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

DIVISION OF
CORPORATION FINANCE

Mail Stop 4720

November 13, 2015

Via E-mail
Katrine S. Bosley
President and Chief Executive Officer
Editas Medicine, Inc.
300 Third Street, First Floor
Cambridge, MA 02142

Re: Editas Medicine, Inc.
Draft Registration Statement on Form S-1
Submitted October 16, 2015
CIK No. 0001650664

Dear Ms. Bosley:

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.

Prospectus Summary, page 1

Our Business, page 1

1. We refer to your disclosure in the second paragraph under the heading which indicates that you "have developed" a proprietary genome editing platform based on CRISPR/Cas9 technology. Please revise this paragraph, or the preceding one, to clarify that your research is pre-clinical in nature. Also, tell us, and revise, as appropriate to indicate whether your editing platform is fully developed or whether it remains under active development. In this regard, we note that your research efforts are pre-clinical and your disclosure on page 20 highlights material risks relating to off-target editing. Based on the disclosure at the bottom of page 100, it is also unclear whether you can achieve

commercial success unless and until your editing platform is modified to allow for different types of cuts.

2. Please revise the final sentence of the second paragraph under the heading to clarify and put into context your statement concerning your ability to "efficiently develop and advance" a broad range of therapies. In this regard, we note your disclosure page 14 which indicates that it typically takes about 10 to 15 years to develop a new medicine and your disclosures on page 15 concerning the difficultly of predicting the time and cost of product candidate development, particularly when the candidate acts at the level of DNA.

3. We refer to the final sentence of the second paragraph on page 2. Please tell us your basis for disclosing and highlighting in the Summary that you enjoy a "durable competitive position in the marketplace" from your patent estate given your risk factor disclosure on page 43 highlighting that the current University of California and/or Rockefeller matters could cause you to cease development, manufacture and commercialization of one or more product candidates and have a material adverse impact on the business.

Our Genome Editing Platform, page 2

4. Please revise the Summary to explain briefly what you intend to commercialize and who your customers will be. In this regard, we note your disclosure on page 16 that you intend to sell biologics. Accordingly, the Summary discussion should explain briefly what a biologic is and how it compares to a drug. If material to your commercialization plans, also revise to disclose whether you will sell or license your editing platform and/or sell or license editing reagents, which are referenced on page 119.

5. Please provide narrative disclosure here, and on page 103, to indicate how many potential patients each figure in the chart is intended to represent.

Risks Associated with Our Business, page 4

6. Please revise the second bullet point under the heading, or add an additional one, to highlight your disclosure on page 75 that you do not expect to generate any revenue from product sales for the foreseeable future.

7. Revise the penultimate bullet point on page 5 to clarify that you presently *are* subject to inventorship disputes. Revise here, or under a separate subheading in the Summary to address your risk factor disclosure on page 43 highlighting that the current University of California and/or Rockefeller matters could cause you to cease development, manufacture and commercialization of one or more product candidates and have a material adverse impact on the business.

The Offering, page 7

8. Please revise to state the number of shares issued upon early exercise of stock options subject to repurchase.

Risk Factors, page 11

Our rights to develop and commercialize . . ., page 41

9. Please revise the second paragraph or elsewhere in the registration statement, as applicable, to discuss responsibility for costs associated with in-licensed patents, including those related to proceedings before the USPTO or enforcement in courts of applicable jurisdiction. In this regard, we note your disclosures on page 87 concerning expenses to defend patents and intellectual property.

Some of our owned and in-licensed patents and other intellectual property . . ., page 42

10. Please revise the risk factor so that it is clear how a "Suggestion of Interference" differs from a continuation patent application. Also, identify the in-licensed patent that is the subject of the continuation patent application filed by Rockefeller and describe briefly, if known, Rockefeller's claimed basis for the continuation application.

In preparation of this offering, we identified a material weakness. . . , page 61

11. Please provide additional detail in an appropriate section of your registration statement regarding the specific steps you are taking to remediate your material weakness in your internal controls over financial reporting.

Use of Proceeds, page 66

12. Please revise to disclose the approximate amounts intended to be used for expansion of the platform technology and preclinical studies other than those related to LCA10 and engineered T cells.

Expenses, page 75

13. Please reconcile your disclosure on page 76 that you have not identified a product candidate for advancement into clinical trials with your disclosure on page 108 that you aim to initiate a first clinical trial in 2017 in Leber Congenital Amaurosis.

Management's Discussion and Analysis of Financial Condition and Results of Operations
Critical Accounting Policies and Estimates
Stock-Based Compensation, page 81

14. We may have additional comments on your accounting for equity issuances including stock compensation and beneficial conversion features. Once you have an estimated offering price, please provide us an analysis explaining the reasons for the differences between recent valuations of your common stock leading up to the IPO and the estimated offering price.

