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**SECURITIES AND EXCHANGE COMMISSION**

Washington, DC 20549

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**SCHEDULE 13G**

**Under the Securities Exchange Act of 1934  
(Amendment No. )\***

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**resTORbio, Inc.**

(Name of Issuer)

**Common Stock, par value \$0.0001 per share**  
(Title of Class of Securities)

**76133L103**  
(CUSIP Number)

**January 30, 2018**  
(Date of Event Which Requires Filing of this Statement)

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Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- Rule 13d-1(b)
- Rule 13d-1(c)
- Rule 13d-1(d)

\* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

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1.	Names of Reporting Persons  Novartis Institutes for BioMedical Research, Inc.	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3.	SEC Use Only	
4.	Citizenship or Place of Organization  Delaware	
Number of Shares Beneficially Owned by Each Reporting Person With:	5.	Sole Voting Power  0
	6.	Shared Voting Power  2,021,237
	7.	Sole Dispositive Power  0
	8.	Shared Dispositive Power  2,021,237
9.	Aggregate Amount Beneficially Owned by Each Reporting Person  2,021,237	
10.	Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
11.	Percent of Class Represented by Amount in Row 9  7.2%*	
12.	Type of Reporting Person (See Instructions)  CO	

\* This percentage is calculated based upon 28,046,315 shares of common stock outstanding of resTORbio, Inc. (the "Issuer"), as set forth in the Issuer's Form 424B4 Prospectus filed with the Securities and Exchange Commission on January 29, 2018, which gives effect to the additional 850,000 shares of common stock issued and sold by the Issuer to the underwriters pursuant to the underwriters' option.

1.	Names of Reporting Persons <b>Novartis AG</b>	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3.	SEC Use Only	
4.	Citizenship or Place of Organization <b>Switzerland</b>	
Number of Shares Beneficially Owned by Each Reporting Person With:	5.	Sole Voting Power <b>0</b>
	6.	Shared Voting Power <b>2,021,237</b>
	7.	Sole Dispositive Power <b>0</b>
	8.	Shared Dispositive Power <b>2,021,237</b>
9.	Aggregate Amount Beneficially Owned by Each Reporting Person <b>2,021,237</b>	
10.	Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
11.	Percent of Class Represented by Amount in Row 9 <b>7.2%*</b>	
12.	Type of Reporting Person (See Instructions) <b>CO</b>	

\* This percentage is calculated based upon 28,046,315 shares of common stock outstanding of resTORbio, Inc. (the "Issuer"), as set forth in the Issuer's Form 424B4 Prospectus filed with the Securities and Exchange Commission on January 29, 2018, which gives effect to the additional 850,000 shares of common stock issued and sold by the Issuer to the underwriters pursuant to the underwriters' option.

- Item 1(a).** Name of Issuer:  
resTORbio, Inc.
- Item 1(b).** Address of Issuer’s Principal Executive Offices:  
500 Boylston Street, 12<sup>th</sup> Floor, Boston, MA 02116
- Item 2(a).** Name of Person Filing:  
This statement is filed on behalf of the following persons with respect to shares of Common Stock of the Issuer:  
(i) Novartis Institutes for BioMedical Research, Inc. (“NIBRI”), a Delaware corporation, with respect to shares held by it; and  
(ii) Novartis AG, a Switzerland corporation, as the publicly owned parent of NIBRI, with respect to the shares held by NIBRI.  
The foregoing persons are hereinafter referred to collectively as the “Reporting Persons.”
- Item 2(b).** Address of Principal Business Office or, if none, Residence:  
The address of the principal business office of NIBRI is 250 Massachusetts Avenue, Cambridge, MA 02139.  
The address of the principal business office of Novartis AG is Lichtstrasse 35, 4056 Basel, Switzerland.
- Item 2(c).** Citizenship:  
NIBRI is a corporation organized under the laws of Delaware and is an indirect wholly-owned subsidiary of Novartis AG.  
Novartis AG is a corporation organized under the laws of Switzerland and is the publicly owned parent of NIBRI.
- Item 2(d).** Title of Class of Securities:  
Common Stock, par value \$0.0001 per share (“Common Stock”).
- Item 2(e).** CUSIP Number:  
76133L103
- Item 3. If this statement is filed pursuant to §§240.13d-1(b), or 240.13d-2(b) or (c), check whether the person filing is a:**
- (a)  Broker or dealer registered under section 15 of the Act (15 U.S.C. 78o);
  - (b)  Bank as defined in section 3(a)(6) of the Act (15 U.S.C. 78c);
  - (c)  Insurance company as defined in section 3(a)(19) of the Act (15 U.S.C. 78c);
  - (d)  Investment company registered under section 8 of the Investment Company Act of 1940 (15 U.S.C. 80a-8);
  - (e)  An investment adviser in accordance with §240.13d-1(b)(1)(ii)(E);
  - (f)  An employee benefit plan or endowment fund in accordance with §240.13d-1(b)(1)(ii)(F);
  - (g)  A parent holding company or control person in accordance with §240.13d-1(b)(1)(ii)(G);
  - (h)  A savings associations as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813);
  - (i)  A church plan that is excluded from the definition of an investment company under section 3(c)(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3);
  - (j)  A non-U.S. institution in accordance with § 240.13d-1(b)(1)(ii)(J);
  - (k)  Group, in accordance with § 240.13d-1(b)(1)(ii)(K). If filing as a non-U.S. institution in accordance with § 240.13d-1(b)(1)(ii)(J), please specify the type of institution: \_\_\_\_\_

