

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

FORM S-3

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

Eyenovia, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

001-38365
(Commission File Number)

47-1178401
(I.R.S. Employer
Identification Number)

**23461 S. Pointe Drive, Suite 390
Laguna Hills, CA 92653
(833) 393-6684**

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

Michael Rowe
Chief Executive Officer
23461 S. Pointe Drive, Suite 390
Laguna Hills, CA 92653
Tel: (833) 393-6684

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

Copies to:

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Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this registration statement.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. "

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, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. x

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. "

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 registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box. "

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box. "

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. (Check one:)

Large accelerated filer	"	Accelerated filer	"
Non-accelerated filer	x	Smaller reporting company	x
		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. "

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

The information in this prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell nor is it soliciting an offer to buy these securities in any jurisdiction where such offer or sale is not permitted.

Subject to completion, dated April 17, 2025

PRELIMINARY PROSPECTUS



Up to 6,370,387 Shares of Common Stock

This prospectus relates to the offer and sale from time to time, by the selling securityholders identified in this prospectus, of up to 6,370,387 shares of the common stock, par value \$0.0001 per share (the “Common Stock”), of Eyenovia, Inc. (the “Company”) which includes (i) up to 23,771 shares of Common Stock that were issued in connection with the First Amendment (the “First Amendment”) to the Supplement (the “Supplement”) to that certain Loan and Security Agreement, dated November 22, 2022 (the “Loan and Security Agreement”) with Avenue Capital Management II, L.P., as administrative agent and collateral agent, Avenue Venture Opportunities Fund, L.P., as a lender (“Avenue I”) and Avenue Venture Opportunities Fund II, L.P., as a lender (together with Avenue I, the “Lenders”) and the Subscription Agreement, dated November 22, 2024 (the “Subscription Agreement”), among the Company and the Lenders, (ii) up to 394,236 shares of Common Stock issuable upon the exercise of 394,236 Warrants (defined herein) at an exercise price of \$5.272 per share, which Warrants were issued in connection with a warrant inducement offer letter (the “Inducement Letter”), dated as of January 16, 2025, between the Company and an institutional investor, and (iii) up to 5,952,380 shares of Common Stock issuable upon the exercise of the conversion right by the Lenders pursuant to the Second Amendment (the “Second Amendment”) to the Supplement to the Loan and Security Agreement, dated February 21, 2025. Unless otherwise stated, the share information in this prospectus reflects the effect of the reverse stock split of the Common Stock at a ratio of 1-for-80, which became effective January 31, 2025.

The Common Stock may be offered and sold from time to time by the entities or individuals listed in the section titled “Selling Securityholders” beginning on page 9 (the “Selling Securityholders”). We are registering these securities for sale by the Selling Securityholders to satisfy certain registration rights that we have granted to the Selling Securityholders. We are not selling any securities under this prospectus and will not receive any of the proceeds from the sale of securities by the Selling Securityholders. We will pay the expenses incurred in registering the Common Stock covered by the prospectus, including legal and accounting fees. The Selling Securityholders will bear all commissions and discounts, if any, attributable to its respective sales of Common Stock under this prospectus.

The Selling Securityholders may sell the Common Stock described in this prospectus in a number of different ways and at varying prices. We provide more information about how a Selling Securityholder may sell its Common Stock in the section titled “Plan of Distribution” on page 10.

Our Common Stock is listed on The Nasdaq Capital Market under the symbol “EYEN.” On April 16, 2025, the last reported sale price of our Common Stock was \$1.07 per share.

We are a “smaller reporting company” under applicable Securities and Exchange Commission rules and are subject to reduced public company reporting requirements for this prospectus and future filings.

Investing in our securities involves a high degree of risk. Before buying our securities, you should carefully consider the risks described under the caption “Risk Factors” beginning on page 6 of this prospectus and in the documents incorporated by reference into this prospectus.

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 _____, 2025.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the U.S. Securities and Exchange Commission (the “SEC”), under which the Selling Securityholders may, from time to time, sell the securities described in this prospectus in one or more offerings.

Neither we nor the Selling Securityholders have authorized anyone to provide you with information that is different from or in addition to the information contained or incorporated by reference in this prospectus. Accordingly, neither we nor any Selling Securityholder takes any responsibility for, or can provide any assurance as to the reliability of, any information that others may give. The Selling Securityholders are offering to sell, and seeking offers to buy, our securities only in jurisdictions where it is lawful to do so. This prospectus does not constitute an offer to sell or the solicitation of an offer to buy any securities other than where offers and sales of these securities are permitted or an offer to sell or the solicitation of an offer to buy such securities in any circumstances in which such offer or solicitation is unlawful. You should assume that the information appearing in this prospectus is accurate only as of the date of this prospectus and that any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus, or any sale of our securities. Our business, financial condition, results of operations and prospects may have changed materially since those dates.

In making your investment decision it is important for you to read and consider all information contained in this prospectus. You should also read and consider the information in the documents to which we have referred you in the section titled “Incorporation by Reference” in this prospectus. To the extent the information contained in this prospectus differs or varies from the information contained in documents previously filed with the SEC that are incorporated by reference herein, the information in this prospectus will supersede such information.

All brand names or trademarks appearing in this prospectus are the property of their respective holders. Use or display by us of other parties’ trademarks, trade dress, or products in this prospectus is not intended to, and does not, imply a relationship with, or endorsements or sponsorship of, us by the trademark or trade dress owners.

All references in this prospectus to “Eyenovia,” “EYEN,” “the company,” “we,” “us,” “our,” or similar references, refer to Eyenovia, Inc., except where the context otherwise requires or as otherwise indicated.

Unless otherwise stated, the share information in this prospectus reflects the effect of the reverse stock split of the Common Stock at a ratio of 1-for-80, which became effective January 31, 2025.

PROSPECTUS SUMMARY

This summary highlights selected information included or incorporated by reference in this prospectus and does not contain all of the information that may be important to you. You should carefully review this entire prospectus, including the risk factors and financial statements and related notes thereto included or incorporated by reference herein, before making a decision to purchase our securities.

Overview

We are an ophthalmic technology company developing our proprietary Optejet® topical ophthalmic medication dispensing platform. In November 2024, we received a negative clinical trial result in the development of our development-stage drug-device combination product, MicroPine. As a result, we restructured our company to minimize expenses and engaged an investment bank to explore strategic options in order to maximize shareholder value. We have paused the national sales roll-out of our products clobetasol propionate and Mydcombi® until additional funding is obtained. At the same time, we accelerated our development efforts relating to the Optejet in order to potentially increase the value of that asset in any strategic transaction or capital raising activities.

