

To the shareholders of SOPHiA GENETICS SA

Invitation to the Annual General Meeting

Date and Time: Wednesday, June 15, 2022 at 8:00 a.m. EDT / 2:00 p.m. CEST

Location: Headquarters of SOPHiA GENETICS SA, Rue du Centre 172, 1025 St-Sulpice VD, Switzerland (no physical shareholder attendance)

Dear Fellow Shareholders,

2021 was a tremendous and unforgettable year for SOPHiA GENETICS, as we made meaningful strides across our strategic objectives during our first fiscal year as a publicly traded company. I am immensely proud of our progress, which we believe directly reflects our continued ability to execute our vision, and I am thoroughly excited by the opportunities that lie ahead. We have come a long way since 2011 from just a handful of people in a 10 square meter room with a vision to democratize and drive the adoption of data-driven medicine. Flash forward to the present where SOPHiA has expanded globally with over 500 employees, offices across three countries, a broad network of customers who have adopted our platform, and world class R&D capabilities all supporting our mission of bringing that vision to life. Thank you to all the SOPHiA employees for their hard work and dedication. Without them, it is safe to say none of this would be possible. While we have achieved many milestones in 2021, it has not been without its challenges. The continued impact of the COVID-19 pandemic has disrupted daily life and the global economy. However, we have adapted our business accordingly and introduced a COVID-19 solution and pipeline application to help support our customers and the world in the fight against COVID-19, demonstrating our resilience and innovation as a company and the flexibility of our network. The six strategic pillars we continue to highlight remain at the forefront of SOPHiA's focus to drive long-term growth and value creation for our customers, partners, and shareholders. We are encouraged by and as confident as ever about the strategic path that we have embarked on as a newly public company, and I am both proud and excited to share with you our progress to date.

New Customer Adoption

Healthcare institutions continue to choose SOPHiA as their trusted cloud-based analytics platform to accelerate their innovation with data-driven medicine. One of our primary focuses has been on growing the adoption of our platform in the U.S. market, which we firmly believe represents a massive but underpenetrated opportunity. I am thrilled to announce that we signed a total of 7 new logos in the U.S in 2021 with prominent institutions and have additionally seen commensurate momentum in other regions in the world. We are incredibly excited and encouraged by the size and scale of our new customer relationships. The scope of the opportunity that lies ahead requires the right leaders to help guide us. For that reason, we have brought on Ken Freedman as the new Chief Revenue Officer to lead our global clinical sales efforts. The executive team is thrilled to have Ken, who has the deep knowledge and experience to help lead us in the next phase of our growth.

Increasing Utilization Within Our Existing Customer Base

We employ a "land and expand" commercial model that is focused on first winning new customers, and then driving greater utilization of our solution by those customers by continuously demonstrating the value of our platform. Once we have secured a customer, we continue to build trust and help that customer scale their usage and the insights they are able to derive from our network. We also leverage our initial entry point with our customers to expand our coverage to additional clinician users and departments within that institution. We are excited with the momentum we see with users continuing to increase their utilization after experiencing the value of the SOPHiA DDM™ platform. We ended the year with over 240,000 analyses conducted on our platform across a recurring user base of more than 380 platform customers.

Expanding our Menu of Offerings

As a team we are energized about the opportunities ahead and our progress in creating and growing the capabilities of SOPHiA DDM™. A crucial part of SOPHiA's story is driving innovation across our product offerings. We are continuing to invest in scientific innovation to land new customers and bring new, high-impact applications to our customers through frequent updates to our platform. 2021 saw approximately 30 exciting new product launches and expansions including HRD, OncoPortal, TSO500 to name a few. In November, at RSNA, we announced the launch of an observational, clinical study called DEEP-Lung-IV which leverages machine learning algorithms that will also fuel landmark new offerings, such as CarePath, which is expected to be launched in 2022. The study leverages machine learning-enabled analysis of aggregated real-world multimodal data to identify and validate predictive signatures associated with responses to immunotherapy and prognosis of patients with metastatic stage IV non-small cell lung cancer. Such signatures can support clinicians in their decision-making, including identifying patients who are likely to benefit from immunotherapy, stratifying patients according to risk, and making more informed treatment decisions for their patients. The derived insights also can support biopharma companies in selecting the right patients for the right clinical trials. The data we have previewed has been promising, and we look forward to updating you on this front.

