

August 23, 2016

VIA EDGAR

U.S. Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, D.C. 20549

Attention: Suzanne Hayes, Assistant Director

Re: NantKwest, Inc.
Registration Statement on Form S-3
File No. 333-213174
Acceleration Request
Requested Date: August 26, 2016
Requested Time: 9:30 A.M. Eastern Time

Ladies and Gentlemen:

Pursuant to Rule 461 under the Securities Act of 1933, as amended, NantKwest, Inc. (the “**Company**”) hereby requests that the above-referenced Registration Statement on Form S-3 (File No. 333-213174 (the “**Registration Statement**”) be declared effective at the “Requested Date” and “Requested Time” set forth above or as soon thereafter as practicable, or at such later time as the Company or its counsel may orally request via telephone call to the staff (the “**Staff**”) of the Division of Corporation Finance of the Securities and Exchange Commission (the “**Commission**”). Once the Registration Statement has been declared effective, please orally confirm that event with our counsel, Wilson Sonsini Goodrich & Rosati, P.C., by calling Daniel L. Horwood at (858) 350-2313.

In connection with the acceleration request, the Company hereby acknowledges that:

- should the Commission or the Staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the Staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the Company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and

- the Company may not assert Staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

[Signature page follows]

* * * *

Sincerely,

NantKwest, Inc.

/s/ Sonja Nelson

Sonja Nelson
Chief Accounting Officer, NantKwest, Inc.

cc: Irene Paik, Securities and Exchange Commission
Mary Beth Breslin, Securities and Exchange Commission
Martin J. Waters, Wilson Sonsini Goodrich & Rosati, P.C.
Daniel L. Horwood, Wilson Sonsini Goodrich & Rosati, P.C.