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Filed Pursuant to Rule 424(b)(5)
Registration No. 333-225083

PROSPECTUS SUPPLEMENT
(To prospectus dated June 1, 2018)

$15,000,000
Common Stock

This prospectus supplement and accompanying prospectus relates to the issuance and sale of up to $15,000,000 of our common stock, par value $0.01 per share, from time to time to or through our sales agent, H.C. Wainwright & Co., LLC, or Wainwright. These sales, if any, will be made under an at-the-market sales agreement, dated October 2, 2018, between us and Wainwright, which we refer to as the sales agreement.

Sales of our common stock, if any, under this prospectus supplement and the accompanying prospectus may be made by any method permitted by law deemed to be an "at-the-market offering" as defined in Rule 415 under the Securities Act of 1933, as amended, which we refer to as the Securities Act, including sales made directly on The Nasdaq Capital Market, on any other existing trading market for our common stock or to or through a market maker or through an electronic communications network. If expressly authorized by us, Wainwright may also sell our common stock in privately negotiated transactions. Wainwright will act as sales agent on a commercially reasonable efforts basis, consistent with its normal trading and sales practices and applicable state and federal laws, rules and regulations and the rules of The Nasdaq Capital Market. There is no specific date on which the offering will end, there are no minimum sale requirements and there are no arrangements to place any of the proceeds of this offering in an escrow, trust or similar account.

Wainwright will be entitled to compensation at a fixed commission rate of 8.0% of the gross proceeds from the sale of our common stock pursuant to the sales agreement and an additional management fee equal to 1.0% of the gross proceeds from the sale of our common stock pursuant to the sales agreement. In addition, we have agreed to reimburse Wainwright for certain of its expenses and to grant warrants to purchase shares of our common stock, or the Sales Agent Warrants, to Wainright as described under the "Plan of Distribution" below. In connection with the sale of the common stock on our behalf, Wainwright may, and will with respect to sales effected in an "at-the-market offering," be deemed to be an "underwriter" within the meaning of the Securities Act, and the compensation of Wainwright may be deemed to be underwriting commissions or discounts. We have also agreed to provide indemnification and contribution to Wainwright against certain civil liabilities, including liabilities under the Securities Act.

Our common stock is listed on the Nasdaq Capital Market under the symbol "RSLS." The closing price of our common stock on October 1, 2018 was $0.045.

We are currently seeking stockholder approval for an amendment to our Sixth Amended and Restated Certificate of Incorporation, as amended, authorizing a reverse stock split of the issued and outstanding shares of our common stock, at a ratio between 1-for-20 and 1-for-140, such ratio and the implementation and timing of such reverse stock split to be determined in the discretion of our Board of Directors.

Investing in our securities involves a high degree of risk. See "Risk Factors" beginning on page S-9 of this prospectus supplement.

Neither the United States Securities and Exchange Commission, or the SEC, nor any state securities commission has approved or disapproved of the securities that may be offered under this prospectus supplement, nor have any of these regulatory authorities determined if this prospectus supplement is truthful or complete. Any representation to the contrary is a criminal offense.

H.C. Wainwright & Co.
The date of this prospectus supplement is October 2, 2018

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ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying prospectus form part of a registration statement on Form S-3 that we filed with the SEC utilizing a "shelf" registration process. This document is in two parts. The first part is this prospectus supplement, which describes the specific terms of this offering and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference herein from our filings with the SEC. The second part, the accompanying prospectus, provides more general information. Before you invest, you should carefully read this prospectus supplement, the accompanying prospectus, all information incorporated by reference herein and therein, as well as the additional information described under "Where You Can Find More Information" and "Incorporation of Documents by Reference" on page S-19 of this prospectus supplement. These documents contain information you should consider when making your investment decision. This prospectus supplement may add, update or change information contained in the accompanying prospectus. To the extent that any statement that we make in this prospectus supplement is inconsistent with statements made in the accompanying prospectus or any documents incorporated by reference, the statements made in this prospectus supplement will be deemed to modify or supersede those made in the accompanying prospectus and such documents incorporated by reference.

We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference herein were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

You should rely only on the information contained or incorporated by reference in this prospectus supplement, the accompanying prospectus and in any free writing prospectuses we may provide to you in connection with this offering. Neither we nor the sales agent have authorized anyone to provide any information that is different from that contained in this prospectus supplement, the accompanying prospectus or in any free writing prospectus we may authorize to be delivered or made available to you. Neither we nor the sales agent take responsibility for, and can provide no assurance as to the reliability of, any other information that any others may give you. If anyone provides you with different or inconsistent information, you should not rely on it. The information contained in this prospectus supplement or the accompanying prospectus, or incorporated by reference herein or therein is accurate only as of the respective dates thereof, regardless of the time of delivery of this prospectus supplement and the accompanying prospectus or of any sale of our securities.

We are offering to sell, and seeking offers to buy, our securities only in jurisdictions where offers and sales are permitted. The distribution of this prospectus supplement and the accompanying prospectus and the offering of the securities in certain jurisdictions may be restricted by law. Persons outside the United States who come into possession of this prospectus supplement and the accompanying prospectus must inform themselves about, and observe any restrictions relating to, the offering of the securities and the distribution of this prospectus supplement and the accompanying prospectus outside the United States. This prospectus supplement and the accompanying prospectus do not constitute, and may not be used in connection with, an offer to sell, or a solicitation of an offer to buy, any securities offered by this prospectus supplement and the accompanying prospectus by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation.

On June 1, 2018, we amended our certificate of incorporation to effect a one-for-15 reverse split of our outstanding shares of our common stock. All share and per share data in this prospectus supplement gives effect to the reverse stock split.

Unless otherwise stated, all references in this prospectus supplement and the accompanying prospectus to "we," "us," "our," "ReShape Lifesciences," "the Company" and similar designations refer, collectively, to ReShape Lifesciences Inc., a Delaware corporation, and its consolidated subsidiaries, unless otherwise specified.

We also register the trademarks and trade names through which we conduct our business. In the United States we have registered trademarks for vBLOC®, ENTEROMEDICS®, MAESTRO®, RESHAPE®, RESHAPE DUO®, and RESHAPE MEDICAL®, each registered with the United States Patent and Trademark Office, and trademark applications for RESHAPE vBLOC, RESHAPE VEST, RESHAPE LIFESCIENCES AND DESIGN, and RESHAPE BALLOON & COLOR DESIGN. In addition, some or all of the marks vBLOC, ENTEROMEDICS, MAESTRO, MAESTRO SYSTEM ORCHESTRATING OBESITY SOLUTIONS, vBLOC POWER TO CHOOSE, vBLOC POWER TO CHOOSE AND DESIGN, RESHAPE, RESHAPE DUO, and RESHAPE MEDICAL are the subject of either a trademark registration or application for registration in Australia, Brazil, Canada, China, the European Community, India, Kuwait, Mexico, Saudi Arabia, Switzerland and the United Arab Emirates. We believe that we have common law trademark rights to RESHAPE VEST.

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights selected information contained in greater detail elsewhere in this prospectus supplement or incorporated by reference into this prospectus supplement. This summary may not contain all of the information that you should consider before investing in our securities. You should carefully read the entire prospectus supplement, including "Risk Factors" beginning on page S-9 and the financial statements and related notes and other documents incorporated by reference into this prospectus supplement, before making an investment decision.

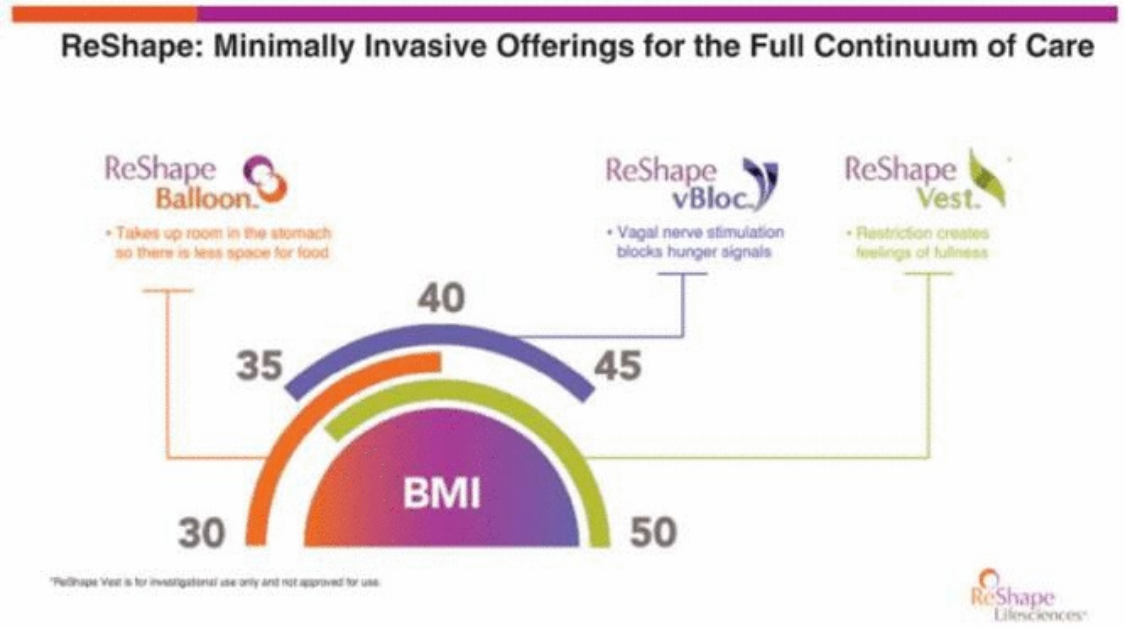
Our Company

Our vision is to be recognized as a leading medical technology company focused on the design, development and commercialization of transformative technologies to treat obesity and metabolic diseases. Our growing and differentiated product portfolio is utilized by bariatric surgeons, general surgeons, and gastroenterologists. We believe obesity is a global epidemic and that the majority of patients need treatment options that are anatomy friendly and provide for weight loss and comorbidity improvements along with long-term, ongoing obesity support and prevention.

Our Strategic Focus

Develop and Commercialize a Differentiated Portfolio of Products/Therapies

An overarching strategy for our company is to develop and commercialize a product portfolio that is differentiated from our competition by offering transformative technologies to bariatric surgeons and gastroenterologists that consists of a selection of patient friendly, non-anatomy-changing alternatives to traditional bariatric surgery. With ReShape vBloc, the ReShape Balloon, and the ReShape Vest (if approved for commercial use), we believe we will have three compelling and differentiated medical devices, two of which are currently FDA approved. We believe that we are well positioned for the existing market and can serve more of the overweight and obese population with our solutions and thereby help expand the addressable market for obesity.



Obtain Broad Coverage and Reimbursement

We are working to obtain coverage for our products from insurance carriers, local coverage entities and self-insured plans, including Integrated Delivery Networks (IDNs) and Medicare Administrative Contractors (MACs), although they are not currently covered. Initial coverage for ReShape vBloc will likely occur in self-contained healthcare systems that operate as IDNs, as these systems are able to evaluate risk-benefit ratios in a closed environment.

While payers are not our direct customers, their coverage and reimbursement policies influence patient and physician selection of obesity treatment. Our commercialization is coverage-centric, focused on payer and employer engagement, in order to obtain support for our ReShape vBloc and ReShape Balloon. We plan to establish a market price for the ReShape vBloc in the United States that is competitive with other available weight loss surgical procedures and comparable to other active implantable devices such as implantable cardioverter defibrillators, neurostimulation devices for chronic pain and depression, and cochlear implant systems.

The Centers for Medicare & Medicaid Services, or CMS, issued a national coverage determination for several specific types of bariatric surgery in 2006, which we view as positive potential precedent and guidance factors that CMS might use in deciding to cover our vBloc Therapy, although it is not currently covered. Although Medicare policies are often emulated or adopted by other third-party payers, other governmental and private insurance coverage often varies by carrier and geographic location.

Drive the Adoption of Our Portfolio through Obesity Therapy Experts and Patient Ambassadors

Our clinical development strategy is to collaborate closely with regulatory bodies, healthcare providers, obesity therapy experts and others involved in the obesity management process, patients and their advocates and scientific experts. We have established relationships with obesity therapy experts and healthcare providers, including physicians and hospitals, and have identified ReShape vBloc and ReShape Balloon patient ambassadors and we believe these individuals will be important in promoting patient awareness and gaining widespread adoption of the ReShape vBloc, the ReShape Balloon and the ReShape Vest.

Expand and Protect Our Intellectual Property Position.

We believe that our issued patents and our patent applications encompass a broad platform of neuromodulation therapies, including vagal blocking and combination therapy focused on obesity, diabetes, hypertension and other gastrointestinal disorders. We also have broad patent coverage and pending patent applications for our ReShape Balloon and our ReShape Vest products. We intend to continue to pursue further intellectual property protection through U.S. and foreign patent applications.

Leverage our vBloc Technology for Other Disease States.

We intend to continue to conduct research and development for other potential applications for our vBloc Therapy and believe we have a broad technology platform that will support the development of additional clinical applications and therapies for other metabolic and gastrointestinal disorders in addition to obesity.

Alternative Weight Loss Solutions

If we are able to commercialize the ReShape Vest, we believe that we will be able to offer three distinct weight loss treatment solutions that may be selected by the physician depending on the severity of the patient's BMI or condition. Together, the ReShape Vest, ReShape vBloc and ReShape Balloon provide a minimally—invasive continuum of care for bariatric patients and their care providers.

Concentrate Our Resources on the U.S. Market while Achieving Measured International Expansion

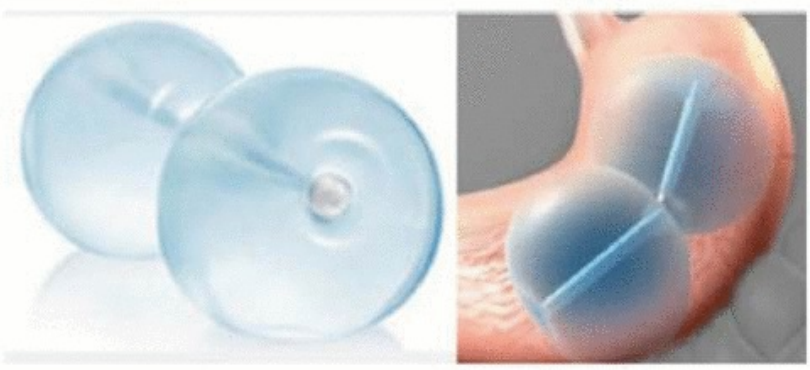
We intend to devote our near-term efforts toward our commercialization in the United States. We intend to explore select international markets to commercialize the ReShape vBloc and the ReShape Balloon as our resources permit, using direct, dealer and distributor sales models as the targeted market best dictates. With the ReShape Vest we intend on collecting data in our clinical trials sufficient to obtain future CE Mark approval and subsequent country approvals.