The ergonomic and functional design of the Optejet allows for horizontal drug delivery and eliminates the need to tilt the head back or the manual dexterity to squeeze a bottle to administer medications. Drug is delivered in a microscopic array of droplets that is both comfortable and matches the amount of fluid that the front of the eye can hold. The precise delivery of a low-volume columnar spray by the Optejet device helps ensure instillation success while minimizing contamination risk with a non-protruding nozzle and self-closing shutter. In clinical trials, the Optejet has demonstrated that its targeted delivery achieves a high rate of successful administration, with 98% of sprays being accurately delivered upon first attempt compared to the established rate reported with traditional eye drops of approximately 50%.

A more physiologically appropriate volume of medication in the range of seven to ten microliters is delivered by the Optejet, which is approximately one-fifth of the 35 to 50 microliter dose typically delivered in a single eye drop. Lower volume of medication exposes the ocular surface to less active ingredients and preservatives, potentially reducing ocular stress and surface damage and improving tolerability. The lower volume also minimizes the potential for drug to enter systemic circulation, with the goal of avoiding some common side effects that are related to overdosing of the eye.

We are developing versions of the Optejet with on-board digital technology that records the date and time of each use. These data may be used to provide reminders via Bluetooth to smart devices and to allow healthcare practitioners to monitor usage. This information can then be used by practitioners and health care systems to measure treatment compliance and improve medical decision making. In this way, the Optejet could serve as an extension of the physician's office by providing information that is not currently possible to collect except through the use of diaries.

MicroLine is our investigational pharmacologic treatment for presbyopia, a non-preventable, age-related hardening of the lens, which causes the gradual loss of the eye's ability to focus on near objects and impairs near visual acuity. We have completed two Phase III studies using our Optejet device. In these studies, patients reported high satisfaction with using the device, and a strong preference over using an eye dropper bottle. Since completing these studies, the market opportunity has markedly deteriorated, and we have chosen to put this program on hold and reallocate our resources towards larger opportunities. When and if the market improves, we have kept open the option to continue development of MicroLine, which would include a meeting with the U.S. Food and Drug Administration (the "FDA") to review our clinical data to date.

Our first product using the Optejet technology, Mydcombi®, is the only FDA-approved fixed combination of the two leading mydriatic agents, tropicamide and phenylephrine, in the United States. As an ophthalmic spray delivered with Optejet technology, Mydcombi may present a number of benefits for ophthalmic surgical centers, optometric and ophthalmic offices and patients. Those benefits may include improved cost-effectiveness in centers that employ single-use bottles for mydriasis, more efficient use of office time and resources, and an overall improved doctor-patient experience.

The first commercial sale of Mydcombi occurred on August 3, 2023 as part of a targeted launch. On July 24, 2024, we received written comments from the FDA providing direction for the design of a clinical bridging study to transition Mydcombi into our new Gen-2 Optejet device, which has a significantly lower cost to manufacture than the currently approved product.

On December 12, 2024, we announced the engagement of Chardan Capital Markets, LLC (“Chardan”), an investment bank, as the Company’s financial advisor in connection with its evaluation of strategic alternatives. With assistance from Chardan, the Company will continue to assess a full range of strategic alternatives, including but not limited to, a business combination, sale of the Company, reverse merger, asset sale, or a combination of alternatives, while also carefully managing its expenses. As part of restructuring to minimize expenses during this process, the Company temporarily halted sales and promotion activities and focused its development efforts on completing the verification and validation studies required for regulatory approval of the Optejet UFD. This device is designed for users to fill with preserved artificial tears or contact lens rewetting solutions at home, providing greater flexibility while leveraging Optejet’s advanced delivery system. As of April 2025, Eyenovia is progressing with its development of the Optejet UFD, aiming for a 510K submission in the United States in the fourth quarter of 2025.

On March 18, 2025, we entered into a non-binding letter of intent (the “Letter of Intent”) with Betaliq, a Delaware corporation, relating to a proposed business combination between Eyenovia and Betaliq. Betaliq is a clinical stage pharmaceutical company with a therapeutic focus on Glaucoma, founded in 2018 through a collaboration with Novaliq GmbH. The parties currently contemplate a reverse merger structure, pursuant to which (i) a newly-formed, wholly-owned subsidiary of Eyenovia would merge with and into Betaliq, with Betaliq as the surviving corporation and a wholly-owned subsidiary of Eyenovia, and (ii) Betaliq would then immediately merge with and into a second newly-formed wholly-owned subsidiary of Eyenovia (the “Second Merger Sub”), with the Second Merger Sub as the surviving corporation. In connection with the closing of the transaction, Eyenovia expects to change its name to “Betaliq, Inc.” or such other name as determined by Betaliq and change its trading symbol as determined by Betaliq.

As contemplated by the Letter of Intent, Betaliq stockholders would receive (a) shares of Eyenovia common stock (“Eyenovia Common Stock”) and (b) securities convertible into Eyenovia Common Stock in exchange for their shares of Betaliq capital stock (“Betaliq Capital Stock”) based on the Exchange Ratio (defined below). Outstanding equity awards, convertible notes, warrants, and any other equity interests or instruments convertible into Betaliq Capital Stock (“Betaliq Stock Rights”) would be assumed by Eyenovia and become the equity awards, convertible notes, warrants, and any other equity interests or instruments convertible into equity interests of Eyenovia, as applicable, based on the Exchange Ratio in a manner mutually agreeable to Betaliq and Eyenovia.

As contemplated by the Letter of Intent, the conversion of the Betaliq Capital Stock and Betaliq Stock Rights would be effected pursuant to an exchange ratio (the “Exchange Ratio”) intended to result in the following approximate aggregate post-closing percentage ownership: (i) the equity holders of Betaliq immediately prior to the closing (including all Betaliq Stock Rights) would own approximately 83.7% of the equity of the combined company on a fully diluted basis, and (ii) the equity holders of Eyenovia immediately prior to the closing (including outstanding equity awards, convertible notes, warrants, and any other securities or instruments convertible into or exercisable for equity interests of Eyenovia) would own approximately 16.3% of the equity of the combined company on a fully diluted basis. These ownership percentages assume a valuation of approximately \$77 million for Betaliq and approximately \$15 million for Eyenovia, Eyenovia “net cash” (which will include, among other things, unrestricted current assets in the form of cash and cash equivalents as of the closing minus current liabilities and all expenses related to the proposed transaction as of the closing) of zero at closing, and the inclusion of Optejet and related Eyenovia assets, and are subject to adjustment as described in the Letter of Intent.

Following the closing of the business combination, the combined company’s board of directors will be comprised of members to be mutually agreed upon by the parties. Assuming signing and closing of the definitive agreement occurs, stockholder approval of the issuance of Eyenovia securities in excess of limits imposed by Nasdaq listing rules to the former Betaliq stockholders will be sought at a meeting to take place following the closing.

