

Via Facsimile and U.S. Mail  
Mail Stop 4720

February 16, 2010

David G.P. Allan  
Chairman and Chief Executive Officer  
YM Biosciences Inc.  
5045 Orbitor Drive, Building 11, Suite 400  
Mississauga, Ontario, L4W 4Y4  
Canada

**Re: YM Biosciences Inc.**  
**Form 20-F for the Year Ended June 30, 2009 Filed September 25, 2007**  
**Form 6-K Filed October 7, 2009**  
**File No. 001-32186**

Dear Mr. Allan:

We have reviewed your filing and have the following comments. In our comments, we ask you to provide us with information to better understand your disclosure. Where it requests you to revise disclosure, the information you provide should show us what the revised disclosure will look like and identify the annual or quarterly filing, as applicable, in which you intend to first include it. If you do not believe that revised disclosure is necessary, explain the reason in your response. After reviewing the information provided, we may raise additional comments and/or request that you amend your filing.

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 on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

**Form 20-F filed September 25, 2007**  
**Item 4. Information on Company, page 19**

1. Please revise your disclosure in this section to describe the material terms of each of your material Clinical Research Services Agreements, filed as Exhibits 4.19, 4.20 and 4.21. The material terms should include, but are not limited to, any payment provisions, rights obtained and material obligations that must be met to keep the agreement in place, term and termination provisions.

Licensing Arrangements, page 32  
In-Licensing, page 32

2. On page 34, you disclose the terms of your November 12, 2003, agreement between CIMYM and Oncoscience. It appears that this agreement was amended and restated in the Amended and Restated Development and License Agreement between CIMYM, CIMAB and Oncoscience filed as Exhibit 4.11. Please revise your disclosure to describe the material terms of this amended and restated agreement, including, but not limited to any payment provisions, a range of royalty rates, aggregate milestones, usage restrictions, exclusivity provisions, other rights obtained and material obligations that must be met to keep the agreement in place, term and termination provisions. Similarly, on page 37, you disclose the terms of your 1995 joint-venture shareholders' agreement filed as Exhibit 4.7. It appears that you entered into another joint-venture shareholders' agreement on May 16, 1996 filed as Exhibit 4.10. Please disclose all the material terms of your joint-venture shareholders' agreement dated May 16, 1996, whether both agreements are still in effect and the relationship between the agreements.
3. It appears that your business may be substantially dependent on your license agreement between CIMYM BioSciences and Daiichi Pharmaceutical Co., Ltd. dated July 2006. See 4(b)(ii) of the Instructions to Exhibits of Form 20-F. Please revise to file a copy of this agreement as an exhibit to your Form 20-F. In addition, please revise your disclosure to describe the material terms of this agreement, including, but not limited to any payment provisions, a range of royalty rates, aggregate milestones, usage restrictions, exclusivity provisions, other rights obtained and material obligations that must be met to keep the agreement in place, term and termination provisions. Alternatively, please provide us with a detailed analysis which supports your conclusion that you are not substantially dependent on this agreement.

Exhibit Index, page EX-1

4. You have redacted portions of Exhibits 4.4, 4.11, 4.19, 4.20 and 4.21. Your confidential treatment order for Exhibit 4.4 expired on June 30, 2007. Please either submit a request for an extension of this confidential treatment or reinstate all redactions and re-file this agreement. You have not requested confidential treatment for the redacted portions of Exhibits 4.11, 4.19, 4.20 and 4.21. Since you have not promptly submitted a request for confidential treatment of the redacted portions of these exhibits, please reinstate all redactions and re-file each agreement in its entirety. In addition, please confirm that you have filed all other material agreements without redactions and in their entirety.

**Form 6-K filed on October 7, 2009**

5. In Exhibit 99.1 to this Form 6-K, you state that in connection with your merger with Cytopia, Cytopia shareholders are being offered 0.0852 common shares of YM in exchange for each common share of Cytopia. The transaction would result in YM issuing approximately 7.2 million new shares. Please advise us how you are registering this transaction. Alternatively, please provide us with your analysis which supports your reliance on an exemption from registration.

\* \* \* \*

Please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a cover letter that keys your responses to our comments and provide any requested information. Detailed letters greatly facilitate our review. Please file your letter on EDGAR under the form type label CORRESP.

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 Exchange Act of 1934 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.

In connection with responding to our comments, please provide, in your letter, a statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

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 our review of your filing or in response to our comments on your filing.

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Please contact Jennifer Riegel, Staff Attorney at (202) 551-3575 or me at (202) 551-3715 with question on any of the comments.

Sincerely,

Jeff Riedler  
Assistant Director