Developing Key Partnerships

We have achieved considerable momentum in signing key partnerships with premier leaders in our industry that further enable our customer bases to generate actionable insights. In July, we signed a letter of intent with GE Healthcare, and we have now executed a final Master Alliance Agreement. Under this agreement, we will be working together with GE on a variety of commercial opportunities and collaborating on different initiatives and projects in the fields of digital oncology and radiogenomic analysis. Our partnership with GE continues to evolve. We're currently working together on a new statement of work to begin developing the software infrastructure that will enable the bi-directional exchange of data between GE's Edison platform and the SOPHiA DDM™ platform to generate even more powerful analysis and insights to support clinical and biopharma customers. We intend to pursue more alliances because we strongly believe that relationships like the one with GE will allow us to accelerate our vision and growth even faster. Through strategic collaborations, we believe we will be able to spark innovation, more quickly increase the size and scale of our network, connect with a larger volume of data, and offer more capabilities than we would be able to provide individually.

BioPharma Strategy Expansion

As SOPHiA continues to deliver for our clinical clients and increase the size of our network, we believe ourselves to be even better positioned to service the biopharma market. We believe these opportunities are intrinsically tied, as success in one market will drive further success in the other. For example, we have seen great traction in the important segment of Homologous Recombination Deficiency, or HRD, testing in clinical markets, which is, in turn, helping drive additional opportunities with biopharma customers. We recently signed an agreement with AstraZeneca to partner on expanding access to in-house HRD testing across European labs and institutions. As SOPHiA continues to innovate in the clinical market and expand our network, we see additional opportunities to pursue similar partnerships with biopharma customers going forward. Given the many exciting opportunities that lie ahead, we are continuing to invest heavily in our biopharma team, and to head our efforts in the biopharma space, we recently brought on Peter Casasanto as

Chief BioPharma Officer. Peter's expertise and more than 15 years of industry experience make him a fantastic addition as we continue building out and scaling our biopharma strategy.

Exceling Operationally Within SOPHiA

Our final strategic pillar places a large focus on exceling at every level within SOPHiA operationally, and firmly believe we have built a good foundation to continue to improve efficiency and execute our near term strategic and operational plans. We will continue to selectively invest in our business to drive growth organically and inorganically. I am immensely proud of what we have accomplished at SOPHiA in 2021. There are a lot of exciting things yet to come, and I look forward to sharing them with you in the months and years ahead. Thank you for your confidence and unwavering support as we continue this ambitious journey to democratize data-driven medicine.

Sincerely,

Dr. Jurgi Camblong

Chief Executive Officer

A handwritten signature in dark ink, consisting of a stylized 'J' followed by a horizontal line and a small flourish at the end.

Important notice regarding COVID-19

Unfortunately, the continuing circumstances of the COVID-19 pandemic do not allow us to hold our 2022 Annual General Meeting with shareholders attending in-person.

In accordance with the Swiss COVID-19 regulations, shareholders will not be permitted to be physically present, and may exercise their rights at our 2022 Annual General Meeting exclusively by sending voting instructions to the Independent Proxy. See the “Organizational Information” section at the end of this document for more detail.

We take the safety of our shareholders, directors, officers, employees and service providers very seriously, and hope you understand the need for these measures.

Agenda and Proposals of the Board of Directors

1. 2021 Management Report, Annual Financial Statements and Consolidated Financial Statements, Auditors' Reports

The Board of Directors proposes that the Management Report, the Annual Financial Statements and the Consolidated Financial Statements for the fiscal year 2021 be approved, and that the Auditors' Reports be acknowledged.

2. Discharge of the members of the Board of Directors and the Executive Board

The Board of Directors proposes that the members of the Board of Directors and the Executive Board be discharged from liability for the financial year 2021.

