As filed with the Securities and Exchange Commission on March 15, 2021

Registration No. 333-

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-3

REGISTRATION STATEMENT

UNDER THE SECURITIES ACT OF 1933

Solid Biosciences Inc.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of ncorporation or organization)

90-0943402 (I.R.S. Employer Identification Number)

Erin Powers Brennan **Chief Legal Officer**

Solid Biosciences Inc.

141 Portland Street, Fifth Floor

Cambridge, MA 02139

141 Portland Street, Fifth Floor

Cambridge, MA 02139 (617) 337-4680 (Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

Ilan Ganot Chief Executive Officer Solid Biosciences Inc. 141 Portland Street, Fifth Floor Cambridge, MA 02139

(617) 337-4680 (Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent for Service)

Copy to:

Lia Der Marderosian Wilmer Cutler Pickering Hale and Dorr LLP 60 State Street Boston, MA 02109 Telephone: (617) 526-6000 Telecopy: (617) 526-5000

Approximate date of commencement of proposed sale to the public: As soon as practicable after this registration statement is declared effective.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. 🗆

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. \Box

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. \Box

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box. \Box

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

X

Non-accelerated filer

Accelerated filer X Smaller reporting company X

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

CALCULATION OF REGISTRATION FEE

		Proposed	Proposed	
	Amount	Maximum	Maximum	
Title of each class of	to be	Offering Price	Aggregate	Amount of
securities to be registered	Registered(1)	Per Share(2)	Offering Price(2)	Registration Fee
Common Stock, \$0.001 par value per share	24,324,320	\$9.62	\$ 233,999,958.40	\$25,529.40

The shares will be offered for resale by selling stockholders. Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement also $\overline{(1)}$ covers any additional number of shares of common stock issuable upon stock splits, stock dividends, dividends or other distribution, recapitalization or similar events with respect to the shares of common stock being registered pursuant to this registration statement.

Estimated solely for purposes of calculating the registration fee pursuant to Rule 457(c) under the Securities Act, based on the average of the high and low price per share of the (2)common stock as reported on the Nasdaq Global Select Market on March 11, 2021.

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until this registration statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

The information in this prospectus is not complete and may be changed. The selling stockholders named in this prospectus may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and the selling stockholders named in this prospectus are not soliciting offers to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to completion, dated March 15, 2021

PROSPECTUS



24,324,320 SHARES

COMMON STOCK

This prospectus relates to the resale from time to time of up to 24,324,320 shares of common stock of Solid Biosciences Inc. by the selling stockholders listed on page 8, including their transferees, pledgees or donees or their respective successors, issued to the selling stockholders in our December 2020 private placement. We are registering these shares on behalf of the selling stockholders, to be offered and sold by them from time to time. We will not receive any proceeds from the sale of the shares offered by this prospectus.

We have agreed to bear all of the expenses incurred in connection with the registration of these shares. The selling stockholders will pay or assume discounts, commissions, fees of underwriters, selling brokers or dealer managers and similar expenses, if any, incurred for the sale of shares of our common stock.

The selling stockholders identified in this prospectus, or their respective transferees, pledgees, donees or other successors-in-interest, may offer the shares from time to time through public or private transactions at prevailing market prices, at prices related to prevailing market prices or at privately negotiated prices. For additional information on the methods of sale that may be used by the selling stockholders, see the section entitled "Plan of Distribution" on page 12. For a list of the selling stockholders, see the section entitled "Selling Stockholders" on page 8.

We may amend or supplement this prospectus from time to time by filing amendments or supplements as required. You should read the entire prospectus and any amendments or supplements carefully before you make your investment decision.

Our common stock is traded on the Nasdaq Global Select Market under the symbol "SLDB." On March 12, 2021, the closing sale price of our common stock on the Nasdaq Global Select Market was \$9.52 per share. You are urged to obtain current market quotations for our common stock.

We are an "emerging growth company" and a "smaller reporting company" under applicable Securities and Exchange Commission rules and, as such, have elected to comply with certain reduced public company disclosure requirements for this prospectus and future filings. See "Prospectus Summary— Implications of Being an Emerging Growth Company and a Smaller Reporting Company" for additional information.

Our business and investing in our common stock involve significant risk. These risks are described in the section titled "<u>Risk Factors</u>" beginning on page 5 of this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is

, 2021.

TABLE OF CONTENTS

	Page
PROSPECTUS SUMMARY	1
RISK FACTORS	5
CAUTIONARY NOTE REGARDING FORWARD-LOOKING INFORMATION	6
USE OF PROCEEDS	7
SELLING STOCKHOLDERS	8
PLAN OF DISTRIBUTION	12
LEGAL MATTERS	14
EXPERTS	14
WHERE YOU CAN FIND MORE INFORMATION	15
INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE	15

You should rely only on the information contained or incorporated by reference in this prospectus. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. This prospectus may only be used where it is legal to offer and sell shares of our common stock. If it is against the law in any jurisdiction to make an offer to sell these shares, or to solicit an offer from someone to buy these shares, then this prospectus does not apply to any person in that jurisdiction, and no offer or solicitation is made by this prospectus to any such person. You should assume that the information appearing in this prospectus is accurate only as of the date on the front cover of this prospectus, regardless of the time of delivery of this prospectus or of any sale of common stock. Our business, financial condition, results of operations and prospects may have changed since such date. Information contained on our website is not a part of this prospectus.

PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus and in the documents we incorporate by reference. This summary does not contain all of the information you should consider before making an investment decision. You should read this entire prospectus carefully, especially the risks of investing in our common stock discussed under "Risk Factors" beginning on page 5 of this prospectus, along with our consolidated financial statements and notes to those consolidated financial statements and the other information incorporated by reference in this prospectus.

Solid Biosciences Inc.

We are a clinical-stage biotechnology company with a mission to cure Duchenne muscular dystrophy, or Duchenne, a genetic muscle-wasting disease predominantly affecting boys, with symptoms that usually manifest between three and five years of age. Duchenne is a progressive, irreversible and ultimately fatal disease that affects approximately one in every 3,500 to 5,000 live male births and has an estimated prevalence of 10,000 to 15,000 cases in the United States alone. Duchenne is caused by mutations in the dystrophin gene, which result in the absence or near-absence of dystrophin protein. Dystrophin protein works to strengthen muscle fibers and protect them from daily wear and tear. Without functioning dystrophin and certain associated proteins, muscles suffer excessive damage from normal daily activities and are unable to regenerate, leading to the build-up of fibrotic, or scar, and fat tissue. There is no cure for Duchenne and, for the vast majority of patients, there are no satisfactory symptomatic or disease-modifying treatments. Our efforts are focused on our lead product candidate, SGT-001, a gene transfer candidate under investigation for its ability to drive functional dystrophin protein expression in patients' muscles and improve the course of the disease. Based on our preclinical program that included multiple animal species of different phenotypes and genetic variations, as well as preliminary clinical trial biomarker results, we believe that SGT-001, has the potential to slow or even halt the progression of Duchenne, regardless of the type of genetic mutation or stage of the disease.

Corporate Information

Our principal executive offices are located at 141 Portland Street, Fifth Floor, Cambridge, MA 02139. Our main telephone number is (617) 337-4680. Our website address is www.solidbio.com. The information contained on, or that can be accessed through, our website is not incorporated by reference and is not a part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

Unless the context otherwise indicates, references in this prospectus to "we," "our" and "us" refer, collectively, to Solid Biosciences Inc. and our consolidated subsidiaries.

Implications of Being an Emerging Growth Company and a Smaller Reporting Company

As a company with less than \$1.07 billion in revenue during our last fiscal year, we qualify as an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, and we may remain an emerging growth company until December 31, 2023 or until such earlier time as we have more than \$1.07 billion in annual revenue, the market value of our stock held by non-affiliates is more than \$700 million as of our most recently completed second fiscal quarter or we issue more than \$1 billion of non-convertible debt over a three-year period. For so long as we remain an emerging growth company, we are permitted and intend to rely on exemptions from certain disclosure and other requirements that are applicable to public companies that are not emerging growth companies.

We are also a "smaller reporting company," meaning that the market value of our stock held by non-affiliates is less than \$700 million as of our most recently completed second fiscal quarter and our annual revenue was less

- 1 -

than \$100 million during our most recently completed fiscal year. We may continue to be a smaller reporting company if either (i) the market value of our stock held by non-affiliates is less than \$250 million or (ii) our annual revenue was less than \$100 million during the most recently completed fiscal year and the market value of our stock held by non-affiliates is less than \$700 million as of our most recently completed second fiscal quarter. If we are a smaller reporting company at the time we cease to be an emerging growth company, we may continue to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies.

- 2 -

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THE OFFERING			
Common stock offered by selling stockholders	24,324,320 shares.		
Use of proceeds	We will not receive any proceeds from the sale of shares in this offering.		
Risk factors	You should read the "Risk Factors" section included or incorporated by reference in this prospectus for a discussion of factors to consider carefully before deciding to invest in shares of our common stock.		
Nasdaq Global Select Market symbol	"SLDB"		

- 3 -

DESCRIPTION OF PRIVATE PLACEMENT WITH THE SELLING STOCKHOLDERS

On December 10, 2020, we entered into a securities purchase agreement with the selling stockholders, pursuant to which we issued and sold an aggregate of 24,324,320 shares of our common stock at a price of \$3.70 per share in a private placement to accredited investors. The closing of the issuance and sale of these securities was consummated on December 15, 2020.

We received gross proceeds of approximately \$90.0 million from the sale of these securities, before deducting placement agent fees and offering expenses.

For a detailed description of the transactions contemplated by the securities purchase agreement with the selling stockholders and the securities issued pursuant thereto, see the section entitled "Selling Stockholders" in this prospectus. We filed the registration statement on Form S-3, of which this prospectus forms a part, to fulfill our contractual obligations under the registration rights agreement entered into concurrently with the securities purchase agreement with the selling stockholders to provide for the resale by the selling stockholders of the shares of common stock offered hereby.

- 4 -

RISK FACTORS

Investing in our common stock involves a high degree of risk. Before deciding whether to invest in our common stock, you should carefully consider the risks and uncertainties described under the section captioned "Risk Factors" contained in our most recent Annual Report on Form 10-K, our most recent Quarterly Report on Form 10-Q and other filings we make with the Securities and Exchange Commission, or the SEC, from time to time, which are incorporated by reference herein in their entirety, together with other information in this prospectus and in the documents incorporated by reference in this prospectus. The risks described in our most recent Annual Report on Form 10-K, our most recent Quarterly Report on Form 10-Q and the other filings we make with the SEC incorporated by reference herein are not the only ones facing our company. Additional risks and uncertainties may also impair our business operations. If any of the risks described in our most recent Annual Report on Form 10-K, our most recent Quarterly Report on Form 10-Q and the other filings incorporated by reference herein occurs, our business, financial condition, results of operations and future growth prospects could be harmed. In these circumstances, the market price of our common stock could decline, and you may lose all or part of your investment.

