As filed with the Securities and Exchange Commission on August 14, 2026. File No. 333-________

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

FORM S-8

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

ELUTIA INC.

(Exact Name of Registrant as Specified in its Charter)

Delaware	**47-4790334**
(State or Other Jurisdiction of Incorporation or Organization)	*(I.R.S. Employer Identification No.)*

20 Firstfield Road
Gaithersburg, MD 20878
(Address, Including Zip Code, of Registrant's Principal Executive Offices)

Elutia Inc. Amended and Restated 2020 Incentive Award Plan
(Full Title of the Plan)

C. Randal Mills
President and Chief Executive Officer
Elutia Inc.
20 Firstfield Road
Gaithersburg, MD 20878
(240) 247-1170
(Name, Address, and Telephone Number, Including Area Code, of Agent for Service)

Copies to:
Isabelle A. Dinerman, Esq.
Michael Cochran, Esq.
Kilpatrick Townsend & Stockton LLP
1100 Peachtree St NE, Suite 2800
Atlanta, GA 30309
(404) 815-6500

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	☒	Smaller reporting company	☒
		Emerging growth company	☐

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

EXPLANATORY NOTE

This Registration Statement on Form S-8 (this "Registration Statement") is filed by Elutia Inc., a Delaware corporation (the "Registrant"), with the Securities and Exchange Commission (the "SEC") pursuant to the requirements of the Securities Act of 1933, as amended (the "Securities Act"), to register (i) an additional 3,000,000 shares of the Registrant's Class A common stock, par value $0.001 per share ("Common Stock"), under the Registrant's Amended and Restated 2020 Incentive Award Plan (as amended and restated, the "Amended 2020 Plan") that became reserved and available for issuance following approval by the Registrant's stockholders of the First Amendment to the Amended 2020 Plan on June 11, 2026, (ii) 1,408,426 shares of Common Stock under the Amended 2020 Plan that became reserved and available for issuance on January 1, 2025, pursuant to the Amended 2020 Plan's "evergreen" provisions, and (iii) 1,711,394 shares of Common Stock under the Amended 2020 Plan that became reserved and available for issuance on January 1, 2026, pursuant to the Amended 2020 Plan's "evergreen" provisions.

The Registrant previously filed a Registration Statement on Form S-8 (File No. 333-276693) on January 25, 2024 and a Registration Statement on Form S-8 (File No. 333-249391) on October 8, 2020, with respect to the shares of Common Stock previously reserved for issuance under the Amended 2020 Plan (collectively, the "Prior Registration Statements"). This Registration Statement relates to securities of the same class as that to which the Prior Registration Statements relate, and is submitted in accordance with General Instruction E to Form S-8 regarding registration of additional securities. In accordance with such instruction, the contents of the Prior Registration Statements relating to the Amended 2020 Plan are incorporated by reference in this Registration Statement, to the extent not replaced hereby.

ITEM 8. EXHIBITS.

The following exhibits are filed with this Registration Statement:

Exhibit Number	Description
4.1a	Restated Certificate of Incorporation of Elutia Inc. (incorporated by reference to Exhibit 3.1a to the Registrant's Current Report on Form 8-K filed on October 13, 2020).
4.1b	Certificate of Amendment to the Restated Certificate of Incorporation of Elutia Inc. (incorporated by reference to Exhibit 3.1b to the Registrant's Current Report on Form 8-K filed on September 7, 2023).
4.2	Amended and Restated Bylaws of Elutia Inc. (incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K filed on October 13, 2020).
4.3	Specimen stock certificate evidencing the shares of Class A common stock (incorporated by reference to Exhibit 4.2 to the Registrant's Registration Statement on Form S-1 (File No. 333-248788) filed on September 14, 2020).
5.1	Opinion of Kilpatrick Townsend & Stockton LLP (filed herewith).
23.1	Consent of PricewaterhouseCoopers LLP (filed herewith).
23.2	Consent of Kilpatrick Townsend & Stockton LLP (included in Exhibit 5.1).
24.1	Power of Attorney (included in signature pages to this Registration Statement).
99.1	Elutia Inc. Amended and Restated 2020 Incentive Award Plan (incorporated by reference to Annex A to the Registrant's Definitive Proxy Statement filed on April 27, 2023).
99.2	First Amendment to Elutia Inc. Amended and Restated 2020 Incentive Award Plan (incorporated by reference to Annex A to the Registrant's Definitive Proxy Statement filed on April 22, 2026).
107	Filing Fee Table (filed herewith).