The parties intend to negotiate a definitive business combination agreement consistent with the provisions of the Letter of Intent as well as other terms and conditions typical for transactions of this nature. During the binding exclusivity period set forth in the Letter of Intent, which ends on May 16, 2025 but is subject to extension, the parties have agreed not to solicit or encourage submission of, or participate in discussions or enter into any agreement regarding any other acquisition proposal.

Subscription Agreement

On November 22, 2024, we and the Lenders entered into the First Amendment to the Supplement to the Loan and Security Agreement. In connection with the First Amendment, the Company and the Lenders entered into the Subscription Agreement, under which we issued to the Lenders an aggregate of 23,771 shares of Common Stock.

Inducement Agreement

On January 16, 2025, we and an institutional investor entered into the Inducement Letter pursuant to which we agreed to reduce the exercise price of certain outstanding warrants to purchase up to an aggregate of 197,118 shares of Common Stock prior to the reverse stock split (the “Existing Warrants”), and the Investor exercised all of the repriced Existing Warrants. In consideration for exercising those Existing Warrants, pursuant to the terms of the Inducement Letter, we issued to the Investor a new Series A Common Stock Purchase Warrant (the “Series A Warrant”) and a new Series B Common Stock Purchase Warrant (the “Series B Warrant” and, together with the Series A Warrant, the “Warrants”), to purchase up to an aggregate of 394,236 shares of Common Stock at an exercise price of \$5.272 per share.

Second Amendment

On February 21, 2025, we and the Lenders entered into the Second Amendment to the Supplement to the Loan and Security Agreement. Pursuant to the Second Amendment, the Lenders have the right, in their discretion, but not the obligation, to convert an aggregate amount of up to \$10 million of the aggregate principal amount under the Loan and Security Agreement into up to 5,952,380 shares of our Common Stock.

Corporate Information

We were organized as a corporation under the laws of the State of Florida on March 12, 2014 under the name “PGP Holdings V, Inc.” On May 5, 2014, we changed our name to Eyenovia, Inc. On October 6, 2014, we reincorporated in the State of Delaware by merging into Eyenovia, Inc., a Delaware corporation. Our principal executive office is located at 23461 S. Pointe Drive, Suite 390, Laguna Hills, CA 92653, and our telephone number is (833) 393-6684. We maintain a website at www.eyenovia.com, to which we regularly post copies of our press releases as well as additional information about us. The information contained on, or that can be accessed through, our website is not a part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

Implications of Being a Smaller Reporting Company

We are a “smaller reporting company” as defined under the Exchange Act. We may take advantage of certain of the scaled disclosures available to smaller reporting companies until the last day of the fiscal year in which (i) the market value of our common stock held by non-affiliates exceeds \$250 million as of the end of that year’s second fiscal quarter and our annual revenue exceeds \$100 million during such completed fiscal year, or (ii) the market value of our common stock held by non-affiliates exceeds \$700 million, regardless of our annual revenue, as of the end of that year’s second fiscal quarter.

THE OFFERING

Common Stock offered by the Selling Securityholders	Up to 6,370,387 shares of Common Stock, which includes up to 23,771 shares of Common Stock, up to 394,236 shares of Common Stock issuable upon the exercise of the Warrants and up to 5,952,380 shares of Common Stock issuable upon the Lenders' exercise of their conversion right.
Terms of the offering	The Selling Securityholders may, from time to time, sell, at prevailing market prices, privately negotiated prices or such other prices as the Selling Securityholders may determine, any or all of their securities covered hereby. See "Plan of Distribution."
Common Stock to be outstanding after this offering, assuming cash exercise of the Warrants	9,177,162 shares, assuming the exercise of the Warrants and the Lenders' conversion right in full.
Use of Proceeds	We will not receive any of the proceeds from the sale of our securities by the Selling Securityholders. See "Use of Proceeds."
Risk Factors	Investing in our securities involves a high degree of risk. See "Risk Factors" on page 6 of this prospectus to read about factors that you should consider carefully before buying our securities.
Trading Market and Ticker Symbol	Our Common Stock is listed on The Nasdaq Capital Market under the symbol "EYEN."
The number of shares of common stock outstanding immediately after this offering is based on 2,830,546 shares of Common Stock outstanding as of April 11, 2025.	
This number excludes:	
<ul style="list-style-type: none">• 54,151 shares of our Common Stock underlying outstanding options to purchase Common Stock under our 2014 Equity Incentive Plan, as amended (the "2014 Plan") and our Amended and Restated 2018 Omnibus Stock Incentive Plan (the "2018 Plan") with a weighted average exercise price of \$220.92 per share as of April 11, 2025;• 247,623 shares of our Common Stock issuable in connection with restricted stock units under the 2014 Plan and the 2018 Plan as of April 11, 2025;• 138,228 shares of our Common Stock reserved for future issuance under the 2014 Plan and the 2018 Plan as of April 11, 2025;• 5,952,380 shares of our Common Stock issuable upon conversion of outstanding convertible notes as of April 11, 2025; and• warrants to purchase 1,363,135 shares of our Common Stock, with a weighted average exercise price of \$12.65 per share as of April 11, 2025.	

RISK FACTORS

Investing in our securities involves a high degree of risk. You should consider carefully the risks and uncertainties, as well as other information, in this prospectus, including the risks described under “Risk Factors” in our most recent Annual Report on Form 10-K and subsequent Quarterly Reports on Form 10-Q, and all other information contained or incorporated by reference into this prospectus. The risks set forth in this prospectus and incorporated herein by reference are those which we believe are the material risks that we face. These risks are not the only ones facing us and there may be additional matters that we are unaware of or that we currently consider immaterial. The occurrence of any of such risks may materially and adversely affect our business, financial condition, results of operations and future prospects. In such an event, the market price of our Common Stock could decline, and you could lose part or all of your investment.

We will be required to raise additional capital, which may include issuing new securities with terms or rights superior to those of our existing securityholders, which could adversely affect your investment in our company, the market price of shares of our Common Stock and our business.

We will require additional financing to fund future operations. We may not be able to obtain financing on favorable terms, if at all. If we raise additional funds by issuing equity securities, the percentage ownership of our then current stockholders will be reduced, and the holders of the new equity securities may have rights superior to those of our then existing securityholders, which could adversely affect the market price of our Common Stock and the voting power of shares of our Common Stock. If we raise additional funds by issuing debt securities, the holders of these debt securities would similarly have some rights senior to those of our then existing securityholders, and the terms of these debt securities could impose restrictions on operations and create a significant interest expense for us which could have a materially adverse effect on our business.

