Foundation Medicine, Inc.
Form SC 13D/A
April 23, 2015

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

SCHEDULE 13D/A
(Amendment No. 2)
Under the Securities Exchange Act of 1934

Foundation Medicine, Inc.
(Name of Issuer)

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

350456100
(CUSIP Number)

Beat Kraehenmann
Roche Holding Ltd
Grenzacherstrasse 124
CH-4070 Basel, Switzerland
Telephone: +41-61-688-1111
(Name, Address and Telephone Number of Person Authorized to
Receive Notices and Communications)

With a Copy to:

Marc O. Williams
Davis Polk & Wardwell LLP
450 Lexington Avenue
New York, New York 10017
(212) 450-4000

April 14, 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-l(f) or 240.13d-l(g), check the following box. o

*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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1 Names of Reporting Persons.
I.R.S. Identification Nos. of above persons.

Roche Holding Ltd

2 Check the Appropriate Box if a Member of a Group

(a) þ
(b) o

3 SEC Use Only

4 Source of Funds

WC

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

6 Citizenship or Place of Organization

Switzerland

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	Sole Voting Power 21,019,111(1)
	8	Shared Voting Power 1,020,915(2)
	9	Sole Dispositive Power 21,019,111
	10	Shared Dispositive Power - 0 -

11 Aggregate Amount Beneficially Owned by Each Reporting Person
22,040,026(3)

12 Check if the Aggregate Amount in Row (11) Excludes Certain Shares o

13 Percent of Class Represented by Amount in Row (11)

64.5%(3)

14 Type of Reporting Person (See Instructions)

CO

(1) Roche Holding Ltd ("Parent") may be deemed to have beneficial ownership of, and sole voting power with respect to, (a) 20,604,288 Shares directly held by Roche Holdings, Inc. ("Holdings"), an indirect wholly owned subsidiary of Parent, and (b) 414,823 Shares directly held by Roche Finance Ltd, a wholly owned subsidiary of Parent ("Finance").

(2) Solely as a result of the Investor Rights Agreement (as described below), the reporting persons may be deemed to have beneficial ownership of the approximately 192,460 Shares held by Google Ventures 2011 L.P. ("Google Ventures") and approximately 828,455 Shares held by Third Rock Ventures, L.P. ("TRV"). See Item 5 and Item 6 of this Schedule 13D.

(3) See notes (1) and (2).

1 Names of Reporting Persons.
I.R.S. Identification Nos. of above persons.

Roche Finance Ltd

2 Check the Appropriate Box if a Member of a Group

(a) þ
(b) o

3 SEC Use Only

4 Source of Funds

WC

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

6 Citizenship or Place of Organization

Switzerland

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	Sole Voting Power 21,019,111(1)
	8	Shared Voting Power 1,020,915(2)
	9	Sole Dispositive Power 21,019,111
	10	Shared Dispositive Power - 0 -

11 Aggregate Amount Beneficially Owned by Each Reporting Person

22,040,026(3)

12 Check if the Aggregate Amount in Row (11) Excludes Certain Shares o

13 Percent of Class Represented by Amount in Row (11)

64.5%(3)

14 Type of Reporting Person (See Instructions)

CO

(1) In addition to the 414,823 Shares directly held by Finance, Finance may be deemed to have beneficial ownership of, and sole voting power with respect to, the 20,604,288 Shares directly held by Holdings, a wholly owned subsidiary of Finance.
(2) Solely as a result of the Investor Rights Agreement (as described below), the reporting persons may be deemed to have beneficial ownership of the approximately 192,460 Shares held by Google Ventures and approximately 828,455 Shares held by TRV. See Item 5 and Item 6 of this Schedule 13D.
(4) See notes (1) and (2).

1 Names of Reporting Persons.
I.R.S. Identification Nos. of above persons.

Roche Holdings, Inc.

51-0304944

2 Check the Appropriate Box if a Member of a Group

(a) þ
(b) o

3 SEC Use Only

4 Source of Funds

WC

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

6 Citizenship or Place of Organization

Delaware

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	Sole Voting Power 20,604,288
	8	Shared Voting Power 1,020,915(1))
	9	Sole Dispositive Power 20,604,288
	10	Shared Dispositive Power - 0 -

11 Aggregate Amount Beneficially Owned by Each Reporting Person
21,625,203(2)

12 Check if the Aggregate Amount in Row (11) Excludes Certain Shares o

13 Percent of Class Represented by Amount in Row (11)
63.3%(2)

14 Type of Reporting Person (See Instructions)

CO

(1) Solely as a result of the Investor Rights Agreement (as described below), the reporting persons may be deemed to have beneficial ownership of the approximately 192,460 Shares held by Google Ventures and approximately 828,455 Shares held by TRV. See Item 5 and Item 6 of this Schedule 13D.
(2) See note (1).