Our Product Portfolio

The ReShape Balloon

The ReShape Balloon technology, which we acquired in October 2017 in connection with our acquisition of ReShape Medical Inc., or ReShape Medical, is a removable, dual weight loss gastric balloon technology, inserted through an endoscopic procedure, that is approved for people with a body mass index between 30 and 40 with one or more related comorbid conditions who have failed previous attempts to lose weight through diet and exercise. Our ReShape Balloon adds

a lower-cost option to our portfolio of products, allowing access to additional patients within the obesity market. This expansion further reinforces our strategy and commitment to the entire continuum of care in obesity.



Benefits: The ReShape Balloon is a less-invasive weight loss solution ideal for patients who have failed at diet and exercise, and who are not indicated for or are afraid of surgery (but for whom an endoscopic procedure with sedation is appropriate). The ReShape Balloon offers the following benefits:

- **Satiety:** The ReShape Balloon has more potential fill volume to aid in patients' weight loss than any other product on the market. The larger fill volume takes up more room in the stomach, so that patients eat less and feel full longer.

- **Patient Comfort:** Unlike other balloons, we believe that our device differentiates itself with two interconnected balloons designed to better fit the natural contour of the stomach, thereby increasing the level of patient comfort.

- **Customized Aftercare:** For the six months the balloon is in and for six months after the balloon removal, patients obtain monthly customized coaching focused on changing behaviors and relationships with food.

The ReShape Balloon was approved by the FDA in July 2015, and to date, more than 4,000 patients have been treated with this technology. The ReShape Balloon also has received CE Mark approval, but due to limited capital resources, ReShape Medical had not focused on penetrating European markets. The ReShape Balloon was made available to three areas in the Middle East in 2017: Kuwait, Qatar and UAE. Further expansion opportunities will be evaluated based on market opportunity and resources to manage expansion.

On May 24, 2016 and October 14, 2016, ReShape Medical issued letters recalling the ReShape Balloon due to complications involving device leaks and informing customers that the ReShape Balloons must be removed immediately.

The ReShape Vest

The ReShape Vest, which we acquired in May 2017 in connection with our acquisition of BarioSurg, is an investigational, minimally invasive, laparoscopically implanted medical device being studied for weight loss in morbidly obese patients with a BMI of at least 35. This device is designed to restrict the intake of food and provide the feeling of fullness without cutting or permanently removing portions of the stomach, or bypassing, any portion of the gastrointestinal tract. The implantation of the device mimics a traditional weight-loss surgery without permanently altering the anatomy and may not require vitamin supplementation.

In a small pilot study conducted outside the United States, at 12 months, ReShape Vest patients demonstrated a mean percent excess weight loss (%EWL) of 85% and a mean percent total body weight loss (%TBWL) of 30.2%, an average drop in HbA1c (Hemoglobin A1c) of 2.1 points, an average decrease of systolic blood pressure of 13mmHg, an average waist circumference reduction of 38 centimeters, or approximately 15 inches, and an average increase in HDL "good cholesterol" of 29 mg/dl.

Benefits. The ReShape Vest, if approved for sale, would allow us to offer an additional weight loss solution that emulates the effect of conventional weight loss surgery through a procedure that is minimally invasive. The ReShape Vest potentially offers the following benefits:

- **Minimizes Changes to Normal Anatomy.** The ReShape Vest emulates the effects of conventional weight-loss surgery without stapling, cutting or removing any portion of the stomach.

- **Minimally Invasive Procedure.** Unlike conventional weight loss surgery, which typically is performed in a hospital setting under general anesthesia and requires a hospital stay of up to four days, the ReShape Vest is inserted laparoscopically in an outpatient procedure.

- **Removable/Reversible.** The ReShape Vest is designed to be removed laparoscopically, permitting the removal of the device at a later time, if that is desired.

- **Allows Continued Ingestion and Digestion of Foods Found in a Typical, Healthy Diet.** Because the ReShape Vest also leaves the digestive anatomy largely unaltered, patients are able to maintain a more consistent nutritional balance compared to conventional surgical approaches, thus allowing them to effect positive changes in their eating behavior in a non-forced and potentially more consistent way.

ReShape vBloc

ReShape vBloc, our initial product, uses vBloc Therapy to block the gastrointestinal effects of the vagus nerve using high-frequency, low-energy electrical impulses to intermittently interrupt naturally occurring neural impulses on the vagus nerve between the brain and the digestive system. Our therapy controls hunger sensations between meals, limits the expansion of the stomach and reduces the frequency and intensity of stomach contractions, leading to earlier fullness. The resulting physiologic effects of vBloc Therapy produce a feeling of early and prolonged fullness following smaller meal portions. By intermittently blocking the vagus nerve and allowing it to return to full function between therapeutic episodes, our therapy limits the body's natural tendency to circumvent the therapy, which can result in long-term weight loss.

Benefits. We have designed ReShape vBloc to address a significant market opportunity that we believe exists for a patient-friendly, safe, effective, less-invasive and durable therapy that is intended to address the underlying causes of hunger and obesity. Our ReShape vBloc offers each of the following benefits, which we believe could lead to the adoption of vBloc Therapy as the surgical therapy of choice for obesity and its comorbidities:

- **Preserves Normal Anatomy.** The ReShape vBloc is designed to deliver therapy that blocks the neural signals that influence a patient's hunger and sense of fullness without altering digestive system anatomy. Accordingly, patients should experience fewer and less severe side effects compared to treatments that incorporate anatomical alterations.

- **Allows Continued Ingestion and Digestion of Foods Found in a Typical, Healthy Diet.** Because our therapy leaves the digestive anatomy unaltered, patients are able to maintain a more consistent nutritional balance compared to conventional surgical approaches, thus allowing them to effect positive changes in their eating behavior in a non-forced and potentially more consistent way.

- **May be Implanted on an Outpatient Basis and Adjusted Non-Invasively.** The ReShape vBloc is designed to be laparoscopically implanted within a 60-90 minute procedure, allowing patients to leave the hospital or clinic on the same day. The implantable system is designed to be turned off and left in place for patients who reach their target weight. When desired, the follow-up physician can simply and non-invasively turn the therapy back on. Alternatively, the implantable system can be removed in a laparoscopic procedure.

- **Offers Favorable Safety Profile.** We have designed our clinical trials to demonstrate the safety of the ReShape vBloc. In our clinical trials to date, including the ReCharge trial, we have not observed any mortality related to our device or any unanticipated adverse device effects. We have also not observed any long-term problematic clinical side effects in any patients, including in those patients who have been using vBloc Therapy for more than one year.

- **Targets Multiple Factors that Contribute to Hunger and Obesity.** We designed vBloc Therapy to target the digestive, metabolic and information transmission functions of the vagus nerve and to affect the perception of hunger and fullness, which together contribute to obesity and its metabolic consequences.

On January 14, 2015, the vBloc® System, which we now refer to as ReShape vBloc, received U.S. Food and Drug Administration (FDA) approval for vBloc Therapy, delivered via the ReShape vBloc, for the treatment of adult patients with

obesity who have a Body Mass Index (BMI) of at least 40 to 45 kg/m2, or a BMI of at least 35 to 39.9 kg/m2 with a related health condition such as high blood pressure or high cholesterol levels, and who have tried to lose weight in a supervised weight management program and failed within the past five years.

In 2015, we began a controlled commercial launch of the ReShape vBloc at select surgical centers in the United States and had our first commercial sales. During 2015, we initiated a controlled expansion of our commercial operations and started the process of building a sales force. In January 2016, we hired new executives to oversee this expansion. Throughout 2016, our sales force called directly on key opinion leaders and bariatric surgeons at commercially-driven surgical centers that met our certification criteria. Additionally, beginning in 2016, through a distribution agreement with Academy Medical, LLC, U.S. Department of Veterans Affairs (VA) medical facilities began to offer the ReShape vBloc as a treatment option for veterans, at little to no cost to veterans in accordance with their veteran healthcare benefits. Our goal for the ReShape vBloc remains broad coverage and reimbursement for vBloc Therapy. We believe that the most significant barrier to adoption for patients who want vBloc Therapy has been cost and lack of payer coverage.

Our Intellectual Property

Our success will depend in part on our ability to obtain and defend patent protection for our products and processes, to preserve our trade secrets and to operate without infringing or violating the proprietary rights of third parties. We own numerous U.S. and foreign patents, and have numerous patent applications pending, several of which pertain to treating gastrointestinal disorders and we believe provide us with broad intellectual property protection covering electrically-induced vagal blocking and methods for treating obesity. Assuming timely payment of maintenance fees as they become due, many of these patents will expire in 2023. Our acquisition of the ReShape Vest included four U.S. patents, one pending U.S. patent application, four foreign patents, and five pending foreign patent applications. The patents we acquired related to the ReShape Vest will expire between 2028 and 2034. We have also received or applied for patents in Europe, Australia, China, India and Japan. These applications primarily pertain to our vagal blocking technology and its application to obesity as well as other gastrointestinal disorders. The applications that we acquired related to the ReShape Vest primarily pertain to methods of gastric restriction for treating obesity. Our acquisition of the ReShape Balloon included broad coverage for multi-balloon gastric implants and methods for its placement and retrieval. Patent coverage also includes methods of manufacturing and additional therapy applications. There are 35 patents granted in the United States, Europe, Canada, and Japan with additional U.S. and international patent applications pending. The key patents we acquired in connection with our acquisition of ReShape Medical will expire between 2027 and 2030.

Our Market

The Obesity and Metabolic Disease Epidemic

Obesity is a disease that has been increasing at an alarming rate with significant medical repercussions and associated economic costs. Since 1980, the worldwide obesity rate has more than doubled, with about 13% of the world's adult population now being obese. The World Health Organization (WHO) currently estimates that as many as 600 million people worldwide are obese and more than 1.9 billion adults are overweight. Being overweight or obese is also the fifth leading risk for global deaths, with approximately 3.4 million adults dying each year as a result.

According to the World Health Organization, there are over 70 progressive obesity-related diseases and disorders associated with obesity, which are also known as comorbidities, including Type 2 diabetes, hypertension, infertility and certain cancers. Worldwide, 44% of the diabetes burden, 23% of the heart disease burden and between 7% and 41% of certain cancer burdens are attributable to overweight and obesity.

We believe that this epidemic will continue to grow worldwide given dietary trends in developed nations that favor highly processed sugars, larger meals and fattier foods, as well as increasingly sedentary lifestyles. Despite the growing obesity rate, increasing public interest in the obesity epidemic and significant medical repercussions and economic costs associated with obesity, there continues to be a significant unmet need for effective treatments.

The United States Market

Obesity has been identified by the U.S. Surgeon General as the fastest growing cause of disease and death in the United States, and according to a 2014 McKinsey Report is the leading cause of preventable death in the U.S. Currently, the Center for Disease Control, or the CDC, estimates that 35.7% of U.S. adults (or approximately 73 million people) are obese, having a BMI of 30 or higher. BMI is calculated by dividing a person's weight in kilograms by the square of their height in meters. It is estimated that if obesity rates stay consistent, 51% of the U.S. population will be obese by 2030. According to

data from the U.S. Department of Health and Human Services, almost 80% of adults with a BMI above 30 have comorbidity, and almost 40% have two or more of these comorbidities. According to The Obesity Society and the CDC, obesity is associated with many significant weight-related comorbidities including Type 2 diabetes, high blood-pressure, sleep apnea, certain cancers, high cholesterol, coronary artery disease, osteoarthritis and stroke. According to the American Cancer Society, 572,000 Americans die of cancer each year, over one-third of which are linked to excess body weight, poor nutrition and/or physical inactivity. Over 75% of hypertension cases are directly linked to obesity, and more than 90% of the approximately 28 million U.S. adults with Type 2 diabetes are overweight or have obesity.

Currently, medical costs associated with obesity in the U.S. are estimated to be up to $210 billion per year and nearly 21% of medical costs in the U.S. can be attributed to obesity. An estimated approximately $1.5 billion was spent in 2015 alone in the U.S. on approximately 200,000 bariatric surgical procedures to treat obesity. By 2025, it is estimated that up to $3.8 billion will be spent in the U.S. on approximately 800,000 bariatric surgical procedures to treat obesity. Researchers estimate that if obesity trends continue, obesity related medical costs could rise by another $44-$66 billion each year in the U.S. by 2030. The medical costs paid by third-party payers for people who are obese were $2,741 per year, or 42% higher than those of people who are normal weight and the average cost to employers is $6,627 to $8,067 per year per obese employee (BMI of 35 to 40 and higher).

Current Treatment Options and Their Limitations

We believe existing bariatric surgery and endoscopic procedural options for the treatment of obesity have seen limited adoption to date, with approximately 1% of the obese population qualifying for treatment actually seeking treatment, due to patient concerns and potential side effects including permanently altered anatomy and morbidity.

The principal treatment alternatives available today for obesity include:

- **Behavioral modification.** Behavioral modification, which includes diet and exercise, is an important component in the treatment of obesity; however, most obese patients find it difficult to achieve and maintain significant weight loss with a regimen of diet and exercise alone.

- **Pharmaceutical therapy.** Pharmaceutical therapies often represent a first option in the treatment of obese patients but carry significant safety risks and may present troublesome side effects and compliance issues.

- **Bariatric Surgery and Endoscopic Procedures.** In more severe cases of obesity, patients may pursue more aggressive surgical treatment options such as gastric banding, sleeve gastrectomy and gastric bypass. These procedures promote weight loss by surgically restricting the stomach's capacity and outlet size. While largely effective, these procedures generally result in major lifestyle changes, including dietary restrictions and food intolerances, and they may present substantial side effects and carry short- and long-term safety and side effect risks that have limited their adoption.

Our Corporate Information

We were incorporated in Minnesota in December 2002 as two separate legal entities, Alpha Medical, Inc. and Beta Medical, Inc., both of which were owned 100% by a common stockholder. In October 2003, the two entities were combined and we changed our name to EnteroMedics Inc. In 2004 we reincorporated in Delaware. On October 23, 2017, we changed the company name from EnteroMedics Inc. to ReShape Lifesciences Inc. (Nasdaq: RSLS) in recognition of our expansion and growth in developing and commercializing transformative technologies to address the continuum of care for obesity and its associated health conditions. The ReShape brand name is strong and well-established in the marketplace and we expect this to not only help our other products succeed, but we also believe it will accelerate growth in our industry overall. In connection with our acquisition of ReShape Medical, we moved our principal executive offices from St. Paul, Minnesota to San Clemente, California. In December 2017, we rebranded the three products under the ReShape Lifesciences brand. Our portfolio of transformative technologies, designed to help patients lose weight and live a healthier life, includes two FDA-approved devices, ReShape™ vBloc (formerly vBloc) and ReShape™ Balloon, as well as the investigational ReShape™ Vest (formerly Gastric Vest System).

On May 22, 2017, we acquired the Gastric Vest System™, which we now refer to as the ReShape Vest, through our acquisition of BarioSurg.

On October 2, 2017, we acquired ReShape Medical, Inc., a privately-held medical technology company that develops, manufactures and markets the ReShape® Integrated Dual Balloon, which we refer to as the ReShape Balloon.

