Registration No. 333-

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8

REGISTRATION STATEMENT

UNDER THE SECURITIES ACT OF 1933

ACELYRIN, INC.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation) 85-2406735 (IRS Employer Identification No.)

4149 Liberty Canyon Road Agoura Hills, California (Address of principal executive offices)

91301 (Zip Code)

ACELYRIN, INC. 2023 Equity Incentive Plan ACELYRIN, INC. 2023 Employee Stock Purchase Plan (Full titles of the plans)

Shao-Lee Lin, M.D., Ph.D. Chief Executive Officer 4149 Liberty Canyon Road Agoura Hills, California 91301 (805) 730-0360

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

Copies to: Chadwick Mills Charles S. Kim Anitha Anne Cooley LLP 3 Embarcadero Center, 20th Floor San Francisco, California 94111 (415) 693-2000

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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

Non-accelerated filer

	Accelerated filer	
\mathbf{X}	Smaller reporting company	
	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 pursuant to Section 7(a)(2)(B) of the Securities Act.

EXPLANATORY NOTE

REGISTRATION OF ADDITIONAL SHARES

Pursuant to General Instruction E of Form S-8, ACELYRIN, INC. (the "*Registrant*") is filing this Registration Statement on Form S-8 with the Securities and Exchange Commission (the "*Commission*") for the purpose of registering (i) 5,230,473 additional shares of its Common Stock under the 2023 Equity Incentive Plan (the "*2023 Plan*"), pursuant to the provisions of the 2023 Plan providing for an automatic increase in the number of shares of Common Stock reserved and available for issuance under the 2023 Plan on January 1, 2024 and that have become available for issuance under the 2023 Plan as a result of shares withheld or reacquired to satisfy the exercise price or tax withholding obligations associated with any award that had been granted under the 2020 Stock Option and Grant Plan (the "*2020 Plan*"), and (ii) 978,658 additional shares of its Common Stock under the 2023 Employee Stock Purchase Plan (the "*2023 ESPP*," together with the 2023 Plan, the "*Plans*"), pursuant to the provisions of the 2023 ESPP providing for an automatic increase in the number of shares of Common Stock reserved and available for issuance under the 2023 ESPP on January 1, 2024. In accordance with the instructional note to Part I of Form S-8 as promulgated by the Commission, the information specified by Part I of the Form S-8 has been omitted from this Registration Statement.

The Registrant previously registered shares of its Common Stock for issuance under the Plans on a Registration Statement on Form S-8 filed with the Commission on May 8, 2023 (File No. 333-271737). Pursuant to General Instruction E to Form S-8, this Registration Statement hereby incorporates by reference the contents of the Registration Statement referenced above except as set forth below.

PART II INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The Registrant hereby incorporates by reference into this Registration Statement the following documents previously filed by the Registrant with the Commission:

- (a) The Registrant's <u>Annual Report on Form 10-K</u> for the fiscal year ended December 31, 2023, filed with the Commission on March 28, 2024 (the "2023 Form 10-K").
- (b) The description of the Registrant's Common Stock contained in the Registrant's Registration Statement on Form 8-A filed on May 2, 2023 (File No. 001-41696) under Section 12(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), as updated by <u>Exhibit 4.3</u> to the 2023 Form 10-K, including any amendment or report filed for the purpose of updating such description.

All documents filed by the Registrant pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this Registration Statement and prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference into this Registration Statement and to be a part hereof from the date of filing of such documents; provided, however, that documents or portions thereof that are furnished and not filed in accordance with the rules of the Commission shall not be deemed incorporated by reference into this Registration Statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement herein or in any other subsequently filed document that also is or is deemed to be incorporated by reference herein modifies or superseded shall not constitute a part of this Registration Statement, except as so modified or superseded.

Item 6. Indemnification of Directors and Officers.