This Schedule 13D/A ("Amendment No. 1") amends and restates the Schedule 13D/A filed on April 9, 2015 (the "Schedule 13D").

Item 1. Security and Company

The class of equity securities to which this statement relates is the common stock, $0.0001 par value per share (the "Shares"), of Foundation Medicine, Inc., a Delaware corporation (the "Company"). The principal executive offices of the Company are located at 150 Second Street, Cambridge, MA, 02141.

Item 2. Identity and Background

(a)–(c) and (f) This statement is filed jointly by Roche Holding Ltd, a Swiss company ("Parent"), Roche Finance Ltd, a Swiss company and a wholly owned subsidiary of Parent ("Finance"), and Roche Holdings, Inc., a Delaware corporation and a wholly owned subsidiary of Finance ("Holdings" and, together with Parent and Finance, the "Roche Entities").

Headquartered in Basel, Switzerland, Parent is the holding company of the Roche Group, which is a leader in research-focused healthcare with combined strengths in pharmaceuticals and diagnostics. The Roche Group is the world's largest biotech company, with truly differentiated medicines in oncology, immunology, infectious diseases, ophthalmology and neuroscience. The Roche Group is also the world leader in in vitro diagnostics and tissue-based cancer diagnostics, and a frontrunner in diabetes management. The Roche Group's personalized healthcare strategy aims at providing medicines and diagnostics that enable tangible improvements in the health, quality of life and survival of patients. Founded in 1896, the Roche Group has been making important contributions to global health for more than a century. Twenty-four medicines developed by the Roche Group are included in the World Health Organisation Model Lists of Essential Medicines, among them life-saving antibiotics, antimalarials and chemotherapy. The address of the principal office of Parent is Grenzacherstrasse 124 4002 Basel, Switzerland.

Finance is a holding company participating in various subsidiaries of Parent. The address of the principal office of Finance is Grenzacherstrasse 122, 4002 Basel, Switzerland.

Holdings was organized in Delaware in 1987 to act as a holding company for substantially all of Parent's United States operations. The address of the principal office of Holdings is 1 DNA, MS #24, South San Francisco, CA 94080.

The name, business address, present principal occupation or employment and citizenship of each director and executive officer of the Roche Entities are set forth on Schedules A to C attached hereto, and are incorporated herein by reference.

The Roche Entities understand that certain shareholders of Parent are party to a shareholder pooling agreement with respect to a significant portion of (but not a majority of) the issued shares of Parent.

(d) During the last five years, neither any of the Roche Entities nor, to the knowledge of any of the Roche Entities, any of the persons set forth on Schedules A to C attached hereto has been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors).

(e) During the last five years, neither any of the Roche Entities nor, to the knowledge of any of the Roche Entities, any of the persons set forth on Schedules A to C attached hereto 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, U.S. federal or state securities laws or finding any violations with respect to such laws.

Item 3. Source and Amount of Funds or Other Consideration

On April 7, 2015, Holdings accepted for purchase, pending finalization of any required proration, 15,604,288 Shares that were validly tendered and not validly withdrawn prior to expiration of the Offer (as defined in Item 4), at a price of $50.00 per share, for an aggregate purchase price of $780,214,400.

On April 7, 2015 following the Acceptance Time (as defined below), in accordance with the Transaction Agreement, Roche made a primary investment of $250 million in cash to purchase the Issuance Shares (as defined below).

The source of funds for the purchases of Shares described in this Item 3 was the ordinary course cash flows of Roche.

Item 4. Purpose of Transaction

On February 2, 2015, Roche commenced a tender offer (the "Offer") to purchase up to 15,604,288 Shares at a purchase price of $50.00 per Share pursuant to a Transaction Agreement dated January 11, 2015 (the "Transaction Agreement").