Our principal executive offices are located at 1001 Calle Amanecer, San Clemente, California 92673, and our telephone number is (949) 429-6680. Our website address is *www.reshapelifesciences.com*. The information on, or that may be accessed through, our website is not incorporated by reference into this prospectus supplement and should not be considered a part of this prospectus supplement.

Recent Developments

We intend to call a special meeting of our stockholders scheduled to be held on October 30, 2018 at which we will seek stockholder approval for an amendment to our Sixth Amended and Restated Certificate of Incorporation, as amended, authorizing a reverse stock split of the issued and outstanding shares of our common stock, at a ratio between 1-for-20 and 1-for-140, such ratio and the implementation and timing of such reverse stock split to be determined in the discretion of our Board of Directors.

Our Board of Directors believes that a reverse stock split at a ratio of between 1-for-20 and 1-for-140, inclusive, as currently proposed, will be effective to maintain the per share trading price of our common stock above the minimum bid price of $1.00 per share required by the Nasdaq Stock Market, or Nasdaq, to be listed on The Nasdaq Capital Market. If our stockholders approve the reverse stock split, the Board of Directors may implement the reverse stock split promptly if necessary to satisfy the minimum bid price rule and so maintain our listing on The Nasdaq Capital Market. However, the Board of Directors reserves the right to abandon the reverse stock split at any time prior to its effectivness if it determines, in its sole discretion, that the reverse stock split is no longer in the best interests of our company and our stockholders.

While we are seeking stockholder approval of a reverse stock split ratio of between 1-for-20 and 1-for-140, the continued listing standards of The Nasdaq Capital Market require companies to, among other things, have at least 500,000 publicly held shares. Because our shares of common stock are our only publicly listed shares, the reverse stock split ratio determined by our Board of Directors may be limited by the number of shares of outstanding common stock we have outstanding at the time the reverse stock split is implemented, if approved by our stockholders. We are seeking approval for a range of reverse stock split ratios up to 1-for-140 because it is possible that securities convertible into or exercisable for shares of our common stock will be converted or exercised prior to implementing the reverse stock split, which would increase the maximum reverse stock split ratio our Board of Directors could choose to implement.

The Nasdaq Marketplace Rules contain various continued listing criteria that companies must satisfy in order to remain listed on the exchange. One of these criteria is that a company's common stock has a bid price that is greater than or equal to $1.00 per share. We believe that the only credible plan to maintain compliance with the minimum bid price rule is to implement a reverse stock split to maintain the per share trading price of our common stock above Nasdaq's minimum bid price requirement of $1.00 per share as set forth in this proposal.

Our Board of Directors has considered the potential harm to us and our stockholders should Nasdaq delist our common stock from The Nasdaq Capital Market. Delisting from Nasdaq would adversely affect our ability to raise additional financing through the public or private sale of equity securities and would significantly affect the ability of investors to trade our securities. Delisting would also negatively affect the value and liquidity of our common stock because alternatives, such as the OTC Bulletin Board and the pink sheets, are generally considered to be less efficient markets.

The primary purpose of the reverse stock split is to increase the per share trading price of our common stock in order to maintain the eligibility of our common stock for listing on The Nasdaq Capital Market. We believe that the reverse stock split would allow us to maintain compliance with the minimum bid price rule. Additionally, a secondary purpose of the reverse stock split is to enhance the marketability of our common stock by increasing the price per share. We believe the current price per share of our common stock diminishes the effective marketability of our common stock because of the reluctance of many leading brokerage firms to recommend lower-priced stock to their clients. Additionally, the policies and practices of a number of brokerage firms with respect to the payment of commissions based on stock price tend to discourage individual brokers within those firms from dealing in lower-priced stocks.

If approved and implemented, the reverse stock split will be realized simultaneously and in the same ratio for all of our issued and outstanding shares of common stock and common stock equivalents. Any fractional shares that would otherwise be issuable as a result of the reverse stock split will be rounded up to the nearest whole share.

The Offering

Issuer	ReShape Lifesciences Inc.
Common stock offered by us	Shares of our common stock having an aggregate offering price of up to $15,000,000.
Manner of offering	"At the market offering" that may be made from time to time to or through our sales agent, Wainwright. Please see "Plan of Distribution" on page S-18.
Use of Proceeds	We intend to use the net proceeds of this offering to continue our commercialization efforts, for clinical and product development activities and for other working capital and general corporate purposes. See "Use of Proceeds" on page S-15 of this prospectus supplement for additional information.
Market for the Common Stock	Our common stock is listed on the Nasdaq Capital Market under the symbol "RSLS".
Risk Factors	See "Risk Factors" beginning on page S-9 and other information included in, or incorporated by reference into, this prospectus supplement for a discussion of factors that you should consider carefully before deciding to invest in our common stock.

Except as otherwise indicated, all information in this prospectus supplement assumes no exercise of the Sales Agent Warrants to be issued to Wainwright in connection with this offering.

RISK FACTORS

An investment in our securities involves a high degree of risk. You should carefully read and consider the risks described below, as well as the other information in this prospectus supplement and other information incorporated by reference herein, before deciding to invest in our securities. The occurrence of any of the following risks could have a material adverse effect on our business, financial condition, results of operations or cash flows. In that case, the trading price of our common stock could decline, and you could lose all or part of your investment.

Risks Relating to this Offering

We received a written notice from Nasdaq that we have failed to comply with certain listing requirements of the Nasdaq Stock Market, which could result in our common stock being delisted from the Nasdaq Stock Market.

On August 22, 2018, we received a written notice from the Listing Qualifications department of The Nasdaq Stock Market (the "Nasdaq Staff") notifying us that we had failed to comply with Listing Rule 5250(e)(2), which requires companies listed on Nasdaq to file notification forms for the Listing of Additional Shares ("LAS Notification") at least 15 calendar days prior to issuing any common stock (or any securities convertible into common stock) in a transaction that may result in the potential issuance of common stock (or securities convertible into common stock) greater than 10% of either the total shares outstanding or the voting power outstanding on a pre-transaction basis. Specifically, we did not timely submit LAS Notifications on five occasions since June 2018 in connection with our publicly announced securities offerings during that period. While we did submit LAS Notifications for each of the offerings, they were not submitted at least 15 calendar days prior to the closing of the offerings as required by Listing Rule 5250(e)(2). The Nasdaq Staff requested that we submit a plan on or before August 29, 2018 to address the specific steps we are taking to ensure that we will comply with Listing Rule 5250(e) in the future. We submitted our written compliance plan to the Nasdaq Staff on August 29, 2018, which is currently under review by the Nasdaq Staff.

In addition to the failure to comply with Listing Rule 5250(e)(2), the Nasdaq Staff is considering whether our history of non-compliance with Nasdaq's minimum $1.00 bid price requirement and the corresponding history of reverse stock splits raise public interest concerns under Listing Rule 5101, which provides that Nasdaq may suspend or delist particular securities based on any event, condition or circumstance that exists or occurs that makes continued listing of the securities on Nasdaq inadvisable or unwarranted in the opinion of the Nasdaq Staff, even though the securities meet all enumerated criteria for continued listing on Nasdaq. In that regard, the Nasdaq Staff may determine that any subsequent failure by us to comply with the minimum bid price rule, or any price-based market value requirement, constitutes a public interest concern that would result in the Nasdaq Staff issuing a delisting determination with respect to our common stock (subject to any appeal we might file). We intend to call a special meeting of our stockholders scheduled to be held on October 30, 2018 at which we will seek stockholder approval for an amendment to our Sixth Amended and Restated Certificate of Incorporation, as amended, authorizing a reverse stock split of the issued and outstanding shares of our common stock, at a ratio between 1-for-20 and 1-for-140, such ratio and the implementation and timing of such reverse stock split to be determined in the discretion of our Board of Directors. There can be no assurance that the reverse stock split will be approved by our stockholders. Further, there can be no assurance that the market price per new share of our common stock after the reverse stock split will remain unchanged or increase in proportion to the reduction in the number of old shares of our common stock outstanding before the reverse stock split.

We have not received a delisting determination letter from Nasdaq, but it is possible that Nasdaq will issue a delisting determination letter upon completion of its review of our written compliance plan that we submitted on August 29, 2018. When determining whether to issue a delisting determination letter, Nasdaq may take into account the effects of this offering, including its dilutive effect and any adverse impact on the market price of our common stock as a result of this offering, and our current efforts, whether or not successful, to have our stockholders approve a reverse stock split of our outstanding shares of common stock at a ratio of between 1-for-20 and 1-for-140. If we are delisted from Nasdaq, our common stock may be eligible for trading on an over-the-counter market. If we are not able to obtain a listing on another stock exchange or quotation service for our common stock, it may be extremely difficult or impossible for stockholders to sell their shares of common stock. Moreover, if we are delisted from Nasdaq, but obtain a substitute listing for our common stock, it will likely be on a market with less liquidity, and therefore experience potentially more price volatility than experienced on Nasdaq. Stockholders may not be able to sell their shares of common stock on any such substitute market in the quantities, at the times, or at the prices that could potentially be available on a more liquid trading market. As a result of these factors, if our common stock is delisted from Nasdaq, the price of our common stock is likely to decline. A delisting of our common stock from Nasdaq could also adversely affect our ability to obtain financing for our operations and/or result in a loss of confidence by investors or employees.

We have a limited number of authorized shares of common stock available for issuance and will need to seek stockholder approval to amend our charter to either effect an increase in our authorized shares of common stock or a reverse split.

We currently have 275 million shares of authorized common stock. As of September 27, 2018, we had 113,523,063 shares of common stock either outstanding or reserved for issuance upon the conversion of outstanding shares of preferred stock, the exercise of outstanding stock options or warrants, or for future issuance under our stock incentive plan, leaving 161,476,937 shares of common stock available for future issuance. Based on an assumed offering price of $0.045 per share, the closing price of our common stock on October 1, 2018, we currently do not have sufficient authorized shares to issue the maximum $15,000,000 of shares of our common stock in connection with this offering. Therefore, we expect that we will need to seek stockholder approval to amend our charter to either effect an increase in our authorized shares of common stock or a reverse stock split of our common stock in order to increase the number of shares of common stock available for future issuance. We intend to call a special meeting of our stockholders scheduled to be held on October 30, 2018 at which we will seek the approval of our stockholders of a reverse stock split of our outstanding shares of common stock at a ratio of between 1-for-20 and 1-for-140. We held a special meeting of our stockholders on September 13, 2018 at which we sought the approval of our stockholders of, among other things, a reverse stock split of our outstanding shares of common stock at a ratio of between 1-for-20 and 1-for-125, which our stockholders did not approve at that meeting. There can be no assurance that our stockholders will approve either an increase in our authorized shares of common stock or a reverse stock split of our outstanding shares of common stock. If we do not have a sufficient number of shares of common stock available for future issuance, we will not be able to finance our operations through the sale of equity securities. If we are unable to obtain adequate financing or generate sufficient revenue in the future, our business, results of operations, liquidity and financial condition could be materially and adversely harmed.

We have a significant number of outstanding warrants, options and shares of convertible preferred stock, some of which contain full-ratchet anti-dilution protection, which may cause significant dilution to our stockholders, have a material adverse impact on the market price of our common stock and make it more difficult for us to raise funds through future equity offerings.

As of September 27, 2018, we had outstanding 83,472,628 shares of common stock. In addition, as of that date we had outstanding warrants to acquire 12,464,248 shares of common stock, options to acquire 603,725 shares of common stock and shares of convertible preferred stock convertible into an aggregate of 16,544,582 shares of common stock. The issuance of shares of common stock upon the exercise of warrants or options or conversion of preferred stock would dilute the percentage ownership interest of all stockholders, might dilute the book value per share of our common stock and would increase the number of our publicly traded shares, which could depress the market price of our common stock.

In addition, a substantial number of our outstanding warrants and shares of convertible preferred stock contain so-called full-ratchet anti-dilution provisions which, subject to limited exceptions, would reduce the exercise price of the warrants (but not increase the number of shares issuable) and reduce the conversion price of the convertible preferred stock (and increase the number of shares issuable) in the event that we in the future issue common stock, or securities convertible into or exercisable to purchase common stock, at a price per share lower than the exercise price or the conversion price then in effect, to such lower price. Of our outstanding warrants as of September 27, 2018, warrants exercisable to purchase 6,034,693 shares of common stock at an exercise price of $0.045 per share contained a full-ratchet anti-dilution provision, and shares of convertible preferred stock convertible into 15,908,662 shares of common stock at a conversion price of $0.045 per share contained a full-ratchet anti-dilution provision. If the purchase price per share of common stock sold in this offering is lower than $0.045, these anti-dilution provisions will be triggered in connection with this offering. For example, if we sold shares of common stock at a purchaes price of $0.035 per share in this offering it would cause a reduction in the exercise price of our warrants exercisable to purchase 6,034,693 shares from $0.045 per share to $0.035 per share and would cause shares of our convertible preferred stock convertible before the offering into 15,908,662 shares of common stock at a conversion price of $0.045 per share to become convertible after the offering into approximately 20.5 million shares of common stock at a conversion price of $0.035 per share. These full ratchet anti-dilution provisions would be triggered by the future issuance by us of shares of our common stock or common stock equivalents at a price per share below the then-exercise price of the warrants and the then-conversion price of the convertible preferred stock, subject to limited exceptions.

In addition to the dilutive effects described above, the perceived risk of dilution as a result of the significant number of outstanding warrants, options and shares of convertible preferred stock may cause our common stockholders to be more inclined to sell their shares, which would contribute to a downward movement in the price of our common stock. Moreover, the perceived risk of dilution and the resulting downward pressure on our common stock price could encourage investors to engage in short sales of our common stock, which could further contribute to price declines in our common stock. The fact

that our stockholders, warrant holders and option holders can sell substantial amounts of our common stock in the public market, whether or not sales have occurred or are occurring, as well as the existence of full-ratchet anti-dilution provisions in a substantial number of our outstanding warrants and shares of convertible preferred stock, could make it more difficult for us to raise additional funds through the sale of equity or equity-related securities in the future at a time and price that we deem reasonable or appropriate, or at all.

Because our management will have broad discretion and flexibility as to how the net proceeds from this offering are used, our management may use the net proceeds in ways with which you disagree or which may not prove effective.

We currently intend to use the net proceeds from this offering as discussed under "Use of Proceeds" in this prospectus supplement. We have not allocated specific amounts of the net proceeds from this offering for any of the purposes set forth in that section. Accordingly, our management will have significant discretion and flexibility in applying the net proceeds of this offering. You will be relying on the judgment of our management with regard to the use of these net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the net proceeds are being used appropriately. It is possible that the net proceeds will be invested in a way that does not yield a favorable, or any, return for us. The failure of our management to use such funds effectively could have a material adverse effect on our business, financial condition, operating results and cash flow.

You will experience immediate and substantial dilution in the net tangible book value per share of the common stock you purchase.

