

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

**SCHEDULE 13G**

**Under the Securities Exchange Act of 1934**

**Amendment No. 2\***

**Arcadia Biosciences, Inc.**  
(Name of Issuer)

**Common Stock**  
(Title of Class of Securities)

**039014105**  
(CUSIP Number)

**December 31, 2016**  
(Date of Event Which Requires Filing of this Statement)

**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 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).

**1. NAME OF REPORTING PERSON (S.S. or I.R.S. Identification No. of Above Person)**

Ivy Investment Management Company Tax ID No. 03-0481447

**2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP:**(a) (b) **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** 3,166,800 (See Item 4)**6. SHARED VOTING POWER** 0**7. SOLE DISPOSITIVE POWER** 3,166,800 (See Item 4)**8. SHARED DISPOSITIVE POWER** 0**9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON:**

3,166,800 (See Item 4)

**10. CHECK IF THE AGGREGATE AMOUNT IN ROW 9 EXCLUDES CERTAIN SHARES:****11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9:** 7.1**12. TYPE OF PERSON REPORTING:** IA

**1. NAME OF REPORTING PERSON (S.S. or I.R.S. Identification No. of Above Person)**

Waddell &amp; Reed Investment Management Company Tax ID No. 48-1106973

**2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP:**(a) (b) **3. SEC USE ONLY****4. CITIZENSHIP OR PLACE OF ORGANIZATION:** Kansas**NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH:****5. SOLE VOTING POWER** 1,688,200 (See Item 4)**6. SHARED VOTING POWER** 0**7. SOLE DISPOSITIVE POWER** 1,688,200 (See Item 4)**8. SHARED DISPOSITIVE POWER** 0**9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON:**

1,688,200 (See Item 4)

**10. CHECK IF THE AGGREGATE AMOUNT IN ROW 9 EXCLUDES CERTAIN SHARES:****11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9:** 3.8**12. TYPE OF PERSON REPORTING:** IA

**1. NAME OF REPORTING PERSON (S.S. or I.R.S. Identification No. of Above Person)**

Waddell &amp; Reed, Inc. Tax ID No. 43-1235675

**2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP:**(a) (b) **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** 1,688,200 (See Item 4)**6. SHARED VOTING POWER** 0**7. SOLE DISPOSITIVE POWER** 1,688,200 (See Item 4)**8. SHARED DISPOSITIVE POWER** 0**9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON:**

1,688,200 (See Item 4)

**10. CHECK IF THE AGGREGATE AMOUNT IN ROW 9 EXCLUDES CERTAIN SHARES:****11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9:** 3.8**12. TYPE OF PERSON REPORTING:** BD

**1. NAME OF REPORTING PERSON (S.S. or I.R.S. Identification No. of Above Person)**

Waddell &amp; Reed Financial Services, Inc. Tax ID No. 43-1414157

**2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP:**(a) (b) **3. SEC USE ONLY****4. CITIZENSHIP OR PLACE OF ORGANIZATION:** Missouri**NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH:****5. SOLE VOTING POWER** 1,688,200 (See Item 4)**6. SHARED VOTING POWER** 0**7. SOLE DISPOSITIVE POWER** 1,688,200 (See Item 4)**8. SHARED DISPOSITIVE POWER** 0**9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON:**

1,688,200 (See Item 4)

**10. CHECK IF THE AGGREGATE AMOUNT IN ROW 9 EXCLUDES CERTAIN SHARES:****11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9:** 3.8**12. TYPE OF PERSON REPORTING:** HC

**1. NAME OF REPORTING PERSON (S.S. or I.R.S. Identification No. of Above Person)**

Waddell &amp; Reed Financial, Inc. Tax ID No. 51-0261715

**2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP:**(a) (b) **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** 4,855,000 (See Item 4)**6. SHARED VOTING POWER** 0**7. SOLE DISPOSITIVE POWER** 4,855,000 (See Item 4)**8. SHARED DISPOSITIVE POWER** 0**9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON:**

4,855,000 (See Item 4)

**10. CHECK IF THE AGGREGATE AMOUNT IN ROW 9 EXCLUDES CERTAIN SHARES:****11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9:** 10.9**12. TYPE OF PERSON REPORTING:** HC

Item 1(a):      Name of Issuer: Arcadia Biosciences, Inc.