The Registrant is incorporated under the laws of the State of Delaware. Section 145 of the Delaware General Corporation Law (the "General Corporation Law") authorizes a court to award, or a corporation's board of directors to grant, indemnity to directors and officers in terms sufficiently broad to permit such indemnification under certain circumstances for liabilities, including reimbursement for expenses incurred, arising under the Securities Act of 1933, as amended (the "Securities Act"). The Registrant's amended and restated certificate of incorporation permits indemnification of its

directors, officers, employees and other agents to the maximum extent permitted by the General Corporation Law, and the Registrant's amended and restated bylaws provide that the Registrant will indemnify its directors and officers and permit the Registrant to indemnify its employees and other agents, in each case to the maximum extent permitted by the General Corporation Law.

The Registrant has entered into indemnification agreements with its directors and officers, whereby the Registrant has agreed to indemnify its directors and officers to the fullest extent permitted by law, including indemnification against expenses and liabilities incurred in legal proceedings to which the director or officer was, or is threatened to be made, a party by reason of the fact that such director or officer is or was a director, officer, employee, or agent of the Registrant, provided that such director or officer acted in good faith and in a manner that the director or officer reasonably believed to be in, or not opposed to, the best interest of the Registrant.

The Registrant maintains insurance policies that indemnify its directors and officers against various liabilities arising under the Securities Act and the Exchange Act that might be incurred by any director or officer in his or her capacity as such.

Item 8. Exhibits.

The exhibits to this Registration Statement are listed below:

		Incorporated by Reference				
Exhibit Number	Description	Schedule Form	File Number	Exhibit	Filing Date	
4.1	Amended and Restated Certificate of Incorporation of the Registrant.	8-K	001-41696	3.1	May 9, 2023	
4.2	Amended and Restated Bylaws of the Registrant.	8-K	001-41696	3.2	May 9, 2023	
4.3	Form of common stock certificate of the Registrant.	S-1/A	333-271244	4.1	May 1, 2023	
4.4	Amended and Restated Investors' Rights Agreement, by and among the Registrant and certain of its stockholders, dated September 9, 2022.	S-1	333-271244	4.2	April 13, 2023	
5.1*	Opinion of Cooley LLP.					
23.1*	Consent of Cooley LLP (included in Exhibit 5.1).					
23.2*	Consent of PricewaterhouseCoopers LLP, independent registered public accounting firm.					
24.1*	Power of Attorney (included on the signature page of this Registration Statement).					
99.1	ACELYRIN, INC. 2023 Equity Incentive Plan.	S-1/A	333-271244	10.3	May 1, 2023	
99.2	Forms of Stock Option Grant Notice, Stock Option Agreement and Notice of Exercise under the ACELYRIN, INC. 2023 Equity Incentive Plan.	S-1/A	333-271244	10.4	May 1, 2023	
99.3	Forms of Restricted Stock Unit Grant Notice and Award Agreement under the ACELYRIN, INC. 2023 Equity Incentive Plan.	S-1/A	333-271244	10.5	May 1, 2023	
99.4	ACELYRIN, INC. 2023 Employee Stock Purchase Plan.	S-1/A	333-271244	10.6	May 1, 2023	
107	Filing Fee Table.					
*	Piled Level M					

* Filed herewith.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, 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 Agoura Hills, State of California, on March 28, 2024.

ACELYRIN, INC.

By: /s/ Shao-Lee Lin

Shao-Lee Lin, M.D., Ph.D. Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Shao-Lee Lin, Gil Labrucherie and Mina Kim and each one 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 their name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement, and to sign any registration statement for the same offering covered by this registration statement that is to be effective on filing pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and all post-effective amendments thereto, 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, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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