On April 7, 2015, Roche accepted for purchase, pending finalization of any required proration, 15,604,288 Shares that were validly tendered and not validly withdrawn prior to expiration of the Offer (the time at which Shares were first accepted for payment under the Offer, the "Acceptance Time").

Immediately following the Acceptance Time (as defined below), Roche purchased 5,000,000 newly issued Shares (the "Issuance Shares"), at a price of $50.00 per share (the "Issuance" and, together with the Offer, the "Investment"), for an aggregate purchase price of $250,000,000.

On April 14, 2015, the required proration was finalized, with a final proration factor of 83.186197%.

(d) Pursuant to the Transaction Agreement and the Investor Rights Agreement, upon consummation of the Investment, the following three individuals appointed by Roche were elected to the Board of Directors (the "Board"): Daniel O'Day, Sandra Horning, M.D. and Michael D. Varney, Ph.D.

(g) Pursuant to the Transaction Agreement, in connection with the consummation of the Investment, the Company amended its Certificate of Incorporation (i) to declassify the Board, provide for the annual election of directors and permit the removal of directors with or without cause and (ii) to renounce the Company's expectancy regarding certain corporate opportunities.

Except as disclosed herein, Roche has no present plans or proposal which relate to or would result in the matters described in subparagraphs (a) through (j) of Item 4 of Schedule 13D.

Item 5. Interest in Securities of the Company

The beneficial ownership percentages described in this Schedule 13D are based on 34,164,957 Shares outstanding as of April 7, 2015, based on information provided by the Company.

(a) and (b) Finance and Parent may each be deemed for purposes of Rule 13d-3 promulgated under the Exchange Act to beneficially own 22,040,026 Shares (calculated as the sum of (i) 20,604,288 Shares directly held by Holdings, (ii) 414,823 Shares directly held by Finance and (iii) solely as a result of the Investor Rights Agreement, approximately (x) 192,460 Shares held by Google Ventures and (y) 828,455 Shares held by TRV, representing in the aggregate approximately 64.5% of the outstanding Shares as of April 7, 2015.

Holdings may be deemed for purposes of Rule 13d-3 promulgated under the Exchange Act to beneficially own 21,625,203 Shares (calculated as the sum of (i) 20,604,288 Shares directly held by Holdings and (ii) solely as a result of the Investor Rights Agreement, approximately (x) 192,460 Shares held by Google Ventures and (y) 828,455 Shares held by TRV, representing approximately 63.3% of the outstanding Shares as of April 7, 2015.

Except as set forth herein, no Reporting Person or, to the best knowledge of the Reporting Persons, any of the persons set forth on Schedules A to C hereto beneficially own any Shares.

(c) Inapplicable.

(d) Inapplicable.

(e) Inapplicable.

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

Investor Rights Agreement

In connection with the Investment and simultaneously with the execution of the Transaction Agreement, the Company, Holdings and the VC Investors entered into an Investor Rights Agreement, which became effective at the Acceptance Time

(the "Investor Rights Agreement"). "VC Investors" means Google Ventures, TRV, Kleiner Perkins Caufield & Byers XIV, LLC and KPCB XIV Founders Fund, LLC (Kleiner Perkins Caufield & Byers XIV, LLC and KPCB XIV Founders Fund, LLC, collectively, "KPCB").

Board Representation. Under the terms of the Investor Rights Agreement, the Board consists of nine directors, consisting of (a) three directors designated by Holdings, who initially shall be Daniel O'Day, Sandra Horning, M.D. and Michael D. Varney, Ph.D., (b) two of the current independent directors affiliated with the VC Investors, (c) three additional independent directors, who shall initially be current directors Evan Jones and David Schenkein and a third director to be agreed upon by the Company and Holdings, and (d) Michael Pellini, the Chief Executive Officer of the Company (the foregoing, the "Board Composition").

Pursuant to the Investor Rights Agreement: (a) so long as Holdings beneficially owns at least 10% of the outstanding Shares, it will be entitled to the lesser of (i) the number of seats representing 33.34% of the Board and (ii) proportionate representation on the Board, but in any event, at least one director designee and (b) so long as Holdings is entitled to appoint at least one director to the Board, it will be entitled to proportionate representation on each committee of the Board, but in any event, at least one director designee on each committee, subject to compliance with the applicable rules of the Securities and Exchange Commission and the NASDAQ Stock Market.

