

VIA EDGAR

November 9, 2023

United States Securities and Exchange Commission
Office of Life Sciences
Division of Corporation Finance
100 F Street, N.E.
Washington, D.C. 20549

**Re: Prime Medicine, Inc.
Acceleration Request for Registration Statement on Form S-3
File No. 333-275321**

Ladies and Gentlemen:

Pursuant to Rule 461 under the Securities Act of 1933, as amended (the “**Act**”), Prime Medicine, Inc. (the “**Company**”) hereby requests that the effective date of the above-referenced registration statement (the “**Registration Statement**”) be accelerated to November 13, 2023, at 4:01 p.m., Eastern Time, or as soon thereafter as practicable, unless we or our outside counsel, Goodwin Procter LLP, request by telephone that such Registration Statement be declared effective at some other time. In making this acceleration request, the Company acknowledges that it is aware of its responsibilities under the Act.

Once the Registration Statement is effective, please orally confirm the event with our counsel, Goodwin Procter LLP by calling Marishka DeToy at (617) 570-1926. If you have any questions regarding this request, please contact Marishka DeToy of Goodwin Procter LLP at (617) 570-1926.

Sincerely,

PRIME MEDICINE, INC.

/s/ Keith Gottesdiener

Keith Gottesdiener

President and Chief Executive Officer

cc: Carman Alenson, *Prime Medicine, Inc.*
Kingsley L. Taft, *Goodwin Procter LLP*
Marishka DeToy, *Goodwin Procter LLP*