3. Appropriation of 2021 Financial Result

The Board of Directors proposes that the net loss of the Company for the fiscal year 2021 be carried forward as follows:

Accumulated loss on January 1, 2021	CHF 119,488,888
Net loss for the year 2021	CHF 62,506,860
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Accumulated losses to be carried forward	CHF 181,995,748

4. Increase and Renewal of Authorized Share Capital

The Board of Directors proposes to increase and renew the Company's Authorized Share Capital by CHF 235,928.75, by amending Article 4a, Paragraph 1 of the Articles of Association as follows (the proposed amendments are underlined):

"The Board of Directors shall be authorized to increase the share capital at any time, including in connection with an intended takeover, until June 14, 2024, at the latest, by a maximum amount of CHF 1,659,954.10 by issuing a maximum of 33,199,082 fully paid in registered shares with a par value of CHF 0.05 each. Increases in partial amounts shall be permissible."

Explanations

The Board of Directors proposes to top up the existing authorized share capital. Under Swiss law, shareholders may authorize the Board of Directors to issue new shares at its discretion up to a maximum of 50% of the existing share capital within a period of two years. The Company completed a successful IPO in 2021, utilizing a portion of its authorized share capital. The purpose of this proposal is to replenish the authorized share capital to permissible levels, allowing the Company to maintain a reasonable level of financial flexibility and to preserve authorized share capital for potential future financings or other opportunities.

5. Increase of Conditional Share Capital for Employee Participation

The Board of Directors proposes to increase the Company's Conditional Share Capital for Employee Participation by CHF 125,000, by amending Article 4b, Paragraph 1 of the Articles of Association as follows (the proposed amendments are underlined):

“The share capital may be increased in an amount not to exceed CHF 580,000 through the issuance of up to 11,600,000 fully paid in registered shares with a par value of CHF 0.05 per share through the direct or indirect issuance of shares, options or related subscription rights to members of the board of directors (or equivalent corporate body), members of the executive management, employees, contractors or consultants of the Company or its group companies, or other persons providing services to the Company or its group companies.”

Explanations

The Board of Directors proposes to replenish and top up the existing conditional share capital for employee participation. In March 2022, 2,500,000 shares were issued as treasury shares to efficiently cover the delivery of shares to participants in the Company's different equity incentive plans over the course of 2022 and potentially beyond. The purpose of this proposal is to replenish the conditional share capital for employee participation to its initial post-IPO level of 11,600,000 shares, which would also cover the annual evergreen top-up provided in the Company's 2021 Equity Incentive Plan.

6. Increase of Conditional Share Capital for Financing, Acquisitions and Other Purposes

The Board of Directors proposes to increase the Company's Conditional Share Capital for Financing, Acquisitions and Other Purposes by CHF 209,954.10, by amending Article 4c, Paragraph 1 of the Articles of Association as follows (the proposed amendments are underlined):

“The share capital may be increased including in connection with an intended takeover in an amount not to exceed CHF 1,079,954.10 through the issuance of up to 21,599,082 fully paid in registered shares with a par value of CHF 0.05 per share through the exercise or mandatory exercise of conversion, exchange, option, warrant or similar rights or obligations for the subscription of shares granted to shareholders or third parties on a stand-alone basis or in connection with bonds, notes, options, warrants or other securities or contractual obligations of the Company or any of its group companies (collectively, the Financial Instruments).”

Explanations

The Board of Directors proposes to replenish and top up the existing conditional share capital for financing, acquisitions, and other purposes. Under Swiss law, shareholders may authorize the Board of Directors to issue new shares under the aggregate conditional share capital up to a maximum of 50% of the existing share capital. The purpose of this proposal is to replenish the conditional share capital for financing, acquisitions and other purposes to permissible levels, allowing the Company to maintain a reasonable level of financial flexibility and to preserve conditional share capital for potential future financings or other opportunities.

7. Amendments to Articles of Association

The Board of Directors has nominated Dr. Jean-Michel Cosséry as new member of the Board of Directors (see agenda item 8.h). To enable his election, the maximum number of directors set forth in the current Articles of Association must be increased from seven to eight.

The Board of Directors proposes that Article 15 of the Articles of Association be amended to increase the maximum size of the Board of Directors as follows (the proposed amendment is underlined):

“The board of directors of the Company (the Board of Directors) shall consist of not less than 3 and not more than 8 members.”