Item 1(b):      Address of Issuer's Principal Executive Offices:

202 Cousteau Place, Suite 105  
Davis, CA 95618

Item 2(a):      Name of Person Filing:

- (i)    Waddell & Reed Financial, Inc.
- (ii)   Waddell & Reed Financial Services, Inc.
- (iii)  Waddell & Reed, Inc.
- (iv)  Waddell & Reed Investment Management Company
- (v)    Ivy Investment Management Company

Item 2(b):      Address of Principal Business Office:

- (i)-(v):        6300 Lamar Avenue  
                    Overland Park, KS 66202

Item 2(c):      Citizenship:

- (i), (iii) and (v): Delaware
- (ii): Missouri
- (iv): Kansas

Item 2(d):      Title of Class of Securities: Common Stock

Item 2(e):      CUSIP Number: 039014105

Item 3:         The reporting person is:

- (i)    Waddell & Reed Financial, Inc., a parent holding company in accordance with Reg. 240.13d-1(b)(1)(ii)(G);
- (ii)   Waddell & Reed Financial Services, Inc., a parent holding company in accordance with Reg. 240.13d-1(b)(1)(ii)(G);
- (iii)  Waddell & Reed, Inc., a broker-dealer registered under section 15 of the Act (15 U.S.C. 78o); and
- (iv)  Waddell & Reed Investment Management Company, an investment advisor in accordance with Reg. 240.13d-1(b)(1)(ii)(E).
- (v)    Ivy Investment Management Company, an investment advisor in accordance with Reg. 240.13d-1(b)(1)(ii)(E).

Item 4:            Ownership

The securities reported on herein are beneficially owned by one or more open-end investment companies or other managed accounts which are advised or sub-advised by Ivy Investment Management Company (“IICO”), an investment advisory subsidiary of Waddell & Reed Financial, Inc. (“WDR”) or Waddell & Reed Investment Management Company (“WRIMCO”), an investment advisory subsidiary of Waddell & Reed, Inc. (“WRI”). WRI is a broker-dealer and underwriting subsidiary of Waddell & Reed Financial Services, Inc., a parent holding company (“WRFSI”). In turn, WRFSI is a subsidiary of WDR, a publicly traded company. The investment advisory contracts grant IICO and WRIMCO all investment and/or voting power over securities owned by such advisory clients. The investment sub-advisory contracts grant IICO and WRIMCO investment power over securities owned by such sub-advisory clients and, in most cases, voting power. Any investment restriction of a sub-advisory contract does not restrict investment discretion or power in a material manner. Therefore, IICO and/or WRIMCO may be deemed the beneficial owner of the securities covered by this statement under Rule 13d-3 of the Securities Exchange Act of 1934 (the “1934 Act”).

IICO, WRIMCO, WRI, WRFSI and WDR are of the view that they are not acting as a “group” for purposes of Section 13(d) under the 1934 Act. Indirect “beneficial ownership” is attributed to the respective parent companies solely because of the parent companies’ control relationship to WRIMCO and IICO.

- (a) Amount beneficially owned: 4,855,000
- (b) Percent of class: 10.9
- (c) Number of shares as to which the person has:
  - (i) Sole voting power to vote or to direct the vote:
    - WDR: 4,855,000 (indirect)
    - WRFSI: 1,688,200 (indirect)
    - WRI: 1,688,200 (indirect)
    - WRIMCO: 1,688,200 (direct)
    - IICO: 3,166,800 (direct)
  - (ii) Shared power to vote or to direct the vote: 0
  - (iii) Sole power to dispose or to direct the disposition of:
    - WDR: 4,855,000 (indirect)
    - WRFSI: 1,688,200 (indirect)
    - WRI: 1,688,200 (indirect)
    - WRIMCO: 1,688,200 (direct)
    - IICO: 3,166,800 (direct)

(iv) Shared power to dispose or to direct the disposition of: 0

Item 5: Ownership of Five 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 Five Percent on Behalf of Another Person:

The clients of IICO and WRIMCO, including investment companies registered under the Investment Company Act of 1940 and other managed accounts, have the right to receive dividends from, as well as the proceeds from the sale of, such securities. Ivy Science & Technology Fund, a company registered under the Investment Company Act of 1940, has an interest in more than 5% of the class of securities reported herein.

Item 7: Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company:

See Attached Exhibit 2.

Item 8: Identification and Classification of Members of the Group:

Not Applicable.

Item 9: Notice of Dissolution of Group:

Not Applicable.

**Item 10: Certification:**

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were acquired and are held in the ordinary course of business and 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.

Dated: February 14, 2017

Waddell & Reed Financial, Inc.

By: /s/ J.J. Richie  
Name: J.J. Richie  
Title: Attorney-In-Fact

Waddell & Reed, Inc.

By: /s/ J.J. Richie  
Name: J.J. Richie  
Title: Attorney-In-Fact

Ivy Investment Management Company

By: /s/ J.J. Richie  
Name: J.J. Richie  
Title: Attorney-In-Fact

Waddell & Reed Financial Services, Inc.