Overview, page 95

15. We note your disclosure on page 2 and 96 highlighting that your company was founded by world leaders in genome editing. Discuss their current involvement with the company and describe the obligations, if any, they owe to you for work on CRISPR/Cas9, TALENS and other related technologies. In this regard, we note that your Summary on page 2 highlights the involvement of these founders but your risk factor on page 18 indicates that you do not have rights to one founder's work on a protein that "may work better than" the Cas9 protein in some cases. Please explain why you do not have access to this founder's work and any material consequences to your business plans. Also, discuss whether you have Invention and Non-Disclosure Agreements as well as Non-Competition and Non-Solicitation Agreements with your founders.

16. With respect to your founders, we note that your November 25, 2013 press release identifies Jennifer Doudna, Ph.D., a professor at University of California, Berkeley, as one of your five founders. We also note multiple press accounts indicating that Dr. Doudna has left your company, that she has founded one or more of the competitors whom you identify in the draft registration statement and that her research is directly at issue in the Suggestion of Interference filed by the University of California, Berkeley. Accordingly, please substantially revise your draft registration statement, including your summary, risk factor and intellectual property discussions to discuss specifically Dr. Doudna's role in your company, and, as applicable, her involvement with your competitors and in the Suggestion of Interference matter. We may have further comment after we see your revised disclosures.

Advantages of CRISPR/Cas9 for Genome Editing, page 100

17. The Business discussion in this subsection and the following subsection address the advantages of CRISPR/Cas9 technology and your editing platform. Please revise to add discussion in the Business section concerning competing technologies, such as those identified on page 30, and any advantages they may have. In this regard, we note your risk factor disclosure on page 18 indicates that the Cas9 protein may be less attractive in some cases than the Cpf1 protein. Please revise to discuss this particular research. Be sure to identify the "cases" where Cas9 protein may be better alternative, and if discussed by these researchers, or otherwise known, the reasons why it may prove better.

Control and Specificity, page 102

18. Please tell us the basis for your claim of leadership in these fields.

Engineered T Cell Therapies…, page 109

19. Please revise to explain whether Target A and Target B are types of cancerous cells or something else. Similarly revise the Summary on page 2.

Delivery, page 113

20. Please explain how the chart at the top of page 115 supports your claims of efficient editing. In this regard, we note that percentages appear significantly lower than those you achieved in the context of human T cells.

Competition, page 121

21. Please revise your discussion of competitive conditions by describing in greater detail the current landscape for patent protections in your industry. In this regard, we note that across several risk factors on pages 45 to 48 you address specific risks stemming from existing third-party patents and patent applications. In your discussion of this landscape, identify specific patents and patent applications, if material, as well as their holders/applicants.

Intellectual Property, page 122

22. Please revise your disclosures on pages 123 and 124 concerning in-licensed and owned patents to discuss whether the portfolio covers all four components of your gene editing platform and, if applicable, whether the patent coverage is more focused in certain areas, such as in the control and specificity fields where you claim to have a position of leadership. Refer to page 102.

23. We note your disclosure on page 123 concerning the Suggestion of Interference. Please revise to discuss the basis or bases for any claims made by the University of California, Berkeley and associated parties in support of interference. Also, disclose whether the 10 patents involved in the interference request cover all aspects of your platform or are limited to certain aspects. If these patents focus heavily on specific areas of your platform, please discuss.

24. Please tell us whether the loss of any specific owned or in-licensed patent would have a material negative impact on the conduct of your business. If so, then revise to identify and describe the specific patent, its claims and whether it is under challenge. In this regard, we note your April 15, 2014 press release highlighting the awarding of U.S. Patent No. 8,697,359 as the first patent for engineered CRISPR/Cas9 system. We also note that multiple press accounts indicate that this patent is the focus University of California, Berkeley's request for interference.

25. Revise to discuss the types of patents that you hold (*i.e.*, composition of matter, use or process).

Outstanding Equity Awards, page 160

26. Please tell us whether Ms. Bosley has received additional grants pursuant to section 6 of her employment agreement.

Material U.S. Federal Income…, page 186

27. Your disclosures on pages 186, 187 and 190 concerning the "general" nature of the information inappropriately suggests that you are disclaiming responsibility for the disclosures. Please revise to remove these disclaimers.

Other

28. Please provide us proofs of all graphic, visual or photographic information you will provide in the printed prospectus prior to its use, for example in a preliminary prospectus. Please note that we may have comments regarding this material.

29. 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.

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.

You may contact Bonnie Baynes at (202) 551-4924 or Mary Mast at (202) 551-3613 if you have questions regarding comments on the financial statements and related matters. Please contact Alla Berenshteyn at (202) 551-4325 or Joseph McCann at (202) 551-6262 with any other questions.

Sincerely,

/s/ Suzanne Hayes

Suzanne Hayes
Assistant Director
Office of Healthcare and Insurance

cc (via email): Jeffries Oliver-Li - Wilmer Cutler Pickering Hale and Dorr LLP