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Gaithersburg, State of Maryland, on August 14, 2026.

ELUTIA INC.

By: /s/ C. Randal Mills, Ph.D.
C. Randal Mills, Ph.D.
President and Chief Executive Officer

POWER OF ATTORNEY

Each of the undersigned officers and directors of the Registrant hereby severally constitutes and appoints C. Randal Mills, Ph.D., Matthew Ferguson or Jeffrey Hamet, or any of them, as his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, and in any and all capacities, to file and sign any and all amendments, including post-effective amendments, to this Registration Statement and any other Registration Statement for the same offering that is to be effective under Rule 462(b) of the Securities Act of 1933, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith and about the premises as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof. This power of attorney shall be governed by and construed with the laws of the State of Delaware and applicable federal securities laws.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Name and Signature	Title	Date
/s/ C. Randal Mills, Ph.D. C. Randal Mills, Ph.D.	President, Chief Executive Officer and Director (principal executive officer)	August 14, 2026
/s/ Matthew Ferguson Matthew Ferguson	Chief Financial Officer (principal financial officer and principal accounting officer)	August 14, 2026
/s/ Kevin Rakin Kevin Rakin	Chairman of the Board of Directors	August 14, 2026
/s/ David Colpman David Colpman	Director	August 14, 2026
/s/ Brigid A. Makes Brigid A. Makes	Director	August 14, 2026
/s/ Guido Neels Guido Neels	Director	August 14, 2026

Exhibit 5.1

Suite 2800, 1100 Peachtree Street NE
Atlanta, GA 30309-4528

Kilpatrick Townsend & Stockton LLP
ktslaw.com

August 14, 2026

Elutia Inc.
20 Firstfield Road
Gaithersburg, MD 20878

Re: Registration Statement on Form S-8

Ladies and Gentlemen:

We have acted as counsel to Elutia Inc., a Delaware corporation ("Elutia" or the "Company"), in connection with the filing by the Company of a Registration Statement on Form S-8 (the "Registration Statement") filed with the Securities and Exchange Commission (the "SEC") on the date hereof, covering the registration of (i) an additional 3,000,000 shares of the Company's Class A common stock, par value $0.001 per share ("Common Stock"), under the Company's Amended and Restated 2020 Incentive Award Plan (the "Plan"), as amended by the First Amendment thereto (the "First Amendment") approved by the Company's stockholders on June 11, 2026 (as so amended, the "Amended Plan"), which shares of Common Stock became reserved and available for issuance under the Amended Plan following such stockholder approval, (ii) an additional 1,408,426 shares of Common Stock under the Plan that became reserved and available for issuance on January 1, 2025, pursuant to the Plan's "evergreen" provisions in Section 3.1(a) thereof, and (iii) an additional 1,711,394 shares of Common Stock under the Plan that became reserved and available for issuance on January 1, 2026, pursuant to the Plan's evergreen provisions (collectively, clauses (i)-(iii), the "Shares").

Subject to the assumptions, qualifications and limitations identified in this letter, we are of the opinion that the Shares have been duly authorized and, when issued in accordance with the terms of the Amended Plan, will be validly issued, fully paid and nonassessable (except as to Shares issued pursuant to deferred payment arrangements, which will be fully paid and nonassessable when such deferred payments are made in full).

In connection with the preparation of this letter, we have among other things reviewed: (i) the Registration Statement, including the filings incorporated by reference therein; (ii) the Plan; (iii) the First Amendment; (iv) copies of minutes, resolutions and consents, as applicable, of the Board of Directors and committees of the Board of Directors of the Company related to the offering, certified by an officer of the Company; (v) the Restated Certificate of Incorporation of the Company, as amended (the "Charter"), as certified by the Secretary of State of the State of Delaware on August 13, 2026; (vi) the Amended and Restated Bylaws of the Company, certified by an officer of the Company; (vii) a certificate of good standing from the Secretary of State of the State of Delaware dated August 13, 2026; and (viii) such other certificates, documents and instruments we have deemed appropriate for purposes of this letter.

