warrants expected to be earned at the date of the agreement was approximately \$760 thousand. You further disclose that you recognized no compensation expense for the warrants, which you refer to a “contingent issuance.” Please help us understand how you have applied the guidance from FASB Codification Topic 718 in reaching your conclusion regarding the attribution of stock compensation expense to earnings for the contingent warrants. In that regard, tell us how you concluded that compensation expense should not be recognized as services are rendered to the extent you believe it is probable the performance conditions will be achieved. Please address your consideration of paragraphs 718-10-25-20, 718-10-35-2 and -3 of the FASB Codification. Please also refer to Example 2 from FASB ASC 718-20-55-35.

Note 7. Notes Payable, page 15

Convertible Promissory Notes, page 18

53. We see that the conversion price of the convertible debt was reset at the time of the default. Please disclose the currently applicable conversion rate. Please also tell us (and disclose, as applicable) whether there are other circumstances under the agreement that could lead to further adjustment of the conversion price. For instance, tell us whether the conversion price would be reset upon future issuances of equity or equity linked instruments at a lower effective strike price.

Note 9. Equity, page 21

Warrants for Common Shares

54. Please refer to your response to our prior comment 111. With respect to warrants, please revise to disclose the terms and provisions of cashless exercise provisions. Please also disclose any provisions that could lead to reductions in exercise prices upon issuance of future securities (that is, down-round provisions) or confirm to us that there are none.

55. Please provide us a table showing the components of the 20.4 million warrants granted in 2009. Provide a cross reference that shows where the notes to financial statements describe each significant warrant grant, including the terms of the grant and related accounting.

Note 10. Commitments and Contingencies, page 23

56. In the first paragraph on page 24, please clarify by assessing potential adverse material effect in terms of the financial statements as a whole; or in terms of financial position, results of operations, and cash flows.
57. Under Operating Leases on page 24, please disclose rent expense in each fiscal year. Refer to FASB ASC 840-20-50-1.

Note 12. Subsequent Events, page 25

58. We see that you sold convertible debt and warrants in February and March 2010. Based on the underlying agreements filed in EDGAR, it appears that the instruments may include down-round provisions where the conversion or strike price is reset if you issue securities at a price lower than the then applicable conversion or strike price. Accordingly, please tell us how you considered the guidance from FASB Codification Topic 815-10 in assessing whether the warrants should be accounted for as derivatives reported in earnings at fair value; and, how you considered FASB Codification Topic 815-15 in evaluating the accounting for the embedded conversion feature. In that regard, please note that a down round provision may preclude a conclusion that an instrument is indexed to your stock. For guidance, please refer to FASB ASC 815-40-15-5 through -8 and 815-40-55-33 through -34.

Item 15. Recent Sales..., page 37

59. Refer to the last paragraph in this section. Please reconcile this issuance with Note 12 to your financial statements. We note, for example, that the description on page 25 relates to warrants to purchase 10,000,000 shares.
60. Please tell us where you described the February and April 2010 issuance to non-employees disclosed on page 26.

Item 16. Exhibits

61. We note your response to comment 120. It appears that you still have not filed several agreements. For example, please tell us which exhibit relates to:
- the agreement in the fifth bullet point;
 - the purchase warrant in the seventh bullet point;

- the agreement for the 5,100,000 shares in the eight bullet point;
- the agreement for the September 17 issuance relating to the ninth bullet point; and
- the agreements in the eleventh, sixteenth, seventeenth, and twenty second bullet point.

62. We reissue comment 122 as the agreement has not been filed as exhibit 10.24.

Exhibit 23.1 Consent of Independent Registered Public Accounting Firm

63. Please include a currently dated and signed consent from your independent auditors with any amendment of the filing.

As appropriate, please amend your registration statement in response to these comments. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes all information required under the Securities Act of 1933 and that they have provided all information investors require for an informed investment decision. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Notwithstanding our comments, in the event the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Christopher F. Tirotta
American Scientific Resources, Incorporated
June 2, 2010
Page 11

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in connection with our review of your filing or in response to our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement.

We direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

You may contact Jeanne Bennett at (202) 551-3606 or Gary Todd at (202) 551-3605 if you have questions regarding comments on the financial statements and related matters. Please contact Gabriel Eckstein at (202) 551-3286 or me at (202) 551-3314 with any other questions.

Sincerely,

Daniel Morris
Special Counsel

cc (via fax): David B. Manno, Esq.
Sichenzia Ross Friedman Ference LLP