

ARROWHEAD RESEARCH CORP  
Form SC 13D  
February 12, 2016

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

**SCHEDULE 13D**

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

**Arrowhead Research Corporation**

(Name of Issuer)

**COMMON STOCK, PAR VALUE \$0.001 PER SHARE**

(Title of Class of Securities)

**042797209**

(CUSIP Number)

**Scott Brown**

**General Counsel**

**Novartis Institutes for BioMedical Research, Inc.**

**250 Massachusetts Avenue**

**Cambridge, MA 02139**

**(617) 871-8000**

**With a copy to:**

**G. Scott Lesmes**

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**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)

**March 12, 2015**

(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).

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CUSIP No. 042797209

- |     |  |
|-----|--|
| 1.  | Names of Reporting Persons<br>Novartis Institutes for BioMedical Research, Inc.                            |
| 2.  | Check the Appropriate Box if a Member of a Group (See Instructions)  |
|     | (a) <input type="radio"/>  |
|     | (b) <input type="radio"/>  |
| 3.  | SEC Use Only   |
| 4.  | Source of Funds (See Instructions)<br>OO   |
| 5.  | Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) <input type="radio"/>  |
| 6.  | Citizenship or Place of Organization<br>Delaware   |
|     | 7. Sole Voting Power<br>None   |
|     | 8. Shared Voting Power<br>3,321,383  |
|     | 9. Sole Dispositive Power<br>None  |
|     | 10. Shared Dispositive Power<br>3,321,383  |
| 11. | Aggregate Amount Beneficially Owned by Each Reporting Person<br>3,321,383                                  |
| 12. | Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="radio"/> |
| 13. | Percent of Class Represented by Amount in Row (11)<br>5.57%*   |
| 14. | Type of Reporting Person (See Instructions)<br>CO  |

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\* This calculation is based on 59,627,499 shares of Common Stock, par value \$0.001 per share, outstanding as of February 5, 2016, as reported by the Issuer on its Quarterly Report on Form 10-Q for the fiscal quarter ended December 31, 2015, filed by the Issuer with the Securities and Exchange Commission on February 9, 2016.

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CUSIP No. 042797209

- |     |  |
|-----|--|
| 1.  | Names of Reporting Persons<br>Novartis AG  |
| 2.  | Check the Appropriate Box if a Member of a Group (See Instructions)  |
|     | (a) <input type="radio"/>  |
|     | (b) <input type="radio"/>  |
| 3.  | SEC Use Only   |
| 4.  | Source of Funds (See Instructions)<br>OO   |
| 5.  | Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) <input type="radio"/>  |
| 6.  | Citizenship or Place of Organization<br>Switzerland  |
|     | 7. Sole Voting Power<br>None   |
|     | 8. Shared Voting Power<br>3,321,383  |
|     | 9. Sole Dispositive Power<br>None  |
|     | 10. Shared Dispositive Power<br>3,321,383  |
| 11. | Aggregate Amount Beneficially Owned by Each Reporting Person<br>3,321,383                                  |
| 12. | Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="radio"/> |
| 13. | Percent of Class Represented by Amount in Row (11)<br>5.57%*   |
| 14. | Type of Reporting Person (See Instructions)<br>CO  |

\* This calculation is based on 59,627,499 shares of Common Stock, par value \$0.001 per share, outstanding as of February 5, 2016, as reported by the Issuer on its Quarterly Report on Form 10-Q for the fiscal quarter ended December 31, 2015, filed by the Issuer with the Securities and Exchange Commission on February 9, 2016.

## Item 1. Security and Issuer

This Statement on Schedule 13D relates to the common stock, par value \$0.001 per share (the **Common Stock**) of Arrowhead Research Corporation, a Delaware corporation (the **Issuer**). The Issuer's principal executive offices are located at 225 S. Lake Avenue, Suite 1050, Pasadena, California 91101.

## Item 2. Security and Issuer

(a) This Schedule 13D is being filed by Novartis Institutes for BioMedical Research, Inc. ( **NIBRI** ) and Novartis AG ( **Novartis** ). NIBRI and Novartis are hereinafter collectively referred to as the **Reporting Persons**.