We will need to raise additional capital in the future to remain a going concern, which may not be available on reasonable terms, or at all.

We require significant capital resources in order to continue to operate our business and conduct our exploration of strategic alternatives, and our limited liquidity could materially and adversely affect our business operations. As of December 31, 2024, we had cash and cash equivalents of \$2.1 million. As of April 11, 2025, we owed \$9.6 million in principal and accrued interest under the Loan and Security Agreement. As of December 31, 2024, we had an accumulated deficit of approximately \$195 million. We expect to continue to incur cash outflows from operations for the near future. These circumstances raise substantial doubt about our ability to continue as a going concern for at least one year. Implementation of our plans and our ability to continue as a going concern will depend on many factors, including our ability to successfully commercialize our products and services, competing technological and market developments, and the need to enter into collaborations with other companies.

Also, it is very difficult to project our current monthly cash burn rate, and we may expend our limited resources sooner than we anticipate. Any required additional capital may not be available on reasonable terms, if at all, due to a variety of factors, including uncertainty about the future direction of the Company, as well as broader conditions in the economy and capital markets, including recent volatility caused by inflation, questions about bank stability and other factors. If we are unsuccessful in our operations to secure additional financing, or if any such incremental financing is not sufficient to fund our operations, we may be required to take additional measures to reduce costs in order to conserve our cash or to pursue strategic transactions.

Delisting of our common stock from Nasdaq could prevent us from maintaining an active, liquid and orderly trading market for our common stock and may materially and adversely impact our ability to consummate certain strategic transactions.

Our ability to publicly or privately sell equity securities and the liquidity of our common stock would be adversely affected if we are delisted from The Nasdaq Capital Market or if we are unable to transfer our listing to another stock market. On September 18, 2024, we were notified by The Nasdaq Stock Market LLC, or Nasdaq, that we were in breach of Listing Rule 5550(a)(2), or the (“Minimum Bid Price Rule”), for continued listing on the Nasdaq Capital Market because the minimum bid price of our listed securities for 30 consecutive business days had been less than \$1 per share. On December 12, 2024, we received a letter from Nasdaq notifying us that, because the closing bid price for our common stock was below \$0.10 per share for 10 consecutive trading days, we were in breach of Listing Rule 5810(c)(3)(A)(iii). On January 31, 2025, we executed an 80-for-1 reverse stock split, following which we were notified by Nasdaq that we had regained compliance with the Minimum Bid Price Rule.

Nasdaq Listing Rule 5810(c)(3)(A)(iv) states that any listed company that fails to meet the Minimum Bid Price Rule and has effected a reverse stock split over the prior one-year period, or has effected one or more reverse stock splits over the prior two-year period with a cumulative ratio of 250 shares or more to one, will not be eligible for an automatic 180-day grace compliance period and the Nasdaq Listing Qualifications Department is obligated to immediately issue a delisting determination. Therefore, if we were to fall out of compliance with the Minimum Bid Price requirement prior to January 31, 2026, we would not be able to effect a reverse stock split and would immediately be issued a delisting determination.

If our common stock is delisted by Nasdaq, it could lead to a number of negative implications, including an adverse effect on the price of our common stock, deterring broker-dealers from making a market in or otherwise seeking or generating interest in our common stock, increased volatility in our common stock, reduced liquidity in our common stock, the loss of federal preemption of state securities laws and greater difficulty in obtaining financing. Delisting could also cause a loss of confidence of our customers, collaborators, vendors, suppliers and employees, which could harm our business and future prospects.

If our common stock is delisted by Nasdaq, the price of our common stock may decline, and although our common stock may be eligible to trade on the OTC Bulletin Board, another over-the-counter quotation system, or on the pink sheets, an investor may find it more difficult to dispose of their common stock or obtain accurate quotations as to the market value of our common stock. If our common stock is delisted from Nasdaq, trading in our securities may be subject to the SEC’s “penny stock” rules. These “penny stock” rules will require brokers trading in our common stock to adhere to more stringent rules and possibly result in a reduced level of trading activity in the secondary trading market for our common stock. The additional burdens imposed upon broker-dealers by these requirements may discourage broker-dealers from recommending transactions in our securities, which could severely limit the liquidity of our securities and consequently adversely affect the market price for our securities. Furthermore, if our common stock is delisted, we would expect it to have an adverse impact on our ability to consummate certain strategic alternatives.

Further, if our common stock is delisted, we would incur additional costs under state blue sky laws in connection with any sales of our securities. These requirements could severely limit the market liquidity of our common stock and the ability of our stockholders to sell our common stock in the secondary market.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents we have filed with the SEC that are incorporated by reference herein contain “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”) and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). These statements relate to future events or to our future operating or financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performances or achievements expressed or implied by the forward-looking statements. Forward-looking statements may include, but are not limited to, statements about:

- our need to raise additional money to fund our operations for the next twelve months as a going concern;
- our estimates regarding expenses, future revenue, timing of any future revenue, capital requirements and needs for additional financing;
- our ability to complete the proposed transaction with Betaliq;
- our ability to make payments on our debt to Avenue Capital;
- our expectations related to the use of proceeds from our financings;
- our intellectual property position;
- our ability to attract and retain key personnel;
- the impact of government laws and regulations;
- our competitive position;
- developments relating to our competitors and our industry;
- our ability to maintain and establish collaborations;
- general or regional economic conditions;
- changes in U.S. GAAP; and
- changes in the legal, regulatory and legislative environments in the markets in which we operate, and the impact of these changes on our ability to obtain regulatory approval for our products.

In some cases, you can identify forward-looking statements by terms such as “anticipate,” “believe,” “can,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “might,” “plan,” “potential,” “project,” “seek,” “should,” “target,” “will,” “would” and similar expressions or variations intended to identify forward-looking statements. These statements reflect our current views with respect to future events, are based on assumptions and are subject to risks and uncertainties. Given these uncertainties, you should not place undue reliance on these forward-looking statements. More information on factors that could cause actual results to differ materially from those anticipated is included from time to time in our reports filed with the SEC, including, but not limited to, those described in the section titled “Risk Factors” in our Annual Report on Form 10-K for our most recent fiscal year, as updated by our subsequent filings under the Exchange Act, which are incorporated herein by reference, and as may be updated or superseded by the risks and uncertainties described under similar headings in the other documents that are filed after the date hereof and incorporated by reference into this prospectus. Also, these forward-looking statements represent our estimates and assumptions only as of the date of the document containing the applicable statement.

You should read this prospectus and the documents we have filed with the SEC that are incorporated by reference herein completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of the forward-looking statements in the foregoing documents by these cautionary statements.