The offering price per share of our common stock being offered is expected to be substantially higher than the net tangible book value per share of our outstanding common stock. After giving effect to the assumed sale of shares of common stock in the aggregate amount of $15,000,000 at an assumed public offering price of $0.045 per share, the closing price of our common stock on October 1, 2018, and after deducting sales agent commissions and estimated offering expenses payable by us, you will experience immediate dilution of $0.022 per share. Because the sales of the shares offered hereby will be made directly into the market, the prices at which we sell these shares will vary and these variations may be significant. Purchasers of the shares we sell, as well as our existing stockholders, will experience significant dilution if we sell shares at prices significantly below the price at which they invested. See "Dilution" on page S-16 of this prospectus supplement for a more detailed discussion of the dilution you will incur if you purchase shares in this offering.

A substantial number of shares of our common stock may be sold in this offering, which could cause the price of our common stock to decline.

Based on the assumed sale of shares of common stock in the aggregate amount of $15,000,000 at an assumed public offering price of $0.045 per share, the closing price of our common stock on October 1, 2018, the number of shares to be sold in this offering represents approximately 400% of our outstanding common stock as of October 1, 2018, after giving effect to the sale of the shares of our common stock in this offering. This sale and any future sales of a substantial number of shares of our common stock in the public market, or the perception that such sales may occur, could adversely affect the price of our common stock on the Nasdaq Capital Market. We cannot predict the effect, if any, that market sales of those shares of our common stock or the availability of those shares of our common stock for sale will have on the market price of our common stock.

The U.S. Food and Drug Administration (FDA) has published an announcement to alert health care providers of unanticipated deaths involving the ReShape Balloon, which may substantially harm our business and our ability to continue to commercialize the ReShape Balloon in the United States.

On August 10, 2017, the FDA published an announcement to alert health care providers of five reports of unanticipated deaths that occurred within one month of the placement of an intragastric balloon, one of which involved the ReShape Balloon. The announcement indicated that the root cause or incidence of patient death in these cases had not been found and the FDA was not able to definitively attribute the deaths to the balloon devices or their respective insertion procedures. The announcement also indicated that the FDA had received an additional report of a death related to potential complications associated with an esophageal perforation related to the ReShape Balloon. On June 4, 2018, the FDA published an update to that announcement and identified an additional five reports of unanticipated deaths in patients with liquid-filled intragastric balloons since the August 10, 2017 announcement, one of which related to a patient implanted with a ReShape Balloon. Since 2016, the FDA has received reports of a total of 12 deaths that occurred in patients with liquid-filled intragastric balloon systems worldwide. Seven of these 12 deaths were patients in the U.S., three of which were with the ReShape Balloon. Seventy-nine serious adverse events have been reported to the FDA's MAUDE database.

If these adverse events occur more frequently or other serious adverse effects are detected in liquid-filled intragastric

balloons, the ReShape Balloon product may be subject to adverse FDA action or additional communications from the FDA, which could harm our business. The FDA has required labeling changes for ReShape Balloon and in the future, could require additional labeling changes or could change its approval, or, could withdraw its approval or take other actions. In addition, we believe that the FDA announcement has negatively impacted, and may continue to negatively impact, our sales of the ReShape Balloon, which could have an adverse effect on our business, results of operations, liquidity and financial condition.

The FDA declared our response letter regarding a recently issued Form 483 inadequate to correct the cited deficiencies. If our subsequent response letter is not accepted, we may be subject to a warning letter or other FDA enforcement action.

In December 2017, following an inspection of our St. Paul, Minnesota facility, the FDA issued us a Form 483. The Form 483 identified seven observations in relation to the ReShape vBloc Therapy, many of which related to improper or deficient quality and/or safety procedures, including, but not limited to: (i) failure to adequately validate the silicone over-molding of the lead electrode; (ii) manufacture of printed circuit boards (PCBs) using a non-validated process that resulted in the PCBs being assembled into finished devices, 20 of which were distributed (6 of the 20 were implanted in patients, and 14 were recalled); (iii) failure to properly document root causes, correction, corrective action, and acknowledgement by supplier in connection with a CAPA procedure; (iv) incomplete risk analysis, which was not updated in connection with the PCB malfunctions; and (v) failure to submit MDRs to the FDA within the required timeline. MDRs are mandatory when manufacturers and importers become aware of information that reasonably suggests that one of their marketed devices may have caused or contributed to a death or serious injury or has malfunctioned and the malfunction of the device or a similar device that they market would be likely to cause or contribute to a death or serious injury if the malfunction were to recur. Manufacturers must send reports of such deaths, serious injuries and malfunctions to the FDA.

We submitted a response letter to the FDA to address and identify a plan of correction for the cited deficiencies. On June 13, 2018, we received a letter from the FDA notifying us that our responses in our Response Letter were inadequate and that the vBloc was, as a result, adulterated. The FDA provided 30 days for us to correct the remaining violations. Our failure to adequately do so could result in a number of serious enforcement actions, including:

- warning letters, fines, injunctions, consent decrees and civil penalties;
- unanticipated expenditures, repair, replacement, refunds, recall or seizure of our products;
- operating restrictions, partial suspension or total shutdown of production, and prohibition on further sales of our product;
- the FDA's refusal of our requests for 510(k) clearance or premarket approval of new products, new intended uses or modifications to existing products;
- the FDA's refusal to issue certificates to foreign governments needed to export products for sale in other countries;
- withdrawing 510(k) clearance or premarket approvals that have already been granted; and
- criminal prosecution.

We may be subject to fines, restrictions or prohibitions on sales, or other penalties for failure to maintain licenses in certain states.

Certain of our licenses in states in which we currently conduct our business (including Arizona, Alabama, South Carolina, Iowa, and Louisiana) are expired, and we may not maintain required licenses in every state in which we conduct business. As a result, we could be subject to fines, restrictions or prohibitions on its sales, or other penalties under applicable state laws, which could adversely affect our business and results of operations.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement and the information incorporated by reference in it contain "forward—looking statements" within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. Forward—looking statements can be identified by words such as "anticipate," "intend," "plan," "goal," "seek," "believe," "project," "estimate," "expect," "strategy," "future," "likely," "may," "should," "will" and similar references to future periods. Forward—looking statements are neither historical facts nor assurances of future performance. Instead, they are based only on our current beliefs, expectations and assumptions regarding the future of our business, financial condition and results of operations, future plans and strategies, projections, anticipated events and trends, the economy and other future conditions. Because forward—looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict and many of which are outside of our control. Our actual results and financial condition may differ materially from those indicated in the forward—looking statements. Therefore, you should not place undue reliance on any of these forward—looking statements. Important factors that could cause our actual results and financial condition to differ materially from those indicated in the forward—looking statements include, but are not limited to, those listed below.

Without limiting the foregoing, all statements relating to our future outlook, anticipated capital expenditures, future cash flows and borrowings, and sources of funding are forward-looking statements. If one or more of these risks or uncertainties occur, or if our underlying assumptions prove to be incorrect, actual events or results may vary significantly from those implied or projected by the forward-looking statements. Such risks and uncertainties include, among others:

- risks and uncertainties related to our acquisitions of ReShape Medical, Inc. and BarioSurg, Inc.;
- risks related to the U.S. Food and Drug Administration's announcement, including updates thereto, to alert health care providers of unanticipated deaths involving the ReShape Balloon;
- our proposed ReShape Vest product may not be successfully developed and commercialized;
- our ability to continue as a going concern if we are unable to either substantially improve our operating results or obtain additional financing after this offering;
- our limited history of operations; our losses since inception and for the foreseeable future;
- our limited commercial sales experience;
- the competitive industry in which we operate;
- our ability to maintain compliance with the Nasdaq continued listing requirements and remain listed on Nasdaq;
- our dependence on third parties to initiate and perform our clinical trials;
- the need to obtain regulatory approval for our ReShape Vest and any modifications to our vBloc system or ReShape Balloon;
- physician adoption of our products;
- our ability to obtain third party coding, coverage or payment levels;
- ongoing regulatory compliance;
- our dependence on third party manufacturers and suppliers;
- the successful development of our sales and marketing capabilities;
- our ability to raise additional capital when needed;
- international commercialization and operation;
- our ability to attract and retain management and other personnel and to manage our growth effectively;

- potential product liability claims;
- the cost and management time of operating a public company;
- potential healthcare fraud and abuse claims;
- healthcare legislative reform; and
- our ability to obtain and maintain intellectual property protection for our technology and products.

These and additional risks and uncertainties are described more fully our filings with the Securities and Exchange Commission. Any forward-looking statement in this prospectus supplement reflects our current views with respect to future events and is subject to these and other risks, uncertainties and assumptions relating to our operations, results of operations, industry and future growth. Except as required by law, we assume no obligation to publicly update or revise any forward-looking statements contained in this prospectus supplement, whether as a result of new information, future events or otherwise.

USE OF PROCEEDS

We may issue and sell shares of our common stock having aggregate sales proceeds of up to $15,000,000 from time to time. 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 Wainwright as a source of financing.

We intend to use the net proceeds of this offering to continue our commercialization efforts, for clinical and product development activities and for other working capital and general corporate purposes.

We have not yet determined with certainty the manner in which we will allocate these net proceeds. Accordingly, our management will have broad discretion in the application of the net proceeds, and investors will be relying on the judgment of our management regarding the application of the proceeds of this offering. The amounts and timing of these expenditures will vary depending upon a number of factors, including our success in implementing our commercialization strategy for our product, the success of our research and product development efforts, future sales growth, cash generated from future operations and actual expenses to operate our business. Pending the uses described above, we intend to invest the net proceeds in United States government securities and other short-term, investment-grade, interest-bearing instruments.

DILUTION

Your interest in the shares of common stock offered hereunder may be diluted to the extent of the difference between the price you pay for each share in this offering and the net tangible book value per share of our common stock immediately after this offering. As of June 30, 2018, our historical net tangible book value was approximately $(5.7) million, or $(1.58) per share of common stock. Our historical net tangible book value per share represents the amount of our total tangible assets reduced by the amount of our total liabilities, divided by the total number of shares of our common stock outstanding as of June 30, 2018.

After giving effect to the assumed sale of shares of common stock in the aggregate amount of $15,000,000 at an assumed public offering price of $0.045 per share, the closing price of our common stock on October 1, 2018, and after deducting sales agent commissions and estimated offering expenses payable by us, our net tangible book value as of June 30, 2018 would have been $7.7 million, or $0.023 per share of our common stock. This amount represents an immediate increase of net tangible book value to our existing stockholders of $1.60 per share and an immediate dilution of $0.022 per share to the new investors purchasing securities in this offering.

The following table illustrates this per share dilution:

Assumed offering price per share in this offering			$	0.045
Historical net tangible book value per share as of June 30, 2018	$	(1.58)		
Increase per share attributable to sale of shares by us in this offering	$	1.60		
Net tangible book value per share, as adjusted to give effect to this offering			$	0.023
Dilution per share to investors in this offering			$	0.022

The above discussion and table are based on 3,610,009 shares outstanding as of June 30, 2018 and excludes:

- 3,981,358 shares of our common stock issuable upon the exercise of warrants outstanding as of June 30, 2018, with exercise prices ranging from $3.07 to $33,000, of which warrants to purchase 3,042,892 shares of our common stock contain a full-ratchet anti-dilution provision, and therefore had an exercise price per share of $3.07 as of June 30, 2018 and the remainder of which have exercise prices as of June 30, 2018 greater than the current market value of one share of our common stock;
- 603,725 shares of common stock issuable upon the exercise of options outstanding as of June 30, 2018, with exercise prices ranging from $3.52 to $478,170 and having a weighted average exercise price of $113.85 per share;
- 437,880 shares of our common stock reserved for future issuance under our Second Amended and Restated 2003 Stock Incentive Plan as of June 30, 2018;
- 963,193 shares of our common stock issuable upon the conversion of 2,957 shares of series B convertible preferred stock outstanding as of June 30, 2018 (and any shares of common stock issuable pursuant to the full-ratchet anti-dilution provisions thereof);
- 635,920 shares of our common stock issuable upon the conversion of 95,388 shares of series C convertible preferred stock outstanding as of June 30, 2018;
- 1,547,232 shares of our common stock issuable upon the conversion of 4,750 shares of series D convertible preferred stock outstanding as of June 30, 2018 (and any shares of common stock issuable pursuant to the full-ratchet anti-dilution provisions thereof);
- 1,241,382 shares of our common stock sold in a registered direct offering completed on July 12, 2018, 1,241,382 shares of our common stock issuable upon the exercise of warrants sold in a private placement concurrent with that offering at an exercise price of $2.06 per share, and 86,897 shares of our common stock issuable upon exercise of a warrant issued to our placement agent as compensation for that offering at an exercise price of $2.719 per share;

- 1,000,000 shares of our common stock sold in a registered direct offering completed on August 3, 2018, 1,000,000 shares of our common stock issuable upon the exercise of warrants sold in a private placement concurrent with that offering at an exercise price of $1.10 per share, and 70,000 shares of our common stock issuable upon exercise of a warrant issued to our placement agent as compensation for that offering at an exercise price of $0.75 per share; and

- 11,688,890 shares of our common stock sold in a public offering completed on September 20, 2018, 5,844,445 shares of common stock issuable upon exercise of the warrants included in the units sold in that public offering at an exercise price of $0.045 per share, and 818,222 shares of our common stock issuable upon the exercise of the warrants issued as compensation to our placement agent for that offering at an exercise price of $0.05625 per share.

To the extent that outstanding options or warrants are exercised, you will experience further dilution. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of additional equity, the issuance of these shares could result in further dilution to our stockholders. To the extent that any Sales Agent Warrants are exercised, you will experience further dilution.

PLAN OF DISTRIBUTION

We have entered into a sales agreement with Wainwright, dated October 2, 2018, under which we may issue and sell from time to time shares of our common stock having an aggregate offering price of not more than $15,000,000 through Wainwright as our sales agent. The actual dollar amount and number of shares of common stock we sell pursuant to this prospectus supplement will be dependent, among other things, on market conditions and our capital raising requirements. Sales of the common stock, if any, will be made by any method permitted by law deemed to be an "at the market offering" as defined in Rule 415 promulgated under the Securities Act, including sales made directly on The Nasdaq Capital Market, on any other existing trading market for our common stock or to or through a market maker or through an electronic communications network. If expressly authorized by us, Wainwright may also sell our common stock in privately negotiated transactions.

Wainwright will offer our common stock at prevailing market prices subject to the terms and conditions of the sales agreement as agreed upon by us and Wainwright. We will designate the number of shares which we desire to sell, the time period during which sales are requested to be made, any limitation on the number of shares that may be sold in one day and any minimum price below which sales may not be made. Subject to the terms and conditions of the sales agreement, Wainwright 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 or Wainwright may suspend the offering of the common stock being made through Wainwright under the sales agreement upon proper notice to the other party.

