

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

AMENDMENT NO. 1 TO
FORM S-3

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Hyperion DeFi, 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)

Hyunsu Jung
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(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.

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

Non-accelerated filer

Accelerated filer

Smaller reporting 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 September 26, 2025

PRELIMINARY PROSPECTUS



Up to 50,770,667 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 50,770,667 shares of common stock, par value \$0.0001 per share (the “Common Stock”), of Hyperion DeFi, Inc., formerly known as Eyenovia, Inc. (“Hyperion DeFi” or the “Company”) which includes (i) up to 15,384,615 shares of Common Stock issuable upon the conversion of 5,128,205 shares of the Company’s Series A Non-Voting Preferred Stock, par value \$0.0001 per share (the “Series A Preferred Stock”), that were issued pursuant to the Securities Purchase Agreement, dated June 17, 2025, by and among the Company and certain institutional accredited investors (the “Securities Purchase Agreement”); (ii) up to 30,769,230 shares of Common Stock issuable upon the exercise of warrants (the “Purchaser Warrants”) at an exercise price of \$3.25 per share, which Purchaser Warrants were issued pursuant to the Securities Purchase Agreement; (iii) up to 923,076 shares of Common Stock issuable upon the conversion of 307,692 shares of Series A Preferred Stock that were issued pursuant to the Engagement Letter, dated June 17, 2025, by and between the Company and Chardan Capital Markets, LLC (the “Engagement Letter”); (iv) up to 1,846,153 shares of Common Stock issuable upon the exercise of warrants (the “Placement Agent Warrants”) at an exercise price of \$3.25 per share, which Placement Agent Warrants were issued pursuant to the Engagement Letter; (v) up to 1,497,593 shares of Common Stock issuable as in-kind dividends on the Series A Preferred Stock; and (vi) up to 350,000 shares of Common Stock issuable upon the exercise of warrants (the “Lender Warrants” and, together with the Purchaser Warrants and the Placement Agent Warrants, the “Warrants”) at an exercise price of \$4.00 per share, which Lender Warrants were issued in connection with the Fourth Amendment (the “Fourth 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 (“Avenue II” and, together with Avenue I, the “Lenders”).

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 14 (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 17.

Our Common Stock is listed on The Nasdaq Capital Market under the symbol “HYPD.” On September 25, 2025, the last reported sale price of our Common Stock was \$8.46 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 9 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.

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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 “Hyperion DeFi,” “HYPD,” “the Company,” “we,” “us,” “our,” or similar references, refer to Hyperion DeFi, Inc., except where the context otherwise requires or as otherwise indicated.

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

Hyperion DeFi, Inc. (previously known as Eyenovia, Inc.) is the first U.S. publicly listed company building a long-term strategic treasury of Hyperliquid's native token, HYPE, as well as a pioneering digital ophthalmic technology company. Hyperion DeFi is working to provide its shareholders with simplified exposure to the Hyperliquid ecosystem, which we believe to be one of the fastest-growing, highest revenue-generating blockchains in the world, according to information provided by various blockchain data tracking sources, including Artemis Analytics and DefiLlama. At the same time, we continue to execute on our planned completion of development and registration of our Optejet ophthalmic liquid delivery device.

HYPE Treasury

Hyperliquid is a layer one (L1) Proof-of-Stake blockchain engineered for transparent high-frequency finance. Hyperliquid offers HyperCore, an exchange product built directly onchain, which hosts perpetual futures and spot order books, with every order, cancel, trade and liquidation occurring within 70 millisecond block times and offering up to 200,000 transactions per second, resulting in near-instant trade settlement. The Hyperliquid blockchain also hosts the HyperEVM, a general-purpose smart contract platform that, like Ethereum or Solana, supports permissionless decentralized financial applications, broadly known as decentralized finance (DeFi).

On HyperCore, users start by funding their non-custodial accounts with deposits of USD Coin, a centralized cryptocurrency that is linked to the US dollar ("USDC"). The available USDC can be withdrawn at any time. Users can use their funds to purchase or sell spot token assets, or enter into a perpetuals trade on their desired token asset, with near-instant settlement. Hyperliquid supports non-custodial trading via its performant HyperCore order books, with spot and/or perpetual futures trading for a range of digital assets including Bitcoin (BTC), Ether (ETH), Ripple (XRP), Solana (SOL) and Sui (SUI) driving its utilization. Both type of transactions can be entered or exited at any time, with the users' confirmation. When transactions are executed on HyperCore, they are recorded and settled in the order they were placed, and they are not reported to a broker-dealer or alternative trading system (ATS), as execution is fully managed onchain and there is no offering being made that requires a specific "lifecycle" for user onboarding, registration or settlement. The "lifecycle" of a transaction on HyperCore may be viewed as the duration of a user entering and exiting a trade.