Unless required by law, we undertake no obligation to update or revise any forward-looking statements to reflect new information or future events or developments. Thus, you should not assume that our silence over time means that actual events are bearing out as expressed or implied in such forward-looking statements.

USE OF PROCEEDS

We will not receive any of the proceeds from the sale of Common Stock by the Selling Securityholders named in this prospectus. If the Warrants were to be exercised in full for cash, as to which no assurance can be given, we would receive an aggregate of \$2.1 million in proceeds. Any such proceeds would be used for working capital, general corporate purposes, and the repayment of amounts owed under the Loan and Security Agreement.

SELLING SECURITYHOLDERS

This prospectus relates to the offer and sale from time to time by the Selling Securityholders listed below of (i) up to 23,771 shares of Common Stock that were issued in connection with the First Amendment to the Supplement to Loan and Security Agreement with the Lenders and the Subscription Agreement among the Company and the Lenders, (ii) up to 394,236 shares of Common Stock issuable upon the exercise of 394,236 Warrants issued in connection with the Inducement Letter and (iii) up to 5,952,380 shares of Common Stock issuable upon the exercise of the conversion right by the Lenders pursuant to the Second Amendment to the Supplement to the Loan and Security Agreement. We are registering these securities for sale by the Selling Securityholders to satisfy certain registration rights that we have granted to the Selling Securityholders.

The Selling Securityholders may from time to time offer and sell any or all of the Common Stock set forth below pursuant to this prospectus. As used in this prospectus, the term “Selling Securityholders” includes the persons listed in the table below, together with any additional selling securityholders listed in a subsequent amendment to this prospectus, and their pledgees, donees, transferees, assignees, successors, designees and others who later come to hold any of the Selling Securityholders’ interests in the Common Stock, other than through a public sale.

Except as set forth below, the following table sets forth certain information as of April 11, 2025 regarding the beneficial ownership of the Common Stock being offered by the Selling Securityholders. The applicable percentage ownership of Common Stock is based on 2,830,546 shares of Common Stock outstanding as of April 11, 2025. Information with respect to Common Stock owned beneficially after the offering assumes the sale of all of the Common Stock registered hereby, including shares of Common Stock underlying the Warrants, and assumes no further acquisitions or dispositions of securities by the Selling Securityholders. The Selling Securityholders may offer and sell some, all or none of their Common Stock pursuant to this prospectus.

Beneficial ownership is determined in accordance with the rules and regulations of the SEC. A person is a “beneficial owner” of a security if that person has or shares “voting power,” which includes the power to vote or to direct the voting of the security, or “investment power,” which includes the power to dispose of or to direct the disposition of the security, or has the right to acquire such powers within 60 days.

Unless otherwise noted in the footnotes to the following table, and subject to applicable community property laws, the persons and entities named in the table have sole voting and investment power with respect to their beneficially owned Common Stock.

Please see the section titled “Plan of Distribution” in this prospectus for further information regarding the Selling Securityholders’ method of distributing these securities.

Name of Selling Securityholder	Shares Owned Before the Offering	Shares Being Offered	Shares Owned After the Offering(*)	
	(#)	(#)	(#)	(%)
Armistice Capital, LLC ⁽¹⁾	1,307,104	394,236	912,868	4.99
Avenue Venture Opportunities Fund, L.P. ⁽²⁾	2,390,460	2,390,460	-	-
Avenue Venture Opportunities Fund II, L.P. ⁽²⁾	3,585,691	3,585,691	-	-

* Assumes the sale of all of the Common Stock offered in this prospectus.

This table and the information in this note are based upon information supplied by the Selling Securityholders:

- (1) The securities are directly held by Armistice Capital Master Fund Ltd., a Cayman Islands exempted company (the “Master Fund”), and may be deemed to be beneficially owned by: (i) Armistice Capital, LLC (“Armistice Capital”), as the investment manager of the Master Fund; and (ii) Steven Boyd, as the Managing Member of Armistice Capital. The warrants are subject to a beneficial ownership limitation of 4.99%, which such limitation restricts the Selling Stockholder from exercising that portion of the warrants that would result in the Selling Stockholder and its affiliates owning, after exercise, a number of shares of common stock in excess of the beneficial ownership limitation. The information in the above table was provided by Armistice Capital as of February 28, 2025. The address of Armistice Capital Master Fund Ltd. is c/o Armistice Capital, LLC, 510 Madison Avenue, 7th Floor, New York, NY 10022.
- (2) Avenue Venture Opportunities Fund, L.P. and Avenue Venture Opportunities Fund II, L.P., are each Delaware limited partnerships. Marc Lasry, Chairman and Chief Executive Officer of Avenue Capital Group may be deemed to have investment discretion and voting power over the Common Stock held by Avenue Venture Opportunities Fund, L.P. and Avenue Capital Management II, L.P. The address of Avenue Venture Opportunities Fund, L.P. and Avenue Venture Opportunities Fund II, L.P., and each of its affiliates, is 11 West 42nd Street, 9th Floor, New York, New York 10036.

PLAN OF DISTRIBUTION

The Selling Securityholders and their permitted pledgees, donees, transferees, distributees, beneficiaries or other successors in interest, may from time to time offer some or all of the Common Stock covered by this prospectus. We will not receive any of the proceeds from such sales by the Selling Securityholders. We will bear all fees and expenses incident to our obligation to register such securities.

The Selling Securityholders may, from time to time, sell any or all of their Common Stock covered hereby on the Nasdaq or any other stock exchange, market or trading facility on which the Common Stock is traded or in private transactions. These sales may be at fixed or negotiated prices. If the Common Stock is sold through underwriters or broker-dealers, each Selling Securityholder will be responsible for underwriting discounts or commissions or agent's commissions in connection with the Common Stock held by such Selling Securityholder. A Selling Securityholder may use any one or more of the following methods when selling Common Stock:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the Common Stock as agent, but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an over-the-counter distribution;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- short sales effected after the effective date of the registration statement of which this prospectus is a part;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- in "at the market" offerings, as defined in Rule 415 under the Securities Act, at negotiated prices, at prices prevailing at the time of sale or prices related to such prevailing market prices, including sales made directly on a national securities exchange or sales made through a market maker other than on an exchange or other similar offerings through sales agents;
- through trading plans entered into by the Selling Securityholders pursuant to Rule 10b5-1 under the Exchange Act, that are in place at the time of an offering pursuant to this prospectus that provide for periodic sales of their securities on the basis of parameters described in such trading plans;
- through firm-commitment underwritten public offerings;
- a combination of any such methods of sale; or
- any other method permitted pursuant to applicable law.

