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

FORM S-1

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

GREENWICH LIFESCIENCES, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

2834 (Primary Standard Industrial Classification Code Number) **20-5473709** (I.R.S. Employer Identification Number)

3992 Bluebonnet Dr, Building 14

Stafford, TX 77477 (832) 819-3232 (Address and telephone number of registrant's principal executive offices)

> Snehal Patel Chief Executive Officer

Greenwich LifeSciences, Inc. 3992 Bluebonnet Dr, Building 14 Stafford, TX 77477

(832) 819-3232

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Jeffrey J. Fessler, Esq. Nazia J. Khan, Esq. Sheppard, Mullin, Richter & Hampton LLP 30 Rockefeller Plaza New York, NY 10112-0015 Tel.: (212) 653-8700 Gregory Sichenzia, Esq. Darrin Ocasio, Esq. Sichenzia Ross Ference LLP 1185 Avenue of the Americas, 37th Floor New York, NY 10036 Tel.: (212) 930-9700

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

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 check the following box: []

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. [X] **333-251366**

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

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

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

Large accelerated filer []

Accelerated filer []

Non-accelerated filer [X]

Smaller reporting company [X] Emerging growth company [X]

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

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Proposed Maximum Aggregate Amount of Offering Registration Price ⁽¹⁾ Fee ⁽²⁾			
The of Each Class of Securities to be Registered	¢		¢	
Common Stock, par value \$0.001 per share	Э	5,060,000	\$	553
Total:	\$	5,060,000	\$	553

- (1) Estimated solely for the purpose of computing the amount of the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended. Includes shares of common stock that the underwriters have the option to purchase to cover over-allotments, if any.
- (2) Calculated pursuant to Rule 457(o) based on an estimate of the proposed maximum aggregate offering price of the securities registered hereunder to be sold by the registrant. Represents the registration fee only for the additional amount of securities of the registrant being registered hereby. The registrant previously registered securities pursuant to a Registration Statement on Form S-1 (File No. 333-251366) for which a fee of \$2,761 was paid.

This Registration Statement shall become effective upon filing with the Securities and Exchange Commission in accordance with Rule 462(b) of the Securities Act of 1933, as amended.

EXPLANATORY NOTE AND INCORPORATION BY REFERENCE

Greenwich LifeSciences, Inc. (the "Company") is filing this Registration Statement on Form S-1 (the "Registration Statement") with the Securities and Exchange Commission ("SEC") pursuant to Rule 462(b) of the Securities Act of 1933, as amended. The contents of the Registration Statement on Form S-1 (File No. 333-251366) filed by the Company with the SEC on December 15, 2020, and declared by the SEC effective on December 17, 2020, including the exhibits thereto, are incorporated herein by reference.

We are filing this registration statement for the purpose of registering additional securities of the Company with the proposed maximum aggregate offering price not to exceed \$5,060,000.

The required opinions and consents are listed on an Exhibit Index attached hereto and filed herewith.

Exhibit	
Number	Description
5.1	Opinion of Sheppard, Mullin, Richter & Hampton LLP
23.1	Consent of MaloneBailey, LLP, independent registered public accounting firm
23.2	Consent of Sheppard, Mullin, Richter & Hampton, LLP (included in Exhibit 5.1)

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant has duly caused this Registration Statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Stafford, State of Texas, on the 17th day of December, 2020.

GREENWICH LIFESCIENCES, INC.

By: /s/ Snehal Patel Snehal Patel

Chief Executive Officer and Director

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement on Form S-1 has been signed by the following persons in the capacities and on the dates indicated below.

Signature	Title	Date
/s/ Snehal Patel Snehal Patel	Chief Executive Officer and Director (Principal Executive Officer and Principal Accounting and Financial Officer)	December 17, 2020
/s/ F. Joseph Daugherty F. Joseph Daugherty	Chief Medical Officer and Director	December 17, 2020
/s/ David McWilliams David McWilliams	Director	December 17, 2020
/s/ Eric Rothe Eric Rothe	Director	December 17, 2020
/s/ Kenneth Hallock Kenneth Hallock	Director	December 17, 2020



December 17, 2020

VIA ELECTRONIC MAIL Greenwich LifeSciences, Inc. 3992 Bluebonnet Dr, Building 14 Stafford, TX 77477

Re: Registration Statement on Form S-1

Ladies and Gentlemen:

