

Registered public accounting firms must report information about certain participants in the audit and any amendments thereto to the PCAOB by completing and submitting this Form according to the instructions to Form AP.

It is important to refer to the instructions when completing each item of the Form. The Firm is responsible for completing each item according to the instructions, and should not merely rely on the Firm's own interpretation of the item descriptions appearing in this Form.

Italicized terms are defined in PCAOB Rule 1001, except for the definition of "other accounting firm" which appears in the general instructions to Form AP. The Firm must apply those definitions in completing the Form.

**PART I - IDENTITY OF THE FIRM**

**ITEM 1.1 - NAME OF THE FIRM**

a. Firm legal name

Deloitte & Touche LLP

b. If different than its legal name, state the name under which the Firm issued this *audit report*.

**PART II - AMENDMENTS**

**ITEM 2.1 - AMENDMENTS**

If this is an amendment to a report previously filed with the *Board* -

a. Indicate, by checking the box corresponding to this item, that this is an amendment.

b. Identify the specific Part or Item number(s) of this Form (other than this Item 2.1) as to which the Firm's response has changed from that provided in the most recent Form AP or amended Form AP filed by the Firm with respect to an *audit report* related to the *issuer* named in Item 3.1.

- Part I, Identity of the Firm
- Part III, *Audit Client and Audit Report*
  - Item 3.1, *Audit Report*
  - Item 3.2, *Other Accounting Firms*
  - Item 3.3, *Divided Responsibility*
- Part IV, *Responsibility for the Audit is Not Divided*
  - Item 4.1, *Other Accounting Firm(s) Individually 5% or Greater of Total Audit Hours*
  - Item 4.2, *Other Accounting Firm(s) Individually Less Than 5% of Total Audit Hours*
- Part V, *Responsibility for the Audit is Divided*
- Part VI, *Certification of the Firm*

If you check this box, use the text field below to describe the error or omission in Part VI as previously filed and to supply the information as it should have been provided in the previous submission. Use Part VI of this amended form only to certify the amended form, not to supply corrections to the previous form.

**PART III - AUDIT CLIENT AND AUDIT REPORT**

**ITEM 3.1 - AUDIT REPORT**

a. Provide the following information concerning the *issuer* for which the Firm issued the *audit report* -

1. Indicate, by checking the box corresponding to this item, if the *audit client* is an:

*Issuer*, other than employee benefit plan or investment company       Employee Benefit Plan       Investment Company

2a. Central Index Key (CIK) number, if any

1481512       Check here, if none

2b. Fund Series, if any

Series Identifier	Fund Name

3. The name of the *issuer* whose financial statements were audited

Ra Pharmaceuticals, Inc.

4. Date of the *audit report* (mm/dd/yyyy)

3/14/2018

5. The end date of the most recent period's financial statements identified in the *audit report* (mm/dd/yyyy)

12/31/2017

6. The name (that is, first and last name, all middle names and suffix, if any) of the engagement partner on the most recent period's *audit*, his/her Partner ID, and any other Partner IDs by which he/she has been identified on a Form AP filed by a different *registered public accounting firm* or on a Form AP filed by the Firm at the time when it had a different Firm ID

Family name (last name)	Given name (first name)	Middle name	Suffix
Gauthier	Kevin	Mark	

Partner ID  
0003410529

Previously reported Partner ID(s)

7. The office of the Firm issuing the *audit report*

Country	City	State
United States	Boston	Massachusetts

b. Indicate, by checking the box corresponding to this item, if the most recent period and one or more other periods presented in the financial statements identified in Item 3.1.a.5 were audited during a single *audit* engagement.     

c. In the event of an affirmative response to Item 3.1.b, indicate the periods audited during the single *audit* engagement for which the individual named in Item 3.1.a.6 served as engagement partner (for example, as of December 31, 20XX and 20X1 and for the two years ended December 31, 20XX).

d. Indicate, by checking the box corresponding to this item, if the *audit report* was dual-dated pursuant to AS 3110, *Dating of the Independent Auditor's Report*.     

e. In the event of an affirmative response to Item 3.1.d, indicate the date of the dual-dated information.

