

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

January 4, 2024

John R. Beaver President and Chief Executive Officer Biolase, Inc. 27042 Towne Centre Drive, Suite 270 Lake Forest, California 92610

Re: Biolase, Inc.
Registration Statement on Form S-1
Filed December 26, 2023
File No. 333-276280

Dear John R. Beaver:

This is to advise you that we have not reviewed and will not review your registration statement.

Please refer to Rules 460 and 461 regarding requests for acceleration. 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.

Please contact Juan Grana at 202-551-6034 with any questions.

Sincerely,

Division of Corporation Finance Office of Industrial Applications and Services

cc: Leslie Marlow, Esq.