

September 30, 2022

Keith Gottesdiener, M.D.  
President and Chief Executive Officer  
Prime Medicine, Inc.  
21 Erie Street  
Cambridge, MA 02139

Inc.

Statement on Form S-1  
2022

Re: Prime Medicine,  
Registration  
Filed September 23,  
File No. 333-267579

Dear Dr. Gottesdiener:

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 respond 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 registration statement and the information you provide in response to these comments, we may have additional comments.

Registration Statement on Form S-1

Prospectus Summary  
Overview, page 1

1. We note your disclosure on page 48, that your "licensors retain control of preparation, filing, prosecution and maintenance of their wholly-owned patents and patent applications" and your disclosure on page 206 that the '770 Patent was "issued by the USPTO to Broad Institute." Given these disclosures, please place your disclosure in the penultimate paragraph of this section in context to clarify, for example, if true, that the inventions underlying the '770 Patent were developed at Broad Institute and to clarify which party pursued the preparation, filing and prosecution of this patent.

Keith Gottesdiener, M.D.  
FirstName LastNameKeith Gottesdiener, M.D.  
Prime Medicine, Inc.  
Comapany 30,  
September NamePrime  
2022 Medicine, Inc.

September  
Page 2 30, 2022 Page 2

FirstName LastName  
Friedreich's Ataxia: Correcting Repeat Expansions in the FXN Gene, page 8

2. Please remove the statement on this page and on page 182 that "[y]our Prime Editors can restore normal function of patient sensory neurons." Efficacy determinations are in the exclusive purview of the FDA or other regulators. In this regard, we note your statement on page 1 that "[g]ene editing, including platforms such as Prime Editing, is a novel technology that is not yet clinically validated for human therapeutic

use."  
Principal Stockholders, page 256

3. Please identify in a footnote to the table all natural persons who have voting and/or investment power over the shares held by F-Prime Capital Partners Life Sciences Fund VI LP.

We remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

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

You may contact Tracey Houser at 202-551-3736 or Angela Connell at 202-551-3426 if you have questions regarding comments on the financial statements and related matters. Please contact Dillon Hagius at 202-551-7967 or Tim Buchmiller at 202-551-3635 with any other questions.

Sincerely,

Division of

Office of Life

Corporation Finance

Sciences

cc: Gabriela Morales-Rivera, Esq.