Perpetual futures are a type of derivative contract that are blockchain-enabled and allows users to speculate on the price of an asset without owning the underlying asset itself. Unlike traditional futures contracts, perpetual futures have no expiration date, allowing users to hold positions indefinitely as long as they meet margin requirements. Hyperliquid utilizes a traditional order book system. This approach allows users to place bids and asks for various assets, more akin to a centralized cryptocurrency exchange than other decentralized exchanges that rely on automated market makers to fulfill orders. The Hyperliquid blockchain is available to any potential user with a compatible cryptocurrency wallet such as MetaMask, Phantom, and Coinbase Wallet. However, Hyperliquid interface operators can choose to block persons in certain jurisdictions or sanctioned wallets as required via solutions such as geoblocking and address screening.

If desired, users can also transfer their assets to HyperEVM. On HyperEVM, a user can similarly swap, lend and borrow against their self-custodied assets on various Hyperliquid compatible smart-contract applications, with near-instant settlement. The lifecycle of a transaction varies here, as it is dependent on the user's intent with using various smart contract applications.

HYPE is the native token of Hyperliquid. On both HyperCore and HyperEVM, users can purchase the HYPE token. HYPE is also available through other platforms such as Binance US, Gate.io and Kucoin, and it is not the only spot asset available on the Hyperliquid network (e.g. BTC, ETH, and SOL are also available on the Hyperliquid network). The total supply of HYPE is 1 billion, with 31% of the supply being issued in November 2024. 38.88% of the total supply was reserved for future community emissions. As of September 19, 2025, 31.6% of the supply of HYPE, which was reported on DefiLlama to be approximately 316,310,000, was circulating. The next major unlock event for the HYPE token will begin on November 29, 2025 with the unlock of approximately 9,920,000 HYPE tokens on a monthly basis for the core contributors, totaling up to approximately 238 million HYPE tokens over 10 years. HYPE serves multiple purposes: users can stake HYPE to reduce their trading fees, use it to conduct transactions on the HyperEVM, and even use it as collateral on various DeFi applications. In addition, Hyperliquid has a unique network mechanism that autonomously purchases and removes HYPE tokens from circulation. This is done by using the trading fees generated on the network's order books to buy back available HYPE: approximately 97% of daily fees are allocated to this mechanism, which serves as a consistent "marginal buyer" for the token. As of September 2025, more than 30 million HYPE has been removed from circulation.

Additionally, HYPE has certain governance rights with respect to the Hyperliquid blockchain. The Hyperliquid L1 is a Proof-of-Stake blockchain, wherein validators that have staked the threshold number of HYPE are selected to produce blocks and will receive rewards when they successfully validate blocks. Holders of HYPE can delegate to validators who then are able to vote on certain decisions regarding the platform, such as the listing and de-listing of new markets. Any holder of HYPE can delegate HYPE to a validator to earn staking rewards, should the validator successfully participate in network consensus. To delegate HYPE to a validator, holders of HYPE must transfer their HYPE from their "spot balance" to the "staking balance". Unstaking staked HYPE and transferring it back from the "staking balance" to the "spot balance" requires a 7-day unlocking period. As of June 30, 2025, none of our HYPE holdings were staked. The Company initialized the staking process on July 1, 2025, and as of September 19, 2025, it had approximately 834,050.16 HYPE staked directly to the Kinetiq x Hyperion validator, described further below.

