UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-4

REGISTRATION STATEMENT **UNDER** THE SECURITIES ACT OF 1933

SESEN BIO, 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)

26-2025616

(I.R.S. Employer Identification Number)

245 First Street, Suite 1800 Cambridge, MA 02142 (617) 444-8550

(Address including zip code, and telephone number, including area code, of registrant's principal executive offices)

> Thomas R. Cannell, D.V.M. **President and Chief Executive Officer** Sesen Bio, Inc. 245 First Street, Suite 1800 Cambridge, MA 02142 (617) 444-8550

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

Copies to:

Steven J. Abrams Tiffany Posil Jessica A. Bisignano Hogan Lovells US LLP 1735 Market Street, 23rd Floor Philadelphia, PA 19103 (267) 675-4600

Exchange Act Rule 13e-4(i) (Cross-Border Issuer Tender Offer) □

Exchange Act Rule 14d-1(d) (Cross-Border Third-Party Tender Offer) □

Steven Kelly President and Chief Executive Officer CARISMA Therapeutics Inc. 3675 Market Street, Suite 200 Philadelphia, PA 19104 (267) 491-6422

Brian A. Johnson Hal J. Leibowitz Christopher D. Barnstable-Brown Wilmer Cutler Pickering Hale and Dorr LLP 7 World Trade Center 250 Greenwich Street New York, NY 10007 (212) 230-8800

Approximate date of commencement of satisfaction or waiver of all other conditions		the public: As soon as practicable after the effectiveness of this red herein.	egistration statement and th
If the securities being registered on this length the following box. \Box	Form are being offered in connection	with the formation of a holding company and there is compliance	with General Instruction G
If this Form is filed to register additional registration statement number of the earlier e	01	o Rule 462(b) under the Securities Act, check the following box and a same offering. ⊠ 333-267891	d list the Securities Act
If this Form is a post-effective amendme number of the earlier effective registration sta	1	er the Securities Act, check the following box and list the Securitie	s Act registration statemen
į	9	accelerated filer, a non-accelerated filer, a smaller reporting compa aller reporting company," and "emerging growth company" in Rule	0.00
Large accelerated filer		Accelerated filer	
Non-accelerated filer	\boxtimes	Smaller reporting company	\boxtimes
		Emerging growth company	
If an emerging growth company, indicate inancial accounting standards provided purs	5	elected not to use the extended transition period for complying wit urities Act. \Box	h any new or revised

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.

If applicable, place an X in the box to designate the appropriate rule provision relied upon in conducting this transaction:

EXPLANATORY NOTE

Pursuant to its Registration Statement on Form S-4 (Registration No. 333-267891) (the "Prior Registration Statement"), which was declared effective on January 19, 2023, Sesen Bio, Inc., a Delaware corporation ("Sesen Bio") registered an aggregate of 440,794,480 shares of its common stock, par value \$0.001 per share (the "Common Stock"), and paid an aggregate fee of \$0.06. Sesen Bio is filing this Registration Statement on Form S-4 (this "Registration Statement") pursuant to General Instruction K to Form S-4 and Rule 462(b) under the Securities Act of 1933, as amended, solely to register 180,443,631 additional shares of Common Stock for issuance in connection with the consummation of the merger contemplated by the Agreement and Plan of Merger and Reorganization dated as of September 20, 2022, by and among Sesen Bio, Seahawk Merger Sub, Inc. and CARISMA Therapeutics Inc., as amended by the First Amendment to Agreement and Plan of Merger and Reorganization dated as of December 29, 2022 and the Second Amendment to Agreement and Plan of Merger and Reorganization dated as of February 13, 2023. The additional securities that are being registered are in an amount and at a price that together represent no more than 20% of the maximum aggregate offering price set forth in the Calculation of Filing Fee Tables set forth in Exhibit 107 as filed with the Prior Registration Statement.