The Selling Securityholders may, from time to time, pledge or grant a security interest in some or all of the Common Stock owned by it and, if a Selling Securityholder defaults in the performance of its secured obligations, the pledgees or secured parties may offer and sell the Common Stock, from time to time, under this prospectus, or under an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending the list of the Selling Securityholders to include the pledgee, transferee, or other successors in interest as the Selling Securityholders under this prospectus. The Selling Securityholders also may transfer the Common Stock owned by them in other circumstances, in which case the transferees, pledgees or other successors in interest will be the beneficial owners for purposes of this prospectus.

In connection with the sale of the Common Stock, or interests therein, the Selling Securityholders may enter into hedging transactions with broker-dealers or affiliates thereof or other financial institutions, which may in turn engage in short sales of our Common Stock in the course of hedging the positions it assumes. The Selling Securityholders may also sell Common Stock short and deliver the Common Stock to close out their short positions, or loan or pledge the Common Stock to broker-dealers that in turn may sell these shares. The Selling Securityholders may also enter into option or other transactions with broker-dealers or affiliates thereof or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or affiliates thereof or other financial institution of Common Stock offered by this prospectus, which Common Stock such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

In addition, the Selling Securityholders may enter into derivative or hedging transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. In connection with such a transaction, the third parties may sell the applicable securities covered by and pursuant to this prospectus and an applicable prospectus supplement or pricing supplement, as the case may be. If so, the third party may use securities borrowed from Selling Securityholders or others to settle such sales and may use securities received from Selling Securityholders to close out any related short positions. The Selling Securityholders may also loan or pledge Common Stock covered by this prospectus and an applicable prospectus supplement to third parties, who may sell the loaned Common Stock or, in an event of default in the case of a pledge, sell the pledged Common Stock pursuant to this prospectus and the applicable prospectus supplement or pricing supplement, as the case may be.

In effecting sales, broker-dealers or agents engaged by the Selling Securityholders may arrange for other broker-dealers to participate. Broker-dealers or agents may receive commissions, discounts or concessions from the Selling Securityholders in amounts to be negotiated immediately prior to the sale.

In offering the Common Stock covered by this prospectus, the Selling Securityholders and any broker-dealers who execute sales for them may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. Any profits realized by Selling Stockholders who are “underwriters,” and the compensation of any broker-dealer who executes sales for them, may be deemed to be underwriting discounts and commissions.

In order to comply with the securities laws of certain states, if applicable, the Common Stock must be sold in such jurisdictions only through registered or licensed brokers or dealers. In addition, in certain states the Common Stock may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

We have advised the Selling Securityholders that the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of Common Stock in the market and to the activities of the Selling Securityholders and their affiliates. In addition, we will make copies of this prospectus available to the Selling Securityholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. The Selling Securityholders may indemnify any broker-dealer that participates in transactions involving the sale of the Common Stock against certain liabilities, including liabilities arising under the Securities Act.

At the time a particular offer of Common Stock is made, if required, a prospectus supplement will be distributed that will set forth the number of shares of Common Stock being offered and the terms of the offering, including the name of any underwriter, dealer or agent, the purchase price paid by any underwriter, any discount, commission and other item constituting compensation, any discount, commission or concession allowed or reallocated or paid to any dealer, and the proposed selling price to the public.

LEGAL MATTERS

The validity of the securities registered hereunder has been passed upon for us by Covington & Burling LLP, Boston, Massachusetts. If legal matters are passed upon by counsel for the underwriters, dealers or agents, if any, such counsel will be named in the prospectus supplement relating to such offering.

EXPERTS

The financial statements of Eyenovia, Inc. as of December 31, 2024 and 2023 and for each of the two years in the period ended December 31, 2024, have been audited by Marcum LLP, independent registered public accounting firm, as stated in their report, which includes an explanatory paragraph as to the Company's ability to continue as a going concern, which is incorporated herein by reference. Such financial statements of Eyenovia, Inc. are incorporated in this prospectus by reference in reliance on the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the reporting requirements of the Exchange Act, and file annual, quarterly and current reports, proxy statements and other information with the SEC. SEC filings are available at the SEC's website at www.sec.gov. This prospectus is only part of a registration statement on Form S-3 that we have filed with the SEC under the Securities Act and therefore omits certain information contained in the registration statement. We have also filed exhibits and schedules with the registration statement that are excluded from this prospectus, and you should refer to the applicable exhibit or schedule for a complete description of any statement referring to any contract or other document.

We also maintain a website at www.eyenovia.com, through which you can access our SEC filings. The information contained on, or that can be accessed through, our website is not a part of this prospectus. We have included our website in this prospectus solely as an inactive textual reference.

INCORPORATION BY REFERENCE

The SEC allows us to "incorporate by reference" information that we file with them. Incorporation by reference allows us to disclose important information to you by referring you to those other documents. The information incorporated by reference is an important part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. We filed a registration statement on Form S-3 under the Securities Act, with the SEC with respect to the securities we may offer pursuant to this prospectus. This prospectus omits certain information contained in the registration statement, as permitted by the SEC. You should refer to the registration statement, including the exhibits, for further information about us and the securities we may offer pursuant to this prospectus. Statements in this prospectus regarding the provisions of certain documents filed with, or incorporated by reference in, the registration statement are not necessarily complete and each statement is qualified in all respects by that reference. Copies of all or any part of the registration statement, including the documents incorporated by reference or the exhibits, may be accessed on the SEC website as noted above in "Where You Can Find More Information." The documents we are incorporating by reference are:

- our Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2024 that we filed with the SEC on April 15, 2025;
- our Current Reports on Form 8-K that we filed with the SEC on [January 16, 2025](#), [January 24, 2025](#), [January 28, 2025](#), [January 31, 2025](#), [February 24, 2025](#), [February 25, 2025](#) and [March 20, 2025](#) (except for the information furnished under Items 2.02 or 7.01 and the exhibits furnished thereto);
- the description of our common stock contained in [Exhibit 4.1](#) of our Annual Report on Form 10-K for the fiscal year ended December 31, 2024 that we filed with the SEC on April 15, 2025; and

all reports and other documents subsequently filed by us pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act after the date of this prospectus and prior to the termination or completion of the offering of securities under this prospectus shall be deemed to be incorporated by reference in this prospectus and to be a part hereof from the date of filing such reports and other documents.

The SEC file number for each of the documents listed above is 001-38365.

In addition, all reports and other documents filed by us pursuant to the Exchange Act after the date of the initial registration statement and prior to effectiveness of the registration statement shall be deemed to be incorporated by reference into this prospectus.