As part of its broader onchain engagement strategy, the Company recently announced a co-branded Hyperliquid validator, Kinetiq x Hyperion, with Kinetiq Labs, Inc. (“Kinetiq”), a Delaware corporation with its principal place of business located in Brandon, Florida and a liquid staking protocol built natively for the Hyperliquid ecosystem. Validator operations are further supported by infrastructure provided by Pier Two Pty. LTD (“Pier Two”), a proprietary company limited by shares, with its principal place of business located in South Brisbane, Australia, and an institutional staking services provider. We are currently in the process of finalizing a definitive co-validator agreement with Kinetiq and Pier Two, that reflects blockchain best practices and SLA discipline, pursuant to which we will pay a percentage of validator commissions to each of Kinetiq and Pier Two. Kinetiq will provide validator operations support and infrastructure coordination while Pier Two will provide hosting and technical support services for the validator node. By running our own validator, the Company can directly access HYPE staking yield in addition to supporting Hyperliquid’s network stability and security. Staked HYPE can be delegated to user accounts which reduces their trading fees or increases the revenue share from referring new users, both of which could serve as revenue opportunities for the Company. Specifically, the validator potentially enables the Company to create unique financial products built around the demand for these network benefits from those who do not have access to HYPE.

HYPE can also be deployed into the HyperEVM for various strategies such as lending and liquidity provisioning. This is expected to enable the Company to support various applications built on Hyperliquid and in return, potentially earn yield that can be compounded into its overall HYPE acquisition strategy.

Anchorage Digital Bank National Association (“Anchorage Digital”), which recently rolled out full support asset custody on HyperEVM, provides custody and trade execution services for HYPE. Anchorage Digital is the only federally chartered cryptocurrency bank in the United States, serves as a custodian for digital assets, and is licensed and regulated by the Office of the Comptroller of the Currency. Anchorage Digital has institutional-grade security required by institutional investors and employs HSM (Hardware Security Module) for a unique security model for security digital assets. Anchorage Digital’s public support for Hyperliquid by prioritizing development of infrastructure uniquely for Hyperliquid is a testament to the future prospect of the Hyperliquid ecosystem. Currently, Anchorage Digital provides only custodial services to the Company and does not use a sub-custodian.

By prudently building and deploying a treasury of HYPE, the Company believes that it can rapidly accelerate the growth of the Hyperliquid ecosystem and further its adoption, potentially creating a powerful flywheel effect that may drive platform usage, increase protocol value and strengthen the long-term position of both the Hyperliquid ecosystem and the Company.

The Optejet

Hyperion DeFi is also developing the proprietary Optejet User Filled Device (the “Optejet UFD”) that is designed to work with a variety of topical ophthalmic liquids, including artificial tears and lens rewetting products. The Optejet UFD is especially useful in chronic front-of-the-eye diseases due to its ease of use, enhanced safety and tolerability, and potential for superior compliance versus standard eye drops. Together, these benefits may result in higher treatment compliance and better outcomes for patients and providers.

The ergonomic and functional design of the Optejet UFD 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 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 UFD helps ensure instillation success while minimizing contamination risk with a non-protruding nozzle and self-closing shutter. In clinical trials, the Optejet UFD 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 UFD, 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 anticipate registering the second generation of the Optejet UFD as a liquid drug delivery device, based on our experience with MydCombi®. MydCombi was the only Food and Drug Administration-approved fixed combination of the two leading mydriatic agents, tropicamide and phenylephrine, in the United States delivered with technology that is nearly identical to the first generation of the Optejet UFD.

Recent Developments

Leadership Updates

On September 2, 2025, Michael Rowe notified the Board of Directors (the “Board”) of the Company of his intent to resign from his position as Chief Executive Officer of the Company. Pending the effectiveness of Mr. Rowe’s resignation, Hyunsu Jung, who is currently the Company’s Chief Investment Officer and a member of the Board, will serve as Interim Chief Executive Officer, Principal Financial Officer, Treasurer and Secretary. In addition, on September 8, 2025, the Company expanded the size of the Board to six members and appointed Happy Walters as a member of the Board and the Nominating and Governance Committee of the Board, effective immediately.

Nasdaq Compliance

As previously reported, on April 29, 2025, the Company received a notice from the staff of the Nasdaq Stock Market LLC (“Nasdaq”) stating that the Company’s stockholders’ equity as reported in the Company’s Annual Report on Form 10-K for the year ended December 31, 2024 was below the minimum \$2,500,000 required for continued listing under Listing Rule 5550(b)(1) (the “Minimum Equity Requirement”). On September 2, 2025, the Company received a notice from the staff indicating that the Company has regained compliance with the Minimum Equity Requirement.