Signature	Title	Date
/s/ Shao-Lee Lin	Founder, Chief Executive Officer and Director	March 28, 2024
Shao-Lee Lin, M.D., Ph.D.	(Principal Executive Officer)	
/s/ Gil M. Labrucherie	Chief Financial Officer	March 28, 2024
Gil M. Labrucherie	(Principal Financial and Accounting Officer)	
/s/ Bruce C. Cozadd	Director	March 28, 2024
Bruce C. Cozadd		
/s/ Dan Becker	Director	March 28, 2024
Dan Becker, M.D., Ph.D.		
/s/ Alan B. Colowick	Director	March 28, 2024
Alan B. Colowick, M.D., M.P.H.		
/s/ Henry O. Gosebruch	Director	March 28, 2024
Henry O. Gosebruch		
/s/ Patrick Machado	Director	March 28, 2024
Patrick Machado, J.D.		
/s/ Beth Seidenberg	Director	March 28, 2024
Beth Seidenberg, M.D.		
/s/ Dawn Svoronos	Director	March 28, 2024
Dawn Svoronos		
/s/ Lynn Tetrault	Director	March 28, 2024
Lynn Tetrault, J.D.		

Calculation of Filing Fee Table

<u>Form S-8</u>

(Form Type)

ACELYRIN, INC.

(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered Securities

Security Type	Security Class Title	Fee Calculation Rule	Amount Registered(1)	Proposed Maximum Offering Price Per Share	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
Equity	Common Stock, \$0.00001 par value per share, underlying outstanding stock option awards pursuant to the 2023 Equity Incentive Plan	457(h)	57(h) 1,651,921(2) \$7.68(3) \$12,686,754		0.0001476	\$1,873.00	
Equity	Common Stock, \$0.00001 par value per share, reserved for issuance pursuant to the 2023 Equity Incentive Plan	457(c) and 457(h)	3,578,552(4)	\$6.66(5)	\$23,833,157	0.0001476	\$3,518.00
Equity	Common Stock, \$0.00001 par value per share, reserved for issuance pursuant to the 2023 Employee Stock Purchase Plan	457(c) and 457(h)	978,658(6)	\$5.67(7)	\$5,548,991	0.0001476	\$820.00
	Total Offering Amounts Total Fee Offsets Net Fee Due				\$42,068,902		\$6,211.00
					—		—
					_	_	\$6,211.00

- (1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement shall also cover any additional shares of Common Stock ("Common Stock") of ACELYRIN, INC. (the "Registrant") that become issuable under the Registrant's 2023 Equity Incentive Plan (the "2023 Plan"), or the Registrant's 2023 Employee Stock Purchase Plan (the "2023 ESPP") by reason of any stock dividend, stock split, recapitalization or other similar transaction.
- (2) Represents 1,651,921 shares of Common Stock underlying outstanding stock option awards pursuant to the 2023 Plan.

(3) Estimated pursuant to Rule 457(h) solely for the purpose of calculating the amount of the registration fee, based upon the weighted average exercise price of the outstanding stock option awards pursuant to the 2023 Plan (rounded up to the nearest cent), which is equal to \$7.68 per share.

(4) Represents (i) 4,893,294 shares of Common Stock that were added to the shares reserved for future issuance under the 2023 Plan on January 1, 2024, pursuant to an evergreen provision contained in the 2023 Plan, (ii) minus 1,651,921 shares of Common Stock underlying outstanding stock option awards pursuant to the 2023 Plan out of such evergreen pool between January 1, 2024 and the date of this filing, and (iii) plus 337,179 shares of Common Stock that were added to the shares reserved for future issuance under the 2023 Plan as a result of shares withheld or reacquired to

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satisfy tax withholding obligations associated with an award that had been granted under the 2020 Stock Option and Grant Plan. Pursuant to the evergreen provision, the number of shares reserved for issuance under the 2023 Plan will automatically increase on January 1 of each year for a period of 10 years, beginning on January 1, 2024 and ending on (and including) January 1, 2033, in an amount equal to five percent (5%) of the total number of shares of the Registrant's Common Stock outstanding on December 31 of the preceding calendar year; provided, however, that the Company's board of directors may act prior to January 1st of a given year to provide that the increase for such year will be a lesser number of shares of Common Stock.

