

January 26, 2021

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

Pharmaceuticals, Inc.

Fiscal Year Ended December 31, 2019

Re: Ionis

Form 10-K for the

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