CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Maximum Aggregate Offering Price[(1)]	Amount of Registration Fee[(2)]
Common Stock, par value $0.0001 per share	$200,000,000.00	$21,820.00

(1) The proposed maximum aggregate offering price is being used to calculate the registration fee pursuant to Rule 457(o) and Rule 457(r) under the Securities Act of 1933, as amended.

(2) Represents deferred payment of the registration fees in connection with the registrant's Registration Statement on Form S-3 (Registration No. 333-249339) being paid herewith.

Filed Pursuant to Rule 424(b)(5)
Registration Statement No. 333-249339

PROSPECTUS SUPPLEMENT **(To prospectus dated October 6, 2020)**

$200,000,000

Common Stock

We have entered into a sales agreement, or the sales agreement, with Cowen and Company, LLC, or Cowen, relating to shares of our common stock, par value $0.0001 per share, offered by this prospectus supplement and the accompanying prospectus. In accordance with the terms of the sales agreement, we may offer and sell shares of our common stock having an aggregate offering price of up to $200,000,000 from time to time through or to Cowen acting as our agent or principal.

Our common stock is listed on the Nasdaq Global Select Market under the symbol “SWTX”. On February 23, 2021, the last reported sale price of our common stock was $90.46 per share.

Sales of our common stock, if any, under this prospectus supplement and the accompanying prospectus will be made in sales deemed to be “at the market offerings” as defined in Rule 415(a)(4) promulgated under the Securities Act of 1933, as amended, or the Securities Act. Cowen is not required to sell any specific amount of securities, but will act as our sales agent using commercially reasonable efforts consistent with its normal trading and sales practices, on mutually agreed terms between Cowen and us. There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

Under the sales agreement, we may also sell shares of common stock to Cowen as principal for its own account, at a price to be agreed upon at the time of sale. If we sell shares to a Cowen as principal, we will enter into a separate terms agreement with Cowen, and we will describe the agreement in a separate prospectus supplement or pricing supplement.

The compensation to Cowen for sales of common stock sold pursuant to the sales agreement will be an amount up to 3.0% of the gross proceeds of any shares of common stock sold under the sales agreement. In connection with the sale of the common stock on our behalf, Cowen will be deemed to be an “underwriter” within the meaning of the Securities Act and the compensation of Cowen will be deemed to be underwriting commissions or discounts. We have also agreed to provide indemnification and contribution to Cowen with respect to certain liabilities, including liabilities under the Securities Act or the Securities Exchange Act of 1934, as amended.

Our business and an investment in our common stock involve significant risks. These risks are described under the caption “Risk Factors” beginning on page S-8 of this prospectus supplement, (including, without limitation, the risk factor entitled “The price of our stock may be volatile, and you could lose all or part of your investment”), page 3 of the accompanying prospectus, as well as those risks described in our most recent Annual Report on Form 10-K and in our other filings with the Securities and Exchange Commission that are incorporated by reference into this prospectus supplement.

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

COWEN

February 25, 2021

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Prospectus Supplement

Prospectus

ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement relates to the offering of our common stock. Before buying any of the common stock that we are offering, we urge you to carefully read this prospectus supplement, together with the information incorporated by reference in this prospectus supplement, and any free writing prospectus supplement or prospectus supplement that we have authorized for use in connection with this offering when making your investment decision. You should also read and consider the information in the documents we have referred you to under the headings "Where You Can Find More Information" and "Incorporation of Certain Information by Reference." These documents contain important information that you should consider when making your investment decision.

This prospectus supplement describes the terms of this offering of common stock and also adds to and updates information contained in the documents incorporated by reference into this prospectus supplement. To the extent there is a conflict between the information contained in this prospectus supplement, on the one hand, and the information contained in any document incorporated by reference into this prospectus supplement that was filed with the SEC before the date of this prospectus supplement, on the other hand, you should rely on the information in this prospectus supplement. If any statement in one of these documents is inconsistent with a statement in another document having a later date — for example, a document incorporated by reference into this prospectus supplement — the statement in the document having the later date modifies or supersedes the earlier statement.

You should rely only on the information contained in or incorporated by reference in this prospectus supplement, and any free writing prospectus or prospectus supplement that we have authorized for use in connection with this offering. We have not, and the sales agent has not, authorized anyone to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not, and the sales agent is not, making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted.

You should assume that the information appearing in this prospectus supplement, the documents incorporated by reference in this prospectus supplement, and any free writing prospectus or prospectus supplement that we have authorized for use in connection with this offering, is accurate only as of the date of those respective documents. Our business, financial condition, results of operations and prospects may have changed since those dates. You should read this prospectus supplement, the documents incorporated by reference in this prospectus supplement, and any free writing prospectus or prospectus supplement that we have authorized for use in connection with this offering, in their entirety before making an investment decision.

Unless otherwise mentioned or unless the context requires otherwise, all references in this prospectus supplement to "SpringWorks," "company," "we," "us" and "our" or similar references refer to SpringWorks Therapeutics, Inc.

This prospectus supplement and the information incorporated by reference herein include trademarks, service marks and trade names owned by us or other companies. All trademarks, service marks and trade names included or incorporated by reference into this prospectus supplement are the property of their respective owners.

PROSPECTUS SUMMARY

This summary highlights certain information about us, this offering and selected information contained elsewhere in or incorporated by reference into this prospectus supplement. This summary is not complete and does not contain all of the information that you should consider before deciding whether to invest in our common stock. For a more complete understanding of our company and this offering, we encourage you to read and consider carefully the more detailed information in this prospectus supplement, including the information incorporated by reference in this prospectus supplement, and the information included in any free writing prospectus that we have authorized for use in connection with this offering, including the information under the heading "Risk Factors" in this prospectus supplement on page S-8 and under similar headings in the documents incorporated by reference into this prospectus supplement

Overview

We are a clinical-stage biopharmaceutical company applying a precision medicine approach to acquiring, developing and commercializing life-changing medicines for underserved patient populations suffering from devastating rare diseases and cancer. We have a differentiated portfolio of small molecule targeted oncology product candidates and are advancing two potentially registrational clinical trials in rare tumor types, as well as several other programs addressing highly prevalent, genetically defined cancers. Our strategic approach and operational excellence in clinical development have enabled us to rapidly advance our two lead product candidates into late-stage clinical trials while simultaneously entering into multiple shared-value partnerships with industry leaders to expand our portfolio. From this foundation, we are continuing to build a differentiated global biopharmaceutical company intensely focused on understanding patients and their diseases in order to develop transformative targeted medicines.

Our most advanced product candidate, nirogacestat, is an oral, small molecule gamma secretase inhibitor, or GSI, initially in development for the treatment of desmoid tumors, a rare and often debilitating and disfiguring soft tissue tumor for which there are currently no therapies approved by the U.S. Food and Drug Administration, or FDA. We believe nirogacestat may address the significant limitations associated with existing treatment options and has the potential to become the first therapy approved by the FDA for both newly diagnosed and previously treated desmoid tumors. Since we licensed nirogacestat from Pfizer Inc., or Pfizer, in August 2017, the FDA has granted us Orphan Drug Designation, Fast Track Designation and Breakthrough Therapy Designation for this indication, and the European Commission granted Orphan Drug Designation to nirogacestat for the treatment of soft tissue sarcoma. In May 2019, we announced the initiation of the DeFi trial, a potentially registrational Phase 3 clinical trial of nirogacestat for adult patients with desmoid tumors, and in July 2020, we announced full enrollment of the DeFi trial. We expect to report topline data from this trial in the second half of 2021. In addition to the ongoing DeFi trial, a Phase 2 clinical trial was initiated in collaboration with the Children's Oncology Group, or COG, in September 2020, to evaluate nirogacestat for the treatment of pediatric patients with desmoid tumors.

Our second product candidate is mirdametinib, an oral, small molecule MEK inhibitor initially in development for the treatment of neurofibromatosis type 1-associated plexiform neurofibromas, or NF1-PN, a rare tumor of the peripheral nerve sheath that causes significant pain and disfigurement, and that most often manifests in children. We believe that mirdametinib has the potential to offer a best-in-class profile in order to enable the long-term treatment required for this patient population, as compared to other MEK inhibitors. As with nirogacestat, we licensed mirdametinib from Pfizer in August 2017; since then, the FDA has granted mirdametinib both Orphan Drug Designation and Fast Track Designation for NF1-PN, and the European Commission has granted mirdametinib Orphan Drug Designation for NF1. In October 2019, we announced the initiation of the ReNeu trial, a potentially registrational Phase 2b clinical trial of mirdametinib for pediatric and adult patients with NF1-PN. In February 2021, we reported interim clinical data from the first 20 adult patients enrolled in the Phase 2b ReNeu trial. We expect to complete enrollment of the trial in the second half of 2021.

In addition to our late-stage programs in rare oncology indications, we have expanded our portfolio to develop targeted therapies for the treatment of highly prevalent hematologic malignancies and genetically defined metastatic solid tumors. To advance this strategy, we are taking a precision medicine approach in collaboration with industry leaders. In hematologic malignancies, we have announced collaborations with GlaxoSmithKline, or GSK, Janssen Biotech, Inc., or Janssen, Pfizer, Allogene Therapeutics, Inc., or

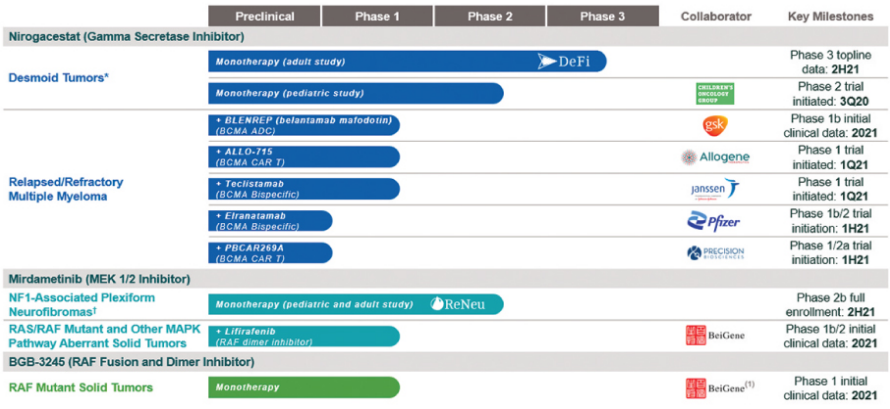
Allogene, and Precision BioSciences, Inc., or Precision, to develop novel combination regimens of nirogacestat alongside our collaborators' B-cell maturation antigen, or BCMA, directed therapies for the treatment of multiple myeloma. In addition to our industry collaborations with leading BCMA therapy developers, we are working with the Fred Hutchinson Cancer Research Center, or Fred Hutch, to further explore nirogacestat's ability to potentiate BCMA-directed therapies as part of a sponsored research agreement. In genetically defined metastatic solid tumors, our current efforts center on the mitogen activated protein kinase, or MAPK, pathway. In collaboration with BeiGene, Ltd., or BeiGene, we are exploring the combination of mirdametinib with BeiGene's lifirafenib in RAS mutated and other MAPK aberrant cancers. In addition, we are exploring the use of BGB-3245 in a distinct set of genetically defined BRAF mutated tumors via MapKure, LLC, or MapKure, an entity jointly owned by us and BeiGene.

Together, we believe that our portfolio provides multiple opportunities for value creation across three distinct categories of oncology programs, each of which has the potential to provide meaningful clinical benefit to patients suffering from severe rare diseases and cancer. In our late-stage rare oncology programs, we believe that our two potentially registrational trials with nirogacestat and mirdametinib each have best-in-class potential for the patient populations in which they are being advanced. In our malignant hematology programs, we believe that nirogacestat has the potential to become a cornerstone of BCMA combination therapy in multiple myeloma and we are seeking to achieve this goal by working with partners developing BCMA-targeted agents across modalities. In our biomarker defined metastatic solid tumor programs, we believe that our precision medicine approach to cancers harboring mutations in key MAPK pathway genes, such as RAS and BRAF, provides the opportunity for meaningful clinical benefit for biomarker defined patient populations.

Furthermore, we intend to continue to expand our portfolio by licensing additional programs with strong biological rationales and validated mechanisms of action. We also plan to continue using shared-value partnerships to maximize the potential of our therapies to serve patients. Since our founding, we have invested in building leading clinical development capabilities and have focused on structuring innovative partnerships that seek to align incentives and optimize business outcomes for each party involved. We believe that this approach will continue to allow us to expand our shared-value relationships with innovators, maximize the potential of our existing and future portfolio, and ultimately support the building of a scalable and sustainable business focused on the efficient advancement and commercialization of product candidates that hold the potential to transform the lives of patients living with severe rare diseases and cancer.

Our Portfolio

The following table summarizes our current portfolio of product candidates and anticipated key milestones:



Note: Nirogacestat = PF-03084014 and Mirdametinib = PD-0325901 (both in-licensed from Pfizer).

* Received Orphan Drug, Fast Track and Breakthrough Therapy Designations.

† Received Orphan Drug and Fast Track Designations.

(1) Being developed by MapKure, an entity that is jointly owned by us and BeiGene.

For purposes of this prospectus supplement, when we refer herein to a "potentially registrational trial," we are referring to a clinical trial to evaluate efficacy and safety of a product candidate to potentially support submission of a marketing application for such product candidate with the applicable regulatory authorities. Such a trial is also sometimes referred to as a Phase 2/3 or Phase 3 clinical trial or a pivotal trial.

Nirogacestat is currently in the potentially registrational Phase 3 DeFi clinical trial for the treatment of adult patients with desmoid tumors, which are rare and often debilitating and disfiguring soft tissue tumors. Desmoid tumors can aggressively invade surrounding healthy tissues and cause significant morbidities, including severe pain, internal bleeding, incapacitating loss of range of motion and, in rare cases, death. There are currently no therapies approved by the FDA for the treatment of desmoid tumors. Nirogacestat has been generally well tolerated in approximately 300 subjects and clinical activity was observed in the desmoid tumor patients enrolled in two previous clinical trials, many of whom had been heavily pre-treated. Since then, the FDA has granted nirogacestat Orphan Drug Designation, Fast Track Designation and Breakthrough Therapy Designation for the treatment of desmoid tumors. We are currently conducting the DeFi trial, a double-blind, randomized, placebo-controlled clinical trial in adults with progressing desmoid tumors. We believe that we have designed the DeFi trial such that, if nirogacestat demonstrates clinical activity consistent with that observed in desmoid tumor patients treated to date with nirogacestat, the primary endpoint of this clinical trial should be met. If the results are favorable, we plan to file for marketing approval for nirogacestat in the U.S. and select international markets. In July 2020, we announced full enrollment of the DeFi trial, and we expect to report topline data in the second half of 2021. In addition to the ongoing DeFi trial, a Phase 2 clinical trial was initiated in collaboration with COG in September 2020 to evaluate nirogacestat for the treatment of pediatric patients with desmoid tumors.