We have assumed for purposes of this letter that: (i) each document we have reviewed is accurate and complete, each such document that is an original is authentic, each such document that is a copy conforms to an authentic original, all signatures on each such document are genuine, and that all natural persons who have signed any documents have the legal capacity to do so; (ii) that the Company will comply with all applicable notice requirements regarding uncertificated shares provided in the Delaware General Corporation Law (the "DGCL"); (iii) that, at the time of issuance of Shares under the Amended Plan, there will be sufficient shares of Common Stock available for issuance under the Charter; and (iv) that the issuance of Shares under the Amended Plan will be for legal consideration equal to or in excess of par value.

We are opining herein only as to the DGCL. We express no opinion to the extent that any other laws are applicable to the subject matter hereof and express no opinion and provide no assurance as to compliance with any federal or state securities law, rule or regulation.

This opinion letter addresses only the specific legal issues expressly referenced herein, and no opinion is implied or may be inferred beyond that expressly stated. This opinion letter speaks only as of its date and is delivered in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act. We assume no obligation to advise you of any change in the foregoing subsequent to the date hereof. We consent to the filing of this opinion as an exhibit to the Registration Statement. In giving this consent, we do not hereby 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 SEC thereunder.

Sincerely,

/s/ Kilpatrick Townsend & Stockton LLP

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of Elutia Inc. of our report dated March 13, 2026 relating to the financial statements, which appears in Elutia Inc.'s Annual Report on Form 10-K for the year ended December 31, 2025.

/s/ PricewaterhouseCoopers LLP
Philadelphia, Pennsylvania
August 14, 2026

Calculation of Filing Fee Tables

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ELUTIA INC.

Table 1: Newly Registered Securities

	Security Type	Security Class Title	Fee Calculation Rule	Amount Registered	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
1	Equity	Class A Common Stock, $0.001 par value	Other	6,119,820	$ 0.857	$ 5,244,685.74	0.0001381	$ 724.29
				Total Offering Amounts:		$ 5,244,685.74		$ 724.29
				Total Fee Offsets:				$ 0.00
				Net Fee Due:				$ 724.29

Offering Note

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"Amount Registered" consists of (i) 3,000,000 shares of Common Stock under the Amended 2020 Plan that became reserved and available for issuance following approval by the Registrant's stockholders of the First Amendment to the Amended 2020 Plan on June 11, 2026, (ii) 1,408,426 shares of Common Stock under the Amended 2020 Plan that became reserved and available for issuance on January 1, 2025, pursuant to the Amended 2020 Plan's "evergreen" provisions, and (iii) 1,711,394 shares of Common Stock under the Amended 2020 Plan that became reserved and available for issuance on January 1, 2026, pursuant to the Amended 2020 Plan's "evergreen" provisions. In addition, pursuant to Rule 416 under the Securities Act, the Registration Statement also relates to such indeterminate number of additional shares of Common Stock as may be issuable to prevent dilution in the event of a stock dividend, stock split, recapitalization, or other similar changes in the Registrant's capital structure, merger, consolidation, spin-off, split-off, spin-out, split-up, reorganization, partial or complete liquidation, or other distribution of assets, issuance of rights or warrants to purchase securities, or any other corporate transaction or event having an effect similar to any of the foregoing. Capitalized terms used in this Exhibit 107 are defined in the Registration Statement that this exhibit is filed with.

"Proposed Maximum Offering Price Per Unit" is estimated solely for the purpose of calculation of the registration fee pursuant to Rules 457(c) and 457(h) under the Securities Act, based on a per share price of $0.8570, the average of the high and low reported sales prices of the Common Stock on the Nasdaq Capital Market on August 10, 2026.

Table 2: Fee Offset Claims and Sources ☑**Not Applicable**

	Registrant or Filer Name	Form or Filing Type	File Number	Initial Filing Date	Filing Date	Fee Offset Claimed	Security Type Associated with Fee Offset Claimed	Security Title Associated with Fee Offset Claimed	Unsold Securities Associated with Fee Offset Claimed	Unsold Aggregate Offering Amount Associated with Fee Offset Claimed	Fee Paid with Fee Offset Source
Rule 457(p)											
Fee Offset Claims											
Fee Offset Sources											