STATEMENT OF INCORPORATION BY REFERENCE

This Registration Statement incorporates by reference the contents of the Prior Registration Statement, including all amendments, supplements and exhibits thereto. Additional opinions and consents required to be filed with this Registration Statement are listed on the Exhibit Index included with this Registration Statement and filed herewith.

Exhibit Index

Exhibit Number	Description
<u>5.1</u>	Opinion of Hogan Lovells US LLP as to the validity of shares of common stock to be issued to CARISMA Therapeutics Inc.
<u>23.1</u>	Consent of Hogan Lovells US LLP (contained in Exhibit 5.1).
<u>23.2</u>	Consent of KPMG LLP,
<u>23.3</u>	Consent of Ernst & Young, LLP.
<u>24.1*</u>	Power of Attorney.
<u>99.1</u>	Consent of SVB Securities LLC, financial advisor to Sesen Bio, Inc.
<u>107</u>	Filing Fee Table.

Previously filed with the registrant's Registration Statement on Form S-4 (Registration No. 333-267891), as amended, which was initially filed with the Securities and Exchange Commission on October 14, 2022.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized in the town of Cambridge, Commonwealth of Massachusetts, on February 14, 2023.

SESEN BIO, INC.

By: /s/ Thomas R. Cannell, D.V.M.

Name: Thomas R. Cannell, D.V.M. Title: President and Chief Executive Officer

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

Signature	Title	Date
/s/ Thomas R. Cannell, D.V.M. Thomas R. Cannell, D.V.M.	Director, President and Chief Executive Officer (Principal Executive Officer)	February 14, 2023
* Monica Forbes	Chief Financial Officer (Principal Financial Officer)	February 14, 2023
* Elly Ryu	Corporate Controller (Principal Accounting Officer)	February 14, 2023
* Jay S. Duker, M.D.	Chair of the Board of Directors	February 14, 2023
* Carrie L. Bourdow	Director	February 14, 2023
* Peter K. Honig, M.D.	Director	February 14, 2023
* Michael A.S. Jewett, M.D.	Director	February 14, 2023
* Jason A. Keyes	Director	February 14, 2023

^{*} Thomas R. Cannell, by signing his name hereto, signs this Registration Statement on behalf of the officers and directors of the registrant above in front of whose name an asterisk appears pursuant to powers of attorney duly executed by such officers and directors and filed with the SEC.

By: /s/ Thomas R. Cannell, D.V.M.
Attorney-in-fact



February 14, 2023

Board of Directors Sesen Bio, Inc. 245 First Street, Suite 1800 Cambridge, MA 02142

Ladies and Gentlemen:

Hogan Lovells US LLP 1735 Market Street, Floor 23 Philadelphia, PA 19103 T +1 267 675 4600 F +1 267 675 4601 www.hoganlovells.com

We are acting as counsel to Sesen Bio, Inc., a Delaware corporation (the "Company"), in connection with its registration statement on Form S-4 (the "Registration Statement"), filed with the Securities and Exchange Commission (the "SEC") pursuant to Rule 462(b) under the Securities Act of 1933, as amended (the "Act"), relating to the proposed offering of up to 180,443,631 additional shares (as such number may be adjusted after giving effect to the 1-for-20 reverse stock split contemplated by the Company's effective registration statement on Form S-4 (File No. 333-267891) initially filed with the SEC under the Act on October 14, 2022 (the "Initial Registration Statement") of common stock, par value \$0.001 per share, of the Company (the "Shares"), in connection with the merger contemplated by the Agreement and Plan of Merger and Reorganization, dated as of September 20, 2022, as amended on December 29, 2022, and further amended on February 13, 2023, by and among the Company, CARISMA Therapeutics Inc., a Delaware corporation, and Seahawk Merger Sub, Inc., a Delaware corporation and a wholly-owned subsidiary of the Company (the "Merger 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.