The Private Placement and Capital Raising

On June 20, 2025, we received approximately \$50 million in gross proceeds, or \$45 million after deducting placement agent fees and offering expenses, in connection with the closing of a private placement (the “Private Placement”). Pursuant to the Securities Purchase Agreement, in the Private Placement, the Purchasers purchased an aggregate of 5,128,205 shares of Series A Preferred Stock (convertible into up to 15,384,615 shares of Common Stock) and Purchaser Warrants to purchase up to 30,769,230 shares of Common Stock at an exercise price of \$3.25 per share. The Company used all of the proceeds from the Private Placement to make purchases of and build a reserve of HYPE. As part of its new cryptocurrency treasury strategy, the Company has begun implementing a HYPE staking program. Following the completion of the Private Placement, the Company has purchased an additional \$10.5 million of HYPE, for a total of \$55.5 million used for HYPE purchases to date. Going forward, subject to market conditions, the Company intends to raise additional proceeds through equity financings to purchase additional HYPE for our treasury, although we cannot currently estimate how much we will raise or when such purchases will occur. The Company intends to use a portion of the proceeds from the exercise of the Warrants, if any, which could be up to a maximum of approximately \$100 million, to purchase additional HYPE. The Company’s

other plans to raise capital include the use of our at-the-market offering sales agreement with Chardan Capital Markets LLC (“Chardan”) and other future equity offerings.

Chardan acted as placement agent to the Company in connection with the Private Placement. Pursuant to the Engagement Letter, as compensation for its services, the Company issued to Chardan 307,692 shares of Series A Preferred Stock (convertible into up to 923,076 shares of Common Stock) and Placement Agent Warrants to purchase up to 1,846,153 shares of Common Stock at an exercise price of \$3.25 per share.

Fourth Amendment

On June 17, 2025, the Company and the Lenders entered into the Fourth Amendment. The Fourth Amendment, among other things, extends the maturity date of the loans under the Loan and Security Agreement to July 1, 2028; provides for an interest-only period from July 1, 2025 until January 31, 2027; reduces the interest rate on the loans from 12.0% to 8.0%, payable half in cash and half in kind; eliminates the option of the Lenders to convert an aggregate amount of up to \$10.0 million of the loans outstanding into shares of Common Stock; and provides the Company with the option to prepay debt owed under the Loan and Security Agreement in part, subject to certain limitations. In connection with the Fourth Amendment, the Company issued to the Lenders Warrants to purchase an aggregate of 350,000 shares of Common Stock at an exercise price of \$4.00 per share.

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. On July 1, 2025, we changed our name to Hyperion DeFi, Inc. 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.hyperiondefi.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 50,770,667 shares of Common Stock, which includes up to 16,307,691 shares of Common Stock issuable upon the conversion of the 5,435,897 outstanding shares of Series A Preferred Stock, up to 1,497,593 shares of Common Stock issuable as in-kind dividends on such Series A Preferred Stock and up to 32,965,383 shares of Common Stock issuable upon the exercise of the Warrants.
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	57,729,826 shares, assuming the conversion of the outstanding shares of Series A Preferred Stock, issuance of 1,497,593 shares of Common Stock as in-kind dividends on the Series A Preferred Stock and exercise of the Warrants 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.” 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 approximately \$107.4 million in proceeds. Any such proceeds would be used for working capital and general corporate purposes (including to build the Company’s reserve of the HYPE token).
Risk Factors	Investing in our securities involves a high degree of risk. See “Risk Factors” on page 9 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 “HYPD.”
The number of shares of common stock outstanding immediately after this offering is based on 6,959,159 shares of Common Stock outstanding as of September 19, 2025.	
This number excludes:	
<ul style="list-style-type: none">· 37,137 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 \$215.02 per share as of September 19, 2025;· 386,651 shares of our Common Stock issuable in connection with restricted stock units under the 2014 Plan and the 2018 Plan as of September 19, 2025;· 5,016,576 shares of our Common Stock reserved for future issuance under the 2014 Plan and the 2018 Plan as of September 19, 2025;· warrants to purchase 855,402 shares of our Common Stock, with a weighted average exercise price of \$14.24 per share as of September 19, 2025; and· 500,000 shares of our Common Stock issuable in connection with restricted stock units to be granted as an inducement award outside of the 2014 Plan and the 2018 Plan.	

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 may need to raise additional capital in the future, which may not be available on reasonable terms, or at all.