Nirogacestat + BLENREP (belantamab mafodotin-blmf) is being explored in collaboration with GSK in patients with relapsed or refractory multiple myeloma, or RRMM. GSK's BLENREP is the most clinically advanced BCMA antibody drug conjugate, or ADC, and is approved as a monotherapy in RRMM patients whose disease has progressed despite prior treatment with at least four prior therapies, including an immunomodulatory agent, proteasome inhibitor and anti-CD38 antibody. Based on data presented by GSK demonstrating synergy when combining BLENREP and nirogacestat in preclinical multiple myeloma models, we believe that the clinical activity of BLENREP may be enhanced with the addition of nirogacestat. Other than the manufacturing of nirogacestat and certain expenses related to intellectual property rights, GSK is responsible for the conduct and expenses of the collaboration, which is governed by a joint development committee with equal representation from each party. The nirogacestat combination with BLENREP is being evaluated as a cohort within GSK's DREAMM-5 platform study, which is an adaptive Phase 1b clinical trial that is currently enrolling patients. We expect initial clinical data to be reported for the combination of nirogacestat and BLENREP in 2021.

Nirogacestat + ALLO-715 is being explored in collaboration with Allogene in patients with RRMM. Allogene's ALLO-715 is a clinical-stage allogeneic BCMA chimeric antigen receptor type T, or CAR T, cell therapy. We believe that the clinical activity of allogeneic BCMA CAR T cell therapies, including ALLO-715, may be enhanced with the addition of a GSI like nirogacestat, and encouraging clinical activity has been demonstrated when combining a GSI with other BCMA CAR T cell therapies. Other than the manufacturing of nirogacestat and certain expenses related to intellectual property rights, Allogene is responsible for the conduct and expenses of the collaboration, which is governed by a joint development committee with equal representation from each party. In December 2020, Allogene announced clearance from the FDA for its Investigational New Drug application, or IND to study ALLO-715 in combination with nirogacestat. As part of their ongoing Phase 1 clinical trial for ALLO-715, Allogene initiated the cohort evaluating the combination in the first quarter of 2021.

Nirogacestat + teclistamab (JNJ-64007957) is being explored in collaboration with Janssen in patients with RRMM. Janssen's teclistamab is a clinical-stage bispecific antibody that targets BCMA and CD3 with monotherapy clinical activity having been demonstrated in RRMM patients. Based on data published by Janssen demonstrating that the activity of teclistamab was improved when combined with a GSI in preclinical

multiple myeloma models, we believe that the clinical activity of teclistamab may be enhanced with the addition of nirogacestat. Other than the manufacturing of nirogacestat and certain expenses related to intellectual property rights, Janssen is responsible for the conduct and expenses of the collaboration, which is governed by a joint oversight committee with equal representation from each party. A Phase 1 clinical trial evaluating the combination was initiated in the first quarter of 2021 by Janssen.

Nirogacestat + elranatamab (PF-06863135) is being explored in collaboration with Pfizer in patients with RRMM. Pfizer's elranatamab is a clinical-stage bispecific antibody that targets BCMA and CD3 with monotherapy clinical activity having been demonstrated in RRMM patients. Based on data presented by Pfizer demonstrating that the activity of elranatamab was improved when combined with a GSI in preclinical multiple myeloma models, we believe that the clinical activity of elranatamab may be enhanced with the addition of nirogacestat. Other than the manufacturing of nirogacestat and certain expenses related to intellectual property rights, Pfizer is responsible for the conduct and expenses of the collaboration, which is governed by a joint development committee with equal representation from each party. Pfizer is expected to initiate a Phase 1b/2 clinical trial evaluating the combination in the first half of 2021.

Nirogacestat + PBCAR269A is being explored in collaboration with Precision in patients with RRMM. Precision's PBCAR269A is a clinical-stage allogeneic BCMA CAR T cell therapy. Based on preclinical data with PBCAR269A, we believe that the clinical activity of PBCAR269A may be enhanced with the addition of nirogacestat. Other than the manufacturing of nirogacestat and certain expenses related to intellectual property rights, Precision is responsible for the conduct and expenses of the collaboration, which is governed by a joint steering committee with equal representation from each party. Precision is expected to begin evaluating the combination in the first half of 2021 by expanding its ongoing Phase 1/2a clinical trial to include a nirogacestat combination arm.

Mirdametinib is currently in the potentially registrational Phase 2b ReNeu clinical trial for the treatment of NF1-PN, which is a rare tumor of peripheral nerve sheaths that causes significant pain and disfigurement, and that most often manifests in children. In a previous Phase 2 clinical trial conducted in NF1-PN patients, mirdametinib was observed to be clinically active and generally well tolerated. Since then, the FDA has granted mirdametinib Orphan Drug Designation for the treatment of NF1 and Fast Track Designation for the treatment of NF1-PN, and the European Commission has granted mirdametinib Orphan Drug Designation for NF1. The Phase 2b ReNeu trial is an open-label, single-arm trial enrolling both pediatric and adult NF1-PN patients. Given the clinical activity and tolerability observed with mirdametinib in the previous NF1-PN clinical trial and informed by our discussions with the FDA, we designed our Phase 2b clinical trial in a manner that we believe has the potential to generate sufficient data to support approval in both pediatric and adult NF1-PN patients. In February 2021, we reported interim clinical data from the first 20 adult patients enrolled in the Phase 2b ReNeu trial. We expect to complete enrollment for the ReNeu trial in the second half of 2021. If, at the conclusion of the trial, the results are favorable, we plan to file for marketing approval for mirdametinib in the U.S. and select international markets.

Mirdametinib + lifirafenib is a combination therapy that we are evaluating in collaboration with BeiGene in a Phase 1b/2 clinical trial that is currently enrolling patients with advanced or refractory solid tumors that harbor various oncogenic driver mutations in the MAPK pathway, a signaling pathway whose constitutive activation has been reported in approximately 25% of human cancers due to mutations in genes such as RAS and RAF. Lifirafenib is a pan-RAF dimer inhibitor that was observed to be clinically active in advanced solid tumor patients with RAS and RAF mutations. Preclinical synergy has been observed with mirdametinib and lifirafenib in RAS mutant or MAPK aberrant tumors and based on these data, we believe that lifirafenib's monotherapy clinical activity can be enhanced with the addition of mirdametinib and that this combination may represent a promising therapy for cancers whose growth is reliant on MAPK pathway signaling, particularly those with mutations in RAS. In May 2019, we announced the initiation of an adaptive Phase 1b/2 clinical trial in patients with advanced or refractory solid tumors harboring relevant genetic mutations in the MAPK pathway are currently being enrolled in Australia and in the U.S. We expect to report initial clinical data from the ongoing Phase 1b/2 clinical trial in 2021.

BGB-3245 is an investigational oral, selective small molecule inhibitor of specific BRAF driver mutations and genetic fusions. BGB-3245 is being advanced via MapKure, an entity jointly owned by us and BeiGene. BGB-3245 is exclusively licensed to MapKure by BeiGene and is being initially developed as a monotherapy. Preclinical activity has been observed with BGB-3245 in a range of tumor models with BRAF mutations or

BRAF fusions that are presently unaddressed with approved BRAF-directed therapies. MapKure initiated an adaptive Phase 1 dose escalation and expansion clinical trial evaluating BGB-3245 in genetically defined solid tumors in the first quarter of 2020 and patient enrollment is ongoing in Australia and in the U.S. We expect MapKure to report initial clinical data from the ongoing Phase 1 trial in 2021.

Our History and Team

We were founded in August 2017 and concurrently acquired rights to certain assets from Pfizer, including exclusive worldwide licenses to nirogacestat and mirdametinib. To date, we have raised approximately $664 million from leading strategic and institutional investors through two private financings and our initial public offering, or IPO, in September 2019.

We are led by biopharmaceutical experts with extensive experience in building and operating organizations that develop and deliver innovative medicines to patients. Our team has broad experience in clinical development, regulatory affairs, manufacturing and commercialization of novel medicines, particularly in oncology and rare diseases. Our Chief Executive Officer, Saqib Islam, has more than 25 years of experience in biopharmaceuticals and finance, and has led our key business operations and strategic corporate planning activities since our inception. Members of our management team have held leadership positions at companies that have successfully discovered, acquired, developed and commercialized therapies for a range of devastating rare diseases and highly prevalent cancers. These companies include Alexion Pharmaceuticals, Inc., AstraZeneca plc, Bamboo Therapeutics, Inc., Bristol-Myers Squibb Company, Forest Laboratories, Inc., GSK, Merck & Co., Inc., Moderna, Inc., Pfizer and United Therapeutics Corporation.

COVID-19 pandemic

In December 2019, a novel strain of coronavirus, severe acute respiratory syndrome coronavirus 2, or SARS-CoV-2, was identified in Wuhan, China. On March 11, 2020, the World Health Organization designated the outbreak of COVID-19, the disease associated with SARS-CoV2, as a global pandemic. Governments and businesses around the world have taken unprecedented actions to mitigate the spread of COVID-19, including, but not limited to, shelter- in-place orders, quarantines, significant restrictions on travel, as well as restrictions that prohibit many employees from going to work. Since the onset of the COVID-19 pandemic, we have undertaken a number of business continuity measures to mitigate potential disruption to our operations and in order to preserve the integrity of our research and development programs. To date, we have not experienced any material disruptions to the execution of the research and development activities that we currently have underway; however, as a result of the pandemic we may experience disruptions that could impact our research and development timelines and outcomes. We will continue to evaluate the impact of the COVID-19 pandemic, along with the impact of emerging variants, on our business. While the extent to which COVID-19 impacts our future results will depend on future developments, it is possible that the global pandemic and its associated economic impacts could result in a material impact to our business, future financial condition, results of operations and cash flows.

Corporate history and information

We were originally formed in Delaware in August 2017 and until March 29, 2019, we conducted our business through SpringWorks Therapeutics, LLC, a Delaware limited liability company. Pursuant to the terms of a corporate reorganization and merger that was completed on March 29, 2019, or the Reorganization, all of the equity interests in SpringWorks Therapeutics, LLC were exchanged for the same number and class of newly issued securities of SpringWorks Therapeutics, Inc. and, as a result, SpringWorks Therapeutics, LLC became a wholly owned subsidiary of SpringWorks Therapeutics, Inc. Our principal executive offices are located at 100 Washington Blvd, Stamford, CT 06902, and our phone number is (203) 883-9490. Our website address is www.springworkstx.com. The information contained in or accessible from our website is not incorporated into this prospectus supplement, and you should not consider it part of this prospectus supplement.

On September 17, 2019, we completed our IPO, pursuant to which we issued and sold 10,350,000 shares of common stock, including the exercise in full by the underwriters of their option to purchase 1,350,000 additional shares of our common stock, at the public offering price of $18.00 per share, resulting in net

proceeds of $169.7 million, after deducting underwriting discounts and commissions and other offering expenses. Upon the closing of the IPO, our outstanding convertible preferred stock automatically converted into shares of common stock.

On October 7, 2020, we completed an underwritten public offering of 5,637,254 shares of common stock, including the exercise in full by the underwriters of their option to purchase 735,294 additional shares of our common stock, at the public offering price of $51.00 per share, resulting in net proceeds of approximately $269.5 million, after deducing underwriting discounts and commissions and other offering expenses.

We own various U.S. federal trademark applications and unregistered trademarks, including our company name and our logo. All other trademarks or trade names referred to in this prospectus supplement are the property of their respective owners. Solely for convenience, the trademarks and trade names in this prospectus supplement are referred to without the symbols ® and ™, but such references should not be construed as any indicator that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto.

THE OFFERING

Common Stock Offered By Us	Shares of our common stock having an aggregate offering price of up to $200,000,000.
Common stock outstanding immediately following the offering	51,030,512 shares, assuming sales of 2,210,921 in this offering at an assumed offering price of $90.46 per share, which was the last reported sale price of our common stock on the Nasdaq Global Select Market on February 23, 2021. The actual number of shares issued will vary depending on how many shares of our common stock we choose to sell and the prices at which such sales occur.
Plan of Distribution	"At-the-market" offering that may be made from time to time through our sales agent, Cowen and Company, LLC. See "Plan of Distribution" on page S-15 of this prospectus supplement.
Use of Proceeds	Our management will retain broad discretion regarding the allocation and use of the net proceeds. We currently intend to use the net proceeds from this offering for working capital and other general corporate purposes. See "Use of Proceeds" on page S-13 of this prospectus supplement.
Risk Factors	Investing in our common stock involves significant risks. See "Risk Factors" on page S-8 of this prospectus supplement, and under similar headings in other documents incorporated by reference into this prospectus supplement and the accompanying prospectus.
Nasdaq Global Select Market Symbol	"SWTX"

The number of shares of our common stock to be outstanding after this offering is based on 48,819,591 shares of our common stock (which includes 686,868 issued but unvested shares of restricted common stock subject to repurchase) outstanding as of December 31, 2020, and excludes:

- 4,505,546 shares of common stock issuable upon the exercise of stock options outstanding as of December 31, 2020 with a weighted-average exercise price of $15.51 per share;
- 1,155,540 shares of common stock issuable upon the exercise of stock options issued subsequent to December 31, 2020 with a weighted-average exercise price of $70.73 per share;
- 136,030 restricted stock awards issued subsequent to December 31, 2020;
- 4,256,747 shares of common stock reserved for future issuance in connection with future grants under our 2019 Stock Option and Equity Incentive Plan, or the 2019 Plan; and
- 872,214 shares of common stock reserved for the future issuance under our 2019 Employee Stock Purchase Plan, or the 2019 ESPP.

Except as otherwise indicated, all information in this prospectus supplement assumes no exercise of stock options listed above and no issuance of shares available, or that may become available, for future issuance under our equity compensation plans after December 31, 2020.

RISK FACTORS

Investing in our securities involves a high degree of risk. You should carefully review the risks and uncertainties described below and under the section titled "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2020, as well as other information in this prospectus supplement and the documents incorporated by reference herein, before deciding whether to invest in our securities. Such risks and uncertainties and those discussed below are not the only ones facing us. Additional risks and uncertainties not presently known to us, or that we currently see as immaterial, may also harm our business. If any of these risks occur, our business, financial condition and operating results could be harmed, the trading price of our common stock could decline and you could lose part or all of your investment.

Risks Related to This Offering

If you purchase our common stock in this offering, you will incur immediate and substantial dilution in the book value of your shares.

The public offering price of our common stock will be substantially higher than the as adjusted net tangible book value per share of our common stock after this offering. Investors purchasing common stock in this offering will pay a price per share that substantially exceeds the as adjusted net tangible book value per share after this offering. As a result, investors purchasing common stock in this offering will incur immediate dilution of $75.76 per share, based on the public offering price of $90.46 per share, representing the difference between our as adjusted net tangible book value per share after giving effect to this offering and the assumed public offering price.