- 5 -

CAUTIONARY NOTE REGARDING FORWARD-LOOKING INFORMATION

This prospectus and the information incorporated by reference in this prospectus include "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. All statements, other than statements of historical fact, contained in or incorporated by reference in this prospectus, including statements regarding our strategy, future operations, future financial position, future revenue, projected costs, prospects, plans and objectives of management, are forward-looking statements. The words "anticipate," "believe," "estimate," "expect," "intend," "may," "might," "plan," "predict," "project," "target," "potential," "would," "could," "should," "continue" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words.

We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forwardlooking statements we make. You are cautioned that these forward-looking statements are only predictions and are subject to risks, uncertainties and assumptions that are referenced in the section of any accompanying prospectus supplement entitled "Risk Factors." You should also carefully review the risk factors and cautionary statements described in the other documents we file from time to time with the SEC, specifically our most recent Annual Report on Form 10-K, our Quarterly Reports on Form 10-Q and our Current Reports on Form 8-K. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, collaborations, joint ventures or investments that we may make or enter into.

You should read this prospectus and the information incorporated by reference herein completely and with the understanding that our actual future results may be materially different from what we expect. We do not assume any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

A statement contained in a document incorporated by reference into this prospectus shall be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus, any prospectus supplement or in any other subsequently filed document which is also incorporated in this prospectus modifies or replaces such statement. Any statements so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

This prospectus incorporates by reference statistical and other industry and market data that we obtained from industry publications and research, surveys and studies conducted by third parties. Industry publications and third-party research, surveys and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information.

- 6 -

USE OF PROCEEDS

We are filing the registration statement of which this prospectus is a part to permit holders of the shares of our common stock described in the section entitled "Selling Stockholders" to resell such shares. We are not selling any securities under this prospectus and we will not receive any proceeds from the sale of shares by the selling stockholders.

The selling stockholders will pay any discounts, commissions, fees of underwriters, selling brokers or dealer managers and expenses incurred by the selling stockholders for brokerage, accounting, tax or legal services or any other expenses incurred by the selling stockholders in disposing of the shares. We will bear all other costs, fees and expenses incurred in effecting the registration of the shares covered by this prospectus, including, without limitation, all registration and filing fees, printing fees, Nasdaq listing fees and expenses of our counsel and our accountants.

SELLING STOCKHOLDERS

On December 10, 2020, we entered into a securities purchase agreement, or the Purchase Agreement, with the selling stockholders, pursuant to which we issued and sold an aggregate of 24,324,320 shares of our common stock at a price of \$3.70 per share in a private placement to accredited investors, which we refer to as the Private Placement. The closing of the issuance and sale of these securities was consummated on December 15, 2020.

In connection with the Private Placement, we entered into a registration rights agreement with the selling stockholders, dated as of December 10, 2020, or the Registration Rights Agreement, pursuant to which we agreed to file a registration statement with the SEC covering the resale of the shares of common stock sold in the Private Placement. We agreed to file such registration statement by the earlier of (i) 15 days following our disclosing any material non-public information that we may have provided the selling stockholders in connection with the Private Placement and (ii) 120 days following the closing of the Private Placement. The Registration Rights Agreement includes customary indemnification rights in connection with the registration statement. The registration statement of which this prospectus is a part has been filed in accordance with the Registration Rights Agreement.

The foregoing summary descriptions of the Purchase Agreement and the Registration Rights Agreement do not purport to be complete and are qualified in their entirety by reference to the full text of such documents, which were filed as exhibits to our Current Report on Form 8-K filed on December 11, 2020, and are incorporated by reference herein.

The table below sets forth, to our knowledge, information concerning the beneficial ownership of shares of our common stock by the selling stockholders as of February 16, 2021. The information in the table below with respect to the selling stockholders has been obtained from the selling stockholders. When we refer to the "selling stockholders" in this prospectus, we mean the selling stockholders listed in the table below as offering shares, as well as their respective pledgees, donees, transferees or other successors-in-interest. The selling stockholders may sell all, some or none of the shares of common stock subject to this prospectus. See "Plan of Distribution."

The number of shares of common stock beneficially owned prior to the offering for each selling stockholder includes (i) all shares of common stock held by such selling stockholder as of February 16, 2021, (ii) all shares as to which such selling stockholder has the right to acquire within 60 days of February 16, 2021 and (iii) all shares of common stock purchased by such selling stockholder in the Private Placement. The percentages of shares owned before and after the offering are based on 85,130,417 shares of common stock outstanding as of February 16, 2021, which includes the outstanding shares of common stock offered by this prospectus. In computing the number of shares of common stock beneficially owned by a person and the percentage ownership of that person, we deemed outstanding shares of common stock issuable upon the exercise of options or pre-funded warrants held by that selling stockholder that are exercisable within 60 days of February 16, 2021. We did not deem these shares outstanding, however, for the purpose of computing the percentage ownership of any other person.

- 8 -

Beneficial ownership is determined in accordance with the rules of the SEC and includes voting or investment power with respect to shares. Unless otherwise indicated below, to our knowledge, each selling stockholder named in the table has sole voting and investment power with respect to the shares of common stock beneficially owned by it, except to the extent authority is shared by spouses under applicable law. The inclusion of any shares in this table does not constitute an admission of beneficial ownership for any selling stockholder named below.