Any statement contained in this prospectus or in a document incorporated or deemed to be incorporated by reference into this prospectus will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or any other subsequently filed document that is deemed to be incorporated by reference into this prospectus modifies or supersedes the statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

You may request, orally or in writing, a copy of any or all of the documents incorporated herein by reference. These documents will be provided to you at no cost, by contacting:

Eyenovia, Inc.
23461 S. Pointe Drive, Suite 390
Laguna Hills, CA 92653
Attn: Corporate Secretary
(833) 393-6684

You may also access these documents on our website, www.eyenovia.com. The information contained on, or that can be accessed through, our website is not a part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

Up to 6,370,387 Shares of Common Stock



PROSPECTUS

, 2025

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following table sets forth the various expenses payable by us in connection with the sale and distribution of the securities being registered hereby.

	Amount to be paid
SEC registration fee	\$ 1,852.62
Legal fees and expenses	\$ 25,000
Accounting fees and expenses	\$ 17,500
Printing and engraving expenses	\$ 5,980
Total	\$ 50,332.62

Item 15. Indemnification of Directors and Officers.

Section 145 of the General Corporation Law of the State of Delaware (the “DGCL”) permits a corporation to indemnify any director or officer of a corporation against expenses (including attorneys’ fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with any action, suit or proceeding brought by reason of the fact that such person is or was a director or officer of the corporation, if such person acted in good faith and in a manner that such person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, if such person had no reason to believe their conduct was unlawful. In a derivative action (i.e., one brought by or on behalf of the corporation), however, indemnification may be made only for expenses, actually and reasonably incurred by any director or officer in connection with the defense or settlement of such action or suit, if such person acted in good faith and in a manner that such person reasonably believed to be in or not opposed to the best interests of the corporation, except that no indemnification shall be made if such person shall have been adjudged to be liable to the corporation, unless and only to the extent that the Delaware Court of Chancery or the court in which the action or suit was brought shall determine that the defendant is fairly and reasonably entitled to indemnity for such expenses despite such adjudication of liability.

The Company’s Third Amended and Restated Certificate of Incorporation, as amended (the “Charter”) and Second Amended and Restated Bylaws (the “Bylaws”) contain provisions that provide for the indemnification of directors and officers consistent with the applicable provisions of the DGCL. If a present or former director or officer successfully defends against any claim subject to indemnification by the Company, they shall be indemnified against expenses (including attorneys’ fees) actually and reasonably incurred in connection therewith.

In accordance with Section 102(b)(7) of the DGCL, the Charter provides that no director of the Company shall be liable to the Company or its stockholders for monetary damages for breach of fiduciary duty as a director, except to the extent such exemption from liability or limitation thereof is not permitted under the DGCL.

The Company maintains a general liability insurance policy which covers certain liabilities of directors and officers of the Company arising out of claims based on acts or omissions in their capacities as directors or officers.

Item 16. Exhibits.

Exhibit Number	Description
3.1	Third Amended and Restated Certificate of Incorporation
3.1.1	Certificate of Amendment to the Third Amended and Restated Certificate of Incorporation, dated June 12, 2018
3.1.2	Certificate of Amendment to the Third Amended and Restated Certificate of Incorporation, dated June 12, 2024
3.1.3	Certificate of Amendment to the Third Amended and Restated Certificate of Incorporation, dated January 31, 2025
3.2	Second Amended and Restated Bylaws
5.1*	Opinion of Covington & Burling LLP
23.1*	Consent of Covington & Burling LLP (included in Exhibit 5.1)
23.2*	Consent of Marcum LLP
24.1*	Power of attorney (included on signature page)
107*	Filing Fee Table

* Filed herewith.

Item 17. Undertakings.

The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that the undertakings set forth in paragraphs (1)(i), (1)(ii) and (1)(iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the SEC by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in this registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act to any purchaser:

(i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

(5) That, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(6) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

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-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Laguna Hills, State of California, on April 17, 2025.

EYENOVIA, INC.

By: /s/ Michael Rowe

Name: Michael Rowe

Title: Chief Executive Officer and Director

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Michael Rowe as his or her true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments, including post-effective amendments, to the Registration Statement, and any registration statement relating to any offering covered by the Registration Statement and filed pursuant to Rule 462(b) under the Securities Act, and to file the same, with exhibits thereto and other documents in connection therewith, with the SEC, granting unto said attorney-in-fact and agent, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent or his substitute may lawfully so or cause to be done by virtue hereof.

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	Position	Date
<u>/s/ Michael Rowe</u> Michael Rowe	Chief Executive Officer and Director (Principal Executive, Financial and Accounting Officer)	April 17, 2025
<u>/s/ Michael Geltzeiler</u> Michael Geltzeiler	Director	April 17, 2025
<u>/s/ Tsontcho Ianchulev</u> Tsontcho Ianchulev	Director	April 17, 2025
<u>/s/ Rachel Jacobson</u> Rachel Jacobson	Director	April 17, 2025
<u>/s/ Charles E. Mather IV</u> Charles E. Mather IV	Director	April 17, 2025
<u>/s/ Ram Palanki</u> Ram Palanki	Director	April 17, 2025
<u>/s/ Ellen Strahlman</u> Ellen Strahlman	Director	April 17, 2025

COVINGTON

BEIJING BOSTON BRUSSELS DUBAI FRANKFURT
JOHANNESBURG LONDON LOS ANGELES NEW YORK
PALO ALTO SAN FRANCISCO SEOUL SHANGHAI WASHINGTON

Covington & Burling LLP
One International Place
Suite 1020
Boston, MA 02110-2600
T +1 617 603 8800

April 17, 2025

Eyenovia, Inc.
23461 S. Pointe Drive, Suite 390
Laguna Hills, CA 92653

Ladies and Gentlemen:

We have acted as counsel to Eyenovia, Inc., a Delaware corporation (the “*Company*”), in connection with the registration by the Company under the Securities Act of 1933, as amended (the “*Securities Act*”), pursuant to the Company’s Registration Statement on Form S-3, which was filed with the Securities and Exchange Commission (the “*Commission*”) on the date hereof (the “*Registration Statement*”), of the resale by the holders thereof of (i) up to 23,771 shares of common stock, \$0.0001 par value per share (the “*Common Stock*”), of the Company (the “*Issued Shares*”), issued pursuant to the Subscription Agreement, dated November 22, 2024 (the “*Subscription Agreement*”), by and among the Company and Avenue Venture Opportunities Fund, L.P. and Avenue Venture Opportunities Fund II, L.P. (together, the “*Lenders*”), (ii) up to 394,236 shares of Common Stock issuable upon the exercise of 394,236 Series A Common Stock Purchase Warrants (the “*Series A Warrants*”) and Series B Common Stock Purchase Warrants (the “*Series B Warrants*” and, together with the Series A Warrants, the “*Warrants*”), dated as of January 17, 2025, at an exercise price of \$5.272 per share (the “*Warrant Shares*”) and (iii) up to 5,952,380 shares of Common Stock issuable upon the exercise of the conversion right by the Lenders pursuant to the Second Amendment (the “*Second Amendment*”) to Supplement to Loan and Security Agreement, dated February 21, 2025, by and among the Company, the Lenders and Avenue Capital Management II, L.P. (the “*Conversion Shares*”) and, together with the Issued Shares and the Warrant Shares, the “*Registered Shares*”).