This dilution is due to our investors who purchased shares prior to this offering having paid substantially less when they purchased their shares than the price offered to the public in this offering. To the extent outstanding options are exercised, there will be further dilution to new investors. As a result of the dilution to investors purchasing shares in this offering, investors may receive significantly less than the purchase price paid in this offering, if anything, in the event of our liquidation. For a further description of the dilution that you will experience immediately after this offering, see "Dilution."

You may experience future dilution as a result of future equity offerings.

In order to raise additional capital, we expect to in the future offer additional shares of our common stock or other securities convertible into or exchangeable for our common stock. We cannot assure you that we will be able to sell shares or other securities in any other offering at a price per share that is equal to or greater than the price per share paid by investors in this offering, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders. The price per share at which we sell additional shares of our common stock or other securities convertible into or exchangeable for our common stock in future transactions may be higher or lower than the price per share in this offering.

The actual number of shares we will issue under the sales agreement with the sales agent, at any one time or in total, is uncertain.

Subject to certain limitations in the sales agreement with the agent and compliance with applicable law, we have the discretion to deliver placement notices to the sales agents at any time throughout the term of the sales agreement. The number of shares that are sold by the agent after delivering a placement notice will fluctuate based on the market price of the common stock during the sales period and limits we set with the agent.

We have broad discretion in the use of our existing cash and cash equivalents, including the net proceeds from this offering, and may not use them effectively.

Our management will have broad discretion in the application of our cash and cash equivalents, including the net proceeds from this offering, including for any of the purposes described in the section titled "Use of proceeds," and you will not have the opportunity as part of your investment decision to assess whether such proceeds are being used appropriately. Because of the number and variability of factors that will determine our use of our cash and cash equivalents, including the net proceeds from this offering, their

ultimate use may vary substantially from their currently intended use. Our management might not apply our cash and cash equivalents, including the net proceeds from this offering, in ways that ultimately increase the value of your investment. The failure by our management to apply these funds effectively could harm our business. Pending their use, we may invest the net proceeds from this offering in short-term, investment-grade, interest-bearing securities. These investments may not yield a favorable return to our stockholders. If we do not invest or apply the net proceeds from this offering in ways that enhance stockholder value, we may fail to achieve expected financial results, which could cause our stock price to decline.

An active trading market for our common stock may not be sustained.

Our shares of common stock began trading on The Nasdaq Global Select Market on September 13, 2019. Given the limited trading history of our common stock, there is a risk that an active trading market for our shares will not be sustained, which could put downward pressure on the market price of our common stock and thereby affect the ability of our stockholders to sell their shares. Further, an inactive market may also impair our ability to raise capital by selling shares of our common stock and may impair our ability to enter into strategic partnerships or acquire companies or products by using our shares of common stock as consideration.

The price of our stock may be volatile, and you could lose all or part of your investment.

The trading price of our common stock is likely to be highly volatile and could be subject to wide fluctuations in response to various factors, some of which are beyond our control, including limited trading volume. In addition to the factors discussed in this "Risk factors" section and in the documents incorporated by reference into this prospectus supplement, these factors include:

- the commencement, enrollment or results of our ongoing potentially registrational clinical trials for nirogacestat and mirdametinib;
- any delay in our regulatory filings for our product candidates and any adverse development or perceived adverse development with respect to the applicable regulatory authority's review of such filings, including without limitation the FDA's issuance of a "refusal to file" letter or a request for additional information;
- adverse results from or delays in future clinical trials;
- our decision to initiate a clinical trial, not to initiate a clinical trial or to terminate an existing clinical trial;
- adverse regulatory decisions, including failure to receive regulatory approval of our product candidates or any future product candidate;
- changes in laws or regulations applicable to our product candidates or any future product candidate, including but not limited to clinical trial requirements for approvals;
- changes in the structure of healthcare payment systems;
- adverse developments concerning our manufacturers;
- our inability to obtain adequate product supply for any approved product or inability to do so at acceptable prices;
- our inability to establish collaborations or partnerships, if needed;
- our failure to commercialize our product candidates, if approved;
- additions or departures of key medical, scientific or management personnel;
- unanticipated serious safety concerns related to the use of our product candidates;
- introduction of new products or services offered by us or our competitors;
- clinical trial results for other product candidates that could compete with our product candidates;
- announcements of significant acquisitions, strategic partnerships, joint ventures or capital commitments by us or our competitors;

- our ability to effectively manage our growth;
- actual or anticipated variations in quarterly operating results;
- our cash position;
- our failure to meet the estimates and projections of the investment community or that we may otherwise provide to the public;
- publication of research reports about us or our industry, or product candidates in particular, or positive or negative recommendations or withdrawal of research coverage by securities analysts;
- changes in the market valuations of similar companies;
- overall performance of the equity markets;
- sales of our common stock by us or our stockholders in the future;
- trading volume of our common stock;
- changes in accounting practices;
- ineffectiveness of our internal controls;
- disputes or other developments relating to proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our technologies;
- significant lawsuits, including patent or stockholder litigation;
- general political and economic conditions; and
- other events or factors, many of which are beyond our control.

In addition, the stock market in general, and the market for biopharmaceutical companies in particular, have experienced extreme price and volume fluctuations resulting from the COVID-19 pandemic or other macroeconomic factors and have often been unrelated or disproportionate to the operating performance of these companies. Broad market and industry factors may negatively affect the market price of our common stock, regardless of our actual operating performance. If the market price of our common stock does not exceed your purchase price, you may not realize any return on your investment in us and may lose some or all of your investment. In the past, securities class action litigation has often been instituted against companies following periods of volatility in the market price of a company's securities. This type of litigation, if instituted, could result in substantial costs and a diversion of management's attention and resources, which would harm our business, operating results or financial condition.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus and the information incorporated by reference herein and therein contain express or implied forward-looking statements, which reflect our current views with respect to, among other things, our operations and financial performance. We make such forward-looking statements pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 and other federal securities laws. All statements other than statements of historical facts contained in this prospectus supplement, the accompanying prospectus and the information incorporated by reference herein and therein, including statements regarding our strategy, future operations, future financial position, future revenue, projected costs, prospects, plan, objectives of management and expected market growth are forward-looking statements that involve risks and uncertainties. You can identify these forward-looking statements by the use of words such as “outlook,” “believes,” “expects,” “potential,” “continues,” “may,” “will,” “should,” “seeks,” “approximately,” “predicts,” “intends,” “plans,” “estimates,” “anticipates” or the negative version of these words or other comparable words. Accordingly, there are or will be important factors that could cause actual outcomes or results to differ materially from those indicated in these statements. We believe these factors include but are not limited to those described under “Risk Factors” and include, among other things:

- the success, cost and timing of our product development activities and clinical trials, including statements regarding the timing of our ongoing Phase 3 clinical trial of nirogacestat, the timing of our ongoing Phase 2b clinical trial of mirdametinib and the initiation and completion of any other clinical trials and related preparatory work, the expected timing of the availability of results of the clinical trials and the potentially registrational nature of the single Phase 3 clinical trial and the Phase 2b clinical trial;
- the fact that interim data from a clinical study, such as the interim data of the ReNeu clinical trial, including its interim primary efficacy, safety and tolerability data, may not be predictive of the final results of such study or the results of other ongoing or future studies;
- the potential attributes and benefits of our product candidates;
- our plans to commercialize any of our product candidates that achieve approval either alone or in partnership with others;
- our ability to obtain funding for our operations, including funding necessary to complete further development of our product candidates, and if approved, commercialization;
- the period over which we anticipate our existing cash, cash equivalents and marketable securities, will be sufficient to fund our operating expenses and capital expenditure requirements;
- the potential for our business development efforts to maximize the potential value of our portfolio;
- our ability to identify, in-license or acquire additional product candidates;
- the ability and willingness of our third-party collaborators to continue research and development activities relating to our product candidates that we are developing as combination therapies;
- our ability to obtain and maintain regulatory approval for our product candidates, and any related restrictions, limitations or warnings in the label of an approved product candidate;
- the potential benefit of Orphan Drug Designation, Fast Track Designation and Breakthrough Therapy Designation for nirogacestat, mirdametinib and any other of our product candidates that may receive one or more of these designations;
- our ability to compete with companies currently marketing or engaged in the development of treatments for desmoid tumors, NF1-PN and other oncology and rare disease indications;
- our expectations regarding our ability to obtain and maintain intellectual property protection or market exclusivity for our product candidates and the duration of such protection;
- our ability and the potential to successfully manufacture our product candidates for preclinical studies, clinical trials and, if approved, for commercial use, the capacity of our current contract manufacturing organizations, or CMOs, to support clinical supply and commercial-scale production

for product candidates and our potential election to pursue additional CMOs for manufacturing supplies of drug substance and finished drug product in the future;

- the size and growth potential of the markets for our product candidates, and our ability to serve those markets, either alone or in partnership with others;
- the rate and degree of market acceptance of our product candidates, if approved;
- regulatory developments in the United States, or U.S. and foreign countries;
- our ability to contract with third-party suppliers and manufacturers and their ability to perform adequately;
- the success of competing products that are or may become available;
- risks associated with the COVID-19 pandemic, which may adversely impact our business, preclinical studies and clinical trials;
- our ability to attract and retain key scientific, medical, commercial or management personnel;
- our estimates regarding expenses, future revenue, capital requirements and needs for additional financing;
- our financial performance; and
- developments and projections relating to our competitors or our industry.

Although we believe that the expectations reflected in these forward-looking statements are reasonable, these statements relate to our strategy, future operations, future financial position, future revenue, projected costs, prospects, plans, objectives of management and expected market growth, and involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements. You are urged to carefully review the disclosures we make concerning these risks and other factors that may affect our business and operating results under “Item 1A. Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2020, as well as our other reports filed with the Securities and Exchange Commission, or the SEC. Any public statements or disclosures by us following this prospectus supplement that modify or impact any of the forward-looking statements contained in this prospectus supplement will be deemed to modify or supersede such statements in this prospectus supplement. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this prospectus supplement. The Company does not intend, and undertakes no obligation, to update any forward-looking information to reflect events or circumstances after the date of this document or to reflect the occurrence of unanticipated events, unless required by law to do so.

USE OF PROCEEDS

We may issue and sell shares of our common stock having aggregate sales proceeds of up to $200 million from time to time after the date of this prospectus supplement. Because there is no minimum offering amount required as a condition to close this offering, the actual total public offering amount, commissions and proceeds to us, if any, are not determinable at this time. There can be no assurance that we will sell any shares under or fully utilize the sales agreement with Cowen as a source of financing.

We currently intend to use the net proceeds from this offering for working capital and other general corporate purposes. We may also use a portion of the net proceeds to in-license, acquire or invest in new businesses, technologies or assets. Although we have no current agreements, commitments or understandings with respect to any such in-license or acquisition, we evaluate such opportunities and engage in related discussions with third parties from time to time.

DILUTION

If you invest in our common stock in this offering, your ownership interest will be diluted to the extent of the difference between the public offering price per share of our common stock and the as adjusted net tangible book value per share of our common stock immediately after this offering.

Our historical net tangible book value was $557.1 million, or $11.41 per share, as of December 31, 2020. Our historical net tangible book value is equal to our total tangible assets less our total liabilities, and our historical net tangible book value per share is that number divided by the number of shares of common stock outstanding as of such date.

After giving effect to our sale of 2,210,921 shares of common stock during the term of the sales agreement with the agent in the aggregate amount of $200.0 million at an assumed public offering price of $90.46 per share, which was the last reported sale price of our common stock on the Nasdaq Global Select Market on February 23, 2021, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us, our as adjusted net tangible book value as of December 31, 2020 would have been $750.4 million, or $14.70 per share of common stock. This represents an immediate increase in net tangible book value of $3.29 per share to existing stockholders and an immediate dilution in net tangible book value of $75.76 per share to purchasers of common stock in this offering. Dilution per share to new investors represents the difference between the amount per share paid by purchasers of shares of common stock in this offering and the as adjusted net tangible book value per share of common stock immediately after completion of this offering. The following table illustrates this dilution on a per share basis:

Assumed public offering price per share		$90.46
Historical Net tangible book value per share as of December 31, 2020	$11.41	
Increase in net tangible book value per share attributable to this offering	$ 3.29	
As adjusted net tangible book value per share as of December 31, 2020, after giving effect to this offering		$14.70
Dilution per share to new investors purchasing shares in this offering		$75.76

The number of shares of our common stock to be outstanding after this offering is based on 48,819,591 shares of our common stock (which includes 686,868 issued but unvested shares of restricted common stock subject to repurchase) outstanding as of December 31, 2020, and excludes:

- 4,505,546 shares of common stock issuable upon the exercise of stock options outstanding as of December 31, 2020 with a weighted-average exercise price of $15.51 per share;
- 1,155,540 shares of common stock issuable upon the exercise of stock options issued subsequent to December 31, 2020 with a weighted-average exercise price of $70.73 per share;
- 136,030 restricted stock awards issued subsequent to December 31, 2020;
- 4,256,747 shares of common stock reserved for future issuance under our 2019 Stock Option and Equity Incentive Plan, or the 2019 Plan; and
- 872,214 shares of common stock reserved for the future issuance under our 2019 Employee Stock Purchase Plan, or the 2019 ESPP.

Except as otherwise indicated, all information in this prospectus supplement assumes no exercise of stock options listed above and no issuance of shares available, or that may become available, for future issuance under our equity compensation plans after December 31, 2020.

PLAN OF DISTRIBUTION

We have entered into a sales agreement with Cowen, under which we may issue and sell from time to time up to $200,000,000 of our common stock through or to Cowen as our sales agent or principal. Sales of our common stock, if any, will be made at market prices by any method that is deemed to be an "at the market offering" as defined in Rule 415(a)(4) under the Securities Act.

Cowen will offer our common stock subject to the terms and conditions of the sales agreement on a daily basis or as otherwise agreed upon by us and Cowen. We will designate the maximum amount of common stock to be sold through Cowen on a daily basis or otherwise determine such maximum amount together with Cowen. Subject to the terms and conditions of the sales agreement, Cowen will use its commercially reasonable efforts to sell on our behalf all of the shares of common stock requested to be sold by us. We may instruct Cowen not to sell common stock if the sales cannot be effected at or above the price designated by us in any such instruction. Cowen or we may suspend the offering of our common stock being made through Cowen under the sales agreement upon proper notice to the other party. Cowen and we each have the right, by giving written notice as specified in the sales agreement, to terminate the sales agreement in each party's sole discretion at any time.