Name of Selling Stockholder	Shares of Com Beneficially O to Offer Number	wned Prior	Number of Shares of Common Stock <u>Being Offered</u> Offered	Shares of Com be Beneficial After Offe Number	lly Owned
Entities associated with RA Capital Management, LLC (2)	9,976,569	11.72%	5,405,405	4,571,164	5.37%
Perceptive Life Sciences Master Fund LTD (3)	10,803,857	12.69%	4,054,054	6,749,803	7.93%
Averill Master Fund, Ltd. (4)	4,054,054	4.76%	4,054,054	_	
BCLS SB Investco, LP (5)	7,060,353	8.29%	3,189,189	3,871,164	4.55%
Entities Associated with EcoR1 Capital, LLC (6)	7,977,702	9.37%	2,702,702	5,275,000	6.20%
Entities associated with Boxer Capital, LLC (7)	6,427,903	7.36%	2,702,702	3,725,201	4.38%
Aspire Capital Fund, LLC (8)	810,810	*	810,810	—	
Ikarian Capital, LLC (9)	1,463,683	1.72%	675,675	788,008	*
Matthew B. Arnold (10)	3,953,429	4.64%	432,432	3,520,997	4.14%
Ian Smith (11)	590,852	*	270,270	320,582	*
Ilan Ganot (12)	1,704,341	2.00%	27,027	1,677,314	1.97%

* Less than one percent.

(1) We do not know when or in what amounts a selling stockholder may offer shares for sale. The selling stockholders might not sell any or might sell all of the shares offered by this prospectus. Because the selling stockholders may offer all or some of the shares pursuant to this offering, and because there are currently no agreements, arrangements or understandings with respect to the sale of any of the shares, we cannot estimate the number of the shares that will be held by the selling stockholders after completion of the offering. However, for purposes of this table, we have assumed that, after completion of the offering, none of the shares covered by this prospectus will be held by the selling stockholders.

(2) Consists of shares held by RA Capital Healthcare Fund, L.P. ("RA Capital Fund") and shares held by a separately managed account (the "Account"). RA Capital Management, L.P. ("RA Capital") is the investment manager for RA Capital Fund and the Account. The general partner of RA Capital is RA Capital Management GP, LLC, of which Peter Kolchinsky and Rajeev Shah, a member of our board of directors, are the managing members. RA Capital, RA Capital Management GP, LLC, Peter Kolchinsky and Rajeev Shah may be deemed to have voting and investment power over the shares held on record by RA Capital Fund and the Account. RA Capital, RA Capital Management GP, LLC, Peter Kolchinsky and Rajeev Shah may be deemed to have voting and investment power over the shares held on record by RA Capital Fund and the Account. RA Capital, RA Capital Management GP, LLC, Peter Kolchinsky and Rajeev Shah may be deemed to have voting and investment power over the shares held on record by RA Capital Fund and the Account. RA Capital, RA Capital Management GP, LLC, Peter Kolchinsky and Rajeev Shah for peter Kolchinsky and Rajeev Shah disclaim beneficial ownership of such shares, except to the extent of any pecuniary interest therein. The address of the entities listed above is 200 Berkeley Street, 18th Floor, Boston, Massachusetts 02116.

(3) Consists of shares held by Perceptive Life Sciences Master Fund LTD (the "Master Fund"). Perceptive Advisors LLC is the investment manager to the Master Fund and may be deemed to beneficially own the securities directly held by the Master Fund. Joseph Edelman is the managing member of Perceptive Advisors LLC. Perceptive Advisors LLC and Mr. Edelman may be deemed to beneficially own the shares held by the Master Fund. Perceptive reports that it holds shared voting power and shared dispositive power with respect to all shares held by it. Adam Stone, a member of our board of directors, is Chief Investment Officer of Perceptive Advisors LLC. Mr. Stone disclaims beneficial ownership of the shares held by Perceptive. The address of Perceptive is 51 Astor Place, 10th Floor, New York, NY 10003.

- 9 -

(4) Consists of shares held by Averill Master Fund, Ltd. Suvretta Capital Management, LLC is the investment manager of Averill Master Fund, Ltd. and Aaron Cowen is a control person of Suvretta Capital Management, LLC and as such may be deemed to beneficially own these shares. The principal business address of Suvretta Capital Management, LLC is 540 Madison Avenue, 7th Floor, New York, NY 10022.

(5) Consists of shares held by BCLS SB Investco, LP ("BCLS"). The governance, investment strategy and decision-making process with respect to investments held by BCLS is directed by Bain Capital Life Sciences Investors, LLC, whose managers are Jeffrey Schwartz and Adam Koppel, a member of our board of directors. As a result, each of Bain Capital Life Sciences Investors, LLC, Mr. Schwartz and Dr. Koppel may be deemed to share voting and dispositive power over the shares held by BCLS. The address of BCLS is c/o Bain Capital Life Sciences, LP, 200 Clarendon Street, Boston, Massachusetts 02116.

(6) Consists of shares held by EcoR1 Capital Fund, L.P. and EcoR1 Capital Fund Qualified, L.P. ("the EcoR1 Funds") which are managed by EcoR1 Capital, LLC ("EcoR1"). Oleg Nodelman, the manager of EcoR1, has shared voting control and investment discretion over the securities reported herein that are held by the EcoR1 Funds. As a result, Mr. Nodelman may be deemed to have beneficial ownership of the securities that are held by the EcoR1 Funds. The address of EcoR1 is 357 Tehama Street #3, San Francisco, CA 94103.