Note: In responding to Item 3.1.e, the Firm should provide each date of any dual-dated *audit report*.

Date(s) of the dual-dated *audit report* (mm/dd/yyyy)

If different from the engagement partner named in Item 3.1.a.6, provide information about the engagement partner who audited the information within the financial statements to which the dual-dated opinion applies.

Family name (last name)	Given name (first name)	Middle name	Suffix

Partner ID

Previously reported Partner ID(s)

**ITEM 3.2 - OTHER ACCOUNTING FIRMS**

Indicate, by checking the box corresponding to this item, if one or more *other accounting firms* participated in the Firm's *audit*. If this item is checked, complete Part IV. By checking this box, the Firm is stating that it is responsible for the *audits* or *audit* procedures performed by the *other accounting firm(s)* identified in Part IV and has supervised or performed procedures to assume responsibility for their work in accordance with PCAOB standards.

Note: For purposes of Item 3.2, an *other accounting firm* participated in the Firm's audit if (1) the Firm assumes responsibility for the work and report of the *other accounting firm* as described in paragraphs .03-.05 of AS 1205, *Part of the Audit Performed by Other Independent Auditors*, or (2) the *other accounting firm* or any of its principals or professional employees was subject to supervision under AS 1201, *Supervision of the Audit Engagement*.

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**ITEM 3.3 - DIVIDED RESPONSIBILITY**

Indicate, by checking the box corresponding to this item, if the Firm divided responsibility for the *audit* in accordance with AS 1205, *Part of the Audit Performed by Other Independent Auditors*, with one or more other *public accounting firm(s)*. If this item is checked, complete Part V.

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**PART IV - RESPONSIBILITY FOR THE AUDIT IS NOT DIVIDED**

In responding to Part IV, total *audit* hours in the most recent period's *audit* should be comprised of hours attributable to: (1) the financial statement *audit*; (2) reviews pursuant to AS 4105, *Reviews of Interim Financial Information*; and (3) the *audit* of internal control over financial reporting pursuant to AS 2201, *An Audit of Internal Control Over Financial Reporting That Is Integrated with An Audit of Financial Statements*. Excluded from disclosure and from total *audit* hours in the most recent period's *audit* are, respectively, the identity and hours incurred by: (1) the engagement quality reviewer; (2) the person who performed the review pursuant to SEC Practice Section 1000.45 Appendix K; (3) specialists engaged, not employed, by the Firm; (4) an accounting firm performing the audit of the entities in which the *issuer* has an investment that is accounted for using the equity method; (5) internal auditors, other company personnel, or third parties working under the direction of management or the audit committee who provided direct assistance in the *audit* of internal control over financial reporting; and (6) internal auditors who provided direct assistance in the *audit* of the financial statements. Hours incurred in the *audit* by entities other than *other accounting firms* are included in the calculation of total *audit* hours and should be allocated among the Firm and the *other accounting firms* participating in the *audit* on the basis of which accounting firm commissioned and directed the applicable work.

In responding to Part IV, if the financial statements for the most recent period and one or more other periods covered by the *audit report* identified in Item 3.1.a.4 were audited during a single *audit* engagement (for example, in a reaudit of a prior period(s)), the calculation should be based on the percentage of *audit* hours attributed to such firms in relation to the total *audit* hours for the periods identified in Item 3.1.c.

Actual audit hours should be used if available. If actual audit hours are unavailable, the Firm may use a reasonable method to estimate the components of this calculation. The Firm should document in its files the method used to estimate hours when actual audit hours are unavailable and the computation of total audit hours on a basis consistent with AS 1215, *Audit Documentation*. Under AS 1215, the documentation should be in sufficient detail to enable an experienced auditor, having no previous connection with the engagement, to understand the computation of total audit hours and the method used to estimate hours when actual hours were unavailable.

