

September 30, 2020

Norbert Bischofberger, Ph.D.  
President and Chief Executive Officer  
Kronos Bio, Inc.  
1300 So. El Camino Real, Suite 300  
San Mateo, CA 94402

Re: Kronos Bio, Inc.  
Registration

Statement on Form S-1  
2020

Filed September 18,  
File No. 333-248925

Dear Dr. Bischofberger:

We have reviewed your registration statement 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 this letter by amending your registration statement and providing the requested information. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

Registration Statement on Form S-1 filed September 18, 2020

Overview, page 2

1. We note your disclosure leading into the discovery table that you anticipate submitting an IND for a drug candidate arising from one of the programs identified in your table in 2022. Please balance this disclosure by indicating, if true, that you may not successfully identify novel product candidates that can selectively modulate the specific oncogenic TRNs specified in this table.

Prior Development of ENTO, page 122

2. We note your additional disclosure in response to our prior comment 6. Please revise to clarify, if true, that the investigator could not determine that the 14 serious AE's were unrelated to treatment.

Norbert Bischofberger, Ph.D.  
Kronos Bio, Inc.  
September 30, 2020  
Page 2

Therapeutic Rationale and Clinical Data in HOX/MEIS-High AML, page 125

3. We note your additional disclosure in response to our prior comment 7. We also note your disclosure that you intend to develop ENTO in combination with IC in newly-diagnosed AML patients with NPM1 mutations. Please revise to clarify if the differences between CR rates for patients receiving the IC and ENTO combination therapy with just NPM1 mutations and the historical CR rates for patients with NPM1 mutations receiving IC therapy alone are statistically significant.

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.

Refer to Rules 460 and 461 regarding requests for acceleration. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

You may contact Sasha Parikh at 202-551-3627 or Julie Sherman at 202-551-3640 if you have questions regarding comments on the financial statements and related matters. Please contact Deanna Virginio at 202-551-4530 or Tim Buchmiller at 202-551-3635 with any other questions.

FirstName LastNameNorbert Bischofberger, Ph.D.

Corporation Finance  
Comapany NameKronos Bio, Inc.

Sciences  
September 30, 2020 Page 2  
cc: Charles J. Bair, Esq.  
FirstName LastName

Sincerely,  
Division of  
Office of Life