(7) Consists of (a) 4,234,574 shares held by Boxer Capital, LLC ("Boxer Capital") for which Boxer Capital, Boxer Asset Management Inc. ("Boxer Management") and Joe Lewis hold shared voting power and shared dispositive power, (b) 1,965,687 shares of common stock which may be acquired upon the exercise of warrants held by Boxer Capital within 60 days of February 16, 2021 for which Boxer Capital, Boxer Management and Joe Lewis hold shared voting power and shared dispositive power, (c) 35,000 shares held by MVA Investors, LLC ("MVA Investors") for which MVA Investors and Aaron Davis hold shared voting power and shared dispositive power. Boxer Management is the managing member and majority owner of Boxer Capital. Joe Lewis is the sole indirect beneficial owner of and controls Boxer Management. Aaron Davis is a member of and has voting and dispositive power over securities held by MVA Investors. The address of Boxer Capital, MVA Investors and Aaron Davis is 12860 El Camino Real, Suite 302, San Diego, CA 92130. The address of Boxer Management and Joe Lewis is Cay House, EP Taylor Drive N7776, Lyford Cay, New Providence, Bahamas.

(8) Consists of shares held by Aspire Capital Fund LLC ("Aspire Fund"). Aspire Capital Partners LLC ("Aspire Partners") is the Managing Member of Aspire Fund. SGM Holdings Corp ("SGM") is the Managing Member of Aspire Partners. Mr. Steven G. Martin ("Mr. Martin") is the president and sole shareholder of SGM, as well as a principal of Aspire Partners. Mr. Erik J. Brown ("Mr. Brown") is the president and sole shareholder of SGM, as well as a principal of Aspire Partners. Mr. Christos Komissopoulos ("Mr. Komissopoulos") is president and sole shareholder of Chrisko Investors Inc. ("Chrisko"), which is a principal of Aspire Partners. Each of Aspire Partners, SGM, Red Cedar, Chrisko, Mr. Martin, Mr. Brown, and Mr. Komissopoulos may be deemed to be a beneficial owner of common stock held by Aspire Fund. Each of Aspire Partners, SGM, Red Cedar, Chrisko, Mr. Martin, Mr. Brown, and Mr. Komissopoulos disclaims beneficial ownership of the common stock held by Aspire Fund. The address of Aspire Fund is 155 N. Wacker Drive, Suite 1600, Chicago, Illinois 60606.

(9) Consists of shares held by Ikarian Capital, LLC. Ikarian Capital, LLC is ultimately owned and controlled by Chart Westcott Living Trust, of which Chart Westcott serves as the sole trustee (the "Trust"), and indirectly owned and controlled by Neil Shahrestani. Accordingly, each of Mr. Westcott, as sole trustee of the Trust, and Mr. Shahrestani may be deemed to indirectly beneficially own securities beneficially owned by Ikarian Capital, LLC. The address of Ikarian Capital, LLC is 100 Crescent Court, Suite 1620, Dallas, Texas 75201

(10) Consists (a) 3,933,429 shares of common stock owned by Mr. Arnold and (b) 20,000 shares of common stock underlying options held by Mr. Arnold that are exercisable as of February 16, 2021 or will become exercisable within 60 days after such date.

- 10 -

(11) Consists of (a) 270,270 shares of common stock owned by Mr. Smith and (b) 350,582 shares of common stock underlying options held by Mr. Smith that are exercisable as of February 16, 2021 or will become exercisable within 60 days after such date.

(12) Consists of (a) 1,139,190 shares held by Mr. Ganot as an individual, (b) 60,631 shares held by Mr. Ganot and Ms. Ganot as joint tenants with right of survivorship, (c) 290,914 shares held by Mr. Adam Ganot and Ms. Ganot, as trustees for the Ilan Ganot 2017 Irrevocable Trust, (d) 209,500 shares of common stock underlying options held by Mr.Ganot that are exercisable as of February 16, 2021 or will become exercisable within 60 days after such date, (e) 3,026 shares held by Mr. Ganot's wife and (f) 1,080 shares of common stock underlying options held by Mr. Ganot's wife that are exercisable as of February 16, 2021 or will become exercisable within 60 days after such date.

Matthew B. Arnold and Ian Smith, who are members of our board of directors, are selling stockholders. Ilan Ganot, our President, Chief Executive Officer and a member of our board of directors, is also a selling stockholder.

- 11 -

PLAN OF DISTRIBUTION

The selling stockholders, which as used herein includes donees, pledgees, transferees or other successors-in-interest selling shares of common stock or interests in shares of common stock received after the date of this prospectus from a selling stockholder as a gift, pledge, partnership distribution or other transfer, may, from time to time, sell, transfer or otherwise dispose of any or all of their shares of common stock or interests in shares of common stock or any stock exchange, market or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices.

The selling stockholders may use any one or more of the following methods when disposing of shares or interests therein:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent, but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- short sales;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

The selling stockholders may, from time to time, pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock, from time to time, under this prospectus, or under an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act, amending the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus. The selling stockholders also may transfer the shares of common stock in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

In connection with the sale of our common stock or interests therein, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the common stock in the course of hedging the positions they assume. The selling stockholders may also sell shares of our common stock short and deliver these securities to close out their short positions, or loan or pledge the common stock to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The aggregate proceeds to the selling stockholders from the sale of the common stock offered by them will be the purchase price of the common stock less discounts or commissions, if any. Each of the selling stockholders

- 12 -

reserves the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of common stock to be made directly or through agents. We will not receive any of the proceeds from this offering.

The selling stockholders also may resell all or a portion of the shares in open market transactions in reliance upon Rule 144 under the Securities Act of 1933, provided that they meet the criteria and conform to the requirements of that rule.