Settlement for sales of common stock will occur on the second trading day or such shorter settlement cycle as may be in effect under Exchange Act Rule 15c6-1 from time to time, following the date on which any sales are made, or on some other date that is agreed upon by us and Wainwright in connection with a particular transaction, 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.

We will pay Wainwright in cash, upon each sale of our shares of common stock pursuant to the sales agreement, a commission equal to 8.0% of the gross proceeds from each sale of shares of our common stock and an additional management fee equal to 1.0% of the gross proceeds from the sale of our common stock pursuant to the sales agreement. Because there is no minimum offering amount required as a condition to this offering, the actual total public offering amount, commissions and proceeds to us, if any, are not determinable at this time. Pursuant to the terms of the sales agreement, we agreed to reimburse Wainwright for the documented fees and costs of its legal counsel reasonably incurred in connection with entering into the transactions contemplated by the sales agreement in an amount not to exceed $100,000 in the aggregate and non-accountable expense allowance of $35,000. We estimate that the total expenses of the offering payable by us, excluding commissions payable to Wainwright under the sales agreement, will be approximately $13.4 million.

In addition, we have agreed to issue to Wainwright, on each settlement date of the shares of common stock sold under the sales agreement, Sales Agent Warrants to purchase up to 7.0% of the aggregate number of shares of common stock sold under the sales agreement. The Sales Agent Warrants will have an exercise price per share equal to 125% of the closing price of our common stock on the date the shares are sold pursuant to the sales agreement, and such Sales Agent Warrants will be exercisable for five years from the date of issuance of such warrants. Notwithstanding the foregoing, the Sales Agent Warrants shall only be exercisable upon the earlier of either (i) the effectiveness of a reverse stock split of our common stock, or (ii) the effectiveness of an increase in our authorized shares of common stock, following the date of the sales agreement. The Sales Agrent Warrants may be exercised in whole or in part, shall provide for "cashless" exercise, and shall provide for customary anti-dilution protection, but shall not contain any ratchet type price protection clauses (such as full ratchet or weighted average ratchet clauses). Pursuant to FINRA Rule 5110(g), the Sales Agent Warrants and any shares issued upon exercise of the Sales Agent Warrants shall not be sold, transferred, assigned, pledged, or hypothecated, or be the subject of any hedging, short sale, derivative, put or call transaction that would result in the effective economic disposition of the securities by any person for a period of 180 days immediately following the date of issuance of the Sales Agent Warrants, except the transfer of any security: (i) by operation of law or by reason of our reorganization; (ii) to any FINRA member firm participating in this offering and the officers or partners thereof, if all securities so transferred remain subject to the lock-up restriction set forth above for the remainder of the time period; (iii) if the aggregate amount of our securities held by Wainwright or related persons do not exceed 1% of the securities being offered; (iv) that is beneficially owned on a pro-rata basis by all equity owners of an investment fund, provided that no participating member manages or otherwise directs investments by the fund and the participating members in the aggregate do not own more than 10% of the equity in the fund; or (v) the exercise or conversion of any security, if all securities remain subject to the lock-up restriction set forth above for the remainder of the time period.

We have also granted Wainwright certain rights of first refusal following the first closing of the sale of the shares of common stock under the sales agreement to act as sole book-running manager, sole underwriter or sole placement agent for each and every future public or private equity offering by us or any of our successors or subsidiaries, under certain circumstances. In addition, we have also agreed to pay Wainwright a tail fee equal to the cash and warrant compensation in this offering, in case certain investors provide us with capital in any public or private offering or other financing or capital raising transaction, subject to certain conditions and exceptions, during the 14-month period following expiration or termination of our engagement of Wainwright.

In connection with the sales of common stock on our behalf, Wainwright will be deemed to be an "underwriter" within the meaning of the Securities Act, and the compensation paid to Wainwright will be deemed to be underwriting commissions or discounts. We have agreed in the sales agreement to provide indemnification and contribution to Wainwright against certain liabilities, including liabilities under the Securities Act.

The offering of our shares of common stock pursuant to the sales agreement will terminate upon the earlier of the (i) sale of all of our shares of common stock provided for in this prospectus supplement, or (ii) termination of the sales agreement as permitted therein.

From time to time, the Wainwright may provide in the future various advisory, investment and commercial banking and other services to us in the ordinary course of business, for which they have received and may continue to receive customary fees and commissions. However, except as disclosed in this prospectus supplement, we have no present arrangements with Wainwright for any further services. Wainwright acted as our placement agent in connection with an agreement with certain of our institutional investors to reprice and exercise their warrants that we consummated in May 2018 and our placement agent in connection with four registered direct offerings of our shares of common stock and concurrent private placements of warrants to purchase shares of our common stock that we consummated on June 8, 2018, June 21, 2018, July 12, 2018 and August 3, 2018, respectively, and an best efforts public offering of units consisting of shares of our common stock and warrants to purchase shares of our common stock that we consummated on September 20, 2018, for which it received compensation.

LEGAL MATTERS

Fox Rothschild LLP, Minneapolis, Minnesota, will issue a legal opinion as to the validity of the securities offered by this prospectus supplement. Haynes and Boone, LLP, New York, New York, is acting as counsel for the sales agent in connection with certain legal matters in connection with this offering.

EXPERTS

The consolidated financial statements as of December 31, 2017 and 2016, and for each of the three years in the period ended December 31, 2017, incorporated by reference in this Prospectus Supplement, have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report, which is incorporated by reference herein (which report expresses an unqualified opinion on the consolidated financial statements and includes an explanatory paragraph referring to going concern). Such consolidated financial statements have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public through the Internet at the SEC's web site at *www.sec.gov*. You may also read and copy any document we file with the SEC at the SEC's public reference room at 100 F Street N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information about its public reference facilities and their copy charges.

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 supplement. When used in this prospectus supplement, the term "registration statement" includes amendments to the registration statement as well as the exhibits, schedules, financial statements and notes filed as part of the registration statement. This prospectus supplement, which constitutes a part of the registration statement, does not contain all of the information in the registration statement. This prospectus supplement omits information contained in the registration statement as permitted by the rules and regulations of the SEC. For further information with respect to us and the securities offered by this prospectus supplement, reference is made to the registration statement. Statements herein concerning the contents of any contract or other document are not necessarily complete and in each instance reference is made to the copy of such contract or other document filed with the SEC as an exhibit to the registration statement, each such statement being qualified by and subject to such reference in all respects.

INCORPORATION OF DOCUMENTS BY REFERENCE

The SEC allows us to incorporate by reference the information we file with them. This allows us to disclose important information to you by referencing those filed documents. We have previously filed the following documents with the SEC and are incorporating them by reference into this prospectus supplement:

- Our Annual Report on Form 10-K (including the portions of our Proxy Statement on Schedule 14A for our annual meeting filed with the SEC on April 30, 2018 that are incorporated by reference therein) for the fiscal year ended December 31, 2017, filed with the SEC on April 2, 2018;

- Our Quarterly Report on Form 10-Q for the period ended March 31, 2018, filed with the SEC on May 15, 2018 and our Quarterly Report on Form 10-Q for the period ended June 30, 2018 filed with the SEC on August 20, 2018;

- Our Current Reports on Form 8-K filed with the SEC on January 31, 2018, March 21, 2018, April 3, 2018, April 24, 2018, May 18, 2018, May 25, 2018 and June 1, 2018, both of our Current Reports on Form 8-K filed with the SEC on June 8, 2018, and our Current Reports on Form 8-K filed with the SEC on June 21, 2018, July 12, 2018, August 2, 2018, August 13, 2018, August 28, 2018, September 11, 2018, September 14, 2018, September 20, 2018 and September 26, 2018 (other than the portions of such documents not deemed to be filed); and

- The description of our common stock contained in any registration statement on Form 8-A that we have filed, and any amendment or report filed with the SEC for the purpose of updating the description.

We also are incorporating by reference any future information filed (rather than furnished) by us with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, after the date of this prospectus supplement and until the termination or completion of the offering. The most recent information that we file with the SEC automatically updates and supersedes more dated information.

You can obtain a copy of any documents which are incorporated by reference in this prospectus supplement, except for exhibits which are specifically incorporated by reference into those documents, at no cost, by writing or telephoning us at:

ReShape Lifesciences Inc.
1001 Calle Amanecer
San Clemente, California 92673
(949) 429-6680

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PROSPECTUS

$125,000,000

Common Stock
Preferred Stock
Securities Warrants
Units

We may from time to time offer to sell any combination of common stock, preferred stock, securities warrants and units described in this prospectus in one or more offerings. The aggregate initial offering price of all securities sold under this prospectus will not exceed $125,000,000.

This prospectus provides a general description of the securities that we may offer. Each time we sell securities, we will provide the specific terms of the securities offered in a supplement to this prospectus. The prospectus supplement may also add, update or change information contained in this prospectus. You should read this prospectus and the applicable prospectus supplement carefully before you invest in any securities. This prospectus may not be used to consummate a sale of securities unless accompanied by the applicable prospectus supplement.

We may from time to time offer and sell our securities in one offering or in separate offerings, to or through underwriters, dealers and agents or directly to purchasers. If any agents or underwriters are involved in the sale of any of these securities, the applicable prospectus supplement will provide the names of the agents or underwriters and any applicable fees, commissions or discounts.

Our common stock is traded on the NASDAQ Capital Market under the symbol "RSLS." On May 18, 2018, the closing price of our common stock as reported on the NASDAQ Capital Market was $0.38 per share. On April 2, 2018, the date we filed our Annual Report on Form 10-K for the fiscal year ended December 31, 2017, we became subject to the offering limits in General Instruction I.B.6 of Form S-3. As of the date of this prospectus, the aggregate market value of our common stock held by non-affiliates pursuant to General Instruction I.B.6 of Form S-3 is $38,537,904.25, which is calculated based on 26,577,865 shares of our common stock outstanding held by non-affiliates and a price of $1.45 per share, the closing price of our common stock on March 29, 2018, which is the highest closing sale price of our common stock on the NASDAQ Capital Market within the prior 60 days of this prospectus. During the prior 12 calendar month period that ends on and includes the date hereof, we have not offered or sold any shares of our common stock pursuant to General Instruction I.B.6 to Form S-3. Pursuant to General Instruction I.B.6 of Form S-3, in no event will we sell securities registered on this registration statement in a public primary offering with a value exceeding more than one-third of our public float in any 12-month period so long as our public float remains below $75.0 million.

Investing in our securities involves risks. You should consider carefully the risks and uncertainties set forth in the section entitled "Risk Factors" beginning on page 3 of this prospectus and in the documents we file with the Securities and Exchange Commission that are incorporated by reference in this prospectus before making a decision to purchase our securities.

NEITHER THE 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.

The date of this prospectus is June 1, 2018.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission (SEC) utilizing a "shelf" registration process. Under this shelf registration process, we may offer and sell any combination of the securities described in this prospectus in one or more offerings up to a total dollar amount of $125,000,000.

This prospectus provides you with a general description of the respective securities that we may offer. Each time we sell securities under this shelf registration, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may also add, update or change information contained in this prospectus. To the extent that any statement that we make in a prospectus supplement is inconsistent with statements made in this prospectus, the statements made in this prospectus will be deemed modified or superseded by those made in the prospectus supplement. You should read both this prospectus and any prospectus supplement, including all documents incorporated herein or therein by reference, together with additional information described under "Where You Can Find More Information" and "Incorporation of Documents by Reference."

We have not authorized any dealer, salesman or other person to give any information or to make any representation other than those contained or incorporated by reference in this prospectus and the accompanying prospectus supplement. You must not rely upon any information or representation not contained or incorporated by reference in this prospectus or the accompanying prospectus supplement. This prospectus and the accompanying prospectus supplement do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the registered securities to which they relate, nor do this prospectus and the accompanying prospectus supplement constitute an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction. You should not assume that the information contained in this prospectus and the accompanying prospectus supplement is accurate on any date subsequent to the date set forth on the front of the document or that any information we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus and any accompanying prospectus supplement is delivered or securities are sold on a later date.

Unless the context otherwise requires, the terms "we," "us," "our," "ReShape Lifesciences," and "the Company" refer to ReShape Lifesciences Inc., a Delaware corporation, and our subsidiary.

All references in this prospectus to "$," "U.S. Dollars" and "dollars" are to United States dollars.

In the United States we have registered trademarks for vBLOC®, ENTEROMEDICS®, MAESTRO®, RESHAPE®, RESHAPE DUO®, and RESHAPE MEDICAL®, each registered with the United States Patent and Trademark Office, and trademark applications for RESHAPE VEST, RESHAPE VBLOC, RESHAPE BALLOON, vBLOC POWER TO CHOOSE and VBLOC POWER TO CHOOSE AND DESIGN. In addition, some or all of the marks vBLOC, ENTEROMEDICS, MAESTRO, MAESTRO SYSTEM ORCHESTRATING OBESITY SOLUTIONS, vBLOC POWER TO CHOOSE, vBLOC POWER TO CHOOSE AND DESIGN, RESHAPE, RESHAPE DUO, RESHAPE MEDICAL and RESHAPE LIFESCIENCES are the subject of either a trademark registration or application for registration in Australia, Brazil, Canada, China, the European Community, India, Kuwait, Mexico, Saudi Arabia, Switzerland and the United Arab Emirates. We believe that we have common law trademark rights to GASTRIC VEST.

RESHAPE LIFESCIENCES INC.

Our vision is to be recognized as a leading medical technology company focused on the design, development and commercialization of transformative technology to treat obesity and metabolic diseases. Our growing and differentiated product portfolio is utilized by bariatric surgeons, general surgeons, and gastroenterologists. We believe obesity is a global epidemic and that the majority of patients need treatment options that are anatomy friendly and provide for weight loss and comorbidity improvements along with long-term, ongoing obesity support and prevention.

We were incorporated in Minnesota in December 2002 as two separate legal entities, Alpha Medical, Inc. and Beta Medical, Inc., both of which were owned 100% by a common stockholder. In October 2003, the two entities were combined and we changed our name to EnteroMedics Inc. In 2004 we reincorporated in Delaware. In October 2017, we changed our company name to ReShape Lifesciences Inc.

In January 2015, the vBloc® System, our initial product, which we now refer to as ReShape vBloc, received U.S. Food and Drug Administration (FDA) approval for vBloc Therapy, delivered via the ReShape vBloc, for the treatment of adult patients with obesity who have a Body Mass Index (BMI) of at least 40 to 45 kg/m2, or a BMI of at least 35 to 39.9 kg/m2 with a related health condition such as high blood pressure or high cholesterol levels, and who have tried to lose weight in a supervised weight management program and failed within the past five years. vBloc Therapy is delivered via a pacemaker-like device that helps patients feel full and eat less by intermittently blocking hunger signals on the vagus nerve. Our therapy limits the expansion of the stomach, helps control hunger sensations between meals, reduces the frequency and intensity of stomach contractions and produces a feeling of early and prolonged fullness. We believe the ReShape vBloc offers obese patients a minimally-invasive treatment that can result in significant, durable and sustained weight loss. We believe that our ReShape vBloc allows bariatric surgeons to offer a new option to obese patients who are concerned about the risks and complications associated with currently available anatomy-altering, restrictive or malabsorptive surgical procedures.