The aggregate compensation payable to Cowen as sales agent up to 3.0% of the gross sales price of the shares sold through it pursuant to the sales agreement. We have also agreed to reimburse Cowen up to $50,000 of Cowen's actual outside legal expenses incurred by Cowen in connection with this offering, and for certain other expenses, including Cowen's FINRA counsel fees in an amount up to $10,000. We estimate that the total expenses of the offering payable by us, excluding commissions payable to Cowen under the sales agreement, will be approximately $665,000.

The remaining sales proceeds, after deducting any expenses payable by us and any transaction fees imposed by any governmental, regulatory, or self-regulatory organization in connection with the sales, will equal our net proceeds for the sale of such common stock.

Cowen will provide written confirmation to us following the close of trading on the Nasdaq Global Select Market on each day in which common stock is sold through it as sales agent under the sales agreement. Each confirmation will include the number of shares of common stock sold through it as sales agent on that day, the volume weighted average price of the shares sold, the percentage of the daily trading volume and the net proceeds to us.

We will report at least quarterly the number of shares of common stock sold through Cowen under the sales agreement, the net proceeds to us and the compensation paid by us to Cowen in connection with the sales of common stock.

Settlement for sales of common stock will occur, unless the parties agree otherwise, on the second business day that is also a trading day following the date on which any sales were made in return for payment of the net proceeds to us. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

Under the sales agreement, we may also sell shares of common stock to Cowen as principal for its own account, at a price to be agreed upon at the time of sale. If we sell shares to a Cowen as principal, we will enter into a separate terms agreement with Cowen, and we will describe the agreement in a separate prospectus supplement or pricing supplement.

In connection with the sales of our common stock on our behalf, Cowen will be deemed to be an "underwriter" within the meaning of the Securities Act, and the compensation paid to Cowen will be deemed to be underwriting commissions or discounts. We have agreed in the sales agreement to provide indemnification and contribution to Cowen against certain liabilities, including liabilities under the Securities Act. As sales agent, Cowen will not engage in any transactions that stabilizes our common stock.

Our common stock is listed on the Nasdaq Global Select Market and trades under the symbol "SWTX." The transfer agent of our common stock is Computershare Trust Company, N.A.

Cowen and/or its affiliates have provided, and may in the future provide, various investment banking and other financial services for us for which services they have received and, may in the future receive, customary fees.

LEGAL MATTERS

The validity of the common stock offered by this prospectus supplement will be passed upon by Goodwin Procter LLP. Cowen and Company, LLC is being represented in connection with this offering by Cooley LLP, New York, New York.

EXPERTS

The financial statements of SpringWorks Therapeutics, Inc. appearing in SpringWorks Therapeutics, Inc.'s Annual Report (Form 10-K) for the year ended December 31, 2020, and the effectiveness of SpringWorks Therapeutics, Inc.'s internal control over financial reporting as of December 31, 2020 have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their reports thereon, included therein, and incorporated herein by reference. Such financial statements are, and audited financial statements to be included in subsequently filed documents will be, incorporated herein in reliance upon the reports of Ernst & Young LLP pertaining to such financial statements and the effectiveness of our internal control over financial reporting as of the respective dates (to the extent covered by consents filed with the Securities and Exchange Commission) given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus supplement is a part of a registration statement we filed with the SEC. This prospectus supplement does not contain all of the information set forth in the registration statement and the exhibits to the registration statement. For further information with respect to us and the securities we are offering under this prospectus supplement, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement. Neither we nor any agent, underwriter or dealer has authorized any person to provide you with different information. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information in this prospectus supplement is accurate as of any date other than the date on the front page of this prospectus supplement, regardless of the time of delivery of this prospectus supplement or any sale of the securities offered by this prospectus supplement.

We file annual, quarterly and current reports, proxy statements and other information with the SEC. The SEC maintains a website that contains reports, proxy statements and other information regarding issuers that file electronically with the SEC, including SpringWorks Therapeutics, Inc. The address of the SEC website is www.sec.gov.

We maintain a website at www.springworkstx.com. Information contained in or accessible through our website does not constitute a part of this prospectus supplement.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" information into this prospectus supplement, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The SEC file number for the documents incorporated by reference in this prospectus supplement is 001-39044. The documents incorporated by reference into this prospectus supplement contain important information that you should read about us.

The following documents are incorporated by reference into this document:

- our Annual Report on Form 10-K for the year ended December 31, 2020, filed with the SEC on February 25, 2021;
- our Definitive Proxy Statement on Schedule 14A, filed with the SEC on April 2, 2020; and
- the description of our common stock contained in our Registration Statement on Form 8-A, filed with the SEC on September 11, 2019, including any amendments or reports filed for the purpose of updating such description.

We also incorporate by reference into this prospectus supplement all documents (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items) that are filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus supplement but prior to the termination of the offering. These documents include periodic reports, such as Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, as well as proxy statements.

We will provide to each person, including any beneficial owner, to whom a prospectus supplement is delivered, without charge upon written or oral request, a copy of any or all of the documents that are incorporated by reference into this prospectus supplement but not delivered with this prospectus supplement, including exhibits which are specifically incorporated by reference into such documents. Requests should be directed to: SpringWorks Therapeutics, Inc., 100 Washington Blvd, Stamford, Connecticut 06902, telephone: (203) 883-9490.

Any statement contained herein or in a document incorporated or deemed to be incorporated by reference into this document will be deemed to be modified or superseded for purposes of the document to the extent that a statement contained in this document or any other subsequently filed document that is deemed to be incorporated by reference into this document modifies or supersedes the statement.

PROSPECTUS

Common Stock
Preferred Stock
Debt Securities
Warrants
Units

From time to time, we may offer and sell our Common Stock, Preferred Stock, Debt Securities, Warrants or Units, in each case in one or more issuances and at prices and on terms that we will determine at the time of the offering.

This prospectus describes the general manner in which any of these securities may be offered using this prospectus. We will specify in an accompanying prospectus supplement the terms of the securities offered and other details regarding the offering thereof.

Our common stock is listed on the Nasdaq Global Select Market under the symbol "SWTX."

We are an "emerging growth company" as defined under U.S. federal securities laws and are subject to reduced public company reporting requirements.

Investing in our securities involves a high degree of risk. You should review carefully the risks and uncertainties described under the heading "Risk Factors" on page 7 of this prospectus and under any similar heading in the documents that are incorporated by reference into this prospectus, as well as "Special Note Regarding Forward-Looking Statements" on page 4 of this prospectus. You should read the entire prospectus carefully before you make your investment decision.

The securities covered by this prospectus may be sold directly by us to investors, through agents designated by us from time to time or through underwriters or dealers at prices and on terms to be determined at the time of offering. We will include in an applicable prospectus supplement the names of any underwriters or agents and any applicable commissions or discounts. Additional information on the methods of sale appears under "Plan of Distribution" in this prospectus. We will also describe in an applicable prospectus supplement the way(s) in which we expect to use the net proceeds we receive from any sale.

Neither the U.S. Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

This prospectus may not be used to offer or sell any securities unless accompanied by a prospectus supplement.

The date of this prospectus is October 6, 2020.

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You should rely only on the information contained or incorporated by reference in this prospectus and in an applicable prospectus supplement to this prospectus. We have not authorized any other person to provide you with different or additional information. If anyone provides you with different, additional or inconsistent information, you should not rely on it. We do not take responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We are not making an offer to sell these securities or soliciting any offer to buy these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus, any applicable prospectus supplement or any free writing prospectus we authorize to be delivered to you is accurate only as of the date of that document or any other date set forth in that document. Additionally, any information we have incorporated by reference in this prospectus or in any applicable prospectus supplement is accurate only as of the date of the document incorporated by reference or other date set forth in that document, regardless of the time of delivery of this prospectus, any applicable prospectus supplement or any sale of securities. Our business, financial condition, results of operations, cash flow and prospects may have changed since that date.

This prospectus, any applicable prospectus supplement and the information incorporated herein or therein by reference contains market data, industry statistics and other data that have been obtained or compiled from information made available by independent third parties. We have not independently verified the accuracy and completeness of such data. This prospectus, any applicable prospectus supplement and the information incorporated herein or therein by reference include trademarks, service marks and trade names owned by us or other companies. Solely for convenience, we may refer to our trademarks included or incorporated by reference in this prospectus, any applicable prospectus supplement or any free writing prospectus without the TM or ® symbols, but any such references are not intended to indicate that we will not assert, to the fullest extent permitted under applicable law, our rights to our trademarks or other intellectual property. All trademarks, service marks and trade names included or incorporated by reference in this prospectus, any applicable prospectus supplement or any related free writing prospectus are the property of their respective owners.

When used in this prospectus, the terms “SpringWorks,” “we,” “our” and “us” refer to SpringWorks Therapeutics, Inc., a Delaware corporation, and its consolidated subsidiaries, unless otherwise specified or the context otherwise requires.

ABOUT THIS PROSPECTUS

This prospectus is part of an automatic shelf registration statement that we have filed with the Securities and Exchange Commission, or the SEC, as a "well-known seasoned issuer" as defined in Rule 405 under the Securities Act of 1933, as amended, or the Securities Act.

Under this process, we may sell the securities described in this prospectus in one or more offerings. This prospectus describes the general manner in which we may offer the securities described in this prospectus. Each time we sell securities pursuant to the registration statement we will provide a prospectus supplement that will contain specific information about the offering and the securities offered, and may also add, update or change information contained in this prospectus. If there is any inconsistency between information in this prospectus and any accompanying prospectus supplement, you should rely on the information in the most recent applicable prospectus supplement and documents incorporated by reference herein and therein. This prospectus may not be used to offer to sell, solicit an offer to buy or consummate a sale of our securities unless it is accompanied by a prospectus supplement.

This prospectus, together with any accompanying prospectus supplement, contains important information you should know before investing in our securities, including important information about us and the securities being offered. You should carefully read both documents, as well as the additional information contained in the documents described under "Where You Can Find More Information" and "Incorporation of Certain Information by Reference" in both this prospectus and the applicable prospectus supplement, and in particular the annual, quarterly and current reports and other documents we file with the SEC. Neither this prospectus nor any accompanying prospectus supplement is an offer to sell these securities or is soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and any accompanying prospectus supplement, and the information incorporated by reference into this prospectus and any accompanying prospectus supplement contain express or implied forward-looking statements that are based on our management's belief and assumptions and on information currently available to our management. In some cases, you can identify forward-looking statements by the following words: "may," "will," "could," "would," "should," "expect," "intend," "plan," "anticipate," "believe," "estimate," "predict," "project," "potential," "continue," "ongoing" or the negative of these terms or other comparable terminology, although not all forward-looking statements contain these words.

These statements involve risks, uncertainties and other factors that may cause actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements. Although we believe that we have a reasonable basis for each forward-looking statement contained in this prospectus, we caution you that these statements are based on a combination of facts and factors currently known by us and our projections of the future, about which we cannot be certain.

Forward-looking statements in this prospectus include, but are not limited to, statements about:

- the success, cost and timing of our product development activities and clinical trials, including statements regarding the timing of our ongoing Phase 3 clinical trial of nirogacestat, the continuation of our planned Phase 2b clinical trial of mirdametinib, the timing of the Phase 2 clinical trial to be initiated in collaboration with the Children's Oncology Group, or COG, to evaluate nirogacestat for the treatment of pediatric patients with desmoid tumors and the initiation and completion of any other clinical trials and related preparatory work, the expected timing of the availability of results of the clinical trials and the potentially registrational nature of the single Phase 3 clinical trial and the Phase 2b clinical trial;
- the potential attributes and benefits of our product candidates;
- our plans to commercialize any of our product candidates that achieve approval either alone or in partnership with others;
- our ability to obtain funding for our operations, including funding necessary to complete further development of our product candidates, and if approved, commercialization;
- the period over which we anticipate our existing cash and cash equivalents, will be sufficient to fund our operating expenses and capital expenditure requirements;
- the potential for our business development efforts to maximize the potential value of our portfolio;
- our ability to identify, in-license or acquire additional product candidates;
- the ability and willingness of our third-party collaborators to continue research and development activities relating to our product candidates that we are developing as combination therapies;
- our ability to obtain and maintain regulatory approval for our product candidates, and any related restrictions, limitations or warnings in the label of an approved product candidate;
- the potential benefit of Orphan Drug Designation, Fast Track Designation and Breakthrough Therapy Designation for nirogacestat, mirdametinib and any other of our product candidates that may receive one or more of these designations;
- our ability to compete with companies currently marketing or engaged in the development of treatments for desmoid tumors, NF1-PN and other oncology indications;
- our expectations regarding our ability to obtain and maintain intellectual property protection or market exclusivity for our product candidates and the duration of such protection;
- our ability and the potential to successfully manufacture our product candidates for preclinical studies, clinical trials and, if approved, for commercial use, the capacity of our current contract manufacturing organizations, or CMOs, to support clinical supply and commercial-scale production for product candidates and our potential election to pursue additional CMOs for manufacturing supplies of drug substance and finished drug product in the future;

- the size and growth potential of the markets for our product candidates, and our ability to serve those markets, either alone or in partnership with others;
- the rate and degree of market acceptance of our product candidates, if approved;
- regulatory developments in the United States and foreign countries;
- our ability to contract with third-party suppliers and manufacturers and their ability to perform adequately;
- the success of competing products that are or may become available;
- risks associated with the COVID-19 pandemic, which may adversely impact our business, preclinical studies and clinical trials;
- our ability to attract and retain key scientific, medical, commercial or management personnel;
- our estimates regarding expenses, future revenue, capital requirements and needs for additional financing;
- our expectations regarding the time during which we will continue to be an emerging growth company as defined in federal securities regulations;
- our financial performance; and
- developments and projections relating to our competitors or our industry.

In addition, you should refer to the “Risk factors” section of this prospectus and to the “Risk factors” section in any of the documents incorporated by reference herein or therein (including our most recent Annual Report on Form 10-K, subsequent Quarterly Reports on Form 10-Q and other filings we make with the SEC pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act), for a discussion of other important factors that may cause actual results to differ materially from those expressed or implied by the forward-looking statements. As a result of these factors, we cannot assure you that the forward-looking statements in this prospectus will prove to be accurate. Furthermore, if the forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all.

The forward-looking statements in this prospectus represent our views as of the date of this prospectus. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we have no current intention of doing so except to the extent required by applicable law. You should therefore not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this prospectus.

MARKET AND INDUSTRY DATA AND FORECASTS

We obtained the industry and market data used throughout this prospectus and the documents incorporated by reference herein from our own internal estimates and research, as well as from independent market research, industry and general publications and surveys, governmental agencies and publicly available information in addition to research, surveys and studies conducted by third parties. Internal estimates are derived from publicly available information released by industry analysts and third-party sources, our internal research and our industry experience, and are based on assumptions made by us based on such data and our knowledge of our industry and market, which we believe to be reasonable. In some cases, we do not expressly refer to the sources from which this data is derived. In addition, while we believe the industry and market data included in this prospectus and in the documents incorporated by reference herein is reliable and based on reasonable assumptions, such data involve risks and uncertainties and are subject to change based on various factors, including those discussed in the section entitled “Risk factors.” These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties or by us.