We are acting as counsel to Greenwich LifeSciences, Inc., a Delaware corporation (the "**Company**"), in connection with its registration statement on Form S-1 (File No. 333-251366) (the "**Registration Statement**"), filed with the Securities and Exchange Commission (the "**Commission**") under the Securities Act of 1933, as amended (the "**Act**"), relating to the proposed public offering of shares of common stock of the Company, par value \$0.001 per share (the "**Shares**"), with a proposed maximum aggregate offering price of \$30,360,000, including Shares issuable upon exercise of an option granted by the Company. The Shares will be sold by the Company pursuant to an underwriting agreement to be entered into by and between the Company and Aegis Capital Corp. as the representative of the several underwriters to be named therein (the "**Agreement**"). This opinion letter is furnished to you at your request to enable you to fulfill the requirements of Item 601(b)(5) of Regulation S-K, 17 C.F.R. §229.601(b)(5), in connection with the Registration Statement.

In connection with this opinion, we have reviewed and relied upon the following:

- the Registration Statement and the related prospectus included therein;
- the form of Agreement;
- the Second Amended and Restated Certificate of Incorporation of the Company in effect on the date hereof;
- the Second Amended and Restated Bylaws of the Company in effect on the date hereof;
- the resolutions of the Board of Directors of the Company authorizing/ratifying the execution and delivery of the Agreement, the issuance and sale of the Shares, the
 preparation and filing of the Registration Statement, and other actions with regard thereto; and
- such other documents, records, certificates, memoranda and other instruments as we deem necessary as a basis for this opinion.

In our examination, we have assumed the genuineness of all signatures, including endorsements, the legal capacity and competency of all natural persons, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as facsimile, electronic, certified or photocopy, and the authenticity of the originals of such copies. As to any facts relevant to the opinions stated herein that we did not independently establish or verify, we have relied upon statements and representations of officers and other representatives of the Company and others and of public officials.

Based upon, subject to and limited by the foregoing, we are of the opinion that following (i) execution and delivery by the Company of the Agreement, (ii) effectiveness of the Registration Statement, (iii) issuance of the Shares pursuant to the terms of the Agreement, and (iv) receipt by the Company of the consideration for the Shares specified in the resolutions, the Shares will be duly authorized for issuance and, when issued, delivered and paid for in accordance with the terms of the Agreement, will be validly issued, fully paid and nonassessable.

We also hereby consent to the reference to our firm under the caption "Legal Matters" in the prospectus which forms part of the Registration Statement. In giving this consent, we do not admit that we are within the category of persons whose consent is required under Section 7 of the Act, the rules and regulations of the Commission promulgated thereunder or Item 509 of Regulation S-K.

We express no opinion as to matters governed by any laws other than the Delaware General Corporation Law. No opinion is expressed herein with respect to the qualification of the Shares under the securities or blue sky laws of any state or any foreign jurisdiction.

This opinion letter is rendered to you solely for use in connection with the issuance and sale of the Shares in accordance with the Registration Statement as of the date first written above and is not to be relied on for any other purpose. We disclaim any obligation to advise you of facts, circumstances, events or developments that hereafter may be brought to our attention and that may alter, affect or modify the opinion expressed herein. Our opinion is expressly limited to the matters set forth above and we render no opinion, whether by implication or otherwise, as to any other matters relating to the Company or the Shares.

Respectfully submitted,

/s/ Sheppard, Mullin, Richter & Hampton LLP

SHEPPARD, MULLIN, RICHTER & HAMPTON LLP



CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the inclusion in this Registration Statement on Form S-1 of our report dated April 2, 2020, except for Note 8, which is dated June 22, 2020, with respect to the audited financial statements of Greenwich LifeSciences, Inc. for the years ended December 31, 2019 and 2018. Our report contains an explanatory paragraph regarding the Company's ability to continue as a going concern.

We also consent to the references to us under the heading "Experts" in such Registration Statement.

/s/ MaloneBailey, LLP www.malonebailey.com Houston, Texas December 17, 2020

> 9801 Westheimer Road, Suite 1100, Houston, Texas 77042 713.343.4286 Zhongzhou Holdings Financial Center (Tower B) #2205 No. 88, Haide Yi Road, Nanshan District, Shenzhen, P.R. China 518054 86.755.8627.8659 #306-307 Ocean International Center (C Tower) No. 60 Dongsihuan Middle Road, Chaoyang District, Beijing, P.R. China 100025 86.10.5908.1688 www.malonebailey.com A member of Public Company Accounting Oversight Board Registered AICPA r Vexia

An Independently Owned and Operated Member of Nexia International

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