- (5) Estimated in accordance with Rules 457(c) and 457(h) solely for the purpose of calculating the registration fee on the basis of \$6.66 per share, which is the average of the high and low selling prices per share of the Registrant's Common Stock on March 27, 2024 as reported on the Nasdaq Global Select Market.
- (6) Represents 978,658 shares of Common Stock that were added to the shares reserved for future issuance under the 2023 ESPP on January 1, 2024, pursuant to an evergreen provision contained in the 2023 ESPP. Pursuant to such provision, the number of shares reserved for issuance under the 2023 ESPP will automatically increase on January 1 of each year for a period of 10 years, beginning on January 1, 2024 and continuing through (and including) January 1, 2033, by the lesser of (a) 1% of the total number of shares of the Registrant's Common Stock outstanding on December 31 of the immediately preceding year and (b) 2,700,000 shares of Common Stock, except that, before the date of any such increase, the Registrant's board of directors may determine that the increase for such year will be less than the amount set forth in clauses (a) and (b). This explanation is provided for information purposes only.
- (7) Estimated in accordance with Rules 457(c) and 457(h) solely for the purpose of calculating the registration fee. The offering price per share and the aggregate offering price are based upon \$5.67 per share, which is the average of the high and low selling prices per share of the Registrant's Common Stock on March 27, 2024 as reported on the Nasdaq Global Select Market multiplied by 85%, which is the percentage of the price per share applicable to purchases under the 2023 ESPP.

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Chadwick Mills T: (650) 843-5654 cmills@cooley.com

March 28, 2024

ACELYRIN, INC. 4149 Liberty Canyon Road Agoura Hills, California 91301

Re: Registration on Form S-8

Ladies and Gentlemen:

We have acted as counsel to ACELYRIN, INC., a Delaware corporation (the "*Company*"), in connection with the filing by the Company of a Registration Statement on Form S-8 (the "*Registration Statement*") with the Securities and Exchange Commission (the "*Commission*") covering the offering of up to 6,209,131 shares (the "*Shares*") of the Company's common stock, par value \$0.00001 per share (the "*Common Stock*"), consisting of (a) 5,230,473 shares of Common Stock issuable pursuant to the Company's 2023 Equity Incentive Plan (the "*2023 Plan*"), and (b) 978,658 shares of Common Stock issuable pursuant to the Company's 2023 Equity incentive Plan, the "*Plans*").

In connection with this opinion, we have examined and relied upon (a) the Registration Statement and the related prospectuses, (b) the Plans, (c) the Company's certificate of incorporation and bylaws, each as currently in effect, and (d) such other records, documents, opinions, certificates, memoranda, and instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below.

We have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, the conformity to originals of all documents submitted to us as copies, the accuracy, completeness and authenticity of certificates of public officials and the due authorization, execution and delivery of all documents by all persons other than the Company where authorization, execution and delivery are prerequisites to the effectiveness thereof. As to certain factual matters, we have relied upon a certificate of an officer of the Company and have not independently verified such matters.

Our opinion is expressed only with respect to the General Corporation Law of the State of Delaware. 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.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that the Shares, when sold and issued in accordance with the Plans, the Registration Statement and related prospectuses, will be validly issued, fully paid, and nonassessable (except as to shares issued pursuant to certain deferred payment arrangements, which will be fully paid and nonassessable when such deferred payments are made in full).

This opinion is limited to the matters expressly set forth in this letter, and no opinion should be implied, or may be inferred, beyond the matters expressly stated. This opinion speaks only as to law and facts in effect or existing as of the date hereof and we have no obligation or responsibility to update or supplement this opinion to reflect any facts or circumstances that may hereafter come to our attention or any changes in law that may hereafter occur.

We consent to the filing of this opinion as an exhibit to the Registration Statement. In giving such consent, we do not thereby admit that we are in 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 Commission thereunder.

Sincerely, Cooley LLP

By: <u>/s/ Chadwick Mills</u> Chadwick Mills

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CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of ACELYRIN, INC. of our report dated March 28, 2024 relating to the financial statements, which appears in ACELYRIN, INC.'s Annual Report on Form 10-K for the year ended December 31, 2023.

/s/ PricewaterhouseCoopers LLP San Diego, California March 28, 2024