ABOUT THE COMPANY

The following highlights information about the Registrant and our business contained elsewhere or incorporated by reference in this prospectus. It is not complete and does not contain all of the information that you should consider before investing in any of our securities. You should carefully read this prospectus together with the more detailed information incorporated by reference in this prospectus.

Overview

We are a clinical-stage biopharmaceutical company applying a precision medicine approach to acquiring, developing and commercializing life-changing medicines for underserved patient populations suffering from devastating rare diseases and cancer. We have a differentiated portfolio of small molecule product candidates representing ten ongoing clinical programs across three distinct targeted oncology categories. Among these, we have two potentially registrational clinical trials underway in rare tumor types, five clinical collaborations exploring combination therapies of nirogacestat with BCMA-targeted agents across different modalities for multiple myeloma and two programs addressing highly prevalent, genetically defined metastatic solid tumors. Our strategic approach and operational excellence in clinical development have enabled us to rapidly advance our two lead product candidates into late-stage clinical trials while simultaneously entering into multiple shared-value partnerships and clinical collaborations with industry leaders to expand our portfolio. From this foundation, we are continuing to build a differentiated global biopharmaceutical company intensely focused on understanding patients and their diseases in order to develop transformative targeted medicines.

Our most advanced product candidate, nirogacestat, is an oral, small molecule gamma secretase inhibitor, or GSI, initially in development for the treatment of desmoid tumors, a rare and often debilitating and disfiguring soft tissue tumor for which there are currently no therapies approved by the U.S. Food and Drug Administration, or FDA. We believe nirogacestat may address the significant limitations associated with existing treatment options and has the potential to become the first therapy approved by the FDA for both newly diagnosed and previously treated desmoid tumors. Since we licensed nirogacestat from Pfizer Inc., or Pfizer, in August 2017, the FDA has granted us Orphan Drug Designation, Fast Track Designation and Breakthrough Therapy Designation for this indication, and the European Commission granted Orphan Drug Designation to nirogacestat for the treatment of soft tissue sarcoma. In May 2019, we announced the initiation of the DeFi trial, a potentially registrational Phase 3 clinical trial of nirogacestat for adult patients with desmoid tumors and in July 2020, we announced full enrollment of the DeFi trial. We expect to report top-line data from this trial in the second or third quarter of 2021. In addition to the ongoing DeFi trial, we expect a Phase 2 clinical trial to be initiated in collaboration with Children's Oncology Group, or COG, to evaluate nirogacestat for the treatment of pediatric patients with desmoid tumors in the fourth quarter of 2020.

Our second product candidate is mirdametinib, an oral, small molecule MEK inhibitor initially in development for the treatment of neurofibromatosis type 1-associated plexiform neurofibromas, or NF1-PN, a rare tumor of the peripheral nerve sheath that causes significant pain and disfigurement, and that most often manifests in children. We believe that mirdametinib has the potential to offer a best-in-class profile in order to enable the long-term treatment required for this patient population, as compared to other MEK inhibitors. As with nirogacestat, we licensed mirdametinib from Pfizer in August 2017; since then, the FDA has granted mirdametinib both Orphan Drug Designation and Fast Track Designation for NF1-PN, and the European Commission has granted mirdametinib Orphan Drug Designation for NF1. In October 2019, we announced the initiation of the ReNeu trial, a potentially registrational Phase 2b clinical trial of mirdametinib for patients with NF1-PN. We expect to provide an update on the ReNeu trial in the fourth quarter of 2020 or the first quarter of 2021.

In addition to our late-stage programs in rare oncology indications, we have expanded our portfolio to develop targeted therapies for the treatment of highly prevalent hematologic malignancies and genetically defined metastatic solid tumors. To advance this strategy, we are taking a precision medicine approach in collaboration with industry leaders. In hematologic malignancies, we have announced collaborations with GlaxoSmithKline, or GSK, Janssen Biotech, Inc., Pfizer, Allogene Therapeutics, Inc. and Precision BioSciences, Inc. to develop novel combination regimens of nirogacestat alongside our collaborators' B-cell maturation antigen, or BCMA, directed therapies for the treatment of multiple myeloma. In addition to

our industry collaborations with leading BCMA therapy developers, we are working with the Fred Hutchinson Cancer Research Center to further explore nirogacestat's ability to potentiate BCMA-directed therapies as part of a sponsored research agreement. In genetically defined metastatic solid tumors, our current efforts center on the mitogen activated protein kinase, or MAPK, pathway. In collaboration with BeiGene, Ltd., or BeiGene, we are exploring the combination of mirdametinib with lifirafenib in RAS mutated and other MAPK aberrant cancers. In addition, we are exploring the use of BGB-3245 in a distinct set of genetically defined BRAF mutated tumors via MapKure, LLC, or MapKure, an entity jointly owned by us and BeiGene.

Together, we believe that our portfolio provides multiple opportunities for value creation across these three distinct categories of oncology programs, each of which has the potential to provide meaningful clinical benefit to patients. In our late-stage rare oncology programs, we believe that our two potentially registrational trials with nirogacestat and mirdametinib each have best-in-class potential for the patient populations in which they are being advanced. In our malignant hematology programs, we believe that nirogacestat has the potential to become a cornerstone of BCMA combination therapy in multiple myeloma and we are seeking to achieve this goal by working with partners developing BCMA targeted agents across modalities. In our biomarker defined metastatic solid tumor programs, we believe that our precision medicine approach to cancers harboring mutations in key MAPK pathway genes, such as RAS and BRAF, provides the opportunity for meaningful clinical benefit for biomarker defined patient populations.

Furthermore, we intend to continue to expand our portfolio by licensing additional programs with strong biological rationales and validated mechanisms of action. We also plan to continue using shared-value partnerships to maximize the potential of our therapies to serve patients. Since our founding, we have invested in building leading clinical development capabilities and have focused on structuring innovative partnerships that seek to align incentives and optimize business outcomes for each party involved. We believe that this approach will continue to allow us to expand our shared-value relationships with innovators, maximize the potential of our existing and future portfolio and ultimately support the building of a scalable and sustainable business focused on the efficient advancement and commercialization of product candidates that hold the potential to transform the lives of patients living with severe rare diseases and cancer.

Corporate Information

We were originally formed in Delaware in August 2017 and until March 29, 2019, we conducted our business through SpringWorks Therapeutics, LLC, a Delaware limited liability company. Pursuant to the terms of a corporate reorganization and merger that was completed on March 29, 2019, or the Reorganization, all of the equity interests in SpringWorks Therapeutics, LLC were exchanged for the same number and class of newly issued securities of SpringWorks Therapeutics, Inc. and, as a result, SpringWorks Therapeutics, LLC became a wholly owned subsidiary of SpringWorks Therapeutics, Inc. Our principal executive offices are located at 100 Washington Blvd, Stamford, CT 06902, and our phone number is (203) 883-9490. Our website address is http://www.springworkstx.com. The information contained in or accessible from our website is not incorporated into this prospectus, and you should not consider it part of this prospectus.

Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act are available, free of charge, on or through our website as soon as reasonably practicable after such reports and amendments are electronically filed with or furnished to the SEC. The SEC maintains an Internet site that contains reports, proxy and information statements and other information regarding our filings *at www.sec.gov*.

For additional information about our Company, please refer to other documents we have filed with the SEC and that are incorporated by reference into this prospectus, as listed under the heading "Incorporation of Certain Information by Reference."

RISK FACTORS

Investing in our securities involves a high degree of risk. You should carefully consider the risks referenced below and described in the documents incorporated by reference in this prospectus and any prospectus supplement, as well as other information we include or incorporate by reference into this prospectus and any applicable prospectus supplement, before making an investment decision. Our business, financial condition or results of operations could be materially adversely affected by the materialization of any of these risks. The trading price of our securities could decline due to the materialization of any of these risks, and you may lose all or part of your investment. This prospectus and the documents incorporated herein by reference also contain forward-looking statements that involve risks and uncertainties. Actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks referenced below and described in the documents incorporated herein by reference, including (i) our Annual Report on Form 10-K for the fiscal year ended December 31, 2019, which is incorporated herein by reference, (ii) our Quarterly Report on Form 10-Q for the quarter ended June 30, 2020, which is incorporated herein by reference, and (iii) other documents we file with the SEC, including our annual or quarterly reports for subsequent fiscal years or quarters that we file with the SEC, and that are deemed incorporated by reference into this prospectus. You should also carefully consider the risks and other information that may be contained in, or incorporated by reference into, any prospectus supplement relating to specific offerings of securities.

USE OF PROCEEDS

We intend to use the net proceeds from the sale of any securities offered under this prospectus for general corporate purposes unless otherwise indicated in the applicable prospectus supplement. General corporate purposes may include funding the continued progress of our preclinical and clinical development, research and development costs, potential strategic acquisitions or licensing of complementary businesses, services or technologies, working capital, capital expenditures and other general corporate purposes. We may temporarily invest the net proceeds in a variety of capital preservation instruments, including in short and immediate-term, interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government., until they are used for their stated purpose. We have not determined the amount of net proceeds to be used specifically for such purposes. As a result, management will retain broad discretion over the allocation of net proceeds.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock. We do not anticipate paying any dividends on our capital stock in the foreseeable future. We currently intend to retain all available funds and any future earnings to fund the development and growth of our business. Investors should not purchase our common stock with the expectation of receiving cash dividends.

GENERAL DESCRIPTION OF SECURITIES

We may offer shares of common or preferred stock, various series of senior or subordinated debt securities, warrants, or units consisting of combinations of the foregoing, in each case from time to time under this prospectus, together with the applicable prospectus supplement, at prices and on terms to be determined by market conditions at the time of offering. This prospectus provides you with a general description of the securities we may offer. At the time we offer a particular type or series of securities, we will provide an applicable prospectus supplement describing the specific amounts, prices and other important terms of the securities, including, to the extent applicable:

- designation or classification;
- aggregate principal amount or aggregate offering price;
- voting or other rights;
- rates and times of payment of interest, dividends or other payments;
- liquidation preference;
- original issue discount;
- maturity;
- ranking;
- restrictive covenants;
- redemption, conversion, exercise, exchange, settlement or sinking fund terms, including prices or rates, and any provisions for changes to or adjustments in such prices or rates and in the securities or other property receivable upon conversion, exercise, exchange or settlement;
- any securities exchange or market listing arrangements; and
- important U.S. federal income tax considerations.

This prospectus may not be used to offer or sell securities unless accompanied by an applicable prospectus supplement. The applicable prospectus supplement may add, update or change information contained in this prospectus or in documents incorporated by reference in this prospectus. You should read the prospectus supplement related to any securities being offered.

We may sell the securities directly to or through underwriters, dealers or agents. We and our underwriters, dealers or agents reserve the right to accept or reject all or part of any proposed purchase of securities. If we do offer securities through underwriters or agents, we will include in the applicable prospectus supplement (i) the names of the underwriters or agents and applicable fees, discounts and commissions to be paid to them; (ii) details regarding over-allotment options, if any; and (iii) net proceeds to us.

The following descriptions are not complete and may not contain all the information you should consider before investing in any securities we may offer hereunder; they are summarized from, and qualified by reference to, our amended and restated certificate of incorporation, amended and restated bylaws and the other documents referred to in the descriptions, all of which are or will be publicly filed with the SEC, as applicable. See “Where You Can Find More Information.”

DESCRIPTION OF CAPITAL STOCK

The following descriptions are summaries of the material terms of our amended and restated certificate of incorporation and amended and restated bylaws and are qualified by reference to our amended and restated certificate of incorporation and amended and restated bylaws, copies of which have been filed with the SEC and are incorporated by reference as exhibits to the registration statement of which this prospectus is a part. We refer in this section to our amended and restated certificate of incorporation as our certificate of incorporation, and we refer to our amended and restated bylaws as our bylaws. The terms of our common stock and preferred stock may also be affected by Delaware law.

General

Our authorized capital stock consists of 150,000,000 shares of common stock, par value $0.0001 per share, and 10,000,000 shares of convertible preferred stock, par value $0.0001 per share, all of which shares of convertible preferred stock will be undesignated.

As of June 30, 2020, 43,016,501 shares of our common stock (which includes 989,303 shares of unvested restricted stock) were outstanding and held by 25 stockholders of record. No shares of preferred stock were outstanding as of June 30, 2020.

Common stock

The holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of the stockholders. The holders of our common stock do not have any cumulative voting rights. Holders of our common stock are entitled to receive ratably any dividends declared by our board of directors out of funds legally available for that purpose, subject to any preferential dividend rights of any outstanding convertible preferred stock. Our common stock has no preemptive rights, conversion rights or other subscription rights or redemption or sinking fund provisions.

In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in all assets remaining after payment of all debts and other liabilities and any liquidation preference of any outstanding convertible preferred stock. The shares to be issued by us in this offering will be, when issued and paid for, validly issued, fully paid and non-assessable.

Convertible preferred stock

Our board of directors has the authority, without further action by our stockholders, to issue up to 10,000,000 shares of convertible preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof. These rights, preferences and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms and the number of shares constituting, or the designation of, such series, any or all of which may be greater than the rights of common stock. The issuance of our convertible preferred stock could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon our liquidation. In addition, the issuance of convertible preferred stock could have the effect of delaying, deferring or preventing a change in control of our company or other corporate action. Immediately after consummation of this offering, no shares of convertible preferred stock will be outstanding, and we have no present plan to issue any shares of convertible preferred stock.

Stock options

As of June 30, 2020, options to purchase 4,567,328 shares of our common stock were outstanding under our 2019 Stock Option and Incentive Plan, or the Private Company Plan, and the 2019 Plan combined, of which 943,225 were exercisable as of that date at a weighted average exercise price of $13.96.

Registration rights

Holders of 29,794,359 shares of our common stock, which shares we refer to as “registrable securities,” are be entitled to rights with respect to the registration of these registrable securities under the Securities Act. These rights are provided under the terms of an investors’ rights agreement between us and holders of our

convertible preferred stock, which converted to common stock upon the completion of IPO. The investors' rights agreement includes demand registration rights, short-form registration rights and piggyback registration rights. All fees, costs and expenses of underwritten registrations under this agreement will be borne by us and all selling expenses, including underwriting discounts and selling commissions, will be borne by the holders of the shares being registered.

Demand registration rights

Holders of registrable securities are entitled to demand registration rights under certain conditions. Under the terms of the investors' rights agreement, we will be required, upon the written request of holders of at least 20% of these registrable securities that would result in an aggregate offering price of that would exceed $5,000,000, to file a registration statement and use best efforts to effect the registration of all or a portion of these registrable securities for public resale. We are required to effect only two registrations pursuant to this provision of the investors' rights agreement.

