

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

January 26, 2021

Elizabeth Hougen Chief Financial Officer Ionis Pharmaceuticals, Inc. 2855 Gazelle Court Carlsbad, California

> Re: Ionis Pharmaceuticals, Inc. Form 10-K for the Fiscal Year Ended December 31, 2019 Filed March 2, 2020 File No. 000-19125

Dear Ms. Hougen:

We have completed our review of your filing. 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.

Sincerely,

Division of Corporation Finance Office of Life Sciences