8. Re-election of the Chairman; election and re-election of the Members of the Board of Directors

The term of office for the Chairman and all members of the Board of Directors expires at the end of the 2022 Annual General Meeting. The Board of Directors proposes the re-election of the current members of the Board of Directors, including the Chairman, for a term of office until completion of the 2023 Annual General Meeting.

The Board of Directors further proposes to elect Dr. Jean-Michel Cosséry as a new member of the Board of Directors for a term of office until completion of the 2023 Annual General Meeting.

Information on the professional background of the Chairman and the other current members of the Board of Directors can be found in our 2021 Annual Report on Form 20-F filed with the U.S. Securities and Exchange Commission on March 15, 2022. Information on the professional background of Dr. Jean-Michel Cosséry can be found below under agenda item 8.h.

- a. Re-election of Troy Cox (as Chairman and member of the Board)**
- b. Re-election of Jurgi Camblong (as member of the Board)**
- c. Re-election of Tomer Berkovitz (as member of the Board)**
- d. Re-election of Kathy Hibbs (as member of the Board)**
- e. Re-election of Didier Hirsch (as member of the Board)**
- f. Re-election of Vincent Ossipow (as member of the Board)**
- g. Re-election of Milton Silva-Craig (as member of the Board)**
- h. Election of Jean-Michel Cosséry (as member of the Board)**

If elected, Dr. Jean-Michel Cosséry is also up for election as a member of the Compensation Committee.

Biographical Information: Jean-Michel Cosséry, age 62, Ph.D., Pharm.D., M.B.A., has been nominated to serve as a member of our board of directors. From 2012 to 2018, Dr. Cosséry served in various senior leadership positions at Eli Lilly and Company, including as Vice President, North America Oncology, as well as Vice President and Managing Director of Lilly UK and Northern Europe. Prior to that, he served as Vice President and Chief Marketing Officer of GE Healthcare as well as in senior positions at Novartis International AG and Serono (now Merck (Schweiz) AG). Dr. Cosséry serves on the board of directors of Malin Corporation plc, Exact Therapeutics AS, Diurnal PLC, and Eracal Therapeutics Ltd., and previously served on the board of directors of ABPI (UK) LIMITED, Immunocore Holdings Limited, and Kymab Ltd and as chairman of the board of directors of the American Pharmaceutical Group in the UK. Dr. Cosséry holds an M.B.A. from the Rotterdam School of Management, a Ph.D. with honors in nuclear chemistry and neurobiology from Paris Sud University, and a Pharm.D. with honors in pharmacology from Paris Sud University.

There are no family relationships between Dr. Cosséry or any of our directors or executive officers. There are no related party transactions between us and Dr. Cosséry that would require disclosure under Item 7.B. of Form 20-F, other than compensatory arrangements that will be disclosed in our Annual Report on Form 20-F for the year ended December 31, 2022.

Our board of directors has determined that Dr. Cosséry, if elected, would be an independent director within the meaning of applicable Nasdaq standards.

9. Election and re-election of the Members of the Compensation Committee

The Board of Directors proposes the re-election of Milton Silva-Craig and Vincent Ossipow as members of the Compensation Committee, each for a term of office until completion of the 2023 Annual General Meeting, subject to their re-election as members of the Board of Directors.

The Board of Directors further proposes to elect Mrs. Kathy Hibbs and Dr. Jean-Michel Cosséry as new members of the Compensation Committee, for a term of office until completion of the 2023 Annual General Meeting, subject to their re-election and election as members of the Board of Directors.

The Board of Directors intends to re-appoint Milton Silva-Craig, if re-elected, as Chairman of the Compensation Committee.

- a. Re-election of Milton Silva-Craig**
- b. Re-election of Vincent Ossipow**
- c. Election of Kathy Hibbs**
- d. Election of Jean-Michel Cosséry**

10. Re-election of the Independent Proxy

The Board of Directors proposes to re-elect Martin Habs, Esq., notary public, in Lausanne, Switzerland, as Independent Proxy for a term of office until completion of the 2023 Annual General Meeting.

11. Re-election of the Statutory Auditor

The Board of Directors proposes to re-elect PricewaterhouseCoopers SA as the Company's statutory auditor for the fiscal year 2022.

