



DIVISION OF
CORPORATION FINANCE

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

July 23, 2010

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

Re: American Scientific Resources, Incorporated
Amendment to Form S-1
Filed on July 6, 2010
File No. 333-164517

Dear Dr. Tirotta:

We have reviewed your registration statement and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please response to this letter by amending your registration statement and providing the requested information. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your filing and the information you provide in response to these comments, we may have additional comments.

Prospectus Summary, page 4

About Us, page 4

1. You state in the second paragraph that you manufacture healthcare and medical products. However, your disclosure beginning on page 18 indicates that your manufacturing activities are limited to the Non-Contact 5-in-1 thermometer and The Disintegrator. We further note that these activities appear to be at preliminary stages and require significant

additional funding. Please revise your disclosure as it currently overstates your manufacturing activities.

2. We note that your summary focuses disproportionately on your products and strategies. Please revise the summary to provide additional balancing disclosure addressing the challenges that you face.
3. We note your response to prior comment 7. Please disclose the aggregate amount of the notes upon which you are currently in default.

Summary of the Shares.... page 5

4. We note your response to prior comment 8; however, based on the computation method set forth in your response and the revised number of shares in amendment 2, the number of shares outstanding after the offering does not appear to be accurate. We therefore reissue our comment.

We are in default on some of our secured.... page 6

5. We note that your amended risk factor now indicates that you are in default on some, rather than all, of your promissory notes. With a view toward disclosure, please tell us which of your outstanding loans are no longer in default.

We are in default on some of our convertible.... page 6

6. You refer in this added risk factor to a verbal settlement with one of your note holders. If this note holder is Gols Associates, one of the selling shareholders and a part with whom you reached a settlement in 2009, it is unclear why you consider this note to be in default, as you indicate in the penultimate sentence of this risk factor. Please clarify.

If our products are found to have defects.... page 6

7. Please clarify your reference to “warrant[ies] and other protective arrangements with certain of [your] suppliers.” Revise the registration statement to ensure that the terms of any warranties and protective arrangements are fully disclosed.

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

8. Revise the risk factor heading to disclose that your agreement with Babies “R” Us is terminable at will.

Selling Security Holders, page 11

9. We note your response to prior comment 15 and reissue the comment. The bases for your belief as to the availability of Rule 415 remains unclear. Please provide detailed legal analysis fully addressing the facts and circumstances relevant to the factors set forth in Securities Act Rules Compliance and Disclosure Interpretations 612.09 available at <http://www.sec.gov/divisions/corpfin/guidance/securitiesactrules-interps.htm>. Note that it is insufficient to provide vague or generalized responses.
10. We note your response to prior comment 16 and reissue our comment. It is unclear how your revisions to the footnotes address our comment.
11. Please note that the purpose of our prior comment 17 was not to request deletion of information required by Item 507 of Regulation S-K but rather clarification as to the ownership by the individuals included in your table. For example, based on the table as it appeared in the previous amendment, it is unclear whether the Percentage Ownership After Completion of the Offering is based on full exercise and conversion of notes and debentures or another amount.

Description of Business, page 18

12. In the final sentence of the fourth paragraph of this section, you state that you are in the process of introducing your product to some major retail pharmacy chains. Please tell us the status of this process and the hurdles that remain.

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

13. Please provide us, on a supplemental basis, the study you refer to in the response to prior comment 22 as well as the link to where the study can be found on the website that you cite.

14. You indicate in your response to prior comment 23 that you have disclosed your reasons for identifying a Chinese factory when final assembly and packaging will be done domestically. Please tell us where you have made this disclosure.
15. It is unclear what you mean by a “passing grade” in the first paragraph on page 18. Please clarify.
16. Refer to the first paragraph on page 19. Your added disclosure indicates that full scale final assembly and production have begun. Please clarify the number of units that you are currently producing and when production actually began.
17. We note your response to prior comment 24 and your disclosure on page 4 that the Thermofocus is being phased out. Please disclose in this section your schedule for the phase-out and how the phase-out is related to your sales of your Non-Contact thermometer.