Consent Rights. Until such time as Holdings beneficially owns less than a majority of the outstanding Shares (subject to a cure period), the Company (and its subsidiaries) may not take certain actions without Holdings' prior written consent, including any of the following: (a) appoint a new Chief Executive Officer of the Company; (b) incur any indebtedness (as defined in the Investor Rights Agreement) that would result in the outstanding aggregate principal amount of the indebtedness of the Company and its subsidiaries exceeding the lesser of (i) $200 million and (ii) 20% of the Company's aggregate market capitalization at the time of such incurrence; (c) issue or sell any equity securities (including any securities convertible or exercisable into such equity securities), other than (X) Shares issued pursuant to equity awards granted as of the Closing in accordance with their terms, (Y) equity awards granted after the Closing pursuant to the Company's 2013 Stock Option and Incentive Plan or any permitted new equity incentive plan or equity incentive plan amendment and (Z) in connection with permitted acquisitions, certain Shares issued as stock consideration as long as such issuance does not result in Holdings beneficially owning less than 50.5% of the outstanding Shares on a fully diluted basis; (d) establish or amend any equity incentive plan of the Company, except for certain equity plans; (e) acquire any entity, business or assets if the aggregate consideration payable by the Company and its subsidiaries exceeds the lesser of (i) $200 million and (ii) 20% of the Company's aggregate market capitalization at the time of such transaction, unless Holdings is separately contemplating acquiring the same entity, business or assets; (f) dispose of any entity, business or assets if the aggregate consideration payable to the Company and its subsidiaries exceeds $50 million; (g) change the scope and nature of the Company's business; (h) amend the organizational documents of the Company or any of its subsidiaries; (i) take any action that would impair in any material respect the Company's ability to perform its obligations under the Investor Rights Agreement or Holdings' rights thereunder; or (j) voluntarily dissolve or liquidate or make any voluntary bankruptcy filings.

Voting Obligations. As long as Holdings is entitled to appoint at least one director to the Board, Holdings will be required to (a) cause all of its Shares to be present for quorum purposes at any meeting of the stockholders of the Company, (b) vote all of its Shares to approve any matter requiring approval by Holdings described in the preceding paragraph that Holdings has approved within the previous six months and (c) vote all of its Shares in connection with the election of directors or the adoption of certain equity plans either (i) in accordance with the recommendation of the Board or (ii) in the same proportion as the votes cast by all stockholders of the Company other than Holdings and its affiliates.

As long as a VC Investor has at least one representative on the Board, such VC Investor will be required to (a) cause all of its Shares to be present for quorum purposes at any meeting of the stockholders of the Company and (b) vote all

of its Shares in a manner consistent with the Board Composition. As of the filing of this Schedule 13D/A, Google Ventures and TRV have a representative on the Board, but KPCB does not.

Standstill Provisions. Under the terms of the Investor Rights Agreement, during the period following the Closing and ending on the date three years following the Closing (the "Restricted Period"), Holdings will be restricted from acquiring additional Shares, except in order to offset dilution and maintain its aggregate percentage ownership in the Company at no less than 50.5% of the outstanding Shares on a fully diluted basis. During the Restricted Period and for as long as Holdings has the right to designate a director, Holdings shall not make any proxy solicitations in connection with the election or removal of directors, or knowingly encourage or facilitate a third party to engage in any such solicitation, subject to certain limited exceptions.

Following the Restricted Period, Holdings will be permitted to make an offer to purchase all remaining Shares held by the

other stockholders of the Company (an "Investor Buyout Offer"). Prior to the fifth anniversary of the Closing, any Investor Buyout Offer shall be made on a confidential basis, subject to the review, evaluation and approval of a special committee of independent directors who are unaffiliated with Holdings and are not officers or employees of the Company (the "Disinterested Directors") and subject to a non-waivable condition that a majority of the Shares held by stockholders of the Company not affiliated with Parent approve the Investor Buyout Offer. From and after the fifth anniversary of the Closing, any Investor Buyout Offer may be made directly to the stockholders of the Company without the review, evaluation or approval of the Board or the Disinterested Directors, as long as it is subject to the non-waivable condition that a majority of the Shares held by stockholders of the Company not affiliated with Holdings approve the Investor Buyout Offer. If, from and after the fifth anniversary of the Closing, Holdings makes an Investor Buyout Offer, then at any subsequent annual meeting of the stockholders of the Company (or special meeting called for the purpose of electing directors), Holdings will be entitled to nominate any individuals who qualify as independent directors under the terms of the Investor Rights Agreement.