12. Approval of the Compensation of the Board of Directors and the Executive Board

a. Approval of the maximum aggregate amount of compensation of the Board of Directors until completion of the 2023 Annual General Meeting

The Board of Directors proposes to approve a maximum aggregate amount of compensation for the members of the Board of Directors of USD 1,766,000 for the period from the 2022 Annual General Meeting to the 2023 Annual General Meeting.

Explanations

The compensation for the Board of Directors and its committees is comprised of cash board fees and participation in the Company's long-term equity incentive plan. Our current Board of Directors is made up of seven members (two of whom do not receive compensation) and may increase to eight, subject to the election of Dr. Jean-Michel Cosséry to the Board of Directors by the shareholders. The proposal aims to keep the total compensation per member of the Board of Directors unchanged. The proposed amount of compensation reflects the total amount for six paid members of the Board of Directors and provide a cushion to facilitate potential replacements or additions throughout the year. Additional information on the compensation of the Board of Directors may be found in the 2021 Compensation Report.

b. Approval of the maximum aggregate amount of fixed compensation of the Executive Board for 2023

The Board of Directors proposes to approve a maximum aggregate amount of fixed compensation for the members of the Executive Board of USD 2,400,000 for the fiscal year 2023.

Explanations

The fixed compensation for the six members of the Executive Board is comprised of annual salary, excluding social security and pension contributions, paid by the Company. The proposed amount reflects a total increase of up to 15% and is intended to provide for merit increases, as well as a cushion to attract new members of the Executive Board if needed, as well as to compensate for inflation, and cover exchange rate fluctuations for compensation paid in CHF to the Swiss-based members of the Executive Board.

c. Approval of the maximum aggregate amount of variable compensation of the Executive Board for 2022

The Board of Directors proposes to approve a maximum aggregate amount of variable compensation for the members of the Executive Board of USD 5,900,000 for the current fiscal year 2022.

Explanations

The variable compensation for the six members of the Executive Board is comprised of annual cash bonus payments and participation in the Company's long-term equity incentive plan, including stock options and RSUs. The proposal is based on the (i) annual bonus pay-outs for the year 2022 to be executed in March 2023 in an aggregate maximum amount of USD 1,200,000 and (ii) awards granted under the 2021 Equity Incentive Plan for the year 2022 in a maximum aggregate amount of USD 4,700,000.

Organizational Information

1. Admission to the 2022 Annual General Meeting

As a result of the continuing COVID-19 pandemic, the 2022 Annual General Meeting of SOPHiA GENETICS SA will be held without the personal attendance of shareholders. Accordingly, voting rights may only be exercised through the Independent Proxy, as set out below. In-person attendance of shareholders at the 2022 Annual General Meeting will not be possible.

2. Eligibility to Vote

Shareholders registered as shareholders with voting rights in the share register maintained by our transfer agent, Computershare Trust Company N.A. (**Computershare**), as of April 21, 2022, at 4:00 p.m. New York time (the **Record Date**), will be entitled to vote at the 2022 Annual General Meeting. Shareholders who sell their shares prior to the 2022 Annual General Meeting will not be able to vote. Shareholders who purchase shares between the Record Date and the conclusion of the 2022 Annual General Meeting will not be able to vote with those shares at the 2022 Annual General Meeting.

Our Articles of Association provide that, if an individual or legal entity acquires shares and, as a result, directly or indirectly, has (alone or in concert with other parties) voting rights with respect to more than 15% of the share capital recorded in the Commercial Register, the shares exceeding the 15% limit shall be entered in the share register as shares without voting rights. If shares are being held by a nominee for third-party beneficiaries that control (alone or together with third parties) voting rights with respect to more than 15% of the share capital, the Board of Directors may cancel the registration of the shares with voting rights held by such nominee in excess of the 15% limit. Shareholders who held more than 15% prior to our initial public offering remain registered with voting rights for such shares.

These restrictions on registration or voting do not impact the trading of shares before, during or after the 2022 Annual General Meeting.

3. 2022 Annual General Meeting Notice and Voting Materials

Shareholders registered as shareholders with voting rights in the share register on the Record Date (**Holders of Record**) will receive the 2022 Annual General Meeting notice (the **Notice**) directly from Computershare. The Notice will contain access information for the Computershare portal, by which Holders of Record may give voting instructions and authorization to the Independent Proxy, as well as information on voting by phone or by mail.