The selling stockholders and any underwriters, broker-dealers or agents that participate in the sale of the common stock or interests therein may be "underwriters" within the meaning of Section 2(11) of the Securities Act. Any discounts, commissions, concessions or profit they earn on any resale of the shares may be underwriting discounts and commissions under the Securities Act. Selling stockholders who are "underwriters" within the meaning of Section 2(11) of the prospectus delivery requirements of the Securities Act.

To the extent required, the shares of our common stock to be sold, the names of the selling stockholders, the respective purchase prices and public offering prices, the names of any agent, dealer or underwriter, and any applicable commissions or discounts with respect to a particular offer will be set forth in an accompanying prospectus supplement or, if appropriate, a post-effective amendment to the registration statement that includes this prospectus.

In order to comply with the securities laws of some states, if applicable, the common stock may be sold in these jurisdictions only through registered or licensed brokers or dealers. In addition, in some states the common stock may not be sold unless it has been registered or qualified for sale or an exemption from registration or qualification requirements is available and is complied with.

We have advised the selling stockholders that the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of shares in the market and to the activities of the selling stockholders and their affiliates. In addition, to the extent applicable, we will make copies of this prospectus (as it may be supplemented or amended from time to time) available to the selling stockholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. The selling stockholders may indemnify any broker-dealer that participates in transactions involving the sale of the shares against certain liabilities, including liabilities arising under the Securities Act.

We have agreed to indemnify the selling stockholders against liabilities, including liabilities under the Securities Act and state securities laws, relating to the registration of the shares offered by this prospectus.

We have agreed with the selling stockholders to use commercially reasonable efforts to cause the registration statement of which this prospectus constitutes a part to become effective and to remain continuously effective until the earlier of (1) the date on which all of the shares covered by this prospectus have been sold or (2) the date on which all of the shares cease to be registrable securities (as defined in the registration rights agreement entered into in connection with the Private Placement).

- 13 -

LEGAL MATTERS

The validity of the shares of our common stock offered hereby is being passed upon for us by Wilmer Cutler Pickering Hale and Dorr LLP.

EXPERTS

The financial statements incorporated in this Prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2020 have been so incorporated in reliance on the report (which contains an explanatory paragraph relating to the Company's ability to contain as a going concern as described in Note 1 to the financial statements) of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

- 14 -

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at http://www.sec.gov. Copies of certain information filed by us with the SEC are also available on our website at www.solidbio.com. Our website is not a part of this prospectus and is not incorporated by reference in this prospectus.

This prospectus is part of a registration statement we filed with the SEC. This prospectus omits some information contained in the registration statement in accordance with SEC rules and regulations. You should review the information and exhibits in the registration statement for further information about us and our consolidated subsidiaries and our securities. Statements in this prospectus concerning any document we filed as an exhibit to the registration statement or that we otherwise filed with the SEC are not intended to be comprehensive and are qualified by reference to these filings. You should review the complete document to evaluate these statements. You can obtain a copy of the registration statement from the SEC's website.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to incorporate by reference much of the information we file with the SEC, which means that we can disclose important information to you by referring you to those publicly available documents. The information that we incorporate by reference in this prospectus is considered to be part of this prospectus. Because we are incorporating by reference future filings with the SEC, this prospectus is continually updated and those future filings may modify or supersede some of the information included or incorporated in this prospectus. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus or in any document previously incorporated by reference have been modified or superseded. This prospectus incorporates by reference the documents listed below (File No. 001-38360) and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (in each case, other than those documents or the portions of those documents not deemed to be filed) between the date of the initial registration statement and the effectiveness of the registration statement until the offering of the securities under the registration statement is terminated or completed:

- (1) Our Annual Report on Form 10-K for the year ended December 31, 2020, filed with the SEC on March 15, 2021;
- (2) Our Current Report on Form 8-K filed with the SEC on March 5, 2021; and
- (3) The description of our common stock contained in our Registration Statement on Form 8-A filed with the SEC on January 22, 2018, including any amendments or reports filed for the purpose of updating such description.

You may request a copy of these filings, at no cost, by writing or telephoning us at the following address or telephone number:

Solid Biosciences Inc. Attn: Investor Relations 141 Portland Street, Fifth Floor Cambridge, MA 02139 (617) 337-4680

- 15 -



24,324,320 SHARES

COMMON STOCK

PROSPECTUS

, 2021

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following table sets forth the various expenses to be incurred in connection with the sale and distribution of the securities being registered hereby, all of which will be borne by Solid Biosciences Inc. (except any underwriting discounts and commissions and expenses incurred by the selling stockholders for brokerage, accounting, tax or legal services or any other expenses incurred by the selling stockholders in disposing of the shares). All amounts shown are estimates except the SEC registration fee.

SEC registration fee	\$ 25,529.40
Legal fees and expenses	\$ 50,000
Accounting fees and expenses	\$ 15,000
Miscellaneous fees and expenses	\$ 4,470.60
Total expenses	\$ 95,000

Item 15. Indemnification of Directors and Officers.

Section 145 of the General Corporation Law of the State of Delaware, or the DGCL, provides, generally, that a corporation shall have the power to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding (except actions by or in the right of the corporation) by reason of the fact that such person is or was a director, officer, employee or agent of the corporation against all expenses, judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the corporation and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful. A corporation may similarly indemnify such person for expenses actually and reasonably incurred by such person in connection with the defense or settlement of any action or suit by or in the right of the corporation, and, in the case of claims, issues and matters as to which such person shall have been adjudged liable to the corporation, provided that a court shall have determined, upon application, that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which such court shall deem proper.