We require significant capital resources in order to continue to operate our business. As of June 30, 2025, we had cash and cash equivalents of \$7.5 million and an accumulated deficit of approximately \$207.5 million. Also as of June 30, 2025, we owed \$8.2 million in principal and accrued interest under the Loan and Security Agreement. We expect to continue to incur cash outflows from operations for the near future. Implementation of our plans 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 resources sooner than we anticipate. Although we have the ability to liquidate HYPE tokens to fund our operations, any required additional capital may not be available on reasonable terms, if at all, due to a variety of factors, including volatile conditions in the economy and capital markets, due to 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.

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 or preferred stock, the holders of such securities may have rights that are senior to those of our then existing securityholders, and the terms of those securities could impose restrictions on operations and create a significant interest expense for us, which could have a materially adverse effect on our business.

Delisting of our Common Stock from Nasdaq could prevent us from maintaining an active, liquid and orderly trading market for our Common Stock.

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) (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.

On April 29, 2025, we received a notice from the staff of the Nasdaq stating that the Company's stockholders' equity as reported in the Company's Annual Report on Form 10-K for the year ended December 31, 2024 was below the Minimum Equity Requirement. On September 2, 2025, we received a notice from the staff indicating that the Company has regained compliance with the Minimum Equity Requirement.

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.

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.

HYPE is a highly volatile asset, and fluctuations in the price of HYPE may influence our financial results and the market price of our listed securities.

Our financial results and the market price of our listed securities would be adversely affected, and our business and financial condition would be negatively impacted, if the price of HYPE decreased substantially, including as a result of:

- decreased user and investor confidence in HYPE, including due to the various factors described herein;
- investment and trading activities such as (i) trading activities of highly active retail and institutional users, speculators and investors or (ii) actual or expected significant dispositions of HYPE by large holders, including the expected liquidation of digital assets seized by governments or associated with entities that have filed for bankruptcy protection, or associated with tokens vested by the Hyperliquid core team;
- negative publicity, media or social media coverage, or sentiment due to events in or relating to, or perception of, HYPE, Hyperliquid or the broader digital assets industry;

- changes in consumer preferences and the perceived value or prospects of HYPE or the utility of Hyperliquid;
- competition from other decentralized exchanges or digital assets that exhibit comparable or better speed, security, scalability or energy efficiency, that feature other more favored characteristics, that are backed by governments, including the U.S. government, or reserves of fiat currencies, or that represent ownership or security interests in physical assets;
- a decrease in the price of other digital assets, to the extent the decrease in the price of such other digital assets may cause a decrease in the price of HYPE or adversely affect investor confidence in digital assets generally;
- developments relating to the Hyperliquid blockchain, including (i) changes to the Hyperliquid blockchain that impact its security, speed, scalability, usability or value, such as changes to the cryptographic security protocol underpinning the Hyperliquid blockchain, changes to the maximum number of HYPE outstanding, changes to the mutability of transactions, changes relating to the size of blockchain blocks, and similar changes; (ii) failures to make upgrades to the Hyperliquid blockchain and the Hyperliquid interface to adapt to security, technological, legal or other challenges; and (iii) changes to the Hyperliquid blockchain that introduce software bugs, security risks or other elements that adversely affect HYPE;
- disruptions, failures, unavailability, or interruptions in services of trading venues for HYPE;
- the filing for bankruptcy protection by, liquidation of, or market concerns about the financial viability of digital asset custodians, trading venues, lending platforms, investment funds, or other digital asset industry participants;
- regulatory, legislative, enforcement and judicial actions that adversely affect access to, functionality of or performance of Hyperliquid and its associated products such as cryptocurrency perpetual futures, the price, ownership, transferability, trading volumes, legality or public perception of, HYPE or other L1 blockchains, or that adversely affect the operations of or otherwise prevent digital asset custodians, trading venues, lending platforms or other digital assets industry participants from accessing the Hyperliquid decentralized exchange and its associated products or operating in a manner that allows them to continue to deliver services to the digital assets industry;
- transaction congestion and fees associated with processing transactions on the Hyperliquid network;
- macroeconomic changes, such as changes in the level of interest rates and inflation, fiscal and monetary policies of governments, trade restrictions and fiat currency devaluations;
- developments in mathematics or technology, including in digital computing, algebraic geometry and quantum computing, that could result in the cryptography used by the Hyperliquid blockchain becoming insecure or ineffective; and
- changes in national and international economic and political conditions, including, without limitation, federal government policies, trade tariffs and trade disputes, and the adverse impacts attributable to global conflicts, including those between Russia and Ukraine and in the Middle East.