By: /s/ J.J. Richie  
Name: J.J. Richie  
Title: Attorney-In-Fact

Waddell & Reed Investment Management Company

By: /s/ J.J. Richie  
Name: J.J. Richie  
Title: Attorney-In-Fact

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EXHIBIT INDEX

Exhibit No.	Description
1	Joint Filing Agreement
2	Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on by the Parent Holding Company
3	Power of Attorney

EXHIBIT 1

JOINT FILING AGREEMENT

Waddell & Reed Financial, Inc., Waddell & Reed Financial Services, Inc., Waddell & Reed, Inc., Waddell & Reed Investment Management Company and Ivy Investment Management Company (the "Filing Persons"), hereby agree to file jointly a Schedule 13G and any amendments thereto relating to the aggregate ownership by each of the Filing Persons of any voting equity security of a class which is registered pursuant to Section 12 of the Securities Exchange Act of 1934, as amended, as required by Rule 13d-1 and Rule 13d-2 promulgated under the Securities Exchange Act of 1934. Each of the Filing Persons agrees that the information set forth in such Schedule 13G and any amendments thereto with respect to such Filing Person will be true, complete and correct as of the date of such Schedule 13G or such amendment, to the best of such Filing Person's knowledge and belief, after reasonable inquiry. Each of the Filing Persons makes no representations as to the accuracy or adequacy of the information set forth in the Schedule 13G or any amendments thereto with respect to any other Filing Person. Each of the Filing Persons shall promptly notify the other Filing Persons if any of the information set forth in the Schedule 13G or any amendments thereto shall become inaccurate in any material respect or if said person learns of information that would require an amendment to the Schedule 13G.

IN WITNESS WHEREOF, the undersigned have set their hands this 2<sup>nd</sup> day of February, 2007.

Waddell & Reed Financial, Inc.

By: /s/ Wendy J. Hills  
Name: Wendy J. Hills  
Title: Vice President

Waddell & Reed Financial Services, Inc.

By: /s/ Wendy J. Hills  
Name: Wendy J. Hills  
Title: Attorney-In-Fact

Waddell & Reed, Inc.

By: /s/ Wendy J. Hills  
Name: Wendy J. Hills  
Title: Attorney-In-Fact

Waddell & Reed Investment Management Company

By: /s/ Wendy J. Hills  
Name: Wendy J. Hills  
Title: Attorney-In-Fact

Ivy Investment Management Company

By: /s/ Wendy J. Hills  
Name: Wendy J. Hills  
Title: Attorney-In-Fact

EXHIBIT 2

Waddell & Reed Investment Management Company - Tax ID No. 48-1106973

Investment Advisor registered under Section 203 of the Investment Advisors Act of 1940

Ivy Investment Management Company - Tax ID No. 03-0481447

Investment Advisor registered under Section 203 of the Investment Advisors Act of 1940

EXHIBIT 3

**POWER OF ATTORNEY**

**KNOW ALL MEN BY THESE PRESENTS, THAT:**

The undersigned, Waddell & Reed Financial, Inc., a corporation organized and existing under the laws of the State of Delaware, constitutes and appoints Wendy J. Hills, J.J. Richie and Mark P. Buyle, and each of them severally, its true and lawful attorneys-in-fact on behalf of the corporation and in its place and stead, in any and all capacities, to execute any and all Schedules 13G or 13D and any amendments thereto relating to ownership of any voting equity security of a class which is registered pursuant to Section 12 of the Securities Exchange Act of 1934, as amended, as required by rules and regulations promulgated under said Securities Exchange Act of 1934, and to file the same with all documents required in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done and hereby ratifying and confirming all said attorneys-in-fact and agents or any of them or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

**IN WITNESS WHEREOF**, the corporation has caused this power of attorney to be executed in its corporate name by its Chief Executive Officer and its Secretary corporate seal to be affixed hereto on this 8<sup>th</sup> day of September 2016.

Waddell & Reed Financial, Inc.

