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

SCHEDULE 13G

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

SOPHiA GENETICS SA

(Name of Issuer)

Ordinary Shares, par value CHF 0.05 per share

(Title of Class of Securities)

H82027105

(CUSIP Number)

December 31, 2021

(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 | NAMES OF REPORTING PERSONS Marc Coucke | | |
| 2 | CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/> | | |
| 3 | SEC USE ONLY | | |
| 4 | CITIZENSHIP OR PLACE OF ORGANIZATION Belgium | | |
| NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH | 5 | SOLE VOTING POWER 0 | |
| | 6 | SHARED VOTING POWER 6,993,800* | |
| | 7 | SOLE DISPOSITIVE POWER 0 | |
| | 8 | SHARED DISPOSITIVE POWER 6,993,800* | |
| 9 | AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH PERSON 6,993,800* | | |
| 10 | CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES <input type="checkbox"/> | | |
| 11 | PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 11.0%** | | |
| 12 | TYPE OF REPORTING PERSON IN | | |

* See Note on page 3.

** See Note on page 3.

| | | | |
|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|--|
| 1 | NAMES OF REPORTING PERSONS Alychlo N.V. | | |
| 2 | CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/> | | |
| 3 | SEC USE ONLY | | |
| 4 | CITIZENSHIP OR PLACE OF ORGANIZATION Belgium | | |
| NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH | 5 | SOLE VOTING POWER 0 | |
| | 6 | SHARED VOTING POWER 6,993,800* | |
| | 7 | SOLE DISPOSITIVE POWER 0 | |
| | 8 | SHARED DISPOSITIVE POWER 6,993,800* | |
| 9 | AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH PERSON 6,993,800* | | |
| 10 | CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES <input type="checkbox"/> | | |
| 11 | PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 11.0%** | | |
| 12 | TYPE OF REPORTING PERSON CO | | |

* Alychlo NV is the record holder of 6,993,800 ordinary shares of SOPHiA GENETICS SA. Marc Coucke is the principal shareholder, Chairman and Managing Director of Alychlo NV.

** According to publicly available information, the percentage ownership is calculated based on 63,857,604 ordinary shares issued and outstanding as of August 25, 2021, which is based on 63,338,111 ordinary shares the Issuer expected to be outstanding on or about July 27, 2021, as reported by the Issuer in its Prospectus filed pursuant to Rule 424(b)(4), Registration No. 333-257647, filed with the Securities and Exchange Commission (the "SEC") on July 23, 2021 plus 519,493 ordinary shares issued and sold to the underwriters of its initial public offering pursuant to the underwriters' option to purchase additional shares, as reported by the Issuer on Form 6-K filed on August 25, 2021.

CUSIP No. **H82027105**

Item 1(a) Name of Issuer:

SOPHiA GENETICS SA

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

Rue du Centre 172
CH-1025 Saint-Sulpice
Switzerland

Items 2(a) Name of Persons Filing:

This Statement is filed on behalf of the following persons (collectively, the "Reporting Persons"):
(i) Marc Coucke
(ii) Alychlo NV

Item 2(b) Address of Principal Business Office:

The address of the principal business office of each Reporting Person is c/o Alychlo NV, Lembergsesteenweg 19, 9820 Merelbeke, Belgium

Item 2(c) Citizenship:

Marc Coucke is a citizen of Belgium
Alychlo NV is a limited liability company organized under the laws of Belgium

Item 2(d) Title of Class of Securities:

Ordinary Shares, par value CHF 0.05 per share

Item 2(e) CUSIP Number:

H82027105

Item 3

If this statement is filed pursuant to Rules 13d-1(b), or 13d-2(b) or (c), check whether the person filing is:

- (a) ☐ Broker or dealer registered under Section 15 of the Act;
- (b) ☐ Bank as defined in Section 3(a)(6) of the Act;
- (c) ☐ Insurance company as defined in Section 3(a)(19) of the Act;
- (d) ☐ Investment company registered under Section 8 of the Investment Company Act of 1940;
- (e) ☐ An investment adviser in accordance with Rule 13d-1(b)(1)(ii)(E);
- (f) ☐ An employee benefit plan or endowment fund in accordance with Rule 13d-1(b)(1)(ii) (F);
- (g) ☐ A parent holding company or control person in accordance with Rule 13d-1(b)(1)(ii) (G);
- (h) ☐ A savings association as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813);
- (i) ☐ A church plan that is excluded from the definition of an investment company under section 3(c) (14) of the Investment Company Act of 1940;
- (j) ☐ A non-U.S. institution in accordance with Rule 240.13d-1(b)(1)(ii)(J);
- (k) ☐ Group, in accordance with Rule 240.13d-1(b)(1)(ii)(K).

This Item 3 is not applicable.

Ownership:

Item 4

The information required by Items 4(a)-(c), as of the date hereof, is set forth in Rows 5-11 of the cover page hereto for each Reporting Person and is incorporated herein by reference for each such Reporting Person.

Item 5

Ownership of Five Percent or Less of a Class:

Not applicable

Ownership of More than Five Percent on Behalf of Another Person:

Item 6

Not applicable

Item 7

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

Not applicable

Item 8

Identification and Classification of Members of the Group:

Not applicable

Item 9

Notice of Dissolution of Group:

Not applicable

Item 10

Certification:

Not applicable

SIGNATURES

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

Dated: February 9, 2022

By: /s/ Marc Coucke
Name: Marc Coucke

ALYCHLO NV

By: /s/ Marc Coucke
Name: Marc Coucke
Title: Chairman / Managing Director

EXHIBIT 99.1
JOINT FILING AGREEMENT

The undersigned hereby agree that the statement on Schedule 13G with respect to the ordinary shares, par value CHF 0.05 per share, of SOPHiA GENETICS SA dated as of February 9, 2022 is, and any amendments thereto (including amendments on Schedule 13D) signed by each of the undersigned shall be, filed on behalf of each of the undersigned pursuant to and in accordance with the provisions of Rule 13d-1(k) under the Securities Exchange Act of 1934, as amended. This joint filing agreement may be executed in any number of counterparts and all of such counterparts taken together shall constitute one and the same instrument.

Dated: February 9, 2022

By: /s/ Marc Coucke

Name: Marc Coucke

ALYCHLO NV

By: /s/ Marc Coucke

Name: Marc Coucke

Title: Chairman / Managing Director