Moreover, the price of our listed securities has been and is likely to continue to be volatile, and with the adoption of our new cryptocurrency treasury strategy, we expect to see additional volatility in our stock price. In addition, if investors view the value of our listed securities as dependent upon or linked to the value or change in the value of our HYPE holdings, the price of HYPE may significantly influence the market price of our listed securities. The price of HYPE has historically been, and is likely to continue to be, volatile.

If we are unable to raise sufficient additional capital on acceptable terms, we may be unable to expand or maintain our HYPE reserve, which could adversely affect our liquidity, financial condition and growth prospects.

We completed the Private Placement on June 20, 2025 pursuant to the securities Purchase Agreement, the net proceeds of which have been used for our HYPE treasury strategy. To the extent holders exercise the Warrants, we may acquire additional HYPE at market prices, which could magnify our exposure to HYPE price volatility. If we are unable to raise sufficient additional capital through warrant exercises, our at-the-market facility or other equity financings on acceptable terms, we may be unable to expand or maintain our HYPE reserve, which could adversely affect our liquidity, financial condition and growth prospects.

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 estimates regarding expenses, future revenue, timing of any future revenue, capital requirements and needs for additional financing;
- the viability of, and risks associated with, our new cryptocurrency treasury strategy;
- our ability to make payments on our debt;
- 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 approximately \$107.4 million in proceeds. Any such proceeds would be used for working capital and general corporate purposes (including to build the Company's reserve of the HYPE token).

SELLING SECURITYHOLDERS

This prospectus relates to the offer and sale from time to time by the Selling Securityholders listed below of (i) up to 15,384,615 shares of Common Stock issuable upon the conversion of 5,128,205 shares of Series A Preferred Stock that were issued pursuant to the Securities Purchase Agreement; (ii) up to 30,769,230 shares of Common Stock issuable upon the exercise of the Purchaser Warrants; (iii) up to 923,076 shares of Common Stock issuable upon the conversion of 307,692 shares of Series A Preferred Stock that were issued pursuant to the Engagement Letter; (iv) up to 1,846,153 shares of Common Stock issuable upon the exercise of the Placement Agent Warrants; (v) up to 1,497,593 shares of Common Stock issuable as in-kind dividends on the Series A Preferred Stock; and (vi) up to 350,000 shares of Common Stock issuable upon the exercise of the Lender Warrants. 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 September 19, 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 6,959,159 shares of Common Stock outstanding as of September 19, 2025. Information with respect to Common Stock owned beneficially after the offering assumes the sale of all of the Common Stock registered hereby 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 Beneficially Owned Before the Offering (#)	Shares Being Offered (#)	Shares Beneficially Owned After the Offering(*) (#)	(%)
HLIP Holdings, LLC ⁽¹⁾	42,334,340	42,334,340	-	-
Chardan Investments LP ⁽²⁾	3,948,034	3,948,034	-	-
Ask Venture LLC ⁽³⁾	951,330	951,330	-	-
Michael Bucella ⁽⁴⁾	237,834	237,834	-	-
VA Consulting & Advisory Inc. ⁽⁵⁾	95,132	95,132	-	-
Chardan Capital Markets, LLC ⁽⁶⁾	2,853,997	2,853,997	-	-
Avenue Venture Opportunities Fund, L.P. ^{(7) (8)}	236,049	140,000	96,049	1.4%
Avenue Venture Opportunities Fund II, L.P. ^{(7) (9)}	354,075	210,000	144,075	2.1%