In May 2017, we acquired the Gastric Vest System™, which we now refer to as the ReShape Vest, through our acquisition of BarioSurg, Inc. The ReShape Vest is an investigational, minimally invasive, laparoscopically implanted medical device being studied for weight loss in morbidly obese patients. The device wraps around the stomach, emulating the effect of conventional weight-loss surgery, and is intended to enable gastric volume reduction without permanently changing patient anatomy.

In October 2017, we acquired ReShape Medical, Inc., a privately-held medical technology company that develops, manufactures and markets the ReShape® Integrated Dual Balloon, which now we refer to as the ReShape Balloon, an FDA-approved, minimally invasive intragastric balloon designed to treat obesity patients with a BMI between 30 and 40, with at least one related comorbidity. The ReShape Balloon provides a new option for individuals who have not succeeded at diet and exercise alone, and do not want or do not qualify for bariatric surgery. Two connected balloons are placed into the stomach during a short, outpatient endoscopic procedure. The balloons remain in the stomach for six months and are then removed endoscopically. During balloon treatment, and for six more months following removal of the balloons, the patient receives access to nutritional counseling and access to exclusive tools to help them achieve their weight loss goals. The ReShape Balloon was approved by the FDA in July of 2015 and has had CE-marking in Europe since 2011.

On October 23, 2017 we changed our company name from EnteroMedics Inc. to ReShape Lifesciences Inc. in recognition of our expansion and growth in developing and commercializing transformative technologies to address the continuum of care for obesity and its associated health conditions. The ReShape brand name is strong and well-established in the marketplace and we expect this to not only help our other products succeed, but we also believe it will accelerate growth in our industry overall. In December, 2017, we rebranded the three products under the ReShape Lifesciences brand. Our portfolio of transformative technologies, designed to help patients lose weight and live a healthier life, includes two FDA-approved devices, ReShape™ vBloc (formerly vBloc) and ReShape™ Balloon, as well as the investigational ReShape™ Vest (formerly Gastric Vest System).

As of December 31, 2017, we had 83 employees, all of which are located in the United States. Our principal executive offices are located at 1001 Calle Amanecer, San Clemente, California 92673, and our telephone number is (949) 429-6680.

RISK FACTORS

Investment in any securities offered pursuant to this prospectus and the applicable prospectus supplement involves risks. You should carefully consider the risk factors incorporated by reference to our most recent Annual Report on Form 10-K and any subsequent Quarterly Reports on Form 10-Q or Current Reports on Form 8-K we file after the date of this prospectus, and all other information contained or incorporated by reference into this prospectus, as updated by our subsequent filings under the Securities Exchange Act of 1934, as amended, and the risk factors and other information contained in the applicable prospectus supplement before acquiring any of such securities. The occurrence of any of these risks might cause you to lose all or part of your investment in the offered securities.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference may contain forward-looking statements with respect to the financial condition, results of operations, plans, objectives, future performance and business of ReShape Lifesciences. Statements preceded by, followed by or that include words such as "may," "will," "expect," "anticipate," "continue," "estimate," "project," "believes" or similar expressions are intended to identify some of the forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 and are included, along with this statement, for purposes of complying with the safe harbor provisions of that Act. These forward-looking statements involve risks and uncertainties. Actual results may differ materially from those contemplated by the forward-looking statements due to, among others, the risks and uncertainties described in this prospectus, including under "Risk Factors," and the documents incorporated by reference in this prospectus. Any forward-looking statement contained in this prospectus and the documents incorporated by reference speaks only as of the date on which the statement is made, and ReShape Lifesciences undertakes no obligation to update any forward-looking statement or statements to reflect events or circumstances that occur after the date on which the statement is made or to reflect the occurrence of unanticipated events. New factors emerge from time to time, and it is not possible for ReShape Lifesciences to predict all of the factors, nor can ReShape Lifesciences assess the effect of each factor on its business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statement.

USE OF PROCEEDS

Unless otherwise indicated in the prospectus supplement, we intend to use the net proceeds from the sale of securities and exercise of warrants under this prospectus to continue our commercialization efforts, for clinical and product development activities and for other working capital and general corporate purposes. The prospectus supplement relating to a particular offering of securities by us will identify the use of proceeds for that offering.

DESCRIPTION OF COMMON STOCK

The following summary of the terms of the common stock we may offer using this prospectus does not purport to be complete and is subject to and qualified in its entirety by reference to our Sixth Amended and Restated Certificate of Incorporation, as amended (certificate of incorporation), and our Amended and Restated Bylaws (bylaws), copies of which have been previously filed by us with the SEC and are incorporated by reference in this prospectus. See "Incorporation of Documents by Reference."

General

We are authorized to issue 275,000,000 shares of common stock, $0.01 par value per share, and 5,000,000 shares of preferred stock, $0.01 par value per share. As of May 11, 2018, our capitalization was as follows:

- 33,717,115 shares of our common stock were issued and outstanding, which were held of record by approximately 62 stockholders of record;
- 4,735 shares of series B convertible preferred stock were outstanding, which shares are convertible into 6,313,318 shares of our common stock;
- 95,388 shares of series C convertible preferred stock were outstanding, which shares are convertible into 9,538,800 shares of our common stock;
- 5,250 shares of our series D convertible preferred stock were outstanding, which shares are convertible into 6,999,983 shares of our common stock;
- 9,055,871 shares of common stock were issuable upon the exercise of outstanding options; and
- 49,303,715 shares of common stock were issuable upon the exercise of outstanding warrants.

Common Stock

Holders of our common stock are entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders, and do not have cumulative voting rights. Accordingly, the holders of a majority of the shares of our common stock entitled to vote can elect all of the directors standing for election. However, as long as the former holders of ReShape Medical, Inc. securities own at least 10% of our outstanding common stock (for this purpose treating as outstanding the shares of common stock issuable upon conversion of the series C convertible preferred stock issued to the former ReShape Medical holders), the committee representing the former ReShape Medical holders will have the right to designate for nomination two directors to our Board of Directors, and we will nominate and use commercially reasonable efforts to appoint each such person to our Board, although any nominees must be reasonably acceptable to our then current Board members. At the closing of our acquisition of ReShape Medical, Michael Y. Mashaal, M.D. was appointed to the Board as a designee of the former ReShape Medical holders and the committee has not yet designated its second director nominee.

Subject to preferences that may be applicable to any outstanding shares of preferred stock, holders of our common stock are entitled to receive ratably such dividends, if any, as may be declared from time to time by our board of directors out of funds legally available for dividend payments. All outstanding shares of our common stock are fully paid and nonassessable, and the shares of our common stock to be sold pursuant to this prospectus supplement will be fully paid and nonassessable. The holders of common stock have no preferences or rights of conversion, exchange, pre- emption or other subscription rights. There are no redemption or sinking fund provisions applicable to our common stock. In the event of any liquidation, dissolution or winding-up of our affairs, holders of our common stock will be entitled to share ratably in our assets that are remaining after payment or provision for payment of all of our debts and obligations and after liquidation payments to holders of outstanding shares of preferred stock, if any.

Anti-Takeover Effects of Delaware Law and Certain Provisions of our Certificate of Incorporation and Bylaws

We have elected to be governed by the provisions of Section 203 of the Delaware General Corporation Law, which generally will have an anti-takeover effect for transactions not approved in advance by our Board of Directors, including discouraging attempts that might result in a premium over the market price for our common stock. 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 the stockholder becomes an interested stockholder, unless the business combination is approved in a prescribed manner. A "business combination" includes, among other things, a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. An "interested stockholder" is a person who, together with affiliates and associates, owns, or did own within three years prior to the determination of interested stockholder status, 15% or more of the corporation's voting stock. 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, the board of directors approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction that 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; or
- at or after the time the stockholder became interested, the business combination was approved by the board and authorized at a stockholder meeting by the affirmative vote of at least two-thirds of the outstanding voting stock not owned by the interested stockholder.

Our certificate of incorporation and bylaws provide for the Board to be divided into three classes of directors serving staggered, three-year terms. The classification of the Board has the effect of requiring at least two annual stockholder meetings, instead of one, to replace a majority of members of the Board. Subject to the rights of the holders of any outstanding series of preferred stock, our certificate of incorporation will authorize only the Board to fill vacancies, including newly created directorships. Accordingly, this provision could prevent a stockholder from obtaining majority representation on the Board by enlarging the Board of Directors and filling the new directorships with its own nominees. Our certificate of incorporation will also provide that directors may be removed by stockholders only for cause and only by the affirmative vote of holders of a majority of the outstanding shares of our voting stock.

Under our bylaws, any vacancy on our Board of Directors resulting from an enlargement of our Board or the death, resignation, retirement, disqualification or other cause (other than removal for cause), may only be filled by vote of a majority of our directors then in office, even if less than a quorum. The limitations on the removal of directors and filling of vacancies could have the effect of making it more difficult for a third party to acquire, or of discouraging a third party from attempting to acquire, control of us.

The affirmative vote of the holders of at least a majority of our voting stock is required to amend or repeal or to adopt any provisions inconsistent with any of the provisions of our certificate of incorporation or bylaws described in the prior two paragraphs.

Our certificate of incorporation provides that stockholders may not take any action by written consent in lieu of a meeting and our bylaws limit the business that may be conducted at an annual meeting of stockholders to those matters properly brought before the meeting. In addition, our bylaws provide that only our Board of Directors or our chairman may call a special meeting of stockholders. Business transacted at any special meeting of stockholders must be limited to matters relating to the purpose stated in the notice of the special meeting.

To be "properly brought" before an annual meeting, the proposals or nominations must be:

- specified in the notice of meeting;
- brought before the meeting by or at the direction of our Board of Directors; or
- brought before the meeting by a stockholder entitled to vote at the meeting who has given to our corporate secretary the required advance written notice, in proper form, of the stockholder's intention to bring that proposal or nomination before the meeting and who was a stockholder of record on the date on which notice is given.

In addition to other applicable requirements, for a stockholder proposal or nomination to be properly brought before an annual meeting by a stockholder, the stockholder generally must have given notice in proper written form to our corporate secretary not less than 90 days nor more than 120 days prior to the first anniversary of the preceding year's annual meeting of stockholders. In the event that no annual meeting was held in the previous year or the annual meeting is called for a date that is not within 30 days from the anniversary date of the preceding year's annual meeting date, written notice by a stockholder in order to be timely must be received not later than the 10th day following the day on which the first public disclosure of the date of the annual meeting was made. Although our bylaws do not give our Board of Directors the power to approve or disapprove stockholder nominations of candidates or proposals regarding other business to be conducted at a special or annual meeting, our bylaws may have the effect of precluding the consideration of some business at a meeting if the proper procedures are not followed or may discourage or defer a potential acquiror from conducting a solicitation of proxies to elect its own slate of directors or otherwise attempting to obtain control of us.

Delaware law provides generally that the affirmative vote of a majority of the shares entitled to vote on any matter is required to amend a corporation's certificate of incorporation or bylaws, unless the certificate of incorporation or bylaws require a greater percentage. Our bylaws may be amended or repealed by a majority vote of our Board of Directors, subject to any limitations set forth in the bylaws, and may also be amended or repealed by the stockholders by the affirmative vote of the holders of a majority of the votes that all the stockholders would be entitled to cast in any annual election of directors. The majority stockholder vote would be in addition to any separate class vote that might in the future be required pursuant to the terms of any series of preferred stock that might be outstanding at the time any of these amendments are submitted to stockholders.

Liability Limitations and Indemnification

Our bylaws provide that we must indemnify our directors and officers and that we must advance expenses, including attorneys' fees, to our directors and officers in connection with legal proceedings, subject to very limited exceptions. In addition, our certificate of incorporation provides that our directors will not be personally liable for monetary damages to us for breaches of their fiduciary duty as directors, except to the extent that the Delaware law statute prohibits the elimination or limitation of liability of directors for breaches of fiduciary duty.

These provisions may discourage stockholders from bringing a lawsuit against our directors for breach of their fiduciary duties. These provisions may also have the effect of reducing the likelihood of derivative litigation against directors and officers, even though such an action, if successful, might otherwise benefit us and our stockholders. Furthermore, you may lose some or all of your investment in our common stock if we pay the costs of settlement or damage awards against our directors and officers under these provisions. We believe these provisions, the director and officer insurance we maintain, and the indemnification agreements we have entered into with our directors and officers are necessary to attract and retain talented and experienced directors and officers.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is EQ Shareowner Services.

DESCRIPTION OF PREFERRED STOCK

This section summarizes the general terms and provisions of the preferred stock that we may offer using this prospectus. This section is only a summary and does not purport to be complete. You must look at our certificate of incorporation and the relevant certificate of designations for a full understanding of all the rights and preferences of any series of preferred stock. Our certificate of incorporation and the certificates of designations have been or will be filed or incorporated by reference as exhibits to the registration statement of which this prospectus is a part. See "Where You Can Find More Information" for information on how to obtain copies.

A prospectus supplement will describe the specific terms of any particular series of preferred stock offered under that prospectus supplement, including any of the terms in this section that will not apply to that series of preferred stock, and any special considerations, including tax considerations, applicable to investing in that series of preferred stock.

General

Pursuant to our certificate of incorporation, we currently have authorized 5,000,000 shares of preferred stock, $0.01 par value per share. As of May 11, 2018, we have the following shares of preferred stock outstanding:

- 4,735 shares of series B convertible preferred stock were outstanding, which shares are convertible into 6,313,318 shares of our common stock;
- 95,388 shares of series C convertible preferred stock were outstanding, which shares are convertible into 9,538,800 shares of our common stock; and
- 5,250 shares of our series D convertible preferred stock were outstanding, which shares are convertible into 6,999,983 shares of our common stock.

Prior to issuance of shares of each series of our undesignated preferred stock, our Board of Directors is required by the Delaware General Corporate Law and our certificate of incorporation to adopt resolutions and file a certificate of designations with the Secretary of State of the State of Delaware, fixing for each such series the designations, powers, preferences, rights, qualifications, limitations and restrictions of the shares of such series. Our Board of Directors could authorize the issuance of shares of preferred stock with terms and conditions which could have the effect of discouraging a takeover or other transaction which holders of some, or a majority, of such shares might believe to be in their best interests or in which holders of some, or a majority, of such shares might receive a premium for their shares over the then-market price of such shares.

Subject to limitations prescribed by the Delaware General Corporation Law, our certificate of incorporation and our bylaws, our Board of Directors is authorized to fix the number of shares constituting each series of preferred stock and the designations, powers, preferences, rights, qualifications, limitations and restrictions of the shares of such series, including such provisions as may be desired concerning voting, redemption, dividends, dissolution or the distribution of assets, conversion or exchange, and such other subjects or matters as may be fixed by resolution of the Board of Directors. Each series of preferred stock that we offer under this prospectus will, when issued, be fully paid and nonassessable and will not have, or be subject to, any preemptive or similar rights.