**Item 4. Ownership**

- (a) Amount beneficially owned:

NIBRI is the record owner of 2,021,237 shares of Common Stock of the Issuer. As the indirect parent of NIBRI, Novartis AG may be deemed to beneficially own these securities.

- (b) Percent of class:

7.2%, based on 28,046,315 shares of the Issuer's common stock outstanding as of January 29, 2018 upon the closing of the Issuer's initial public offering, as reported in the Issuer's prospectus dated January 29, 2018 filed with the Securities and Exchange Commission pursuant to Rule 424(b)(4) of the Securities Act of 1933, as amended.

- (c) Number of shares as to which the person has:

- (i) Sole power to vote or to direct the vote:

Not applicable

- (ii) Shared power to vote or to direct the vote:

2,021,237

- (iii) Sole power to dispose or to direct the disposition of:

Not applicable

- (iv) Shared power to dispose or to direct the disposition of:

2,021,237

**Item 5. Ownership of 5 Percent or Less of a Class**

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than 5 percent of the class of securities, check the following .

**Item 6. Ownership of More than 5 Percent on Behalf of Another Person**

Not Applicable

**Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company or Control Person.**

Not Applicable

**Item 8. Identification and Classification of Members of the Group**

Not Applicable

**Item 9. Notice of Dissolution of a Group**

Not Applicable

**Item 10. Certification**

Each of the Reporting Persons hereby makes the following certification:

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect.

**Signature**

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Date: February 14, 2018

NOVARTIS INSTITUTES FOR BIOMEDICAL RESEARCH,  
INC.

/s/ Scott A. Brown

Name: Scott A. Brown

Title: VP, General Counsel

NOVARTIS AG

/s/ Christian Rehm

Name: Christian Rehm

Title: Authorized Signatory

/s/ Daniel Weiss

Name: Daniel Weiss

Title: Authorized Signatory

INDEX EXHIBIT

SCHEDULE 13G

Exhibit Number

Exhibit Description

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99.1

Joint Filing Agreement

**Joint Filing Agreement**

In accordance with Rule 13d-1(k) under the Securities Exchange Act of 1934, as amended, each of the persons named below agrees to the joint filing of a Statement on Schedule 13G (including amendments thereto) with respect to the shares of Common Stock of resTORbio, Inc., a Delaware corporation, and further agree that this Joint Filing Agreement shall be included as an exhibit to such joint filings.

This Joint Filing Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original instrument, but all of such counterparts together shall constitute one agreement.

In evidence thereof, the undersigned, being duly authorized, hereby execute this Joint Filing Agreement as of February 14, 2018.

NOVARTIS INSTITUTES FOR BIOMEDICAL RESEARCH,  
INC.

/s/ Scott A. Brown

Name: Scott A. Brown

Title: VP, General Counsel

NOVARTIS AG

/s/ Christian Rehm

Name: Christian Rehm

Title: Authorized Signatory

/s/ Daniel Weiss

Name: Daniel Weiss

Title: Authorized Signatory