



DIVISION OF  
CORPORATION FINANCE

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

October 1, 2014

Via E-mail

Mark Heffernan, Ph.D.  
Chief Executive Officer  
Nexvet Biopharma plc  
National Institute for Bioprocessing Research and Training  
Fosters Avenue, Mount Merrion  
Blackrock, Co. Dublin, Ireland

**Re: Nexvet Biopharma plc  
Draft Registration Statement on Form S-1  
Submitted September 5, 2014  
CIK No. 0001618561**

Dear Dr. Heffernan:

We have reviewed your draft 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 respond to this letter by providing the requested information and either submitting an amended draft registration statement or publicly filing your registration statement on EDGAR. 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 the information you provide in response to these comments and your amended draft registration statement or filed registration statement, we may have additional comments.

General

1. Please supplementally provide us with copies of all written communications, as defined in Rule 405 under the Securities Act, that you, or anyone authorized to do so on your behalf, present to potential investors in reliance on Section 5(d) of the Securities Act, whether or not they retain copies of the communications. Similarly, please supplementally provide us with any research reports about you that are published or distributed in reliance upon Section 2(a)(3) of the Securities Act of 1933 added by Section 105(a) of the Jumpstart Our Business Startups Act by any broker or dealer that is participating or will participate in your offering.

2. Please confirm that the graphics included in your registration statement are the only graphics you will use in your prospectus. If those are not the only graphics, please provide any additional graphics prior to their use for our review.
3. We note that you have submitted an application for confidential treatment relating to several of your exhibits. Please be advised that we will review this application separately and comments issued as a result of that review, if any, must be resolved prior to your filing a request for acceleration.

Prospectus Summary  
Overview, page 1

4. Please attempt to minimize the use of overly technical terminology in your registration statement, particularly in this section, that may be unfamiliar to lay readers. If you believe the use of such terms is essential to properly explain your proprietary platform and product candidates please define them in plain language that may be easily understood by people outside the biologics industry. As examples, please provide definitions for anti-nerve growth factor (anti-NGF) and glycoproteins.
5. Please explain what “monoclonal antibodies” and “fusion proteins” are and distinguish them from each other.

Product Pipeline, page 2

6. It is unclear from your disclosure whether NV-02 and NV-08 have as yet advanced into proof-of-concept studies. Your description of these drugs in your Business section suggests that the tests performed involving them have been pre-clinical in nature. Please clarify here and throughout your registration statement the actual current status of these product candidates. Further, in your table on this page and the corresponding one on page 73, please adjust the bars for NV-02 and NV-08 in the table to reflect the actual, and not the anticipated, development stage of each candidate.
7. Here, and in your Business section on page 76, please explain the significance of clonal cell manufacture to your product development, particularly how it serves to advance your product candidates from proof-of-concept studies to pivotal studies and explain why you believe this information is relevant to and should be included in the pipeline tables you include here and on page 73.

Our PETization Platform, page 2

8. Here, and wherever you describe your platform as a “novel algorithmic approach,” please explain how your approach is both novel and algorithmic.

Risk Factors

Risks Related to Our Business

“Our success depends largely upon our ability to advance our product candidates through the various stages of development . . .” page 11

9. Please amend this risk factor to expand your statement that none of your product candidates has completed safety and efficacy studies. You should note that NV-01 has completed a proof-of-concept study but has not yet initiated a pivotal study, NV-02 has not yet completed its proof-of-concept studies and NV-08 is still in a pre-clinical phase.

“The results of our proof-of-concept studies for our product candidates may not be predictive . . .” page 14

10. Please amend this risk factor to note that the studies either performed or underway to date involve a small or relatively small number of animals, e.g. nine in one study for NV-01, 26 in another study, four and five in studies for NV-02, respectively, and four in the study for NV-08.

“Our revenue, expenses and results of operations may be subject to significant fluctuations . . .” page 19

11. Please amend this risk factor to state the amounts you received under the AusIndustry research and development tax concession in fiscal years 2013 and 2014 and to provide the reason(s) you believe this concession may not continue in future years.

“Future federal and state legislation may expose us . . .” page 28

12. Please expand the discussion to disclose the annual policy limits.

Use of Proceeds, page 44

13. Please expand this discussion to indicate the stage of product development you hope to attain for each of your drug candidates using the offering proceeds and to further specify how the allocations will be made. For example, you should state whether you believe the \$3.5 million allocation for NV-01 will be sufficient to complete the safety and efficacy study and break down how the \$9.5 million designated for additional costs will be allocated.
14. With respect to NV-02 and NV-08, specify the development and manufacturing scale-up costs you cite to in your disclosure, including whether you intend for the allocations to cover the costs for each product to overlap.