The applicable prospectus supplement(s) will describe the following terms of the series of preferred stock in respect of which this prospectus is being delivered:

- the title and stated value of the preferred stock;
- the number of shares of the preferred stock offered, the liquidation preference per share and the purchase price of the preferred stock;
- the dividend rate(s), period(s) and/or payment date(s) or the method(s) of calculation for dividends;
- whether dividends shall be cumulative or non-cumulative and, if cumulative, the date from which dividends on the preferred stock shall accumulate;

- the procedures for any auction and remarketing, if any, for the preferred stock;
- the provisions for a sinking fund, if any, for the preferred stock;
- the provisions for redemption, if applicable, of the preferred stock;
- any listing of the preferred stock on any securities exchange or market;
- the terms and conditions, if applicable, upon which the preferred stock will be convertible into common stock or another series of our preferred stock, including the conversion price (or its manner of calculation) and conversion period;
- voting rights, if any, of the preferred stock;
- a discussion of any material and/or special U.S. federal income tax considerations applicable to the preferred stock;
- the relative ranking and preferences of the preferred stock as to dividend rights and rights upon liquidation, dissolution or winding up of our affairs;
- any limitations on issuance of any series of preferred stock ranking senior to or on a parity with the preferred stock as to dividend rights and rights upon liquidation, dissolution or winding up of our affairs; and
- any other specific terms, preferences, rights, limitations or restrictions on the preferred stock.

Unless otherwise specified in the prospectus supplement, with respect to dividend rights and rights upon our liquidation, dissolution or winding up, the preferred stock will rank:

- senior to all classes or series of our common stock, and to all equity securities issued by us the terms of which specifically provide that such equity securities rank junior to the preferred stock with respect to dividend rights or rights upon the liquidation, dissolution or winding up of us;
- on a parity with all equity securities issued by us that do not rank senior or junior to the preferred stock with respect to dividend rights or rights upon the liquidation, dissolution or winding up of us; and
- junior to all equity securities issued by us the terms of which do not specifically provide that such equity securities rank on a parity with or junior to the preferred stock with respect to dividend rights or rights upon the liquidation, dissolution or winding up of us (including any entity with which we may be merged or consolidated or to which all or substantially all of our assets may be transferred or which transfers all or substantially all of our assets).

We currently have outstanding the follows series of preferred stock:

Series B Convertible Preferred Stock

The material terms and provisions of the shares of series B convertible preferred stock ("Series B Preferred Stock") are summarized below. This summary of some of the provisions of the Series B Preferred Stock is not complete. For the complete terms of the Series B Preferred Stock, you should refer to the Certificate of Designation (the "Series B Certificate of Designation") filed as an exhibit to this prospectus and incorporated herein by reference.

Conversion; Anti-Dilution. Each share of Series B Preferred Stock is convertible at any time at the holder's option into a number of shares of common stock equal to $1,000 divided by the conversion price of the Series B Preferred Stock, which currently is $0.75, and is subject to adjustment for stock splits, stock dividends, distributions, subdivisions and combinations. In addition, if at any time while the Series B Preferred Stock is outstanding we sell or grant any option to purchase or sell or grant any right to reprice, or otherwise dispose of or issue, any of our common stock or securities

convertible into or exercisable for shares of our common stock at an effective price per share that is lower than the then conversion price of the Series B Preferred Stock, then the conversion price will be reduced to such lower price, subject to an exception for certain issuances to employees, officer or directors pursuant to a stock incentive plan, certain issuances upon the conversion of outstanding convertible securities and issuances for certain acquisitions. This anti-dilution provision was triggered by our registered offering in April 2018 of convertible preferred stock with a conversion price of $0.75 per share and warrants with an exercise price of $0.75, which caused shares of the Series B Preferred Stock convertible before the offering into 2,633,925 shares of common stock at a conversion price of $2.30 per share to become convertible after the offering into approximately 8.1 million shares of common stock at a conversion price of $0.75 per share.

Exercise Limitations. The Series B Certificate of Designation provides that we may not effect any conversion of Series B Preferred Stock, with certain exceptions, to the extent that, after giving effect to an attempted conversion, the holder of shares of Series B Preferred Stock (together with such holder's affiliates, and any persons acting as a group together with such holder or any of such holder's affiliates) would beneficially own a number of shares of common stock in excess of 4.99% (or, at the election of the holder, 9.99%) of the shares of our common stock then outstanding after giving effect to such exercise; provided, however, that upon notice to the company, the holder may increase or decrease such beneficial ownership limitation, provided that in no event will such beneficial ownership limitation exceed 9.99% and any increase in such beneficial ownership limitation will not be effective until 61 days following notice of such increase from the holder to us.

Dividends. The Series B Certificate of Designation provides that we will not pay any dividends on shares of common stock (other than dividends in the form of common stock) unless and until such time as we pay dividends on each share of Series B Preferred Stock on an as converted basis. Other than as set forth in the previous sentence, the Series B Certificate of Designation provides that no other dividends will be paid on the Series B Preferred Stock and that we will pay no dividends (other than dividends in the form of common stock) on shares of common stock unless we simultaneously comply with the previous sentence.

Liquidation. In the event of a liquidation, the holders of Series B Preferred Stock are entitled to participate on an as converted to common stock basis with holders of the common stock in any distribution of assets of the company to the holders of the common stock. In addition, in the event we consummate a merger or consolidation with or into another person or other reorganization event in which our shares of common stock are converted or exchanged for securities, cash or other property, or we sell, lease, license, assign, transfer, convey or otherwise dispose of all or substantially all of our assets or we or another person acquire 50% or more of our outstanding shares of common stock, then following such event, the holders of the shares of Series B Preferred Stock will be entitled to receive upon conversion of the Series B Preferred Stock the same kind and amount of securities, cash or property which the holders would have received had they converted the Series B Preferred immediately prior to such fundamental transaction. Any successor to us or surviving entity is required to assume the obligations under the Series B Preferred Stock.

Notwithstanding the foregoing, in the event we are not the surviving entity of a fundamental transaction or in the event of a reverse merger or similar transaction where we are the surviving entity, then, automatically and contemporaneous with the consummation of such transaction, the surviving entity (or our company in the event of a reverse merger or similar transaction) will purchase the then outstanding shares of Series B Preferred Stock by paying and issuing, in the event that such consideration given to the holders of our common stock is non cash consideration, as the case may be, to each holder an amount equal to the greater of (i) the cash consideration plus the non-cash consideration in the form issuable to the holders of our common stock (in the case of a reverse merger or similar transaction, shares of common stock issuable to the holders of the acquired company) per share of our common stock in the fundamental transaction multiplied by the number of shares of common stock underlying the shares of Series B Preferred Stock held by the holder on the date immediately prior to the consummation of the fundamental transaction or (ii) 130% of the conversion price of the Series B Preferred Stock then outstanding on the date of the consummation of the fundamental transaction. Such amount will be paid in the same form and mix (whether securities, cash or property, or any combination of the foregoing) as the consideration received by holders of our common stock in the fundamental transaction.

Voting Rights. With certain exceptions, as described in the Series B Certificate of Designation, the shares of Series B Preferred Stock have no voting rights. However, as long as any shares of Series B Preferred Stock remain outstanding, the Series B Certificate of Designation provides that we may not, without the affirmative vote of holders of a majority of the then outstanding shares of Series B Preferred Stock, (a) alter or change adversely the powers, preferences or rights given to the Series B Preferred Stock or alter or amend the Series B Certificate of Designation, (b) increase the number

of authorized shares of Series B Preferred Stock, (c) amend our certificate of incorporation or other charter documents in any manner that adversely affects any rights of holders of shares of Series B Preferred Stock, or (d) enter into any agreement with respect to the foregoing.

Series C Convertible Preferred Stock

The material terms and provisions of the shares of series C convertible preferred stock ("Series C Preferred Stock") are summarized below. All of the outstanding shares of Series C Preferred Stock were issued to the former holders of ReShape Medical, Inc. securities in connection with our acquisition of ReShape Medical. This summary of some provisions of the Series C Preferred Stock is not complete. For the complete terms of the Series C Preferred Stock, you should refer to the Certificate of Designation (the "Series C Certificate of Designation") filed as an exhibit to this prospectus and incorporated herein by reference.

Conversion. Each outstanding share of Series C Preferred Stock is convertible, at the option of the holders, into 100 shares of common stock, subject to adjustment for stock splits, stock dividends, distributions, subdivisions and combinations. In addition, if the volume weighted average price of the common stock exceeds $5.00 per share for at least 20 trading days, then all outstanding shares of Series C Preferred Stock will automatically convert into shares of common stock.

Dividends. The Series C Preferred Stock is entitled to receive dividends (on an as-if-converted-to-common stock basis) actually paid on shares of common stock when, as and if such dividends are paid on shares of common stock. No other dividends will be paid on shares of Series C Preferred Stock.

Voting Rights. In general, the Series C Preferred Stock does not have voting rights. However, as long as any shares of Series C Preferred Stock remain outstanding, the Series C Certificate of Designation provides that we cannot, without the affirmative vote of holders of a majority of the then-outstanding shares of Series C Preferred Stock, (a) alter or change adversely the powers, preferences or rights given to the Series C Preferred Stock (including by the designation, authorization, or issuance of any shares of preferred stock that purports to have equal rights with, or be senior in rights or preferences to, the Series C Preferred Stock), (b) alter or amend the Series C Certificate of Designation, (c) amend our certificate of incorporation or other charter documents in any manner that adversely affects any rights of the holders of Series C Preferred Stock, (d) increase the number of authorized shares of Series C Preferred Stock, (e) except for stock dividends or distributions for which adjustments are to be made pursuant to the Series C Certificate of Designation, pay dividends on any shares of capital stock of the company, or (f) enter into any agreement with respect to any of the foregoing.

As long the former holders of ReShape Medical, Inc. securities own at least 10% of our outstanding common stock (for this purpose treating as outstanding the shares of common stock issuable upon conversion of the Series C Preferred Stock issued to the former ReShape Medical holders), the committee representing the former ReShape Medical holders will have the right to designate for nomination two directors to our Board of Directors, and we will nominate and use commercially reasonable efforts to appoint each such person to our Board, although any nominees must be reasonably acceptable to our then current Board members. At the closing of our acquisition of ReShape Medical, Michael Y. Mashaal, M.D. was appointed to the Board as a designee of the former ReShape Medical holders and the committee has not yet designated its second director nominee.

Liquidation. In the event of a liquidation, the holders of shares of Series C Preferred Stock are entitled to be paid, after and subject to the payment in full of all amounts required to be distributed to the holders of any other shares of the company outstanding as of the date of our acquisition of ReShape Medical ranking on liquidation prior and in preference to the Series C Preferred Stock, but before any payments to be made to the holders of common stock or any other series of preferred stock, an amount per share equal to the greater of (i) $274.8774 ($2.748774 per share on an as-converted-to-common stock basis), plus any dividends declared but unpaid thereon, or (ii) such amount per share as would have been payable had all shares of Series C Preferred Stock been converted to common stock immediately prior to such liquidation. In addition, in the event we consummate a merger or consolidation with or into another person or other reorganization event in which our common shares are converted or exchanged for securities, cash or other property, or we sell, lease, license, assign, transfer, convey or otherwise dispose of all or substantially all of our assets or we or another person acquire 50% or more of our outstanding shares of common stock, then following such event, the holders of the Series C Preferred Stock will be entitled to receive upon conversion of the Series C Preferred Stock the same kind and amount of securities, cash or property which the holders would have received had they converted the

Series C Preferred Stock immediately prior to such fundamental transaction. Any successor to us or surviving entity must assume the obligations under the Series C Certificate of Designation with respect to the Series C Preferred Stock.

Series D Convertible Preferred Stock

The material terms and provisions of the shares of series D convertible preferred stock ("Series D Preferred Stock") are summarized below. This summary of some of the provisions of the Series D Preferred Stock is not complete. For the complete terms of the Series D Preferred Stock, you should refer to the Certificate of Designation (the "Series D Certificate of Designation") filed as an exhibit to this prospectus and incorporated herein by reference.

Conversion; Anti-Dilution. Each share of Series D Preferred Stock is convertible at any time at the holder's option into a number of shares of common stock equal to $1,000 divided by the conversion price of the Series D Preferred Stock, which currently is $0.75, and is subject to adjustment for stock splits, stock dividends, distributions, subdivisions and combinations. In addition, if at any time while the Series D Preferred Stock is outstanding we sell or grant any option to purchase or sell or grant any right to reprice, or otherwise dispose of or issue, any of our common stock or securities convertible into or exercisable for shares of our common stock at an effective price per share that is lower than the then conversion price of the Series D Preferred Stock, then the conversion price will be reduced to equal such lower price, subject to an exception for certain issuances to employees, officer or directors pursuant to a stock incentive plan, certain issuances upon the conversion of outstanding convertible securities and issuances for certain acquisitions.

Exercise Limitations. The Series D Certificate of Designation provides that we may not effect any conversion of Series D Preferred Stock, with certain exceptions, to the extent that, after giving effect to an attempted conversion, the holder of shares of Series D Preferred Stock (together with such holder's affiliates, and any persons acting as a group together with such holder or any of such holder's affiliates) would beneficially own a number of shares of common stock in excess of 4.99% (or, at the election of the holder, 9.99%) of the shares of our common stock then outstanding after giving effect to such exercise; provided, however, that upon notice to the company, the holder may increase or decrease such beneficial ownership limitation, provided that in no event will such beneficial ownership limitation exceed 9.99% and any increase in such beneficial ownership limitation will not be effective until 61 days following notice of such increase from the holder to us.

Dividends. The Series D Certificate of Designation provides, among other things, that we will not pay any dividends on shares of common stock (other than dividends in the form of common stock) unless and until such time as we pay dividends on each share of Series D Preferred Stock on an as converted basis. Other than as set forth in the previous sentence, the Series D Certificate of Designation provides that no other dividends will be paid on the Series D Preferred Stock and that we will pay no dividends (other than dividends in the form of common stock) on shares of common stock unless we simultaneously comply with the previous sentence.

Liquidation. In the event of a liquidation, after any distribution or payment to the holders of our series C convertible preferred stock the holders of Series D Preferred Stock are entitled to participate on an as converted to common stock basis with holders of the common stock in any distribution of assets of the Company to the holders of the common stock. In addition, in the event we consummate a merger or consolidation with or into another person or other reorganization event in which our shares of common stock are converted or exchanged for securities, cash or other property, or we sell, lease, license, assign, transfer, convey or otherwise dispose of all or substantially all of our assets or we or another person acquire 50% or more of our outstanding shares of common stock, then following such event, the holders of the shares of Series D Preferred Stock will be entitled to receive upon conversion of the Series D Preferred Stock the same kind and amount of securities, cash or property which the holders would have received had they converted the Series D Preferred immediately prior to such fundamental transaction. Any successor to us or surviving entity is required to assume the obligations under the Series D Preferred Stock.