The Disintegrator, page 19

18. We note that you use three different defined terms to refer to Safeguard Medical Technologies. Please select a single defined term and use it consistently throughout the registration statement. Note that the meaning of the defined term should be clear and unambiguous on its face. For this reason, the defined term “Seller” (as used on page 23) is not appropriate. Please revise.
19. We note your revisions in response to prior comment 31. Please update your disclosure in the last sentence of this section. To the extent that you have not fulfilled this order as expected, disclose why.
20. Regarding the brochure supplementally submitted in response to prior comment 32, it is unclear where the EPA lists the Disintegrator as an EPA recommended device. Please advise.

Competition, page 20

21. We note that you removed Assess and Personal Best from your list of competitors. Please tell us your basis for concluding that the products of these companies no longer compete with your products.

Legal Proceedings, page 21

22. Please clarify the reference to “KM” in the first paragraph of this section.
23. Please revise the second paragraph of this section to clarify the procedural posture of the lawsuit discussed. In addition, please describe with greater specificity the nature of the claims asserted.
24. We note your response to prior comment 41. Please clarify whether the shares issued in connection with the settlement contain will bear legends.
25. Regarding your revisions in response to prior comment 40 and the Exergen lawsuit described in the third paragraph of this section, please disclose with greater specificity the nature of the allegations. For example, what does the lawsuit allege about the forehead and temporal artery flow and how does this relate to the product?

Purchase of the Disintegrator Patent, page 23

26. Please clarify the reference to certain other products that may be introduced by Mr. Roth.
27. We note your response to prior comment 42 and reissue. It appears that certain material terms of this transaction have not been disclosed. For instance, please disclose the targets that must be met in order to trigger the one-time bonus of up to \$200,000 based on gross revenue generated from sales of the Disintegrator Plus and certain other products. In addition, please clarify the reference here to “certain other products.”
28. To the extent that you are discussing payments made to Mr. Roth in connection with this transaction, please refer to Mr. Roth by name or by name and by title. However, please do not refer to Mr. Roth only by title (i.e., the executive and majority owner of the Seller).

Background of Executive Officers and Directors, page 36

29. Please revise the second sentence of Mr. Roth’s biography to clarify the nature of his duties and the companies by whom he was employed. Alternatively, please remove this sentence.

Financial Statements for March 31, 2010

Note 3. Summary of Significant Accounting Policies, page 8

Patent, page 9

30. Please expand critical accounting policy disclosure in MD&A to describe the factors you considered in determining the useful life for the patent. That is; describe the basis for your conclusion that the period of expected cash flows will extend to the expiration of the underlying patent. Please also describe factors that could lead to reconsideration and revision of the assigned life.

Note 4. Restatements, page 11

31. As your financial statements for the quarter ended March 31, 2010 were not previously filed, please explain to us the rationale for describing those financial statements as “restated.” If previously issued financial statements for the quarter have been restated, please label the individual financial statements presented as “restated.”

Note 9. Commitments and Contingencies, page 19

32. We refer to comment 56 in our letter dated June 2, 2010. We see you have not applied our comment to your interim financial statements. In the first paragraph on page 20, 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.

Item 16. Exhibits, page 46

33. We reissue prior comment 61 as it relates to the second and third bullet points, and the last bullet point in regards to the eleventh bullet point of comment 120 in our February 22, 2010 letter as it is not clear from your response whether these agreements have been filed. Please confirm that you will file all material agreements.
34. Please tell us where you filed, or why you need not file, the exhibit related to the settlement with Shrink you mention on page 22.

Exhibit 23.1 Consent of Independent Registered Public Accounting Firm

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

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 the information the Securities Act of 1933 and all applicable Securities Act rules require. 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 you request acceleration of the effective date of the pending registration statement please provide a written statement from the company 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.

Please refer to Rules 460 and 461 regarding requests for acceleration. 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. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

Dr. Christopher F. Tirotta
American Scientific Resources, Incorporated
July 23, 2010
Page 8

You may contact Jeanne Bennett at (202) 551-3606, or Gary Todd, reviewing accountant, 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 Daniel Morris, Special Counsel at (202) 551-3314 with any other questions.

Sincerely,

Russell Mancuso
Branch Chief

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