Section 102(b)(7) of the DGCL provides, generally, that our certificate of incorporation may contain a provision eliminating or limiting the personal liability of a director to the corporation or its shareholders for monetary damages for breach of fiduciary duty as a director, provided that such provision may not eliminate or limit the liability of a director (i) for any breach of the director's duty of loyalty to the corporation or its shareholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under section 174 of the DGCL, or (iv) for any transaction from which the director derived an improper personal benefit. No such provision may eliminate or limit the liability of a director for any act or omission occurring prior to the date when such provision became effective.

Our charter and bylaws provide for the indemnification of our directors and officers to the fullest extent permitted under the DGCL. As permitted by the DGCL, we have also entered into and expect to continue to enter into agreements to indemnify our directors, executive officers and other employees as determined by our board of directors. Under the terms of our indemnification agreements, we are required to indemnify each of our directors and officers, to the fullest extent permitted by the laws of the State of Delaware, if the basis of the indemnifee's

involvement was by reason of the fact that the indemnitee is or was a director, or officer, of the company or any of its subsidiaries or was serving at our request in an official capacity for another entity. We must indemnify our officers and directors against (1) attorneys' fees and (2) all other costs of any type or nature whatsoever, including any and all expenses and obligations paid or incurred in connection with investigating, defending, being a witness in, participating in (including on appeal) or preparing to defend, be a witness or participate in any completed, actual, pending or threatened action, suit, claim or proceeding, whether civil, criminal, administrative or investigative, or establishing or enforcing a right to indemnification under the indemnification agreements also set forth certain procedures that will apply in the event of a claim for indemnification thereunder. These indemnification provisions and the indemnification agreements may be sufficiently broad to permit indemnification of our officers and directors for liabilities, including reimbursement of expenses incurred, arising under the Securities Act.

In addition, we have purchased a policy of directors' and officers' liability insurance that insures our directors and officers against the cost of defense, settlement or payment of a judgment in some circumstances.

Item 16. Exhibits

Exhibit Number	Description
2.1	<u>Agreement and Plan of Merger, dated March 29, 2017, by and between Solid Biosciences, LLC and Solid GT, LLC (incorporated by reference to Exhibit 2.1 to the Registrant's Registration Statement on Form S-1 filed on December 29, 2017)</u>
2.2	Plan of Conversion, dated January 25, 2018 (incorporated by reference to Exhibit 2.2 to the Registrant's Annual Report on Form 10-K filed on March 29, 2018)
2.3	Agreement and Plan of Merger, dated January 25, 2018, by and among the Registrant, Bain Capital Life Sciences Fund, L.P., BCIP Life Sciences Associates, LP, BCLS Solid Bio, Inc., Foresite Capital Fund III, L.P. and FC Fund III Solid Holdings, Inc. (incorporated by reference to Exhibit 2.3 to the Registrant's Annual Report on Form 10-K filed on March 29, 2018)
4.1	Certificate of Incorporation of the Registrant (incorporated by reference to Exhibit 4.1 to the Registrant's Registration Statement on Form S-8 filed on January 29, 2018)
4.2	Bylaws of the Registrant (incorporated by reference to Exhibit 4.2 to the Registrant's Registration Statement on Form S-8 filed on January 29, 2018)
4.3	Securities Purchase Agreement dated December 10, 2020, by and among the Registrant and the several purchasers named therein (incorporated by reference to Exhibit 10.1 to our Current Report on Form 8-K filed with the SEC on December 11, 2020 (File <u>No. 001-38360))</u>
4.4	Registration Rights Agreement dated December <u>10, 2020, by and among the Registrant and the several purchasers named therein</u> (incorporated by reference to Exhibit 10.2 to our Current Report on Form 8-K filed with the SEC on December <u>11, 2020 (File</u> <u>No. 001-38360))</u>
4.5	Form of Common Stock Certificate (incorporated by reference to Exhibit 4.1 to the Registrant's Registration Statement on Form S-1 filed on December 29, 2017)
5.1*	Opinion of Wilmer Cutler Pickering Hale and Dorr LLP
23.1*	Consent of PricewaterhouseCoopers LLP
23.2*	Consent of Wilmer Cutler Pickering Hale and Dorr LLP (included in Exhibit 5.1 filed herewith)
24.1*	Power of Attorney (included on the signature page of this registration statement)

* Filed herewith

Item 17. Undertakings.

The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933, as amended, or the Securities Act;

(ii) To reflect in the prospectus any facts or events arising after the effective date of this registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Securities and Exchange Commission, or the Commission, pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in this registration statement or any material change to such information in this registration statement;

provided, however, that paragraphs (1)(i), (1)(ii) and (1)(iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, that are incorporated by reference in this registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of this registration statement.

(2) That, for the purposes of determining any liability under the Securities Act, each post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at the time shall be deemed to be the initial *bona fide* offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in this registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the indemnification provisions described herein, or otherwise, the registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Cambridge, Commonwealth of Massachusetts, on March 15, 2021.

SOLID BIOSCIENCES INC.