(b) The principal business address of NIBRI is 250 Massachusetts Avenue, Cambridge, MA 02139. The principal business address of Novartis is Lichtstrasse 35, CH-4056 Basel, Switzerland.

(c) NIBRI is a company organized under the laws of the State of Delaware and is a wholly-owned indirect subsidiary of Novartis. NIBRI is a research organization that works to discover innovative medicines that treat disease and improve human health.

Novartis is a corporation organized under the laws of Switzerland and is the publicly owned parent of a multinational group of companies specializing in the research, development, manufacturing and marketing of a broad range of healthcare products, led by innovative pharmaceuticals. Novartis is the 100% indirect owner of NIBRI.

(d)-(e) Neither the Reporting Persons nor, to the best knowledge of each of them, any of the executive officers and members of the Board of Directors of each of the Reporting Persons set forth on Schedule I hereto, during the last five years, (i) has been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors) or (ii) was a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.

(f) The name, business address, present principal occupation or employment and citizenship of the executive officers and members of the Board of Directors of each of the Reporting Persons is set forth on Schedule I hereto and is herein incorporated by reference.

## Item 3. Source and Amount of Funds or Other Consideration

NIBRI directly owns 3,321,383 shares of Common Stock. Reference is made to the Agreement (as defined in Item 6 below). The shares of Common Stock were acquired in exchange for RNAi assets and rights (as described in Item 6 below) pursuant to the terms of the Agreement.

**Item 4. Purpose of Transaction**

The information contained in Item 3 above is herein incorporated by reference.

All shares of Common Stock reported acquired by the Reporting Persons in this Schedule 13D were acquired for the purpose of investment and were not intended to and did not effect any change in the control of the Issuer.

The Reporting Persons from time to time intend to review their investment in the Issuer on the basis of various factors, including the Issuer's business, financial condition, results of operations and prospects, general economic and industry conditions, the securities markets in general and those for the Issuer's shares of Common

Stock in particular, as well as other developments and other investment opportunities. Based upon such review, the Reporting Persons will take such actions in the future as the Reporting Persons may deem appropriate in light of the circumstances existing from time to time. If the Reporting Persons believe that further investment in the Issuer is attractive, whether because of the market price of the Common Stock or otherwise, they may acquire shares of Common Stock or other securities of the Issuer either in the open market or in privately negotiated transactions. Similarly, depending on market and other factors, the Reporting Persons may determine to dispose of some or all of the shares of Common Stock currently owned by the Reporting Persons or otherwise acquired by the Reporting Persons either in the open market or in privately negotiated transactions.

Except as described above, none of the Reporting Persons currently has any plan or proposal that relates to or would result in any of the actions specified in clauses (a) through (j) of Item 4 of Schedule 13D.

**Item 5. Interest in Securities of the Issuer**

(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 59,627,499 shares of the Issuer's common stock outstanding as of February 5, 2016 according to the Issuer's Quarterly Report on Form 10-Q for the fiscal quarter ended December 31, 2015, filed by the Issuer with the Securities and Exchange Commission (the Commission) on February 9, 2016, the Common Stock held by the Reporting Persons constituted 5.57% 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.

(b) With respect to the number of shares of Common Stock as to which each Reporting Person has:

(i) sole power to vote or to direct the vote with respect to such shares of Common Stock, please see row 7 of the applicable cover sheet to this Schedule 13D for such Reporting Person;

(ii) shared power to vote or to direct the vote with respect to such shares of Common Stock, please see row 8 of the applicable cover sheet to this Schedule 13D for such Reporting Person;

(iii) sole power to dispose or direct the disposition of such shares of Common Stock, please see row 9 of the applicable cover sheet to this Schedule 13D for such Reporting Person; and

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(iv) shared power to dispose or to direct the disposition of such shares of Common Stock, please see row 10 of the applicable cover sheet to this Schedule 13D for such Reporting Person.