Short-form registration rights

Pursuant to the investors' rights agreement, if we are eligible to file a registration statement on Form S-3, upon the written request of holders of at least 20% of these registrable securities that would result in an aggregate offering price of at least $2,000,000, we will be required to effect a registration of such registrable securities. We are required to effect only two registrations in any twelve-month period pursuant to this provision of the investors' rights agreement. The right to have such shares registered on Form S-3 is further subject to other specified conditions and limitations.

Piggyback registration rights

Pursuant to the investors' rights agreement, if we register any of our securities either for our own account or for the account of other security holders, subject to certain exceptions, the holders of these shares are entitled to include their shares in the registration. Subject to certain exceptions contained in the investors' rights agreement, we and the underwriters may limit the number of shares included in the underwritten offering to the number of shares which we and the underwriters determine in our sole discretion will not jeopardize the success of the offering. The holders of a majority of the registrable securities have waived all registration rights with respect to the registrable securities they hold in connection with this offering, which waiver is effective for all investors holding such registrable securities.

Indemnification

Our investors' rights agreement contains customary cross-indemnification provisions, under which we are obligated to indemnify holders of registrable securities in the event of material misstatements or omissions in the registration statement attributable to us, and they are obligated to indemnify us for material misstatements or omissions attributable to them.

Expiration of registration rights

The demand registration rights and short form registration rights granted to any holder of registrable securities under the investors' rights agreement will terminate upon the earliest to occur of (i) immediately prior to the closing of a deemed liquidation event (as defined in our certificate of incorporation) or (ii) the fourth anniversary of the completion of our IPO.

Anti-takeover effects of our amended and restated certificate of incorporation and amended and restated bylaws and Delaware Law

Our amended and restated certificate of incorporation and amended and restated bylaws, as amended include a number of provisions that may have the effect of delaying, deferring or preventing another party from acquiring control of us and encouraging persons considering unsolicited tender offers or other unilateral takeover proposals to negotiate with our board of directors rather than pursue non-negotiated takeover attempts. These provisions include the items described below.

Board composition and filling vacancies

Our amended and restated certificate of incorporation provides for the division of our board of directors into three classes serving staggered three-year terms, with one class being elected each year. Our amended and restated certificate of incorporation also provides that directors may be removed only for cause and then only by the affirmative vote of the holders of two-thirds or more of the shares then entitled to vote at an election of directors. Furthermore, any vacancy on our board of directors, however occurring, including a vacancy resulting from an increase in the size of our board, may only be filled by the affirmative vote of a majority of our directors then in office even if less than a quorum. The classification of directors, together with the limitations on removal of directors and treatment of vacancies, has the effect of making it more difficult for stockholders to change the composition of our board of directors.

No written consent of stockholders

Our amended and restated certificate of incorporation provides that all stockholder actions are required to be taken by a vote of the stockholders at an annual or special meeting, and that stockholders may not take any action by written consent in lieu of a meeting. This limit may lengthen the amount of time required to take stockholder actions and would prevent the amendment of our amended and restated bylaws or removal of directors by our stockholders without holding a meeting of stockholders.

Meetings of stockholders

Our amended and restated certificate of incorporation and amended and restated bylaws, as amended, provide that only a majority of the members of our board of directors then in office may call special meetings of stockholders and only those matters set forth in the notice of the special meeting may be considered or acted upon at a special meeting of stockholders. Our amended and restated bylaws, as amended, limit the business that may be conducted at an annual meeting of stockholders to those matters properly brought before the meeting.

Advance notice requirements

Our amended and restated bylaws, as amended, establish advance notice procedures with regard to stockholder proposals relating to the nomination of candidates for election as directors or new business to be brought before meetings of our stockholders. These procedures provide that notice of stockholder proposals must be timely given in writing to our corporate secretary prior to the meeting at which the action is to be taken. Generally, to be timely, notice must be received at our principal executive offices not less than 90 days nor more than 120 days prior to the first anniversary date of the annual meeting for the preceding year. Our bylaws specify the requirements as to form and content of all stockholders' notices. These requirements may preclude stockholders from bringing matters before the stockholders at an annual or special meeting.

Amendment to amended and restated certificate of incorporation and amended and restated bylaws

Any amendment of our amended and restated certificate of incorporation must first be approved by a majority of our board of directors, and if required by law or our amended and restated certificate of incorporation, must thereafter be approved by a majority of the outstanding shares entitled to vote on the amendment and a majority of the outstanding shares of each class entitled to vote thereon as a class, except that the amendment of the provisions relating to stockholder action, board composition, limitation of liability and the amendment of our bylaws and certificate of incorporation must be approved by not less than two-thirds of the outstanding shares entitled to vote on the amendment, and not less than two-thirds of the outstanding shares of each class entitled to vote thereon as a class. Our amended and restated bylaws may be amended by the affirmative vote of a majority of the directors then in office, subject to any limitations set forth in the amended and restated bylaws, and may also be amended by the affirmative vote of at least two-thirds of the outstanding shares entitled to vote on the amendment, or, if our board of directors recommends that the stockholders approve the amendment, by the affirmative vote of the majority of the outstanding shares entitled to vote on the amendment, in each case voting together as a single class.

Undesignated preferred stock

Our amended and restated certificate of incorporation provides for 10,000,000 authorized shares of preferred stock. The existence of authorized but unissued shares of convertible preferred stock may enable our board of directors to discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise. For example, if in the due exercise of its fiduciary obligations, our board of directors were to determine that a takeover proposal is not in the best interests of our stockholders, our board of directors could cause shares of convertible preferred stock to be issued without stockholder approval in one or more private offerings or other transactions that might dilute the voting or other rights of the proposed acquirer or insurgent stockholder or stockholder group. In this regard, our amended and restated certificate of incorporation grants our board of directors broad power to establish the rights and preferences of authorized and unissued shares of convertible preferred stock. The issuance of shares of convertible preferred stock could decrease the amount of earnings and assets available for distribution to holders of shares of common stock. The issuance may also adversely affect the rights and powers, including voting rights, of these holders and may have the effect of delaying, deterring or preventing a change in control of us.

Choice of forum

Our amended and restated bylaws, as amended, provide that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or, if the Chancery Court does not have jurisdiction, the federal district court for the District of Delaware or other state courts of the State of Delaware) will be the sole and exclusive forum for state law claims for (1) any derivative action or proceeding brought on our behalf; (2) any action asserting a claim of breach of a fiduciary duty or other wrongdoing by any of our directors, officers, employees or agents to us or our stockholders; (3) any action asserting a claim against us, or any current or former director, officer, or other employee or stockholder, arising out of or pursuant to any provision of the General Corporation Law of the State of Delaware or our certificate of incorporation or bylaws; and (4) any action asserting a claim against us or any current or former director or officer or other employee governed by the internal affairs doctrine; provided, however, that this choice of forum provision does not apply to any causes of action arising under the Securities Act or the Exchange Act. Our amended and restated bylaws, as amended, further provide that, unless we consent in writing to an alternative forum, the United States District Court for the District of Connecticut will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act. Our amended and restated bylaws, as amended, also provide that any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock will be deemed to have notice of and to have consented to this choice of forum provision. We recognize that the forum selection clause in our amended and restated bylaws, as amended, may impose additional litigation costs on stockholders in pursuing any such claims, particularly if the stockholders do not reside in or near the State of Delaware or the State of Connecticut, as applicable. Additionally, the forum selection clause in our amended and restated bylaws, as amended, may limit our stockholders' ability to bring a claim in a forum that they find favorable for disputes with us or our directors, officers or employees, which may discourage such lawsuits against us and our directors, officers and employees even though an action, if successful, might benefit our stockholders. The Court of Chancery of the State of Delaware or the United States District Court for the District of Connecticut may also reach different judgments or results than would other courts, including courts where a stockholder considering an action may be located or would otherwise choose to bring the action, and such judgments may be more or less favorable to us than to our stockholders.

Section 203 of the Delaware General Corporation Law

We are subject to the provisions of Section 203 of the Delaware General Corporation Law. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a three-year period following the time that this stockholder becomes an interested stockholder, unless the business combination is approved in a prescribed manner. Under Section 203, a business combination between a corporation and an interested stockholder is prohibited unless it satisfies one of the following conditions:

- before the stockholder became interested, our board of directors approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;

- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, shares owned by persons who are directors and also officers, and employee stock plans, in some instances, but not the outstanding voting stock owned by the interested stockholder; or
- at or after the time the stockholder became interested, the business combination was approved by our board of directors and authorized at an annual or special meeting of the stockholders by the affirmative vote of at least two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines a business combination to include:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, lease, pledge or other disposition involving the interested stockholder of 10% or more of the assets of the corporation;
- subject to exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- subject to exceptions, any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; and
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by the entity or person.

Nasdaq Global Select Market listing

Our common stock is listed on the Nasdaq Global Select Market under the trading symbol “SWTX.”

Transfer agent and registrar

The transfer agent and registrar for our common stock is Computershare Trust Company, N.A. The transfer agent and registrar’s address is 250 Royall Street, Canton, Massachusetts 02021.

DESCRIPTION OF DEBT SECURITIES

This section describes the general terms and provisions of our debt securities that we may issue from time to time. We may issue debt securities, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. While the terms we have summarized below will apply generally to any future debt securities we may offer under this prospectus, the applicable prospectus supplement or free writing prospectus will describe the specific terms of any debt securities offered through that prospectus supplement or free writing prospectus. The terms of any debt securities we offer under a prospectus supplement or free writing prospectus may differ from the terms we describe below. Unless the context requires otherwise, whenever we refer to the "indentures," we also are referring to any supplemental indentures that specify the terms of a particular series of debt securities.

We will issue any senior debt securities under the senior indenture that we will enter into with the trustee named in the senior indenture. We will issue any subordinated debt securities under the subordinated indenture that we will enter into with the trustee named in the subordinated indenture. We have filed forms of these documents as exhibits to the registration statement, of which this prospectus is a part, and supplemental indentures and forms of debt securities containing the terms of the debt securities being offered will be filed as exhibits to the registration statement of which this prospectus is a part or will be incorporated by reference from reports that we file with the SEC.

The indentures will be qualified under the Trust Indenture Act of 1939, as amended, or the Trust Indenture Act. We use the term "trustee" to refer to either the trustee under the senior indenture or the trustee under the subordinated indenture, as applicable.

The following summaries of material provisions of the senior debt securities, the subordinated debt securities and the indentures are subject to, and qualified in their entirety by reference to, all of the provisions of the indenture applicable to a particular series of debt securities. We urge you to read the applicable prospectus supplement or free writing prospectus and any related free writing prospectuses related to the debt securities that we may offer under this prospectus, as well as the complete applicable indenture that contains the terms of the debt securities. Except as we may otherwise indicate, the terms of the senior indenture and the subordinated indenture are identical.

General

We will describe in the applicable prospectus supplement or free writing prospectus the terms of the series of debt securities being offered, including:

- the title;
- the principal amount being offered, and if a series, the total amount authorized and the total amount outstanding;
- any limit on the amount that may be issued;
- whether or not we will issue the series of debt securities in global form, and, if so, the terms and who the depository will be;
- the maturity date;
- whether and under what circumstances, if any, we will pay additional amounts on any debt securities held by a person who is not a United States person for tax purposes, and whether we can redeem the debt securities if we have to pay such additional amounts;
- the annual interest rate, which may be fixed or variable, or the method for determining the rate and the date interest will begin to accrue, the dates interest will be payable and the regular record dates for interest payment dates or the method for determining such dates;
- whether or not the debt securities will be secured or unsecured, and the terms of any secured debt;
- the terms of the subordination of any series of subordinated debt;
- the place where payments will be payable;

- restrictions on transfer, sale or other assignment, if any;
- our right, if any, to defer payment of interest and the maximum length of any such deferral period;
- the date, if any, after which, the conditions upon which, and the price at which, we may, at our option, redeem the series of debt securities pursuant to any optional or provisional redemption provisions and the terms of those redemption provisions;
- the date, if any, on which, and the price at which we are obligated, pursuant to any mandatory sinking fund or analogous fund provisions or otherwise, to redeem, or at the holder's option, to purchase, the series of debt securities and the currency or currency unit in which the debt securities are payable;
- whether the indenture will restrict our ability or the ability of our subsidiaries to:
- incur additional indebtedness;
- issue additional securities;
- create liens;
- pay dividends or make distributions in respect of our capital stock or the capital stock of our subsidiaries;
- redeem capital stock;
- place restrictions on our subsidiaries' ability to pay dividends, make distributions or transfer assets;
- make investments or other restricted payments;
- sell or otherwise dispose of assets;
- enter into sale-leaseback transactions;
- engage in transactions with stockholders or affiliates;
- issue or sell stock of our subsidiaries;
- effect a consolidation or merger;
- whether the indenture will require us to maintain any interest coverage, fixed charge, cash flow-based, asset-based or other financial ratios;
- a discussion of certain material or special United States federal income tax considerations applicable to the debt securities;
- information describing any book-entry features;
- provisions for a sinking fund purchase or other analogous fund, if any;
- the applicability of the provisions in the indenture on discharge;
- whether the debt securities are to be offered at a price such that they will be deemed to be offered at an "original issue discount" as defined in paragraph (a) of Section 1273 of the Internal Revenue Code of 1986, as amended;
- the denominations in which we will issue the series of debt securities, if other than denominations of $1,000 and any integral multiple thereof;
- the currency of payment of debt securities if other than U.S. dollars and the manner of determining the equivalent amount in U.S. dollars; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the debt securities, including any additional events of default or covenants provided with respect to the debt securities, and any terms that may be required by us or advisable under applicable laws or regulations or advisable in connection with the marketing of the debt securities.

Conversion or exchange rights

We will set forth in the applicable prospectus supplement or free writing prospectus the terms on which a series of debt securities may be convertible into or exchangeable for our common stock, our preferred stock

or other securities (including securities of a third-party). We will include provisions as to whether conversion or exchange is mandatory, at the option of the holder or at our option. We may include provisions pursuant to which the number of shares of our common stock, our preferred stock or other securities (including securities of a third-party) that the holders of the series of debt securities receive would be subject to adjustment.

Consolidation, merger or sale

Unless we provide otherwise in the prospectus supplement or free writing prospectus applicable to a particular series of debt securities, the indentures will not contain any covenant that restricts our ability to merge or consolidate, or sell, convey, transfer or otherwise dispose of all or substantially all of our assets. However, any successor to or acquirer of such assets must assume all of our obligations under the indentures or the debt securities, as appropriate. If the debt securities are convertible into or exchangeable for other securities of ours or securities of other entities, the person with whom we consolidate or merge or to whom we sell all of our property must make provisions for the conversion of the debt securities into securities that the holders of the debt securities would have received if they had converted the debt securities before the consolidation, merger or sale.