The standstill restrictions on Holdings will automatically terminate if the Company enters into a definitive agreement with respect to, or the Board recommends to the Company's stockholders, a transaction pursuant to which any person or group would acquire, directly or indirectly, voting securities of the Company representing more than 20% of the aggregate voting power of all then-outstanding voting securities of the Company.

Anti-dilution Protections. The Company has agreed to establish and maintain a stock repurchase program at all times following the Closing and to repurchase Shares in order to maintain the Holdings' aggregate percentage ownership in the Company following the Company's issuance of the Issuance Shares at no less than 50.5% of the outstanding Shares on a fully diluted basis, less any shares transferred by Holdings. The Company's obligation to maintain such stock repurchase program will terminate upon the earlier of (a) any transfer by Holdings of Shares following which Holdings beneficially owns less than 40% of the outstanding Shares on a fully diluted basis and (b) Holdings beneficially owning less than 30% of the outstanding Shares.

Following the Closing and until the date on which Holdings beneficially owns less than 30% of the outstanding Shares, Holdings also will hold a continuing option to purchase Shares from the Company or in the open market, at prevailing market prices, in order to maintain the Holdings' aggregate percentage ownership in the Company at no less than 50.5% of the outstanding Shares on a fully diluted basis, less any shares transferred by Holdings (the "Share Percentage Cap"). If the Company fails to or is unable to satisfy its repurchase obligations under the stock repurchase program described above, and Holdings purchases Shares from the Company or in the open market, the Share Percentage Cap will be increased by the percentage of the outstanding Shares, on a fully diluted basis, represented by the Shares that Holdings was required to purchase at its cost in order to maintain its aggregate percentage ownership in the Company.

In the event that the Company issues any securities and, as a result thereof, Holdings beneficially owns less than 50.1% of the outstanding Shares on a fully diluted basis, the restrictions on Holdings or under the Investor Rights Agreement (including with respect to the agreement to vote Holdings' Shares, the standstill restrictions and transfer restrictions), but not the rights of Holdings under the Investor Rights Agreement, will immediately terminate, and Holdings will thereafter have the ability to exercise in full its rights as a stockholder of the Company.

Restrictions on Transfer of Shares. Holdings may not transfer any Shares for a period of three years after the Closing. Thereafter, subject to certain exceptions, Holdings may not transfer any Shares to any person or group, if such person or group would beneficially own in excess of 10% of the outstanding Shares following such transfer, without the prior consent of a special committee of Disinterested Directors. Following the fifth anniversary of the Closing, Holdings will be permitted to transfer all (but not less than all) of its Shares to a third party that has made an offer to the Company or its stockholders (including pursuant to a tender offer) to purchase all of the outstanding Shares if the price, form of consideration and other terms and conditions of the transfer offered to Holdings are the same (or no

more favorable) than the price, form of consideration and other terms and conditions offered to all other stockholders of the Company, other than (a) fair market consideration payable in exchange for entering into restrictive covenants and (b) commercial agreements (including with respect to transition services) on arms'-length terms, in each case that the purchaser requires as a condition to the transaction.

Registration Rights. Following the third anniversary of the Closing, Holdings will be entitled to customary demand and piggyback registration rights, subject to customary underwriter cutbacks.

Matters Reserved for Approval of the Disinterested Directors. For as long as there is at least one director on the Board designated by Holdings, the following actions will require approval of a majority of the Disinterested Directors (or a special committee of Disinterested Directors): (a) any transaction between Holdings or any of its affiliates, on the one hand, and the Company or any of its subsidiaries, on the other hand; (b) any enforcement or waiver of the rights of the Company or any of its subsidiaries under any agreement between the Company or any of its subsidiaries, on the one hand, and Holdings or any of

its affiliates, on the other hand; and (c) any purchase of Shares by Holdings or any of its affiliates, except as otherwise expressly set forth in the Investor Rights Agreement.

Freedom to Pursue Opportunities. Neither Holdings nor the Company will be required to offer a corporate opportunity to the other, and except as agreed in connection with the Collaboration or as part of the Investor Rights Agreement, there will be no restrictions on the Company's or the Holdings' ability to engage in similar activities or lines of business.

Termination. The Investor Rights Agreement will automatically terminate on the later of the date Holdings beneficially owns less than 10% of the outstanding Shares or the date that Holdings owns no registrable securities.

