
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

FORM S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

T2 BIOSYSTEMS, INC.
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation or organization)

**101 Hartwell Ave.
Lexington, MA 02421
(781) 761-4646**
(Address, including zip code, and telephone
number, including area code, of
registrant's principal executive offices)

20-4827488
(I.R.S. Employer
Identification Number)

John McDonough
President and Chief Executive Officer
T2 Biosystems, Inc.
101 Hartwell Ave.
Lexington, MA 02421
(781) 761-4646

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Johan V. Brigham
Evan G. Smith
Latham & Watkins LLP
John Hancock Tower, 27th Floor
200 Clarendon Street
Boston, MA 02116
(617) 948-6000

Michael T. Gibbs
Vice President, General Counsel and Secretary
T2 Biosystems, Inc.
101 Hartwell Ave.
Lexington, MA 02421
(781) 761-4646

Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this registration statement.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. 333-206707

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated Filer
 Non-accelerated filer Smaller reporting Company
 Emerging growth company
 (Do not check if a smaller reporting company)

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided to Section 7(a)(2)(B) of the Securities Act.

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Amount to be registered/proposed maximum offering price per unit/proposed maximum aggregate offering price	Amount of registration fee
Primary Offering:		
Common Stock		
Preferred Stock		
Debt Securities		
Warrants		
Units		
Total	\$ 8,777,454.45(2)	\$ 1,092.79(1)

- (1) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended (the "Securities Act").
- (2) The Registrant previously registered such indeterminate number of securities as would have an aggregate offering price not to exceed \$100,000,000 on a Registration Statement on Form S-3 (File No. 333-206707), as amended, which was declared effective on September 22, 2015. Of such securities, an aggregate of \$56,112,727.75 have been sold under such Registration Statement, leaving a remaining balance of \$43,887,272.25 as of the date of this filing. The Registrant is filing this registration statement solely for the purpose of increasing the aggregate principal amount of securities being offered by \$8,777,454.45 pursuant to Rule 462(b) of the Securities Act of 1933.

This Registration Statement shall become effective upon filing with the Securities and Exchange Commission in accordance with Rule 462(b) of the Securities Act of 1933.

EXPLANATORY NOTE

This Registration Statement is being filed with the Securities and Exchange Commission (the "Commission") pursuant to Rule 462(b) under the Securities Act of 1933, as amended.

This Registration Statement relates to the registration statement on Form S-3 (File Number 333-206707) (the "Original Registration Statement") declared effective on September 22, 2015 by the Commission, and is being filed for the purpose of registering additional securities in amounts that do not exceed 20% of the Maximum Aggregate Offering Price of securities remaining available for issuance under the Original Registration Statement. The Registrant hereby incorporates by reference into this Registration Statement on Form S-3 in its entirety the Original Registration Statement, including each of the documents filed by the Registrant with the Commission and incorporated or deemed to be incorporated by reference therein and all exhibits thereto. The required opinions and consents are listed on the Exhibit Index attached to and filed with this Registration Statement.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 16. Exhibits.

<u>Exhibit No.</u>	<u>Exhibit Description</u>	<u>Incorporated by Reference</u>			<u>Included in this Registration Statement</u>
		<u>Form</u>	<u>Exhibit No.</u>	<u>Date of Filing</u>	
5.1	Opinion of Latham & Watkins LLP*	S-3	5.1	9/1/2015	
23.1	Consent of Ernst & Young LLP				X
23.2	Consent of Latham & Watkins LLP*	S-3	5.1	9/1/2015	

*Previously filed.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Lexington, Massachusetts, on the 29th day of May, 2018.

T2 Biosystems, Inc.

By: /s/ John McDonough

Name: John McDonough

Title: President, Chief Executive Officer and Director

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed below by the following persons on behalf of the registrant in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ John McDonough</u> John McDonough	President, Chief Executive Officer and Director (principal executive officer)	May 29, 2018
<u>/s/ John Sprague</u> John Sprague	Chief Financial Officer (principal financial and accounting officer)	May 29, 2018
<u>/s/ Stanley N. Lapidus</u> Stanley N. Lapidus	Director	May 29, 2018
<u>/s/ Adrian Jones</u> Adrian Jones	Director	May 29, 2018
<u>/s/ Michael Cima, Ph.D.</u> Michael Cima, Ph.D.	Director	May 29, 2018
<u>/s/ David B. Elsbree</u> David B. Elsbree	Director	May 29, 2018
<u>/s/ Seymour Liebman</u> Seymour Liebman	Director	May 29, 2018
<u>/s/ John W. Cumming</u> John W. Cumming	Director	May 29, 2018

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in this Registration Statement on Form S-3 filed pursuant to Rule 462(b) of the Securities Act of 1933 of the reference to our firm under the caption “Experts” and to the incorporation by reference of our report dated March 19, 2018, with respect to the consolidated financial statements of T2 Biosystems, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2017, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Boston, Massachusetts
May 29, 2018