

June 27, 2023

Axel Bolte
President and Chief Executive Officer
Inozyme Pharma, Inc.
321 Summer Street, Suite 400
Boston, MA 02210

Inc.
fiscal year ended December 31, 2022
2023

Re: Inozyme Pharma,
Form 10-K for the
Filed March 22,
File No. 001-39397

Dear Axel Bolte:

We have limited our review of your filing to the financial statements and related disclosures 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 these comments within ten business days by providing the requested information or advise us as soon as possible when you will respond. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing your response to these comments, we may have additional comments.

Form 10-K for the fiscal year ended December 31, 2022

Research and Development Expense, page 117

1. You disclose on page 115 that research and development activities are central to your business model. You also disclose that from inception through December 31, 2022, you have incurred \$142.1 million of research and development costs for INZ-701. Please revise your future filings to address the following to more clearly address the trends experienced during the periods presented:

the costs incurred during each period presented for INZ-701 each indication. Revise to break out separately for

your research and development costs by indication, please disclose that fact and separately quantify the total amount of expense recognized related to INZ-701 for each period presented.

For all other research and development expenses, provide other quantitative or qualitative disclosure that provides more transparency as to the type of research and

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development expenses incurred (i.e. quantify by nature or type of expense). The total of costs broken out should reconcile to total research and development expense on the Statements of Operations.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations
Results of Operations
General and Administrative Expenses, page 118

2. You disclose here that the increase in General and administrative expenses from 2021 to 2022 was primarily due to an increase in personnel costs. Please revise your future filings to more clearly identify the drivers of the increase and to quantify the impact of each factor cited.

In closing, 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.

You may contact Vanessa Robertson at 202-551-3649 or Kevin Vaughn at 202-551-3494 with any questions.

FirstName LastNameAxel Bolte
Comapany NameInozyme Pharma, Inc.

Corporation Finance
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Sciences
FirstName LastName

Sincerely,

Division of

Office of Life