The foregoing description of the Investor Rights Agreement and the transactions contemplated thereby does not purport to be complete and is subject to, and qualified in its entirety by, the full text of the Investor Rights Agreement, a copy of which is filed as Exhibit 4.1 to the Company's Current Report filed on Form 8-K on January 12, 2015 and is incorporated herein by reference.

Other than as described herein, to the knowledge of the Roche Entities, there are no contracts, arrangements, understandings or relationships (legal or otherwise) among the persons named in Item 2 or between such persons and any other person with respect to any securities of the Company, 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, including any securities pledged or otherwise subject to a contingency the occurrence of which would give another person voting power or investment power over such securities other than standard default and similar provisions contained in loan agreements.

Item 7. Material to be Filed as Exhibits

Exhibit Number	Exhibit Name
99.1	Investor Rights Agreement, dated as of January 11, 2015, by and among Foundation Medicine, Inc., Roche Holdings, Inc. and the other stockholders named as a party thereto (incorporated by reference to Exhibit 4.1 of the Form 8-K filed by Foundation Medicine, Inc. with the SEC on January 12, 2015).
99.2	Joint Filing Agreement, dated as of April 23, 2015, among Roche Holding Ltd, Roche Finance Ltd and Roche Holdings, Inc.

SIGNATURE

After reasonable inquiry and to the best of the undersigned's knowledge and belief, the undersigned certifies that the information set forth in this statement is true, complete and correct.

April 23, 2015

ROCHE HOLDING LTD

By: /s/ Beat Kraehenmann
Name: Beat Kraehenmann
Title: Authorized Signatory

SCHEDULE A

DIRECTORS, EXECUTIVE OFFICERS AND CONTROLLING SHAREHOLDERS OF ROCHE HOLDING LTD

The name, country of citizenship and current principal occupation of each director and executive officer of Roche Holding Ltd are set forth below. Unless otherwise indicated, each occupation set forth opposite an individual's name refers to a position with the Roche Group. Unless otherwise set forth below, the business address of each director and executive officer is Grenzacherstrasse 124, CH-4070, Basel, Switzerland. Directors are identified by an asterisk and controlling shareholders are identified with a cross.

Name	Current Principal Occupation or Employment (address of any corporation or other organization other than the Roche Group)	Country of Citizenship
Dr. Hans Christoph Franz*	Dr. Franz is Chairman of the Board.	Germany
André Hoffmann*†	Mr. Hoffmann is Non-Executive Vice-President.	Switzerland
Dr. Jakob Andreas Oeri*†	Dr. Oeri is an orthopaedic surgeon.	Switzerland
Prof. Dr. Pius Baschera*	Prof. Dr. Baschera is Chairman of the Board of Directors of Hilti Corporation. Feldkircherstrasse 100 FL-9494 Schaan, Liechtenstein	Switzerland and Italy
Prof. Sir John Irving Bell*	Prof. Sir John Bell is the Regius Professor at the University of Oxford. Wellington Square, Oxford OX1 2JD, UK	United Kingdom and Canada
Paul Bulcke*	Mr. Bulcke is Chief Executive Officer of Nestlé S.A.. Avenue Nestlé 55, CH-1800 Vevey, Switzerland	Belgium
Dame DeAnne Julius*	Dame DeAnne Julius is self-employed. Tanglewood, Cobham Road, Fetcham, Surrey KT22 9SJ, UK	United Kingdom and USA
Dr. Severin Schwan*	Dr. Schwan is Chief Executive Officer of the Roche Group.	Austria
Peter R. Voser*	Mr. Voser is a retiree.	Switzerland
Prof. Dr. Beatrice Weder di Mauro*	Prof. Dr. Weder di Mauro is a Professor at the Johannes Gutenberg University of Mainz. Jakob Welder Weg 4, D-55128 Mainz, Germany	Switzerland and Italy
Prof. Dr. Richard P. Lifton*	Prof. Dr. Lifton is an Executive Director of the Yale Center for Genome Analysis and Chairman and Director of the Department of	USA

	Genetics at the Yale University Center for Human Genetics & Genomics.	
Bernard Poussot*	Mr. Poussot is a Non-Executive Director of Cargill Inc.	France and USA
Daniel O'Day	Mr. O'Day is Chief Operating Officer of the Pharmaceuticals Division.	USA