15. Please separate the amount of offering proceeds you intend to allocate toward research to develop your pipeline of other product candidates from the amount used for working capital and general corporate purposes.

Management's Discussion and Analysis of Financial Condition and Results of Operations  
Results of Operations  
Research and Development Expenses, page 55

16. For each period presented, please disclose separately the amount of outsourced development costs incurred for each of your three lead product candidates (NV-01, NV-02 and NV-08), if significant.

Critical Accounting Policies and Significant Judgments and Estimates  
Share-Based Compensation, page 59

17. We may have additional comments on your accounting for stock compensation or any beneficial conversion features once you have disclosed an estimated offering price. Please provide us with a quantitative and qualitative analysis explaining the difference between the estimated offering price and the fair value of each equity issuance through the date of effectiveness for the preceding twelve months.
18. In addition, please revise your filing to disclose that your estimates of the fair value of your ordinary shares are highly complex and subjective and that you will no longer be required to estimate the fair value of your ordinary shares underlying new equity awards once those shares begin trading.

Business  
Market for Companion Animal Therapeutics, page 66

19. Please reconcile the data presented in this section. For example, the first paragraph states the amount of consumer spending on companion animals in 2013 was \$55.7 billion. The chart is identified as total U.S. Companion Animal Health Market and indicates such sales as \$55.7 billion in 2013. However, the paragraph following the chart includes your estimate that consumers spent \$2.3 billion in the animal therapeutics market in 2013.
20. Please expand this discussion to clarify:
- whether the \$55.7 billion amount includes, in addition to medication, items like food, toys, insurance, flea and tick treatments, veterinarian fees, etc.;
  - whether there was a corresponding increase in the number of companion animals during the same time period and the extent of this increase; and
  - the actual size of the market in which you intend to compete.

How our PETization Platform Works, page 71

21. In your discussion on page 72, explain in layman's terms what "heavy" and "light" chains of mAb represent and how identifying the minimal number of changes in the amino acid sequences also results in a conversion between species.

Product Pipeline, page 73

22. In your discussion of the studies performed to date involving your product candidates, please explain what the p-values in each study represent and the significance of each to the respective study. Where applicable, please note that the n-value in the study represents the number of animals tested.
23. Since NV-08 is a fusion protein, please confirm that it is not being developed using PETization, which appears to be limited to the creation of monoclonal antibodies. Please explain how you devised the mechanism of action of this drug independent of the PETization platform. Please also summarize this information in your Prospectus Summary.

Financial Statements, page F-1

24. Please provide audited financial statements of the registrant, Nexvet Biopharma plc (or its predecessor, Nexvet Biopharma Limited), as required by Rule 3-01(a) of Regulation S-X, or tell us why you believe such financial statements are not required.

Notes to Consolidated Financial Statements

25. You recorded license and collaboration revenue. Please revise your filing to include disclosures, as applicable, required by ASC 730-20-50 and ASC 605-25-50.

If you intend to respond to these comments with an amended draft registration statement, please submit it and any associated correspondence in accordance with the guidance we provide in the Division's October 11, 2012 announcement on the SEC website at <http://www.sec.gov/divisions/corpfin/cfannouncements/drsfilingprocedures101512.htm>.

Please keep in mind that we may publicly post filing review correspondence in accordance with our December 1, 2011 policy (<http://www.sec.gov/divisions/corpfin/cfannouncements/edgarcorrespondence.htm>). If you intend to use Rule 83 (17 CFR 200.83) to request confidential treatment of information in the correspondence you submit on EDGAR, please properly mark that information in each of your confidential submissions to us so we do not repeat or refer to that information in our comment letters to you.

Mark Hefferman, Ph.D.  
Nexvet Biopharma plc  
October 1, 2014  
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You may contact Dana Hartz at (202) 551-3648 or Mark Brunhofer at (202) 551-3638 if you have questions regarding comments on the financial statements and related matters. Please contact Scot Foley at (202) 551-3383, John Krug at (202) 551-3862 or me at (202) 551-3715 with any other questions.

Sincerely,

*/s/ Daniel Greenspan for*

Jeffrey P. Riedler  
Assistant Director

cc: Marjorie Sybul Adams  
Bruce Jenett  
Andrew Ledbetter  
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