

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

SCHEDULE 13D

Under the Securities Exchange Act of 1934
(Amendment No. 1)*

Arrowhead Research Corporation

(Name of Issuer)

COMMON STOCK, PAR VALUE \$0.001 PER SHARE

(Title of Class of Securities)

042797209

(CUSIP Number)

Scott A. Brown
General Counsel and
Chief Administrative Officer
Novartis Institutes for BioMedical Research, Inc.
250 Massachusetts Avenue
Cambridge, MA 02139
(617) 871-8000

With a copy to:

G. Scott Lesmes
Morrison & Foerster LLP
2000 Pennsylvania Avenue NW, Suite 6000
Washington, D.C. 20006
(202) 887-1500

(Name, Address and Telephone Number of Person
Authorized to Receive Notices and Communications)

November 28, 2017

(Date of Event Which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box.

* 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 disclosures provided in a prior cover page.

The information required on 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).

CUSIP No. 042797209

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)

(b)

3. SEC Use Only

4. Source of Funds (See Instructions)
OO

5. Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e)

6. Citizenship or Place of Organization
Delaware

7. Sole Voting Power
None

Number of
Shares
Beneficially
Owned by
Each
Reporting
Person With

8. Shared Voting Power
3,321,383

9. Sole Dispositive Power
None

10. Shared Dispositive Power
3,321,383

11. Aggregate Amount Beneficially Owned by Each Reporting Person
3,321,383

12. Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions)

13. Percent of Class Represented by Amount in Row (11)
4.44%*

14. Type of Reporting Person (See Instructions)
CO

* This calculation is based on 74,772,103 shares of Common Stock, par value \$0.001 per share, outstanding as of August 1, 2017, as reported by the Issuer on its Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2017, filed by the Issuer with the Securities and Exchange Commission on August 3, 2017.

CUSIP No. 042797209

1. Names of Reporting Persons
Novartis AG

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a)

(b)

3. SEC Use Only

4. Source of Funds (See Instructions)
OO

5. Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e)

6. Citizenship or Place of Organization
Switzerland

7. Sole Voting Power
None

Number of
Shares
Beneficially
Owned by
Each
Reporting
Person With

8. Shared Voting Power
3,321,383

9. Sole Dispositive Power
None

10. Shared Dispositive Power
3,321,383

11. Aggregate Amount Beneficially Owned by Each Reporting Person
3,321,383

12. Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions)

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4.44%*

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* This calculation is based on 74,772,103 shares of Common Stock, par value \$0.001 per share, outstanding as of August 1, 2017, as reported by the Issuer on its Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2017, filed by the Issuer with the Securities and Exchange Commission on August 3, 2017.

Explanatory Note

This Amendment No. 1 (the "Amendment No. 1") amends the statement on Schedule 13D originally filed by the Reporting Persons on February 12, 2016. The Items below amend the information disclosed under the corresponding Item of the Schedule 13D as described below. Except as specifically provided herein, this Amendment No. 1 does not modify any of the information previously reported in the Schedule 13D. Capitalized terms used but not defined herein shall have the meanings attributed to them in the Schedule 13D.

This Amendment No. 1 is being filed by the Reporting Persons primarily to report that they no longer beneficially own more than 5% of the Issuer's outstanding Common Stock.

Item 5. Interest in Securities of the Issuer

Item 5(a) of the Schedule 13D is hereby amended and restated in its entirety to read as follows:

(a) As of the date hereof, the Reporting Persons may be deemed, for purposes of Rule 13d-3 of the Act, directly or indirectly, including by reason of their mutual affiliation, to be the beneficial owners of the shares of Common Stock described in Item 3 above. NIBRI is a wholly-owned indirect subsidiary of Novartis.

Based on the 74,772,103 shares of the Issuer's common stock outstanding as of August 1, 2017, according to the Issuer's Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2017, filed by the Issuer with the Securities and Exchange Commission on August 3, 2017, the Common Stock held by the Reporting Persons constituted 4.44% of the outstanding shares of Common Stock of the Issuer as of that date.

Novartis, as the parent company of NIBRI, may be deemed to beneficially own all of the shares of Common Stock held directly by NIBRI.

Item 5(b) of the Schedule 13D is hereby amended to delete the last paragraph thereof, as Dr. Perry is no longer employed by Novartis.

Item 5(e) of the Schedule 13D is hereby amended and restated in its entirety to read as follows.

(e) The Reporting Persons determined that they were no longer beneficial owners of more than 5% of the Common Stock based on the 74,173,484 shares of Common Stock the Issuer reported as outstanding as of December 12, 2016, according to the Issuer's Annual Report on Form 10-K for the fiscal year ended September 30, 2016, filed by the Issuer with the Securities and Exchange Commission on December 14, 2016.

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Item 7. Material to be Filed as Exhibits

EXHIBIT	DOCUMENT
1	Joint Filing Agreement dated November 28, 2017 among the Reporting Persons.
2	Asset Purchase and Exclusive License Agreement between Arrowhead Research Corporation and Novartis Institutes for Biomedical Research, Inc., dated March 3, 2015 (incorporated by reference to Exhibit 2.1 to the Issuer's Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2015, as filed with the Securities and Exchange Commission on May 11, 2015).

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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.

Pursuant to Rule 13d-1(k)(1)(iii) of Regulation 13D-G of the General Rules and Regulations of the Securities Exchange Act of 1934, as amended, the undersigned agree that the attached statement is filed on behalf of each of them.

Dated: November 28, 2017

NOVARTIS INSTITUTES FOR BIOMEDICAL RESEARCH, INC.

By: /s/ Revathi Rammohan
Name: Revathi Rammohan
Title: Chief Financial Officer

NOVARTIS AG

By: /s/ Daniel Weiss
Name: Daniel Weiss
Title: Authorized Signatory

By: /s/ Christian Rehm

EXHIBIT INDEX

<u>EXHIBIT</u>	<u>DESCRIPTION</u>
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JOINT FILING AGREEMENT

The undersigned hereby agree that the foregoing statement on Schedule 13D is filed on behalf of each of the undersigned, and any amendments thereto executed by the undersigned shall be filed on behalf of each of the undersigned without the necessity of filing any additional joint filing agreement. The undersigned acknowledge that each is responsible for the timely filing of such statement on Schedule 13D and any amendments thereto, and for the completeness and accuracy of the information concerning it contained therein, but shall not be responsible for the completeness or accuracy of the information concerning the others of the undersigned, except to the extent that it knows or has reason to believe that such information is inaccurate or incomplete. This Joint Filing Agreement may be executed in any number of counterparts, all of which taken together shall constitute one and the same instrument.

IN WITNESS WHEREOF, the undersigned have executed this Joint Filing Agreement as of November 28, 2017.

NOVARTIS INSTITUTES FOR BIOMEDICAL RESEARCH, INC.

By: /s/ Revathi Rammohan
Name: Revathi Rammohan
Title: Chief Financial Officer

NOVARTIS AG

By: /s/ Daniel Weiss
Name: Daniel Weiss
Title: Authorized Signatory

By: /s/ Christian Rehm
Name: Christian Rehm
Title: Authorized Signatory