Indicate, by checking the box, if the percentage of total *audit* hours will be presented within ranges in Part IV.

**ITEM 4.1 - OTHER ACCOUNTING FIRM(S) INDIVIDUALLY 5% OR GREATER OF TOTAL AUDIT HOURS**

Firm ID <input type="text"/>	Check here if no Firm ID is available <input type="checkbox"/>	Percentage of participation <input type="text"/> % or range <input type="text"/>
Legal name <input type="text"/>		
Headquarters' office location:		
Country <input type="text"/>		
City <input type="text"/>	State <input type="text"/>	

Note 1: In responding to Items 4.1 and 4.2, the percentage of hours attributable to *other accounting firms* should be calculated individually for each firm. If the individual participation of one or more *other accounting firm(s)* is less than 5%, the Firm should complete Item 4.2.

Note 2: In responding to Item 4.1, the Firm ID represents a unique five-digit identifier for firms that have a publicly available PCAOB-assigned number.

**ITEM 4.2 - OTHER ACCOUNTING FIRM(S) INDIVIDUALLY LESS THAN 5% OF TOTAL AUDIT HOURS**

a. State the number of *other accounting firm(s)* individually representing less than 5% of total *audit* hours.

b. Indicate the aggregate percentage of participation of the *other accounting firm(s)* that individually represented less than 5% of total *audit* hours by filling in a single number or by selecting the appropriate range as follows:

Aggregate percentage of participation  % or range

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**PART V - RESPONSIBILITY FOR THE AUDIT IS DIVIDED**

**ITEM 5.1 - IDENTITY OF THE OTHER PUBLIC ACCOUNTING FIRM(S) TO WHICH THE FIRM MAKES REFERENCE**

a. Provide the following information concerning each other *public accounting firm* the Firm divided responsibility with in the *audit* -

1. The legal name of the other <i>public accounting firm</i> and when applicable, the other <i>public accounting firm's</i> Firm ID.	
Firm ID <input style="width: 80%;" type="text"/>	Check here if no Firm ID is available <input type="checkbox"/>
Legal name <input style="width: 100%;" type="text"/>	
2. The office of the other <i>public accounting firm</i> that issued the other <i>audit report</i> .	
Country <input style="width: 80%;" type="text"/>	
City <input style="width: 40%;" type="text"/>	State <input style="width: 40%;" type="text"/>
3. The magnitude of the portion of the financial statements audited by the other <i>public accounting firm</i> .	
Criteria <input style="width: 40%;" type="text"/>	Dollar Amount <input style="width: 40%;" type="text"/>
Other <input style="width: 40%;" type="text"/>	Percentage <input style="width: 40%;" type="text"/> %

Note: In responding to Item 5.1.a.3, the Firm should state the dollar amounts or percentages of one or more of the following: total assets, total revenues, or other appropriate criteria, as it is described in the *audit report* in accordance with AS 1205.

PART VI - CERTIFICATION OF THE FIRM

ITEM 6.1 - SIGNATURE OF PARTNER OR AUTHORIZED OFFICER

This Form must be signed on behalf of the Firm by an authorized partner or officer of the Firm by typing the name of the signatory in the electronic submission.

I, the undersigned, certify that -

- a. I am authorized to sign this Form on behalf of the Firm;
- b. I have reviewed this Form;
- c. based on my knowledge, this Form does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading; and
- d. based on my knowledge, the Firm has not failed to include in this Form any information that is required by the instructions to this Form.

Typed signature J.Travis Gilmer  
(to be submitted electronically): Given name (first name) Family name (last name)

Date of typed signature 4/2/2018  
(mm/dd/yyyy):

Business Title: Partner

Capacity in which signed: Partner  Officer

Business telephone number (incl. country and area codes)

+1 202-378-5112

Business e-mail address

tgilmer@deloitte.com