By: /s/ Ilan Ganot

Name: Ilan Ganot Title: Chief Executive Officer

SIGNATURES AND POWER OF ATTORNEY

We, the undersigned officers and directors of Solid Biosciences Inc. hereby severally constitute and appoint Ilan Ganot, Erin Powers Brennan and Joel Schneider, and each of them singly, our true and lawful attorneys with full power to any of them, and to each of them singly, to sign for us and in our names in the capacities indicated below the Registration Statement on Form S-3 filed herewith and any and all amendments (including post-effective amendments) to said Registration Statement, and any registration statement filed pursuant to Rule 462 under the Securities Act of 1933, as amended, in connection with said Registration Statement, and to file or cause to be filed the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, and generally to do all such things in our name and on our behalf in our capacities as officers and directors to enable Solid Biosciences Inc. to comply with the provisions of the Securities Act of 1933, as amended, and all requirements of the Securities and Exchange Commission, hereby ratifying and confirming all that said attorneys, and each of them, or their substitute or substitutes, shall do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	<u>Title</u>	Date
/s/ Ilan Ganot Ilan Ganot	President, Chief Executive Officer and Director (Principal Executive Officer)	March 15, 2021
/s/ Stephen DiPalma Stephen DiPalma	Interim Chief Financial Officer (Principal Financial and Accounting Officer)	March 15, 2021
/s/ Ian F. Smith Ian F. Smith	Chairman of the Board of Directors	March 15, 2021
/s/ Matthew Arnold Matthew Arnold	Director	March 15, 2021
/s/ Martin Freed Martin Freed, M.D.	Director	March 15, 2021
/s/ Robert Huffines Robert Huffines	Director	March 15, 2021

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/s/ Clare Kahn Clare Kahn, Ph.D.	Director	March 15, 2021
/s/ Georgia Keresty Georgia Keresty, Ph.D.	Director	March 15, 2021
/s/ Adam Koppel Adam Koppel, M.D., Ph.D.	Director	March 15, 2021
/s/ Sukumar Nagendran Sukumar Nagendran, M.D.	Director	March 15, 2021
/s/ Rajeev Shah	Director	March 15, 2021
Rajeev Shah /s/ Adam Stone	Director	March 15, 2021
Adam Stone /s/ Lynne Sullivan Lynne Sullivan	Director	March 15, 2021

Exhibit 5.1

WILMERHALE

+1 617 526 6000 (t) +1 617 526 5000 (f) wilmerhale.com

March 15, 2021

Solid Biosciences Inc. 141 Portland Street, 5th Floor Cambridge, Massachusetts 02139

Re: Registration Statement on Form S-3

Ladies and Gentlemen:

This opinion is furnished to you in connection with a Registration Statement on Form S-3 (the "Registration Statement") filed with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Securities Act"), for the registration of the resale of an aggregate of 24,324,320 shares (the "Shares") of common stock, \$0.001 par value per share (the "Common Stock"), of Solid Biosciences Inc., a Delaware corporation (the "Company"). All of the Shares are being registered for resale on behalf of certain stockholders of the Company (the "Selling Stockholders").

We are acting as counsel for the Company in connection with the registration for resale of the Shares. We have examined signed copies of the Registration Statement as filed with the Commission. We have also examined and relied upon minutes of meetings of the Board of Directors of the Company as provided to us by the Company, stock record books of the Company as provided to us by the Company, the Certificate of Incorporation and By-Laws of the Company, each as restated and/or amended to date, and such other documents as we have deemed necessary for purposes of rendering the opinions hereinafter set forth.

In our examination of the foregoing documents, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as copies, the authenticity of the originals of such latter documents and the legal competence of all signatories to such documents.

Our opinion below, insofar as it relates to the Shares being fully paid, is based solely on a certificate of the Chief Financial Officer of the Company confirming the Company's receipt of the consideration called for by the applicable resolutions authorizing the issuance of such Shares.

We assume that the appropriate action will be taken, prior to the offer and sale of the Shares by the Selling Stockholders, to register and qualify the Shares for sale under all applicable state securities or "blue sky" laws.

We express no opinion herein as to the laws of any state or jurisdiction other than the state laws of the Commonwealth of Massachusetts, the General Corporation Law of the State of Delaware and the federal laws of the United States of America.

Based upon and subject to the foregoing, we are of the opinion that the Shares have been duly authorized for issuance and are validly issued, fully paid and nonassessable. It is understood that this opinion is to be used only in connection with the offer and sale of the Shares while the Registration Statement is in effect.

Please note that we are opining only as to the matters expressly set forth herein, and no opinion should be inferred as to any other matters. This opinion is based upon currently existing statutes, rules, regulations and judicial decisions, and we disclaim any obligation to advise you of any change in any of these sources of law or subsequent legal or factual developments which might affect any matters or opinions set forth herein.

Wilmer Cutler Pickering Hale and Dorr LLP, 60 State Street, Boston Massachusetts 02109 Beijing Berlin Boston Brussels Denver Frankfurt London Los Angeles New York Palo Alto San Francisco Washington Solid Biosciences Inc. March 15, 2021 Page 2

We hereby consent to the filing of this opinion with the Commission as an exhibit to the Registration Statement in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act and to the use of our name therein and in the related Prospectus under the caption "Legal Matters." In giving such consent, we do not hereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission.

Very truly yours,

WILMER CUTLER PICKERING HALE AND DORR LLP

By: <u>/s/ Lia Der Mardero</u>sian

Lia Der Marderosian, a Partner

[Signature Page to WilmerHale 5.1 Opinion]

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-3 of Solid Biosciences Inc. of our report dated March 15, 2021 relating to the financial statements, which appears in Solid Biosciences Inc.'s Annual Report on Form 10-K for the year ended December 31, 2020. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ PricewaterhouseCoopers LLP Boston, Massachusetts March 15, 2021