By: /s/ Philip J. Sanders  
Philip J. Sanders  
Chief Executive Officer

Attest: /s/ Wendy J. Hills  
Wendy J. Hills  
Secretary

**POWER OF ATTORNEY**

**KNOW ALL MEN BY THESE PRESENTS, THAT:**

The undersigned, Waddell & Reed Financial Services, Inc., a corporation organized and existing under the laws of the State of Delaware, constitutes and appoints Wendy J. Hills, J.J. Richie and Mark P. Buyle, and each of them severally, its true and lawful attorneys-in-fact on behalf of the corporation and in its place and stead, in any and all capacities, to execute any and all Schedules 13G or 13D and any amendments thereto relating to ownership of any voting equity security of a class which is registered pursuant to Section 12 of the Securities Exchange Act of 1934, as amended, as required by rules and regulations promulgated under said Securities Exchange Act of 1934, and to file the same with all documents required in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done and hereby ratifying and confirming all said attorneys-in-fact and agents or any of them or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

**IN WITNESS WHEREOF**, the corporation has caused this power of attorney to be executed in its corporate name by its Chief Executive Officer and its Secretary corporate seal to be affixed hereto on this 8<sup>th</sup> day of September, 2016.

Waddell & Reed Financial Services, Inc.

By: /s/ Philip J. Sanders  
Philip J. Sanders  
Chief Executive Officer

Attest: /s/ James D. Hughes  
James D. Hughes  
Secretary

**POWER OF ATTORNEY**

**KNOW ALL MEN BY THESE PRESENTS, THAT:**

The undersigned, Waddell & Reed, Inc., a corporation organized and existing under the laws of the State of Delaware, constitutes and appoints Wendy J. Hills, J.J. Richie and Mark P. Buyle, and each of them severally, its true and lawful attorneys-in-fact on behalf of the corporation and in its place and stead, in any and all capacities, to execute any and all Schedules 13G or 13D and any amendments thereto relating to ownership of any voting equity security of a class which is registered pursuant to Section 12 of the Securities Exchange Act of 1934, as amended, as required by rules and regulations promulgated under said Securities Exchange Act of 1934, and to file the same with all documents required in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done and hereby ratifying and confirming all said attorneys-in-fact and agents or any of them or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

**IN WITNESS WHEREOF**, the corporation has caused this power of attorney to be executed in its corporate name by its Chief Executive Officer and its Secretary corporate seal to be affixed hereto on this 8<sup>th</sup> day of September, 2016.

Waddell & Reed, Inc.

By: /s/ Thomas W. Butch  
Thomas W. Butch  
Chief Executive Officer

Attest: /s/ James D. Hughes  
James D. Hughes  
Secretary

**POWER OF ATTORNEY**

**KNOW ALL MEN BY THESE PRESENTS, THAT:**

The undersigned, Waddell & Reed Investment Management Company, a corporation organized and existing under the laws of the State of Kansas, constitutes and appoints Wendy J. Hills, J.J. Richie and Mark P. Buyle, and each of them severally, its true and lawful attorneys-in-fact on behalf of the corporation and in its place and stead, in any and all capacities, to execute any and all Schedules 13G or 13D and any amendments thereto relating to ownership of any voting equity security of a class which is registered pursuant to Section 12 of the Securities Exchange Act of 1934, as amended, as required by rules and regulations promulgated under said Securities Exchange Act of 1934, and to file the same with all documents required in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done and hereby ratifying and confirming all said attorneys-in-fact and agents or any of them or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

**IN WITNESS WHEREOF**, the corporation has caused this power of attorney to be executed in its corporate name by its Chief Executive Officer and its Secretary corporate seal to be affixed hereto on this 8<sup>th</sup> day of September, 2016.

Waddell & Reed Investment Management Company

By: /s/ Philip J. Sanders  
Philip J. Sanders  
Chief Executive Officer

Attest: /s/ James D. Hughes  
James D. Hughes  
Secretary

**POWER OF ATTORNEY**

**KNOW ALL MEN BY THESE PRESENTS, THAT:**

The undersigned, Ivy Investment Management Company, a corporation organized and existing under the laws of the State of Delaware, constitutes and appoints Wendy J. Hills, J.J. Richie and Mark P. Buyle, and each of them severally, its true and lawful attorneys-in-fact on behalf of the corporation and in its place and stead, in any and all capacities, to execute any and all Schedules 13G or 13D and any amendments thereto relating to ownership of any voting equity security of a class which is registered pursuant to Section 12 of the Securities Exchange Act of 1934, as amended, as required by rules and regulations promulgated under said Securities Exchange Act of 1934, and to file the same with all documents required in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done and hereby ratifying and confirming all said attorneys-in-fact and agents or any of them or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

**IN WITNESS WHEREOF**, the corporation has caused this power of attorney to be executed in its corporate name by its Chief Executive Officer and its Secretary with its corporate seal to be affixed hereto on this 8<sup>th</sup> day of September, 2016.

Ivy Investment Management Company

By: /s/ Philip J. Sanders  
Philip J. Sanders  
Chief Executive Officer

Attest: /s/ James D. Hughes  
James D. Hughes  
Secretary