Dr. Michael Perry, Chief Scientific Officer of the Cell & Gene Therapies franchise of Novartis Pharmaceuticals Division, a division of Novartis, has been a member of the Issuer's board of directors since December 2011. As a director of the Issuer, Dr. Perry has received, and is eligible to receive in the future, equity compensation awards from the Issuer, including stock options and restricted stock units. Dr. Perry is not an executive officer or director of the Reporting Persons, and neither Reporting Person has voting or dispositive power over shares of Common Stock beneficially owned by Dr. Perry. The Reporting Persons expressly disclaim beneficial ownership of the shares of Common Stock beneficially owned by Dr. Perry.

(c) The information contained in Items 3 and 4 to this Schedule 13D is herein incorporated by reference. None of (i) the Reporting Persons and (ii) to the Reporting Persons' knowledge, the persons set forth on Schedule I of this Schedule 13D, has effected any transaction in the Issuer's Common Stock during the past 60 days.

(d) Not applicable.

(e) Not applicable.



**Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer**

As previously disclosed in the Issuer's Current Report on Form 8-K filed with the Commission on March 3, 2015, the Issuer entered into an Asset Purchase and Exclusive License Agreement (the "Agreement") with NIBRI, pursuant to which the Issuer acquired NIBRI's RNAi assets and rights thereunder. Pursuant to the Agreement, the Issuer acquired or licensed certain patents and patent applications owned or controlled by NIBRI related to RNAi therapeutics, third party licenses and intellectual property, rights to three pre-clinical RNAi candidates, and other related assets (collectively, the "Purchased Assets"). The acquisition of the Purchased Assets closed on March 4, 2015, concurrent with execution of the Agreement (the "Closing").

In consideration for the Purchased Assets, the Issuer agreed to make certain payments to NIBRI, including: (a) a cash payment of \$10,000,000; (b) \$25,000,000 in shares of the Company's Common Stock, \$10,000,000 of which was provided at Closing and \$15,000,000 of which was provided in three installments of 1,337,256 shares on March 4, 2015, 1,962,067 shares on March 12, 2015, and 22,060 shares on March 17, 2015; (c) escalating royalties based upon annual net sales thresholds for certain RNAi products sold by the Issuer; and (d) milestone payments tied to the achievement of certain development and sales milestones for each target being developed by the Issuer.

The 3,321,383 shares of the Company's Common Stock NIBRI received were acquired in private placement transactions that were exempt from registration under Section 4(a)(2) of the Securities Act of 1933, as amended.

The above summary of the Agreement is qualified by reference to such description and the full text of the Agreement, which is filed as an exhibit to this Schedule 13D and herein incorporated by reference.

Except as disclosed herein, there are no contracts, arrangements, understandings or relationships (legal or otherwise) among the Reporting Persons and any other person with respect to any securities of the Issuer, including but not limited to transfer or voting of any of the securities, finder's fees, joint ventures, loan or option arrangements, puts or calls, guarantees of profits, division of profits or loss, or the giving or withholding of proxies.

**Item 7. Material to Be Filed as Exhibits**

**EXHIBIT**

**DOCUMENT**

- |   |  |
|---|--|
| 1 | Joint Filing Agreement dated February 12, 2016 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). |

**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: February 12, 2016

**NOVARTIS INSTITUTES FOR BIOMEDICAL RESEARCH, INC.**

By:	/s/ Scott Brown	
	Name:	Scott Brown
	Title:	Vice President and General Counsel

**NOVARTIS AG**

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

By:	/s/ Felix Senn	
	Name:	Felix Senn
	Title:	Authorized Signatory

**DIRECTORS AND EXECUTIVE OFFICERS OF  
NOVARTIS AG AND NOVARTIS INSTITUTES FOR BIOMEDICAL  
RESEARCH, INC.**

**DIRECTORS AND EXECUTIVE OFFICERS OF NOVARTIS AG**

The name, function, citizenship and present principal occupation or employment of each of the directors and executive officers of Novartis AG are set forth below. Unless otherwise indicated below, (i) each occupation set forth opposite an individual's name refers to employment with Novartis AG and (ii) the business address of each director and executive officer of Novartis AG is Novartis Campus, Lichstrasse 35, CH-4056, Basel, Switzerland.