For purposes of this opinion letter, we have examined copies of such agreements, instruments and documents as we have deemed an appropriate basis on which to render the opinions hereinafter expressed. In our examination of the aforesaid documents, we have assumed the genuineness of all signatures, the legal capacity of all natural persons, the accuracy and completeness of all documents submitted to us, the authenticity of all original documents, and the conformity to authentic original documents of all documents submitted to us as copies (including pdfs). As to all matters of fact, we have relied on the representations and statements of fact made in the documents so reviewed, and we have not independently established the facts so relied on. This opinion letter is given, and all statements herein are made, in the context of the foregoing.

This opinion letter is based as to matters of law solely on the Delaware General Corporation Law, as amended. We express no opinion herein as to any other statutes, rules or regulations.

Based upon, subject to and limited by the foregoing, we are of the opinion that following (i) the effectiveness of the Registration Statement, (ii) the approval by the stockholders of the Company of the issuance of the Shares, (iii) the approval by the stockholders of the Company of the Certificate of Amendment to the Company's Restated Certificate of Incorporation, as amended, in the form attached as Annex G to the Initial Registration Statement (the "Certificate of Amendment"), and the filing of the Certificate of Amendment with the Secretary of State of the State of Delaware, and (iv) the issuance of the Shares by the Company in accordance with the terms of the Merger Agreement, the Shares will be validly issued, fully paid, and nonassessable.

Hogan Lovells US LLP is a limited liability partnership registered in the District of Columbia. "Hogan Lovells" is an international legal practice that includes Hogan Lovells US LLP and Hogan Lovells International LLP, with offices in: Alicante Amsterdam Baltimore Beijing Birmingham Boston Brussels Colorado Springs Denver Dubai Dusseldorf Frankfurt Hamburg Hanoi Ho Chi Minh City Hong Kong Houston Johannesburg London Los Angeles Luxembourg Madrid Mexico City Miami Milan Minneapolis Monterrey Munich New York Northern Virginia Paris Perth Philadelphia Rome San Francisco São Paulo Shanghai Silicon Valley Singapore Sydney Tokyo Warsaw Washington, D.C. Associated Offices: Budapest Jakarta Riyadh Shanghai FTZ Ulaanbaatar. Business Service Centers: Johannesburg Louisville. Legal Services Center: Berlin. For more information see www.hoganlovells.com

This opinion letter has been prepared for use in connection with the Registration Statement. We assume no obligation to advise of any changes in the foregoing subsequent to the effective date of the Registration Statement.

We hereby consent to the filing of this opinion letter as Exhibit 5.1 to the Registration Statement and to the reference to this firm under the caption "Legal Matters" in the prospectus constituting a part of the Initial Registration Statement. In giving this consent, we do not thereby admit that we are an "expert" within the meaning of the Act.

Very truly yours,

/s/ HOGAN LOVELLS US LLP

HOGAN LOVELLS US LLP

Consent of Independent Registered Public Accounting Firm

We consent to the use of our report dated October 14, 2022, with respect to the consolidated financial statements of CARISMA Therapeutics Inc., incorporated herein by reference and to the reference to our firm under the heading "Experts" in the prospectus.

/s/ KPMG LLP

Philadelphia, Pennsylvania February 14, 2023

Consent of Independent Registered Public Accounting Firm

We consent to the reference to our firm under the caption "Experts" and to the use of our report dated February 28, 2022 incorporated by reference in this Registration Statement on Form S-4 of Sesen Bio, Inc. for the registration of shares of its common stock.

