

T2 BIOSYSTEMS, INC.
101 Hartwell Avenue
Lexington, Massachusetts 02421

August 4, 2014

Via EDGAR Transmission

Amanda Ravitz, Esq.
Assistant Director
Division of Corporation Finance
Securities and Exchange Commission
100 F Street, N.E.
Washington, D.C. 20549

Re: T2 Biosystems, Inc.
Registration Statement on Form S-1
Filed July 2, 2014
Registration No. 333-197193

Dear Ms. Ravitz:

In accordance with Rule 461 of Regulation C of the General Rules and Regulations under the Securities Act of 1933, as amended, we hereby request the acceleration of the effective date of the above-referenced Registration Statement so that it will become effective on August 6, 2014, at 4:00 p.m., Eastern Time, or as soon thereafter as practicable, or at such later time as T2 Biosystems, Inc. (the "Company") or its counsel may request via telephone call to the staff. Please contact Brian Paulson of Latham & Watkins LLP, special counsel to the Company, at (650) 463-4662, or in his absence, Spencer Ricks at (212) 906-4529, to provide notice of effectiveness, or if you have any other questions or concerns regarding this matter.

In connection with this request for effectiveness, the Company acknowledges the following:

- should the Securities and Exchange Commission (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.

Sincerely yours,

T2 Biosystems, Inc.

By: /s/ Marc R. Jones
Marc R. Jones
Chief Financial Officer

cc: Johan Brigham, Esq.
Peter Handrinos, Esq.
Brian Paulson, Esq.
Spencer Ricks, Esq.