<b>Name</b>	<b>Relationship to Novartis AG</b>	<b>Present Principal Occupation</b>	<b>Citizenship</b>
Joseph Jimenez	Member of the Executive Committee; Chief Executive Officer	Member of the Executive Committee; Chief Executive Officer	American
Steven Baert	Member of the Executive Committee; Head of Human Resources	Member of the Executive Committee; Head of Human Resources	Belgian
F. Michael (Mike) Ball	Member of the Executive Committee; Division Head and CEO, Alcon	Member of the Executive Committee; Division Head and CEO, Alcon	American
Felix R. Ehrat, Ph.D.	Member of the Executive Committee; Group General Counsel	Member of the Executive Committee; Group General Counsel	Swiss
David Epstein	Member of the Executive Committee; Division Head and CEO, Novartis Pharmaceuticals	Member of the Executive Committee; Division Head and CEO, Novartis Pharmaceuticals	American
Mark C. Fishman, M.D.	Member of the Executive Committee; President of the Novartis Institutes for BioMedical Research	Member of the Executive Committee; President of the Novartis Institutes for BioMedical Research; 250 Massachusetts Avenue, Cambridge, MA 02139, USA	American

<b>Name</b>	<b>Relationship to Novartis AG</b>	<b>Present Principal Occupation</b>	<b>Citizenship</b>
Richard Francis	Member of the Executive Committee; Division Head and CEO, Sandoz	Member of the Executive Committee; Division Head and CEO, Sandoz	British
Harry Kirsch	Member of the Executive Committee; Chief Financial Officer	Member of the Executive Committee; Chief Financial Officer	German
Vasant (Vas) Narasimhan, M.D.	Member of the Executive Committee; Global Head, Drug Development and Chief Medical Officer	Member of the Executive Committee; Global Head, Drug Development and Chief Medical Officer	American
André Wyss	Member of the Executive Committee; President, Novartis Operations and Country President for Switzerland	Member of the Executive Committee; President, Novartis Operations and Country President for Switzerland	Swiss
Joerg Reinhardt, Ph.D.	Chairman of the Board of Directors	Chairman of the Board of Directors	German
Enrico Vanni, Ph.D.	Vice Chairman of the Board of Directors	Independent Consultant	Swiss
Nancy C. Andrews, M.D., Ph.D.	Director	Dean and Vice Chancellor for Academic Affairs at the Duke University School of Medicine	American
Dimitri Azar, M.D., MBA	Director	Dean of the College of Medicine and Professor of Ophthalmology, Bioengineering and Pharmacology at the University of Illinois at Chicago	American

Name	Relationship to Novartis AG	Present Principal Occupation	Citizenship
Verena A. Briner, M.D.	Director	Professor of Internal Medicine at the University of Basel and Chief Medical Officer and Head of the Department of Medicine at the Lucerne Cantonal Hospital	Swiss
Srikant Datar, Ph.D.	Director	Arthur Lowes Dickinson Professor at the Graduate School of Business Administration at Harvard University	American
Ann Fudge	Director	Vice Chairman and Senior Independent Director of Unilever NV	American
Pierre Landolt, Ph.D.	Director	Chairman of the Sandoz Family Foundation	Swiss
Andreas von Planta, Ph.D.	Director	Partner at Lenz & Staehelin	Swiss
Charles L. Sawyers, M.D.	Director	Chair of the Human Oncology and Pathogenesis Program at Memorial Sloan-Kettering Cancer Center; Professor of Medicine and of Cell and Developmental Biology at the Weill Cornell Graduate School of Medical Sciences	American
William T. Winters	Director	CEO and director of Standard Chartered, a banking and financial services company based in London	British

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## DIRECTORS AND EXECUTIVE OFFICERS OF

## NOVARTIS INSTITUTES FOR BIOMEDICAL RESEARCH, INC.

The name, function, citizenship and present principal occupation or employment of each of the directors and executive officers of Novartis Institutes for BioMedical Research, Inc. are set forth below. Unless otherwise indicated below, (i) each occupation set forth opposite an individual's name refers to employment with Novartis Institutes for BioMedical Research, Inc. and (ii) the business address of each director and executive officer for Novartis Institutes for BioMedical Research, Inc. is 250 Massachusetts Avenue Cambridge, MA 02139, USA.