Events of default under the indenture

Unless we provide otherwise in the prospectus supplement or free writing prospectus applicable to a particular series of debt securities, the following are events of default under the indentures with respect to any series of debt securities that we may issue:

- if we fail to pay interest when due and payable and our failure continues for 90 days and the time for payment has not been extended;
- if we fail to pay the principal, premium or sinking fund payment, if any, when due and payable at maturity, upon redemption or repurchase or otherwise, and the time for payment has not been extended;
- if we fail to observe or perform any other covenant contained in the debt securities or the indentures, other than a covenant specifically relating to another series of debt securities, and our failure continues for 90 days after we receive notice from the trustee or holders of at least 25% in aggregate principal amount of the outstanding debt securities of the applicable series; and
- if specified events of bankruptcy, insolvency or reorganization occur.

We will describe in each applicable prospectus supplement or free writing prospectus any additional events of default relating to the relevant series of debt securities.

If an event of default with respect to debt securities of any series occurs and is continuing, other than an event of default specified in the last bullet point above, the trustee or the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series, by notice to us in writing, and to the trustee if notice is given by such holders, may declare the unpaid principal, premium, if any, and accrued interest, if any, due and payable immediately. If an event of default specified in the last bullet point above occurs with respect to us, the unpaid principal, premium, if any, and accrued interest, if any, of each issue of debt securities then outstanding shall be due and payable without any notice or other action on the part of the trustee or any holder. The holders of a majority in principal amount of the outstanding debt securities of an affected series may waive any default or event of default with respect to the series and its consequences, except defaults or events of default regarding payment of principal, premium, if any, or interest, unless we have cured the default or event of default in accordance with the indenture. Any waiver shall cure the default or event of default.

Subject to the terms of the indentures, if an event of default under an indenture shall occur and be continuing, the trustee will be under no obligation to exercise any of its rights or powers under such indenture at the request or direction of any of the holders of the applicable series of debt securities, unless such holders have offered the trustee reasonable indemnity or security satisfactory to it against any loss, liability or expense. The holders of a majority in principal amount of the outstanding debt securities of any series will

have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee, or exercising any trust or power conferred on the trustee, with respect to the debt securities of that series, provided that:

- the direction so given by the holder is not in conflict with any law or the applicable indenture; and
- subject to its duties under the Trust Indenture Act, the trustee need not take any action that might involve it in personal liability or might be unduly prejudicial to the holders not involved in the proceeding.

A holder of the debt securities of any series will have the right to institute a proceeding under the indentures or to appoint a receiver or trustee, or to seek other remedies if:

- the holder has given written notice to the trustee of a continuing event of default with respect to that series;
- the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series have made written request, and such holders have offered reasonable indemnity to the trustee or security satisfactory to it against any loss, liability or expense or to be incurred in compliance with instituting the proceeding as trustee; and
- the trustee does not institute the proceeding, and does not receive from the holders of a majority in aggregate principal amount of the outstanding debt securities of that series other conflicting directions within 90 days after the notice, request and offer.

These limitations do not apply to a suit instituted by a holder of debt securities if we default in the payment of the principal, premium, if any, or interest on, the debt securities, or other defaults that may be specified in the applicable prospectus supplement or free writing prospectus.

We will periodically file statements with the trustee regarding our compliance with specified covenants in the indentures.

Modification of indenture; waiver

Subject to the terms of the indenture for any series of debt securities that we may issue, we and the trustee may change an indenture without the consent of any holders with respect to the following specific matters:

- to fix any ambiguity, defect or inconsistency in the indenture;
- to comply with the provisions described above under “Description of Debt Securities-Consolidation, Merger or Sale”;
- to comply with any requirements of the SEC in connection with the qualification of any indenture under the Trust Indenture Act;
- to add to, delete from or revise the conditions, limitations, and restrictions on the authorized amount, terms, or purposes of issue, authentication and delivery of debt securities, as set forth in the indenture;
- to provide for the issuance of and establish the form and terms and conditions of the debt securities of any series as provided under “Description of Debt Securities — General,” to establish the form of any certifications required to be furnished pursuant to the terms of the indenture or any series of debt securities, or to add to the rights of the holders of any series of debt securities;
- to evidence and provide for the acceptance of appointment hereunder by a successor trustee;
- to provide for uncertificated debt securities and to make all appropriate changes for such purpose;
- to add to our covenants such new covenants, restrictions, conditions or provisions for the benefit of the holders, to make the occurrence, or the occurrence and the continuance, of a default in any such additional covenants, restrictions, conditions or provisions an event of default or to surrender any right or power conferred to us in the indenture; or

- to change anything that does not materially adversely affect the interests of any holder of debt securities of any series.

In addition, under the indentures, the rights of holders of a series of debt securities may be changed by us and the trustee with the written consent of the holders of at least a majority in aggregate principal amount of the outstanding debt securities of each series that is affected. However, subject to the terms of the indenture for any series of debt securities that we may issue or as otherwise provided in the prospectus supplement or free writing prospectus applicable to a particular series of debt securities, we and the trustee may make the following changes only with the consent of each holder of any outstanding debt securities affected:

- extending the stated maturity of the series of debt securities;
- reducing the principal amount, reducing the rate of or extending the time of payment of interest, or reducing any premium payable upon the redemption or repurchase of any debt securities; or
- reducing the percentage of debt securities, the holders of which are required to consent to any amendment, supplement, modification or waiver.

Discharge

Each indenture provides that, subject to the terms of the indenture and any limitation otherwise provided in the prospectus supplement or free writing prospectus applicable to a particular series of debt securities, we can elect to be discharged from our obligations with respect to one or more series of debt securities, except for specified obligations, including obligations to:

- register the transfer or exchange of debt securities of the series;
- replace stolen, lost or mutilated debt securities of the series;
- maintain paying agencies;
- hold monies for payment in trust;
- recover excess money held by the trustee;
- compensate and indemnify the trustee; and
- appoint any successor trustee.

In order to exercise our rights to be discharged, we must deposit with the trustee money or government obligations sufficient to pay all the principal of, any premium and interest on, the debt securities of the series on the dates payments are due.

Form, exchange and transfer

We will issue the debt securities of each series only in fully registered form without coupons and, unless we otherwise specify in the applicable prospectus supplement or free writing prospectus, in denominations of $1,000 and any integral multiple thereof. The indentures provide that we may issue debt securities of a series in temporary or permanent global form and as book-entry securities that will be deposited with, or on behalf of, The Depository Trust Company or another depository named by us and identified in a prospectus supplement or free writing prospectus with respect to that series.

At the option of the holder, subject to the terms of the indentures and the limitations applicable to global securities described in the applicable prospectus supplement or free writing prospectus, the holder of the debt securities of any series can exchange the debt securities for other debt securities of the same series, in any authorized denomination and of like tenor and aggregate principal amount.

Subject to the terms of the indentures and the limitations applicable to global securities set forth in the applicable prospectus supplement or free writing prospectus, holders of the debt securities may present the debt securities for exchange or for registration of transfer, duly endorsed or with the form of transfer endorsed thereon duly executed if so required by us or the security registrar, at the office of the security registrar or at the office of any transfer agent designated by us for this purpose. Unless otherwise provided in the debt

securities that the holder presents for transfer or exchange, we will make no service charge for any registration of transfer or exchange, but we may require payment of any taxes or other governmental charges.

We will name in the applicable prospectus supplement or free writing prospectus the security registrar, and any transfer agent in addition to the security registrar, that we initially designate for any debt securities. We may at any time designate additional transfer agents or rescind the designation of any transfer agent or approve a change in the office through which any transfer agent acts, except that we will be required to maintain a transfer agent in each place of payment for the debt securities of each series. If we elect to redeem the debt securities of any series, we will not be required to:

- issue, register the transfer of, or exchange any debt securities of that series during a period beginning at the opening of business 15 days before the day of mailing of a notice of redemption of any debt securities that may be selected for redemption and ending at the close of business on the day of the mailing; or
- register the transfer of or exchange any debt securities so selected for redemption, in whole or in part, except the unredeemed portion of any debt securities we are redeeming in part.

Information concerning the trustee

The trustee, other than during the occurrence and continuance of an event of default under an indenture, undertakes to perform only those duties as are specifically set forth in the applicable indenture. Upon an event of default under an indenture, the trustee must use the same degree of care as a prudent person would exercise or use in the conduct of his or her own affairs.

Subject to this provision, the trustee is under no obligation to exercise any of the powers given it by the indentures at the request of any holder of debt securities unless it is offered reasonable security and indemnity against the costs, expenses and liabilities that it might incur.

Payment and paying agents

Unless we otherwise indicate in the applicable prospectus supplement or free writing prospectus, we will make payment of the interest on any debt securities on any interest payment date to the person in whose name the debt securities, or one or more predecessor securities, are registered at the close of business on the regular record date for the interest.

We will pay principal of and any premium and interest on the debt securities of a particular series at the office of the paying agents designated by us, except that unless we otherwise indicate in the applicable prospectus supplement or free writing prospectus, we will make interest payments by check that we will mail to the holder or by wire transfer to certain holders. Unless we otherwise indicate in the applicable prospectus supplement or free writing prospectus, we will designate the corporate trust office of the trustee as our sole paying agent for payments with respect to debt securities of each series. We will name in the applicable prospectus supplement or free writing prospectus any other paying agents that we initially designate for the debt securities of a particular series. We will maintain a paying agent in each place of payment for the debt securities of a particular series.

All money we pay to a paying agent or the trustee for the payment of the principal of or any premium or interest on any debt securities that remains unclaimed at the end of two years after such principal, premium or interest has become due and payable will be repaid to us, and the holder of the debt security thereafter may look only to us for payment thereof.

Governing law

The indentures and the debt securities will be governed by and construed in accordance with the laws of the State of New York, except to the extent that the Trust Indenture Act is applicable.

Ranking of debt securities

The subordinated debt securities will be subordinate and junior in priority of payment to certain of our other indebtedness to the extent described in a prospectus supplement or free writing prospectus. The

subordinated indenture does not limit the amount of subordinated debt securities that we may issue. It also does not limit us from issuing any other secured or unsecured debt.

The senior debt securities will rank equally in right of payment to all our other senior unsecured debt. The senior indenture does not limit the amount of senior debt securities that we may issue. It also does not limit us from issuing any other secured or unsecured debt.

DESCRIPTION OF WARRANTS

The following description, together with the additional information we may include in any applicable prospectus supplements, summarizes the material terms and provisions of the warrants that we may offer under this prospectus and the related warrant agreements and warrant certificates. While the terms summarized below will apply generally to any warrants that we may offer, we will describe the particular terms of any series of warrants in more detail in the applicable prospectus supplement. If we indicate in the prospectus supplement, the terms of any warrants offered under that prospectus supplement may differ from the terms described below. Specific warrant agreements will contain additional important terms and provisions and will be incorporated by reference as an exhibit to the registration statement, which includes this prospectus.

General

We may issue warrants for the purchase of common stock, preferred stock and/or debt securities in one or more series. We may issue warrants independently or together with common stock, preferred stock and/or debt securities, and the warrants may be attached to or separate from these securities.

We will evidence each series of warrants by warrant certificates that we will issue under a separate warrant agreement. We will enter into the warrant agreement with a warrant agent. We will indicate the name and address of the warrant agent in the applicable prospectus supplement relating to a particular series of warrants.

We will describe in the applicable prospectus supplement the terms of the series of warrants, including:

- the offering price and aggregate number of warrants offered;
- the currency for which the warrants may be purchased;
- if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each such security or each principal amount of such security;
- if applicable, the date on and after which the warrants and the related securities will be separately transferable;
- in the case of warrants to purchase debt securities, the principal amount of debt securities purchasable upon exercise of one warrant and the price at, and currency in which, this principal amount of debt securities may be purchased upon such exercise;
- in the case of warrants to purchase common stock or preferred stock, the number of shares of common stock or preferred stock, as the case may be, purchasable upon the exercise of one warrant and the price at which these shares may be purchased upon such exercise;
- the effect of any merger, consolidation, sale or other disposition of our business on the warrant agreement and the warrants;
- the terms of any rights to redeem or call the warrants;
- any provisions for changes to or adjustments in the exercise price or number of securities issuable upon exercise of the warrants;
- the periods during which, and places at which, the warrants are exercisable;
- the manner of exercise;
- the dates on which the right to exercise the warrants will commence and expire;
- the manner in which the warrant agreement and warrants may be modified;
- federal income tax consequences of holding or exercising the warrants;
- the terms of the securities issuable upon exercise of the warrants; and
- any other specific terms, preferences, rights or limitations of or restrictions on the warrants.

DESCRIPTION OF UNITS

We may issue units comprised of shares of common stock, shares of preferred stock, debt securities and warrants in any combination. We may issue units in such amounts and in as many distinct series as we wish. This section outlines certain provisions of the units that we may issue. If we issue units, they will be issued under one or more unit agreements to be entered into between us and a bank or other financial institution, as unit agent. The information described in this section may not be complete in all respects and is qualified entirely by reference to the unit agreement with respect to the units of any particular series. The specific terms of any series of units offered will be described in the applicable prospectus supplement. If so described in a particular supplement, the specific terms of any series of units may differ from the general description of terms presented below. We urge you to read any prospectus supplement related to any series of units we may offer, as well as the complete unit agreement and unit certificate that contain the terms of the units. If we issue units, forms of unit agreements and unit certificates relating to such units will be incorporated by reference as exhibits to the registration statement, which includes this prospectus.

Each unit that we may issue will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date. The applicable prospectus supplement may describe:

- the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- any provisions of the governing unit agreement;
- the price or prices at which such units will be issued;
- the applicable United States federal income tax considerations relating to the units;
- any provisions for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units; and
- any other terms of the units and of the securities comprising the units.

The provisions described in this section, as well as those described under “Description of Capital Stock,” “Description of Debt Securities” and “Description of Warrants” will apply to the securities included in each unit, to the extent relevant and as may be updated in any prospectus supplements.

Issuance in series

We may issue units in such amounts and in as many distinct series as we wish. This section summarizes terms of the units that apply generally to all series. Most of the financial and other specific terms of a particular series of units will be described in the applicable prospectus supplement.

Unit agreements

We will issue the units under one or more unit agreements to be entered into between us and a bank or other financial institution, as unit agent. We may add, replace or terminate unit agents from time to time. We will identify the unit agreement under which each series of units will be issued and the unit agent under that agreement in the applicable prospectus supplement. The following provisions will generally apply to all unit agreements unless otherwise stated in the applicable prospectus supplement:

Modification without consent

We and the applicable unit agent may amend any unit or unit agreement without the consent of any holder:

- to cure any ambiguity; any provisions of the governing unit agreement that differ from those described below;
- to correct or supplement any defective or inconsistent provision; or

- to make any other change that we believe is necessary or desirable and will not adversely affect the interests of the affected holders in any material respect.