In connection with this opinion, we have reviewed:

- (i) the Registration Statement and the prospectus relating to the offering of the securities covered by this opinion;
 - (ii) the Subscription Agreement;
 - (iii) the Second Amendment;
 - (iv) the Series A Warrants;
 - (v) the Series B Warrants; and
 - (vi) such other corporate records, certificates and documents, and such questions of law, as we have considered necessary or appropriate for the purposes of this opinion.
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Eyenovia, Inc.
April 17, 2025
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We have assumed that all signatures are genuine, that all documents submitted to us as originals are authentic and that all copies of documents submitted to us conform to the originals. We have assumed that the Issued Shares have been duly registered on the books of the transfer agent and registrar of the Common Stock in the name and on behalf of the respective owners thereof and that any Warrant Shares issued upon exercise of the Warrants, and any Conversion Shares issued upon exercise of the conversion right set forth in the Second Amendment, will be duly registered on the books of the transfer agent in the name and on behalf of the respective owners thereof. We have also assumed that the Company will comply with applicable notice requirements regarding uncertificated shares provided under the Delaware General Corporation Law (the “DGCL”). We have assumed further that the information and representations and warranties contained in the agreements, instruments, records, certificates and other documents we reviewed were true, accurate and complete as of their stated date and are true, accurate and complete as of the date of this letter.

We have relied as to certain matters on information obtained from public officials, officers of the Company and other sources believed by us to be responsible. With respect to the Warrant Shares and Conversion Shares, we express no opinion to the extent that, notwithstanding the Company’s current reservation of shares of Common Stock, future issuances of securities of the Company, including the Warrant Shares and Conversion Shares, and anti-dilution adjustments to outstanding securities of the Company, including the Warrants, may cause the Warrants to be exercisable for more shares of Common Stock than the number that remain authorized but unissued. We also have assumed that the Exercise Price (as defined in each of the Warrants) will not be adjusted to an amount below the par value per share of the Common Stock.

Based upon the foregoing, and subject to the qualifications set forth herein, we are of the opinion that:

- (1) The Issued Shares have been duly authorized and are validly issued, fully paid and nonassessable.
- (2) The Warrant Shares initially issuable upon exercise of the Warrants have been duly authorized for issuance and, when issued and paid for upon exercise of the applicable Warrants, including receipt by the Company of full payment therefor, in accordance with the terms of such Warrants, will be validly issued, fully paid and non-assessable.
- (3) The Conversion Shares initially issuable upon exercise of the conversion right set forth in the Second Amendment have been duly authorized for issuance and, when issued in accordance with the terms of the Second Amendment, will be validly issued, fully paid and non-assessable.

We are members of the bar of Commonwealth of Massachusetts and the State of New York. We do not express any opinion herein on any laws other than the Delaware General Corporation Law.

We hereby consent to the filing of this opinion as Exhibit 5.1 to the Registration Statement. We also hereby consent to the reference to our firm under the heading “Legal Matters” in the prospectus constituting part of 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.

Very truly yours,

/s/ Covington & Burling LLP

Independent Registered Public Accounting Firm's Consent

We consent to the incorporation by reference in this Registration Statement on Form S-3 of our report dated March 15, 2025 relating to the financial statements appearing in the Annual Report on Form 10-K of Eyenovia, Inc. for the year ended December 31, 2024. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ Marcum LLP

New York, NY
April 17, 2025

Calculation of Filing Fee Tables

Form S-3
(Form Type)

Eyenovia, Inc.
(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered and Carry-Forward Securities

	Security Type	Security Class Title	Fee Calculation Rule	Amount Registered ⁽¹⁾	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee	Carry Forward Form Type	Carry Forward File Number	Carry Forward Initial Effective Date	Filing Fee Previously Paid In Connection with Unsold Securities to be Carried Forward
Secondary Offering												
Fees to be Paid	Equity	Common stock, \$0.001 par value per share ("Common Stock") ⁽²⁾	457(c)	23,771	\$ 0.935 ⁽⁵⁾	\$ 22,225.89 ⁽⁵⁾	0.00015310	\$ 3.41	-	-	-	-
Fees to be Paid	Equity	Common Stock underlying the Warrants ⁽³⁾	457(g)	394,236	\$ 5.272 ⁽⁶⁾	\$ 2,078,412.20 ⁽⁶⁾	0.00015310	\$ 318.21	-	-	-	-
Fees to be Paid	Equity	Common Stock issuable pursuant to the Second Amendment ⁽⁴⁾	457(g)	5,952,380	\$ 1.68 ⁽⁷⁾	\$ 9,999,998.40 ⁽⁷⁾	0.00015310	\$ 1,531.00				
Fees Previously Paid								-				
Total Offering Amount						\$12,100,636.49	0.00015310	\$ 1,852.62				
Total Fees Previously Paid								-				
Total Fee Offsets								-				
Net Fee Due								\$ 1,852.62				

(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 the registrant's Common Stock that become issuable in respect of such securities by reason of any stock dividend, stock split, recapitalization or other similar transaction.

(2) Represents shares of Common Stock offered for resale by the holders thereof.

(3) Represents 394,236 shares of Common Stock issuable upon the exercise of Warrants at an exercise price of \$5.272 per share.

- (4) Represents 5,952,380 shares of Common Stock issuable upon the Lenders' exercise of their right of conversion pursuant to the Second Amendment.
 - (5) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(c) under the Securities Act, and based upon the average of the high and low prices of the registrant's Common Stock as reported on the Nasdaq Capital Market on April 11, 2025.
 - (6) Estimated solely for purposes of calculating the amount of the registration fee pursuant to Rule 457(g) under the Securities Act, based on the applicable exercise price of the Warrants, after reflecting the effect of the reverse stock split of the Common Stock at a ratio of 1-for-80, which became effective January 31, 2025.
 - (7) Estimated solely for the purposes of calculating the amount of the registration fee pursuant to Rule 457(g) under the Securities Act, based on the applicable exercise price under the right of conversion granted pursuant to the Second Amendment to the Supplement to the Company's Loan and Security Agreement, dated February 21, 2025.
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