<b>Name</b>	<b>Relationship to Novartis Institutes for BioMedical Research, Inc.</b>	<b>Present Principal Occupation</b>	<b>Citizenship</b>
Mark C. Fishman, M.D.	Chairman of the NIBR Executive Committee; Vice Chairman of the Board of Directors; President of NIBR	Member of the Novartis AG Executive Committee; President of NIBR	American
Evan Beckman, M.D.	Member of the NIBR Executive Committee; Global Head of Translational Medicine	Member of the NIBR Executive Committee; Global Head of Translational Medicine	American
James Bradner, M.D.	Member of the NIBR Executive Committee; President Designate of NIBR	Member of the NIBR Executive Committee; President Designate of NIBR	American
Karin Briner, Ph.D.	Member of the NIBR Executive Committee; Head of Global Discovery Chemistry	Member of the NIBR Executive Committee; Head of Global Discovery Chemistry	Swiss
Scott Brown	Member of the NIBR Executive Committee; Vice President and General Counsel	Member of the NIBR Executive Committee; Vice President and General Counsel	American
Donald Ganem, M.D.	Member of the NIBR Executive Committee; Vice President and Global Head of Infectious Diseases;	Member of the NIBR Executive Committee; Vice President and Global Head of Infectious Diseases; Novartis Institutes for BioMedical Research, 5300 Chiron Way, Emeryville, CA, 94608	American

<b>Name</b>	<b>Relationship to Novartis Institutes for BioMedical Research, Inc.</b>	<b>Present Principal Occupation</b>	<b>Citizenship</b>
John Hastewell, D. Phil.	Member of the NIBR Executive Committee; Head of Research Cambridge and Global Head of Biologics	Member of the NIBR Executive Committee; Head of Research Cambridge and Global Head of Biologics	American
Christian Klee	Member of the NIBR Executive Committee; Chief Financial Officer; Chief Operating Officer	Member of the NIBR Executive Committee; Chief Financial Officer; Chief Operating Officer, NIBR	Swiss
Dhavalkumar Patel, M.D., Ph.D.	Member of the NIBR Executive Committee	Member of the NIBR Executive Committee; Head of Research, Europe, NIBR; Global Head Autoimmunity, Transplantation, and Inflammatory, NIBR; Novartis Campus, Lichstrasse 35, CH-4056, Basel, Switzerland	American
Jeffrey Porter, Ph.D.	Member of the NIBR Executive Committee; Vice President, Global Head of Developmental and Molecular Pathways	Member of the NIBR Executive Committee; Vice President, Global Head of Developmental and Molecular Pathways	American
Mark Sawyer	Member of the NIBR Executive Committee; Global Head of Human Resources	Member of the NIBR Executive Committee; Global Head of Human Resources	British
William R. Sellers, M.D.	Member of the NIBR Executive Committee; Vice President, Global Head of Oncology	Member of the NIBR Executive Committee; Vice President, Global Head of Oncology	American
Ann Taylor, M.D.	Member of the NIBR Executive Committee; Head of the Program Office	Member of the NIBR Executive Committee; Head of the Program Office	American

Name	Relationship to Novartis Institutes for BioMedical Research, Inc.	Present Principal Occupation	Citizenship
Joerg Reinhardt, Ph.D.	Chairman of the Board of Directors	Chairman of the Board of Directors of Novartis AG; Novartis Campus, Lichstrasse 35, CH-4056, Basel, Switzerland	German
Harry Kirsch	Director	Member of the Novartis AG Executive Committee; Chief Financial Officer of Novartis AG; Novartis Campus, Lichstrasse 35, CH-4056, Basel, Switzerland	German
Christi L. Shaw	Director	Novartis US Country Head, President of Novartis Corporation & President of Novartis Pharmaceuticals Corporation; One Health Plaza, East Hanover, NJ 07936	American

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**EXHIBIT INDEX**

<b>EXHIBIT</b>	<b>DESCRIPTION</b>
1	Joint Filing Agreement dated February 12, 2016 among the Reporting Persons.
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