/s/ Ernst & Young LLP

Boston, Massachusetts February 14, 2023

CONSENT OF SVB SECURITIES LLC

We hereby consent to the use of our opinion letter dated December 29, 2022 to the Board of Directors of Sesen Bio, Inc., incorporated in the Registration Statement on Form S-4 of Sesen Bio, Inc. to be filed on the date hereof, by reference to the Registration Statement on Form S-4 (Registration No. 333-267891) of Sesen Bio, Inc. declared effective on January 19, 2023 (the "Effective S-4"), and to the references to such opinion in such Registration Statement, as incorporated by reference to the Effective S-4 under the captions: "Prospectus Summary – Opinion of Sesen Bio's Financial Advisor," "The Merger – Background of the Merger," "The Merger – Sesen Bio Reasons for the Merger" and "The Merger – Opinion of Sesen Bio's Financial Advisor". In giving such consent, we do not admit that we come within the category of persons whose consent is required under Section 7 of the Securities Act of 1933, as amended, or the rules and regulations of the Securities and Exchange Commission thereunder, nor do we thereby admit that we are experts with respect to any part of such Registration Statement within the meaning of the term "expert" as used in the Securities Act of 1933, as amended, or the rules and regulations of the Securities and Exchange Commission thereunder. Additionally, such consent does not cover any future amendments to the Registration Statement.

/s/ SVB SECURITIES LLC

New York, New York February 14, 2023

Calculation of Filing Fee Tables

Form S-4 (Form Type)

SESEN BIO, INC.

(Exact Name of Registrant as Specified in its Charter)

Table 1—Newly Registered and Carry Forward Securities

	1		1	ı	1	ı			1	1		ı
												Filing Fee
												Previously
												Paid In
												Connection
					_							with
			Fee		Proposed						Carry	Unsold
			Calculation		Maximum	Maximum			Carry	Carry	Forward	Securities
		Security	or Carry		Offering	Aggregate		Amount of	Forward	Forward	Initial	to be
	Security	Class	Forward	Amount	Price Per	Offering	Fee	Registration	Form	File	effective	Carried
	Type	Title	Rule	Registered	Unit	Price	Rate	Fee	Type	Number	date	Forward
	Newly Registered Securities											
		Common										
		Stock,										
		\$0.001										
Fees to Be		par value										
Paid	Equity	per share	Other	180,443,631 (1)	_	\$517.42 (2)	\$0.00011020	\$0.06				
Fees												
Previously												
Paid	_	_	_	_	_	_		_				
Carry Forward Securities												
Carry												
Forward												
Securities	_	_	_	_		_			_	_	_	
	Total Offering Amounts				\$517.42 (2)		\$0.06					
	Total Fees Previously Paid											
	Total Fee Offsets											
	Net Fee Due							\$0.06				

- (1) Relates to common stock, \$0.001 par value per share, of Sesen Bio, Inc., a Delaware corporation, or Sesen Bio, issuable to holders of common stock, \$0.0001 par value per share, and preferred stock, \$0.0001 par value per share, of CARISMA Therapeutics Inc., a Delaware corporation, or Carisma, in the proposed merger of Seahawk Merger Sub, Inc., a Delaware corporation and wholly-owned subsidiary of Sesen Bio, with and into Carisma, with Carisma surviving as a wholly-owned subsidiary of Sesen Bio, or the merger. The amount of Sesen Bio common stock being registered reflects the estimated maximum number of additional shares of Sesen Bio common stock that are expected to be issued pursuant to the merger, without taking into account the effect of a reverse stock split of Sesen Bio common stock, assuming a presplit exchange ratio (which is subject to adjustment prior to the closing of the merger) of 40.0154 shares of Sesen Bio common stock for each outstanding share of Carisma common stock and share of Carisma preferred stock. Sesen Bio previously registered 440,794,480 shares of Sesen Bio common stock pursuant to the Registration Statement on Form S-4 (Registration No. 333-267891), which was declared effective on January 19, 2023, in connection with the transactions contemplated by the proposed merger.
- (2) Estimated solely for purposes of calculating the registration fee in accordance with Rule 457(f)(2) of the Securities Act of 1933, as amended. Carisma is a private company, no market exists for its securities, and Carisma has an accumulated capital deficit. Therefore, the proposed maximum aggregate offering price is equal to one-third of the aggregate par value of the Carisma securities expected to be exchanged in the proposed merger.