Name	Current Principal Occupation or Employment (address of any corporation or other organization other than the Roche Group)	Country of Citizenship
Roland Diggelmann	Mr. Diggelmann is Chief Operating Officer of the Diagnostics Division.	Switzerland
Dr. Alan Hippe	Dr. Hippe is Chief Financial and IT Officer.	Germany
Silvia Ayyoubi	Ms. Ayyoubi is Head of Group Human Resources.	Switzerland
Dr. Gottlieb A. Keller	Dr. Keller is General Counsel.	Switzerland
Dr. Michael D. Varney	Dr. Varney is Head of Genentech Research and Early Development (pRED).	USA
Prof Dr. John C. Reed	Prof. Dr. Reed is Head of Roche Pharma Research and Early Development.	USA
Dr. Sophie Kornowski-Bonnet	Dr. Kornowski-Bonnet is Head of Roche Partnering.	France
Osamu Nagayama	Mr. Nagayama is Chairman of the Board of Directors, President and Chief Executive Officer of Chugai Pharmaceutical Co., Ltd.	Japan
Dr. Stephan Feldhaus	Dr. Feldhaus is Head of Group Communications.	Germany
Vera Michalski-Hoffmann†	Ms. Michalski-Hoffmann is Head of Libella SA, a publishing group.	Switzerland
Marie-Anne (Maja) Hoffmann†	Ms. Hoffmann is President of the Board of Foundation, LUMA Foundation. Im Hausacher 35, CH-3706 Feldmeilen, Switzerland	Switzerland
Sabine Duschmalé-Oeri†	Ms. Duschmalé-Oeri engages in volunteer work and is involved in a number of cultural and social foundations.	Switzerland
Catherine Oeri Kessler†	Ms. Oeri is a therapist.	Switzerland
Dr. Jörg Duschmalé†	Mr. Duschmalé is a Doctor in Chemistry, currently pursuing postgraduate education.	Switzerland
Lukas Duschmalé†	Mr. Duschmalé is currently a full-time student.	Switzerland

SCHEDULE B

DIRECTORS AND EXECUTIVE OFFICERS OF ROCHE FINANCE LTD

The name, country of citizenship and current principal occupation of each director and executive officer of Roche Finance Ltd are set forth below. Unless otherwise indicated, each occupation set forth opposite an individual's name refers to a position with the Roche Group. The business address of each director and executive officer is Grenzacherstrasse 124, CH-4070, Basel, Switzerland. Directors are identified by an asterisk.

Name	Current Principal Occupation or Employment (address of any corporation or other organization other than the Roche Group)	Country of Citizenship
Dr. Severin Schwan*	Dr. Schwan is Chief Executive Officer of the Roche Group.	Austria
Dr. Alan Hippe*	Dr. Hippe is Chief Financial and IT Officer.	Germany
Dr. Gottlieb A. Keller*	Dr. Keller is General Counsel.	Switzerland

SCHEDULE C

DIRECTORS AND EXECUTIVE OFFICERS OF ROCHE HOLDINGS, INC.

The name, country of citizenship and current principal occupation of each director and executive officer of Roche Holdings, Inc. are set forth below. Unless otherwise indicated, each occupation set forth opposite an individual's name refers to a position with the Roche Group. The business address of each director and executive officer is 1 DNA, MS #24, South San Francisco, CA 94080. Directors are identified by an asterisk.

Name	Current Principal Occupation or Employment (address of any corporation or other organization other than the Roche Group)	Country of Citizenship
Dr. Severin Schwan*	Dr. Schwan is Chief Executive Officer of the Roche Group.	Austria
Dr. Alan Hippe*	Dr. Hippe is Chief Financial and IT Officer.	Germany
Roger Brown*	Mr. Brown is Vice President, Tax and Assistant Secretary of Roche Holdings, Inc.	USA
Frederick C. Kentz III*	Mr. Kentz is Senior Vice President, a member of the Executive Committee, Secretary, Chief Compliance Officer and Head of Legal Affairs, North America for Genentech, Inc.	USA
David P. McDede*	Mr. McDede is Vice President and Treasurer of Hoffman La-Roche Inc.	USA
Bruce Resnick*	Mr. Resnick is Vice President, Treasurer, Assistant Secretary and Senior Tax Counsel for Roche Holdings, Inc.	USA