Shareholders holding their shares on the Record Date through their broker or bank (**Street Name Holders**) are unknown to the Company or Computershare. Street Name Holders should be able to vote on the portal designated by their broker or bank. Street Name Holders will only be able to give instructions and authorization to the Independent Proxy via the portal designated by their broker or bank and should therefore contact their broker or bank or its designated agent about how to do so.

Shareholders may order a copy of this Invitation to the 2022 Annual General Meeting and a proxy card as indicated in the Notice. This Invitation to the 2022 Annual General Meeting can also be accessed at <https://ir.sophiagenetics.com/events/event-details/2022-annual-general-meeting>.

4. Voting Instructions to the Independent Proxy

Voting rights can only be exercised through the Independent Proxy, Mr. Martin Habs, Esq., notary public, Lausanne, Switzerland. Shareholders may give voting instructions and authorization to the Independent Proxy via Computershare prior to the 2022 Annual General Meeting.

The Independent Proxy will be physically present at the 2022 Annual General Meeting in order to vote on behalf of the shareholders from whom Computershare has received valid instructions and authorization.

Voting Instructions by Holders of Record

The Company recommends that Holders of Record give voting instructions and authorization to the Independent Proxy *electronically* through the Computershare portal with the individual shareholder number (**QR Code**), or via phone. To do so, Holders of Record should follow the instructions given in the Notice.

Holders of Record may also give voting instructions and authorization to the Independent Proxy through Computershare by mail, using a proxy card. Holders of Record may order a copy of this Invitation to the 2022 Annual General Meeting and a proxy card as indicated in the Notice. Holders of Record should send their filled out and signed proxy card to Computershare at one of the following addresses:

Proxy Services
c/o Computershare Investor Services
PO Box 505008
Louisville, KY 40233-9814
United States of America

Electronic voting instructions, voting instructions via phone and proxy cards must be received by Computershare no later than June 12, 2022, at 11:59 p.m. EDT / June 13, 2022, at 5:59 a.m. CEST.

Once received by Computershare, voting instructions may not be changed by the shareholders. Should Computershare receive voting instructions from the same shareholder both electronically and in writing, only the electronic instructions will be taken into account.

Voting Instructions by Street Name Holders

Street Name Holders who would like to give voting instructions and authorization to the Independent Proxy electronically should follow the instructions of their broker or bank or its designated agent and should use the portal designated by their broker or bank.

Street Name Holders should observe the deadlines to submit voting instructions and authorizations that are set in the instructions of their broker or bank or its designated agent.

5. Shareholder questions

As personal attendance at the 2022 Annual General Meeting is not permitted, shareholders entered in the share register with voting rights may submit questions to the Company ahead of the 2022 Annual General Meeting by sending an e-mail to ir@sophiagenetics.com.

6. Record of Resolutions

A record of the resolutions taken by the 2022 Annual General Meeting will be available for inspection after the meeting at the Company's registered office at Rue du Centre 172, 1025 St-Sulpice VD, Switzerland, and will be published on the Company's website at <https://ir.sophiagenetics.com/events/event-details/2022-annual-general-meeting>.

7. Annual Report

The Annual Report for the fiscal year 2021 (including the 2021 Management Report, the Consolidated Financial Statements, the Annual Financial Statements, the Compensation Report and the Auditors' Reports) is available to the shareholders for inspection as from the date of the Notice at the Company's headquarter at Rue du Centre 172, 1025 St-Sulpice VD, Switzerland. **The Annual Report will be mailed on request free of charge to any shareholder.** The Annual Report is also available electronically on the Company's website at <https://ir.sophiagenetics.com/events/event-details/2022-annual-general-meeting>.

Contact Address

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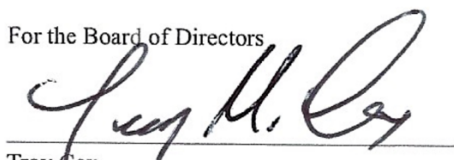
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<https://www.sophiagenetics.com/>

St-Sulpice, May 16, 2022

SOPHiA GENETICS SA

For the Board of Directors



Troy Cox
Chairman of the Board of Directors