We do not need any approval to make changes that affect only units to be issued after the changes take effect. We may also make changes that do not adversely affect a particular unit in any material respect, even if they adversely affect other units in a material respect. In those cases, we do not need to obtain the approval of the holder of the unaffected unit; we need only obtain any required approvals from the holders of the affected units.

Modification with consent

We may not amend any particular unit or a unit agreement with respect to any particular unit unless we obtain the consent of the holder of that unit, if the amendment would:

- impair any right of the holder to exercise or enforce any right under a security included in the unit if the terms of that security require the consent of the holder to any changes that would impair the exercise or enforcement of that right; or
- reduce the percentage of outstanding units or any series or class the consent of whose holders is required to amend that series or class, or the applicable unit agreement with respect to that series or class, as described below.

Any other change to a particular unit agreement and the units issued under that agreement would require the following approval:

- If the change affects only the units of a particular series issued under that agreement, the change must be approved by the holders of a majority of the outstanding units of that series; or
- If the change affects the units of more than one series issued under that agreement, it must be approved by the holders of a majority of all outstanding units of all series affected by the change, with the units of all the affected series voting together as one class for this purpose.

These provisions regarding changes with majority approval also apply to changes affecting any securities issued under a unit agreement, as the governing document.

In each case, the required approval must be given by written consent.

Unit agreements will not be qualified under Trust Indenture Act

No unit agreement will be qualified as an indenture, and no unit agent will be required to qualify as a trustee, under the Trust Indenture Act. Therefore, holders of units issued under unit agreements will not have the protections of the Trust Indenture Act with respect to their units.

Mergers and similar transactions permitted; no restrictive covenants or events of default

The unit agreements will not restrict our ability to merge or consolidate with, or sell our assets to, another corporation or other entity or to engage in any other transactions. If at any time we merge or consolidate with, or sell our assets substantially as an entirety to, another corporation or other entity, the successor entity will succeed to and assume our obligations under the unit agreements. We will then be relieved of any further obligation under these agreements.

The unit agreements will not include any restrictions on our ability to put liens on our assets, nor will they restrict our ability to sell our assets. The unit agreements also will not provide for any events of default or remedies upon the occurrence of any events of default.

Governing law

The unit agreements and the units will be governed by the laws of the State of New York.

Form, exchange and transfer

We will issue each unit in global-i.e., book-entry-form only. Units in book-entry form will be represented by a global security registered in the name of a depositary, which will be the holder of all the units represented

by the global security. Those who own beneficial interests in a unit will do so through participants in the depositary's system, and the rights of these indirect owners will be governed solely by the applicable procedures of the depositary and its participants. We will describe book-entry securities, and other terms regarding the issuance and registration of the units in the applicable prospectus supplement.

Each unit and all securities comprising the unit will be issued in the same form.

If we issue any units in registered, non-global form, the following will apply to them.

The units will be issued in the denominations stated in the applicable prospectus supplement. Holders may exchange their units for units of smaller denominations or combined into fewer units of larger denominations, as long as the total amount is not changed.

- Holders may exchange or transfer their units at the office of the unit agent. Holders may also replace lost, stolen, destroyed or mutilated units at that office. We may appoint another entity to perform these functions or perform them ourselves.
- Holders will not be required to pay a service charge to transfer or exchange their units, but they may be required to pay for any tax or other governmental charge associated with the transfer or exchange. The transfer or exchange, and any replacement, will be made only if our transfer agent is satisfied with the holder's proof of legal ownership. The transfer agent may also require an indemnity before replacing any units.
- If we have the right to redeem, accelerate or settle any units before their maturity, and we exercise our right as to less than all those units or other securities, we may block the exchange or transfer of those units during the period beginning 15 days before the day we mail the notice of exercise and ending on the day of that mailing, in order to freeze the list of holders to prepare the mailing. We may also refuse to register transfers of or exchange any unit selected for early settlement, except that we will continue to permit transfers and exchanges of the unsettled portion of any unit being partially settled. We may also block the transfer or exchange of any unit in this manner if the unit includes securities that are or may be selected for early settlement.

Only the depositary will be entitled to transfer or exchange a unit in global form, since it will be the sole holder of the unit.

Payments and notices

In making payments and giving notices with respect to our units, we will follow the procedures as described in the applicable prospectus supplement.

PLAN OF DISTRIBUTION

We may sell the offered securities in and outside the United States (1) through underwriters or dealers, (2) directly to one or more purchasers, including to a limited number of institutional purchasers, to a single purchaser or to our affiliates and stockholders, (3) through agents or (4) through a combination of any of these methods.

If underwriters or dealers are used in the sale, the securities will be acquired by the underwriters or dealers for their own account and may be resold from time to time in one or more transactions, including:

- in one or more transactions at a fixed price or prices, which may be changed from time to time;
- in "at-the-market offerings," within the meaning of Rule 415(a)(4) of the Securities Act, to or through a market maker or into an existing trading market, on an exchange or otherwise;
- through a market maker or into an existing trading market on an exchange or otherwise;
- at prices related to those prevailing market prices; or
- at negotiated prices.

The applicable prospectus supplement will set forth the following information to the extent applicable:

- the terms of the offering;
- the names of any underwriters, dealers or agents;
- the name or names of any managing underwriter or underwriters;
- the purchase price of the securities;
- the net proceeds from the sale of the securities;
- any delayed delivery arrangements;
- any underwriting discounts, commissions and other items constituting underwriters' compensation;
- any initial public offering price;
- any discounts or concessions allowed or reallowed or paid to dealers; and
- any commissions paid to agents.

Sale through underwriters or dealers

If any securities are offered through underwriters, the underwriters will acquire the securities for their own account and may resell them from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. Underwriters may offer and sell securities to the public either through underwriting syndicates represented by one or more managing underwriters or directly by one or more firms acting as underwriters. Unless otherwise provided in the applicable prospectus supplement, the obligations of the underwriters to purchase the securities will be subject to certain conditions, and the underwriters will be obligated to purchase all of the offered securities if they purchase any of them. In connection with the sale of securities, underwriters may be deemed to have received compensation from us in the form of underwriting discounts or commissions and dealers may receive compensation from the underwriters in the form of discounts or concessions. The underwriters may change from time to time any initial public offering price and any discounts or concessions allowed or reallowed or paid to dealers.

In order to facilitate the offering of securities, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the securities. Specifically, the underwriters may overallot in connection with the offering, creating a short position in the securities for their account. In addition, to cover overallotments or to stabilize the price of the shares, the underwriters may bid for, and purchase, shares in the open market. Finally, an underwriting syndicate may reclaim selling concessions allowed to an underwriter or a dealer for distributing the securities in the offering if the syndicate repurchases previously distributed shares in transactions to cover syndicate short positions, in stabilization transactions, or otherwise.

Any of these activities may stabilize or maintain the market price of the offered securities above independent market levels. The underwriters are not required to engage in these activities, and may discontinue any of these activities at any time.

Some or all of the securities that we offer through this prospectus may be new issues of securities with no established trading market. Any underwriters to whom we sell securities for public offering and sale may make a market in those securities, but they will not be obligated to do so and they may discontinue any market making at any time without notice. Accordingly, we cannot assure you of the liquidity of, or continued trading markets for, any securities offered pursuant to this prospectus.

If any securities are offered through dealers, we will sell the securities to them as principals. They may then resell those securities to the public at varying prices determined by the dealers at the time of resale.

Direct sales and sales through agents

We may sell the securities directly to purchasers. If the securities are sold directly to institutional investors or others who may be deemed to be underwriters within the meaning of the Securities Act with respect to any sale of those securities, we will describe the terms of any such sales in the applicable prospectus supplement. We may also sell the securities through agents designated from time to time. Sales may be made by means of ordinary brokers' transactions on the Nasdaq Global Select Market at market prices, in block transactions and such other transactions as agreed by us and any agent. In the applicable prospectus supplement, we will name any agent involved in the offer or sale of the offered securities, and we will describe any commissions payable to the agent. Unless otherwise provided in the applicable prospectus supplement, any agent will agree to use its reasonable best efforts to solicit purchases for the period of its appointment.

At-the-market offerings

To the extent that we make sales through one or more underwriters or agents in at-the-market offerings, we will do so pursuant to the terms of a sales agency financing agreement or other at-the-market offering arrangement between us, on one hand, and the underwriters or agents, on the other. If we engage in at-the-market sales pursuant to any such agreement, we will issue and sell our securities through one or more underwriters or agents, which may act on an agency basis or a principal basis. During the term of any such agreement, we may sell securities on a daily basis in exchange transactions or otherwise as we agree with the underwriters or agents. Any such agreement will provide that any securities sold will be sold at prices related to the then prevailing market prices for our securities. Therefore, exact figures regarding proceeds that will be raised or commissions to be paid cannot be determined at this time. Pursuant to the terms of the agreement, we may agree to sell, and the relevant underwriters or agents may agree to solicit offers to purchase blocks of our common stock or other securities. The terms of any such agreement will be set forth in more detail in the applicable prospectus supplement.

Remarketing arrangements

Offered securities may also be offered and sold, if we so indicate in the applicable prospectus supplement, in connection with a remarketing upon their purchase, in accordance with a redemption or repayment pursuant to their terms, or otherwise, by one or more remarketing firms, acting as principals for their own accounts or as our agents. Any remarketing firm will be identified and the terms of its agreements, if any, with us and its compensation will be described in the applicable prospectus supplement. Remarketing firms may be deemed to be underwriters of the offered securities under the Securities Act.

Delayed delivery contracts

If we so indicate in the applicable prospectus supplement, we may authorize agents, underwriters or dealers to solicit offers by certain institutions to purchase securities from us pursuant to contracts providing for payment and delivery on a specified future date. The applicable prospectus supplement will describe the conditions to those contracts and the commission payable for solicitation of those contracts.

General information

We may have agreements with the agents, dealers, underwriters and remarketing firms to indemnify them against certain civil liabilities, including liabilities under the Securities Act, or to contribute with respect to payments that the agents, dealers or underwriters may be required to make. Agents, dealers, underwriters and remarketing firms may be customers of, engage in transactions with or perform services for us in the ordinary course of their businesses.

Each underwriter, dealer and agent participating in the distribution of any of the securities that are issuable in bearer form will agree that it will not offer, sell or deliver, directly or indirectly, securities in bearer form in the United States or to United States persons, other than qualifying financial institutions, during the restricted period, as defined in United States Treasury Regulations Section 1.163-5(c)(2)(i)(D)(7).

LEGAL MATTERS

Certain legal matters in connection with this offering will be passed upon for us by Goodwin Procter LLP, Boston, Massachusetts. Any underwriters will also be advised about the validity of the securities and other legal matters by their own counsel, which will be named in the prospectus supplement.

EXPERTS

The consolidated financial statements of SpringWorks Therapeutics, Inc. (formerly SpringWorks Therapeutics, LLC) at December 31, 2018 and 2019, incorporated by reference into this prospectus and registration statement have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon incorporated by reference herein, and are incorporated by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-3 under the Securities Act with respect to the securities offered by this prospectus and the applicable prospectus supplement. This prospectus and the applicable prospectus supplement do not contain all of the information set forth in the registration statement and its exhibits and schedules in accordance with SEC rules and regulations. For further information with respect to us and the securities being offered by this prospectus and the applicable prospectus supplement, you should read the registration statement, including its exhibits and schedules. Statements contained in this prospectus and the applicable prospectus supplement, including documents that we have incorporated by reference, as to the contents of any contract or other document referred to are not necessarily complete, and, with respect to any contract or other document filed as an exhibit to the registration statement or any other such document, each such statement is qualified in all respects by reference to the corresponding exhibit. You should review the complete contract or other document to evaluate these statements. You may obtain copies of the registration statement and its exhibits via the SEC's EDGAR database or our website.

We file annual, quarterly and current reports, proxy statements and other documents with the SEC under the U.S. Securities Exchange Act of 1934, as amended, or the Exchange Act. The SEC maintains a website that contains reports, proxy and information statements and other information regarding issuers, including us, that file electronically with the SEC. You may obtain documents that we file with the SEC at *www.sec.gov*.

We also make these documents available on our website at *www.springworkstx.com*. Our website and the information contained or connected to our website is not incorporated by reference in this prospectus or any prospectus supplement, and you should not consider it part of this prospectus or any prospectus supplement.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

SEC rules permit us to incorporate information by reference in this prospectus and the applicable prospectus supplement. This means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is considered to be part of this prospectus and the applicable prospectus supplement, except for information superseded by information contained in this prospectus or the applicable prospectus supplement itself or in any subsequently filed incorporated document. This prospectus and the applicable prospectus supplement incorporate by reference the documents set forth below that we have previously filed with the SEC, other than information in such documents that is deemed to be furnished and not filed. These documents contain important information about us and our business and financial condition.

- Annual Report on Form 10-K for the year ended December 31, 2019, filed with the SEC on March 12, 2020
- Quarterly Reports on Form 10-Q for the quarters ended March 31, 2020 and June 30, 2020, that we filed with the SEC on May 12, 2020 and August 12, 2020, respectively;
- our Current Report on Form 8-K that we filed with the SEC on May 27, 2020 (other than any portion of such filing that is furnished under applicable SEC rules rather than filed);
- our Definitive Proxy Statement on Schedule 14A, that we filed with the SEC on April 2, 2020; and; and
- the description of our common stock contained in our Registration Statement on Form 8-A filed with the SEC on September 11, 2019, including any amendment or report filed for the purpose of updating such description.

All documents that we file (but not those that we furnish) pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act, after the date of the initial registration statement of which this prospectus is a part and prior to the effectiveness of the registration statement shall be deemed to be incorporated by reference into this prospectus and will automatically update and supersede the information in this prospectus, and any previously filed documents. All documents that we file (but not those that we furnish) pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act on or after the date of this prospectus and prior to the termination of the offering of any of the securities covered under this prospectus shall be deemed to be incorporated by reference into this prospectus and will automatically update and supersede the information in this prospectus, the applicable prospectus supplement and any previously filed documents.

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

Documents incorporated by reference are available from us without charge, excluding all exhibits unless specifically incorporated by reference as an exhibit to this prospectus and the applicable prospectus supplement.

Prospective investors may obtain documents incorporated by reference in this prospectus and the applicable prospectus supplement at no cost by requesting them in writing or by telephone from us at our executive offices at:

SpringWorks Therapeutics, Inc.
100 Washington Blvd
Stamford, CT 06902
(203) 883-94903

$200,000,000

Common Stock

PROSPECTUS SUPPLEMENT

Cowen

February 25, 2021