Notwithstanding the foregoing, in the event we are not the surviving entity of a fundamental transaction or in the event of a reverse merger or similar transaction where we are the surviving entity, then, automatically and contemporaneous with the consummation of such transaction, the surviving entity (or our company in the event of a reverse merger or similar transaction) will purchase the then outstanding shares of Series D Preferred Stock by paying and issuing, in the event that such consideration given to the holders of our common stock is non cash consideration, as the case may be, to each holder an amount equal to the greater of (i) the cash consideration plus the non-cash consideration in the form issuable to the holders of our common stock (in the case of a reverse merger or similar transaction, shares of common stock issuable to the holders of the acquired company) per share of our common stock in the fundamental transaction

multiplied by the number of shares of common stock underlying the shares of Series D Preferred Stock held by the holder on the date immediately prior to the consummation of the fundamental transaction or (ii) 130% of the conversion price of the Series D Preferred Stock then outstanding on the date of the consummation of the fundamental transaction. Such amount will be paid in the same form and mix (whether securities, cash or property, or any combination of the foregoing) as the consideration received by holders of our common stock in the fundamental transaction.

Voting Rights. With certain exceptions, as described in the Series D Certificate of Designation, the shares of Series D Preferred Stock have no voting rights. However, as long as any shares of Series D Preferred Stock remain outstanding, the Series D Certificate of Designation provides that we may not, without the affirmative vote of holders of a majority of the then outstanding shares of Series D Preferred Stock, (a) alter or change adversely the powers, preferences or rights given to the Series D Preferred Stock or alter or amend the Series D Certificate of Designation, (b) increase the number of authorized shares of Series D Preferred Stock, (c) amend our certificate of incorporation or other charter documents in any manner that adversely affects any rights of holders of shares of Series D Preferred Stock, or (d) enter into any agreement with respect to the foregoing.

Optional Exchange. The securities purchase agreement pursuant to which the shares of Series D Preferred Stock were issued provides that as long as the holder continue to hold at least 20% of the initial number of shares of Series D Preferred Stock issued, if we issue any new securities in a subsequent financing the holder may exchange all of the shares of Series D Preferred Stock at their stated value for the securities issued in the subsequent financing on the same terms of such subsequent financing.

Outstanding Warrants

As of May 11, 2018, there were warrants outstanding to purchase a total of 49,303,715 shares of our common stock, which expire between November 18, 2018 and August 16, 2024. Each of these warrants entitles the holder to purchase one share of common stock at prices ranging from $0.75 to $4,095.00 per common share, with a weighted average exercise price of $1.44 per share. Certain of these warrants have a net exercise provision under which its holder may, in lieu of payment of the exercise price in cash, surrender the warrant and receive a net amount of shares based on the fair market value of our common stock at the time of exercise of the warrant after deduction of the aggregate exercise price. Each of these warrants also contains provisions for the adjustment of the exercise price and the aggregate number of shares issuable upon the exercise of the warrant in the event of dividends, share splits, reorganizations and reclassifications and consolidations. Certain of these warrants contain a provision requiring a reduction to the exercise price in the event we issue common stock, or securities convertible into or exercisable for common stock, at a price per share lower than the warrant exercise price.

Transfer Agent and Registrar

The transfer agent and registrar for any series of preferred stock will be set forth in the applicable prospectus supplement.

Certain Provisions of Certificate of Incorporation and Bylaws

For a description of some additional provisions of our certificate of incorporation and bylaws, see “Description of Common Stock—Anti-Takeover Effects of Delaware Law and Certain Provisions of our Certificate of Incorporation and Bylaws.”

DESCRIPTION OF SECURITIES WARRANTS

The following summary of the general terms and provisions of the securities warrants represented by warrant agreements and warrant certificates that we may offer using this prospectus is only a summary and does not purport to be complete. You must look at the applicable forms of warrant agreement and warrant certificate for a full understanding of the specific terms of any securities warrant. The forms of the warrant agreement and the warrant certificate will be filed or incorporated by reference as exhibits to the registration statement to which this prospectus is a part. See "Where You Can Find More Information" for information on how to obtain copies.

A prospectus supplement will describe the specific terms of the securities warrants offered under that prospectus supplement, including any of the terms in this section that will not apply to those securities warrants, and any special considerations, including tax considerations, applicable to investing in those securities warrants.

General

We may issue securities warrants alone or together with other securities offered by the applicable prospectus supplement. The securities warrants may be issued independently or together with any securities and may be attached to or separate from the securities. Each series of securities warrants will be issued under a separate warrant agreement between us and a bank or trust company, as warrant agent, as described in the applicable prospectus supplement. The warrant agent will act solely as our agent in connection with the securities warrants and will not act as an agent or trustee for any holders or beneficial owners of the securities warrants.

The prospectus supplement relating to any securities warrants we offer will describe the specific terms relating to the offering. These terms may include some or all of the following:

- the offering price;
- the currencies in which the securities warrants will be offered;
- the total number of shares that may be purchased if all of the holders exercise the securities warrants and, in the case of securities warrants for the purchase of shares of preferred stock, the designation, total number and terms of the series of preferred stock that can be purchased upon exercise of the securities warrants;
- the number of shares of preferred stock or common stock that may be purchased if a holder exercises any one securities warrant and the price at which and currencies in which the shares of preferred stock or common stock may be purchased upon exercise;
- the designation and terms of any series of securities with which the securities warrants are being offered, and the number of securities warrants offered with each security;
- the date on and after which the holder of the securities warrants can transfer them separately from the related series of securities;
- the date on which the right to exercise the securities warrants begins and expires;
- the triggering event and the terms upon which the exercise price and the number of underlying securities that the securities warrants are exercisable into may be adjusted;
- whether the securities warrants will be issued in registered or bearer form;
- the identity of any warrant agent with respect to the securities warrants and the terms of the warrant agency agreement with that warrant agent;
- a discussion of material U.S. federal income tax consequences; and
- any other terms of the securities warrants.

A holder of securities warrants may:

- exchange them for new securities warrants of different denominations;
- present them for registration of transfer, if they are in registered form; and
- exercise them at the corporate trust office of the warrant agent or any other office indicated in the applicable prospectus supplement.

Until the securities warrants are exercised, holders of the warrants will not have any of the rights of holders of the underlying securities.

Exercise of Securities Warrants

Each holder of a securities warrant is entitled to purchase the number of shares of common stock or preferred stock, as the case may be, at the exercise price described in the applicable prospectus supplement. After the close of business on the day when the right to exercise terminates (or a later date if we extend the time for exercise), unexercised securities warrants will become void.

Holders of securities warrants may exercise them by

- delivering to the warrant agent the payment required to purchase the underlying securities, as stated in the applicable prospectus supplement;
- properly completing and signing the reverse side of their warrant certificate(s), if any, or other exercise documentation; and
- delivering their warrant certificate(s), if any, or other exercise documentation to the warrant agent within the time specified by the applicable prospectus supplement.

If you comply with the procedures described above, your securities warrants will be considered to have been exercised when warrant agent receives payment of the exercise price. As soon as practicable after you have completed these procedures, we will issue and deliver to you the shares of common stock or preferred stock, as the case may be, that you purchased upon exercise. If you exercise fewer than all of the securities warrants represented by a warrant certificate, we will issue to you a new warrant certificate for the unexercised amount of securities warrants.

Amendments and Supplements to Warrant Agreements

We may amend or supplement a warrant agreement or warrant certificates without the consent of the holders of the securities warrants if the changes are not inconsistent with the provisions of the securities warrants and do not adversely affect the interests of the holders.

DESCRIPTION OF UNITS

We may, from time to time, issue units comprised of one or more of the other securities described in this prospectus in any combination. A prospectus supplement will describe the specific terms of the units offered under that prospectus supplement, and any special considerations, including tax considerations, applicable to investing in those units. You must look at the applicable prospectus supplement and any applicable unit agreement for a full understanding of the specific terms of any units. The form of unit agreement will be filed or incorporated by reference as an exhibit to the registration statement to which this prospectus is a part. See “Where You Can Find More Information” for information on how to obtain copies.

PLAN OF DISTRIBUTION

We may sell the securities from time to time pursuant to underwritten public offerings, negotiated transactions, block trades or a combination of these methods. We may sell the securities separately or together:

- through one or more underwriters or dealers in a public offering and sale by them;
- through agents; and/or
- directly to one or more purchasers.

We may distribute the securities from time to time in one or more transactions:

- at a fixed price or prices, which may be changed;
- at market prices prevailing at the time of sale;
- at prices related to such prevailing market prices; or
- at negotiated prices.

We may solicit directly offers to purchase the respective securities being offered by this prospectus. We may also designate agents to solicit offers to purchase the respective securities from time to time. We will name in a prospectus supplement any agent involved in the offer or sale of our securities.

If we utilize a dealer in the sale of the respective securities being offered by this prospectus, we will sell the respective securities to the dealer, as principal. The dealer may then resell the securities to the public at varying prices to be determined by the dealer at the time of resale.

If we utilize an underwriter in the sale of the respective securities being offered by this prospectus, we will execute an underwriting agreement with the underwriter at the time of sale and we will provide the name of any underwriter in the prospectus supplement that the underwriter will use to make resales of the securities to the public. In connection with the sale of the securities, we or the purchasers of securities for whom the underwriter may act as agent may compensate the underwriter in the form of underwriting discounts or commissions. The underwriter may sell the securities to or through dealers, and the underwriter may compensate those dealers in the form of discounts, concessions or commissions.

We will provide in the applicable prospectus supplement any compensation we will pay to underwriters, dealers or agents in connection with the offering of the respective securities, and any discounts, concessions or commissions allowed by underwriters to participating dealers. Underwriters, dealers and agents participating in the distribution of the securities may be deemed to be underwriters within the meaning of the Securities Act, and any discounts and commissions received by them and any profit realized by them on resale of the securities may be deemed to be underwriting discounts and commissions. We may enter into agreements to indemnify underwriters, dealers and agents against civil liabilities, including liabilities under the Securities Act, or to contribute to payments they may be required to make in respect thereof.

The securities may or may not be listed on a national securities exchange. To facilitate the offering of securities, certain persons participating in the offering may engage in transactions that stabilize, maintain or otherwise affect the price of the securities. This may include over-allotments or short sales of the securities, which involve the sale by persons participating in the offering of more securities than we sold to them. In these circumstances, these persons would cover such over-allotments or short positions by making purchases in the open market or by exercising their over-allotment option. In addition, these persons may stabilize or maintain the price of the securities by bidding for or purchasing securities in the open market or by imposing penalty bids, whereby selling concessions allowed to dealers participating in the offering may be reclaimed if securities sold by them is repurchased in connection with stabilization transactions. The effect of these transactions may be to stabilize or maintain the market price of the securities at a level above that which might otherwise prevail in the open market. The transactions may be discontinued at any time.

We may authorize underwriters, dealers or agents to solicit offers by certain purchasers to purchase the respective securities from us at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. The contracts will be subject only to those conditions set forth in the prospectus supplement, and the prospectus supplement will set forth any commissions we pay for solicitation of these contracts.

We may enter into derivative transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement indicates, in connection with those derivatives, the parties may sell securities covered by this prospectus and the applicable prospectus supplement, including short sale transactions. If so, the third party may use securities pledged by us or borrowed from us or others to settle those sales or to close out any related open borrowings of stock, and may use securities received from us in settlement of those derivatives to close out any related open borrowings of stock. The third party in such sale transactions will be an underwriter and, if not identified in this prospectus, will be identified in the applicable prospectus supplement or a post-effective amendment to this registration statement. In addition, we may otherwise loan or pledge securities to a financial institution or other third party that in turn may sell the securities short using this prospectus. Such financial institution or other third party may transfer its economic short position to investors in our securities or in connection with a concurrent offering of other securities.

The underwriters, dealers and agents may engage in transactions with us, or perform services for us, in the ordinary course of business.

LEGAL MATTERS

Fox Rothschild LLP, Minneapolis, Minnesota, will issue a legal opinion as to the validity of the securities offered by this prospectus.

EXPERTS

The consolidated financial statements incorporated in this prospectus by reference from the Company's Annual Report on Form 10-K for the year ended December 31, 2017 have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report which is incorporated herein by reference (which report expresses an unqualified opinion on the consolidated financial statements and includes an explanatory paragraph referring to going concern). Such consolidated financial statements have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public through the Internet at the SEC's web site at *www.sec.gov*. You may also read and copy any document we file with the SEC at the SEC's public reference room at 100 F Street N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information about its public reference facilities and their copy charges.

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. When used in this prospectus, the term "registration statement" includes amendments to the registration statement as well as the exhibits, schedules, financial statements and notes filed as part of the registration statement. This prospectus, which constitutes a part of the registration statement, does not contain all of the information in the registration statement. This prospectus omits information contained in the registration statement as permitted by the rules and regulations of the SEC. For further information with respect to us and the common stock offered by this prospectus, reference is made to the registration statement. Statements herein concerning the contents of any contract or other document are not necessarily complete and in each instance reference is made to the copy of such contract or other document filed with the SEC as an exhibit to the registration statement, each such statement being qualified by and subject to such reference in all respects.

INCORPORATION OF DOCUMENTS BY REFERENCE

The SEC allows us to incorporate by reference the information we file with them. This allows us to disclose important information to you by referencing those filed documents. We have previously filed the following documents with the SEC and are incorporating them by reference into this prospectus:

- Annual Report on Form 10-K for the year ended December 31, 2017;
- Quarterly Report on Form 10-Q for the quarter ended March 31, 2018;
- Current Reports on Form 8-K (only to the extent information is "filed" and not "furnished") filed with the SEC on January 31, 2018, March 21, 2018, April 3, 2018, April 14, 2018 and April 24, 2018;
- the information set forth in Item 9.01 of our Current Report on Form 8-K filed with the SEC on May 23, 2017 as amended by our Form 8-K/A filed with the SEC on July 10, 2017 and the information set forth in Item 9.01 of our Current Report on Form 8-K filed with the SEC on October 3, 2017 as amended by our Form 8-K/A filed with the SEC on December 15, 2017; and
- the description of our common stock contained in any registration statement on Form 8-A that we have filed, and any amendment or report filed for the purpose of updating this description.

We also are incorporating by reference any future information filed (rather than furnished) by us with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, after the date of the initial filing of the registration statement of which this prospectus is a part and before the effective date of the registration statement and after the date of this prospectus until the termination of the offering. The most recent information that we file with the SEC automatically updates and supersedes more dated information.

You can obtain a copy of any documents which are incorporated by reference in this prospectus or prospectus supplement, except for exhibits which are specifically incorporated by reference into those documents, at no cost, by writing or telephoning us at:

ReShape Lifesciences Inc.
1001 Calle Amanecer
San Clemente, California 92673
Attention: Secretary
(949) 429-6680

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$15,000,000
Common Stock

PROSPECTUS SUPPLEMENT

H.C. Wainwright & Co.

October 2, 2018