

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

SCHEDULE 13D

INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT TO § 240.13d-1(a) AND AMENDMENTS THERETO FILED PURSUANT TO
240.13d-2(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934
(Amendment No. 2)*

CRISPR THERAPEUTICS AG
(Name of Issuer)

Common Shares, Par Value CHF 0.03
(Title of Class of Securities)

H17182108
(CUSIP Number)

Victoria A. Whyte
GlaxoSmithKline plc
980 Great West Road
Brentford, Middlesex TW8 9GS
England
Telephone: +44 (0)208 047 5000

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

January 9, 2018
(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.

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See §240.13d-7 for other parties to whom copies are to be sent.

* 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.

1. NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)

GlaxoSmithKline plc

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(see instructions)

(a) (b)

3. SEC USE ONLY

4. SOURCE OF FUNDS (see instructions)

WC

5. CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e)

6. CITIZENSHIP OR PLACE OF ORGANIZATION

England and Wales

7. SOLE VOTING POWER

3,265,627

8. SHARED VOTING POWER

-0-

NUMBER OF
SHARES
BENEFICIALLY
OWNED BY EACH
REPORTING
PERSON WITH

9. SOLE DISPOSITIVE POWER

3,265,627

10. SHARED DISPOSITIVE POWER

-0-

11. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

3,265,627 (1)

12. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES

(see instructions)

13. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

7.1% (2)

14. TYPE OF REPORTING PERSON (see instructions)

CO

Footnotes:

(1) Common Shares are held of record by S.R. One, Limited, an indirect, wholly-owned subsidiary of the Reporting Person.

(2) Based upon 45,890,954 shares of the Issuer's Common Shares outstanding as of January 9, 2018, upon the closing of the Issuer's offering, as reported in the Issuer's prospectus dated January 4, 2018 (the "Final Prospectus") filed with the Securities and Exchange Commission (the "SEC") on January 5, 2018 pursuant to Rule 424(b)(5) of the Securities Act of 1933, as amended (the "Securities Act").

Item 1. Security and Issuer.

This Amendment No. 2 to Schedule 13D amends and supplements the statement on Schedule 13D originally filed on October 28, 2016, as subsequently amended by Amendment No. 1 filed on November 7, 2016 (the "Schedule 13D") with respect to the common shares, par value CHF 0.03 per share (the "Common Shares"), of CRISPR Therapeutics AG, a stock corporation (*Aktiengesellschaft*) organized under the laws of Switzerland (the "Issuer"). GlaxoSmithKline plc is filing this amendment to reflect its new percentage beneficial ownership in the Issuer, which has decreased as a result of an increase in the Issuer's Common Shares outstanding. The Issuer's principal executive offices are located at Aeschenvorstadt 36, 4051 Basel, Switzerland. Unless otherwise indicated, each capitalized term used but not defined herein shall have the meaning assigned to such term in the Schedule 13D.

Item 2. Identity and Background.

The response set forth in Item 2 of the Schedule 13D is hereby amended by deleting Schedule 1 in its entirety, and replacing it with Schedule 1 attached.

Item 5. Interest in Securities of the Issuer.

The response set forth in Items 5 (a) and (b) of the Schedule 13D is hereby amended by deleting the previous response in its entirety and replacing it with the following:

- a. GlaxoSmithKline plc beneficially owns 3,265,627 Common Shares, which represents 7.1% of the 45,890,954 Common Shares outstanding based on 45,890,954 Common Shares outstanding as of January 9, 2018, upon the closing of the Issuer's offering, as reported in the Final Prospectus.
- b. GlaxoSmithKline plc has the sole power to vote or direct the vote, and the sole power to dispose or to direct the disposition of all 3,265,627 shares of Common Stock described in Item 5a above.

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.

Date: February 13, 2018

GLAXOSMITHKLINE PLC

By: /s/ Victoria A. Whyte

Name: Victoria A. Whyte

Title: Authorized Signatory

SCHEDULE 1

<u>Name</u>	<u>Business Address</u>	<u>Principal Occupation or Employment</u>	<u>Citizenship</u>
Board of Directors			
Emma Walmsley	980 Great West Road Brentford Middlesex, England TW8 9GS	Executive Director and Chief Executive Officer	British
Professor Sir Roy Anderson	980 Great West Road Brentford Middlesex, England TW8 9GS	Company Director	British
Manvinder Singh Banga	980 Great West Road Brentford Middlesex, England TW8 9GS	Company Director	Indian
Dr. Vivienne Cox	980 Great West Road Brentford Middlesex, England TW8 9GS	Company Director	British
Simon Dingemans	980 Great West Road Brentford Middlesex, England TW8 9GS	Executive Director and Chief Financial Officer	British
Lynn Elsenhans	980 Great West Road Brentford Middlesex, England TW8 9GS	Company Director	US
Dr. Jesse Goodman	980 Great West Road Brentford Middlesex, England TW8 9GS	Company Director	US
Dr Laurie Glimcher	980 Great West Road Brentford Middlesex, England TW8 9GS	Company Director	US

Sir Philip Hampton	980 Great West Road Brentford Middlesex, England TW8 9GS	Chairman and Company Director	British
Judy Lewent	980 Great West Road Brentford Middlesex, England TW8 9GS	Company Director	US
Urs Rohner	980 Great West Road Brentford Middlesex, England TW8 9GS	Company Director	Swiss
Dr. Hal Barron	The Navy Yard 5 Crescent Drive Philadelphia, PA 19112	Chief Scientific Officer & President, R&D	US
Dr. Patrick Vallance	980 Great West Road Brentford Middlesex, England TW8 9GS	Outgoing President, R&D	British

**Corporate
Executive Team**

Emma Walmsley	980 Great West Road Brentford Middlesex, England TW8 9GS	Executive Director and Chief Executive Officer	British
Roger Connor	980 Great West Road Brentford Middlesex, England TW8 9GS	President, Global Manufacturing & Supply	Irish
Luc Debruyne	980 Great West Road Brentford Middlesex, England TW8 9GS	President, Global Vaccines	Belgian

Simon Dingemans	980 Great West Road Brentford Middlesex, England TW8 9GS	Executive Director and Chief Financial Officer	British
Nick Hirons	980 Great West Road Brentford Middlesex, England TW8 9GS	Senior Vice President, Global Ethics and Compliance	British & US
Brian McNamara	184 Liberty Corner Road Warren NJ, 07059	Chief Executive Officer, GSK Consumer Healthcare	US
David Redfern	980 Great West Road Brentford Middlesex, England TW8 9GS	Chief Strategy Officer	British
Karenann Terrell	980 Great West Road Brentford Middlesex, England TW8 9GS	Chief Digital and Technology Officer	US
Claire Thomas	980 Great West Road Brentford Middlesex, England TW8 9GS	Senior Vice President, Human Resources	British
Philip Thomson	980 Great West Road Brentford Middlesex, England TW8 9GS	President, Global Affairs	British
Daniel Troy	The Navy Yard 5 Crescent Drive Philadelphia, PA 19112	Senior Vice President & General Counsel	US
Luke Miels	980 Great West Road Brentford Middlesex, England TW8 9GS	President, Global Pharmaceuticals	Australian
Dr. Hal Barron	The Navy Yard 5 Crescent Drive Philadelphia, PA 19112	Chief Scientific Officer & President, R&D	US

Dr. Patrick Vallance

980 Great West Road
Brentford
Middlesex, England
TW8 9GS

Outgoing President, R&D

British