* 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) Consists of 13,692,309 shares of Common Stock issuable upon conversion of Series A Preferred Stock held by HLIP Holdings, LLC (“HLIP”) (formerly Hyperion DeFi Holdings, LLC), 27,384,618 shares of Common Stock issuable upon the exercise of Purchase Warrants held by HLIP, and 1,257,413 shares of Common Stock issuable through the fourth quarter of 2026 as in-kind dividends on the Series A Preferred Stock held by HLIP at the 6% annual dividend rate, assuming all dividends are paid in-kind, in each case without giving effect to the beneficial ownership limitations set forth in the Securities Purchase Agreement, the Certificate of Designations with respect to the Series A Preferred Stock, or the Warrants, as applicable (the “Beneficial Ownership Limitation”). Pursuant to the Beneficial Ownership Limitation, HLIP is restricted from effecting any conversion of the Series A Preferred Stock or any exercise of the Purchaser Warrants which would result in ownership in excess of 4.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock upon such conversion or exercise. Justin Russell is the sole manager of HLIP. However, the amended and restated operating agreement of HLIP provides that certain disposition of the Series A Preferred Stock, the Purchaser Warrants, and the underlying shares of Common Stock require majority approval of Mr. Russell, Kenneth Blatt, and Mateo Levy, who share voting and dispositive power over the securities of the Company held by HLIP. The address of HLIP is 401 E. Jackson Street, Suite 1500, Tampa, FL 33602.
- (2) Consists of 1,276,923 shares of Common Stock issuable upon conversion of Series A Preferred Stock held by Chardan Investments LP (“ChIP”), 2,553,846 shares of Common Stock issuable upon the exercise of Purchase Warrants held by ChIP, and 117,265 shares of Common Stock issuable through the fourth quarter of 2026 as in-kind dividends on the Series A Preferred Stock held by ChIP at the 6% annual dividend rate, assuming all dividends are paid in-kind, in each case without giving effect to the Beneficial Ownership Limitation. Pursuant to the Beneficial Ownership Limitation, ChIP is restricted from effecting any conversion of the Series A Preferred Stock or any exercise of the Purchaser Warrants which would result in ownership in excess of 4.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock upon such conversion or exercise. The business address of ChIP is 1 Pennsylvania Plaza, Suite 4800, New York, New York 10119. ChIP is a Delaware Limited Partnership. Its general partner is Chardan Investments Management LLC, a Delaware limited liability company. Mr. Jonas Grossman is the sole manager and member of Chardan Investments Management, LLC and has sole voting and dispositive power over the securities of the Company held by ChIP.
- (3) Consists of 307,692 shares of Common Stock issuable upon conversion of Series A Preferred Stock held by ASK Venture LLC (“ASK Venture”), 615,384 shares of Common Stock issuable upon the exercise of Purchase Warrants held by ASK Venture, and 28,254 shares of Common Stock issuable through the fourth quarter of 2026 as in-kind dividends on the Series A Preferred Stock held by ASK Venture at the 6% annual dividend rate, assuming all dividends are paid in-kind, in each case without giving effect to the Beneficial Ownership Limitation. Pursuant to the Beneficial Ownership Limitation, ASK Venture and its affiliates are restricted from effecting any conversion of the Series A Preferred Stock or any exercise of the Purchaser Warrants which would result in ownership in excess of 4.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock upon such conversion or exercise. The business address of ASK Venture is 21 Law Drive, Fairfield, NJ 07004.

- (4) Consists of 76,923 shares of Common Stock issuable upon conversion of Series A Preferred Stock held by Michael Bucella, 153,846 shares of Common Stock issuable upon the exercise of Purchase Warrants held by Mr. Bucella, and 7,065 shares of Common Stock issuable through the fourth quarter of 2026 as in-kind dividends on the Series A Preferred Stock held by Mr. Bucella at the 6% annual dividend rate, assuming all dividends are paid in-kind. Mr. Bucella's business address is 360 NW 27th Street, 8th Floor, Miami, FL, 33127.
- (5) Consists of 30,768 shares of Common Stock issuable upon conversion of Series A Preferred Stock held by VA Consulting & Advisory Inc. ("VA Consulting"), 61,536 shares of Common Stock issuable upon the exercise of Purchase Warrants held by VA Consulting, and 2,828 shares of Common Stock issuable through the fourth quarter of 2026 as in-kind dividends on the Series A Preferred Stock held by VA Consulting at the 6% annual dividend rate, assuming all dividends are paid in-kind. Varun Anand has sole voting and dispositive power over all securities of the Company held by VA Consulting. The business address of VA Consulting is 223 Bayview Fairways Drive, Thornhill, Ontario, Canada, L3T-2Z1.
- (6) Consists of 923,076 shares of Common Stock issuable upon conversion of Series A Preferred Stock held by Chardan Capital Markets, LLC ("Chardan"), 1,846,153 shares of Common Stock issuable upon the exercise of Placement Agent Warrants held by Chardan, and 84,768 shares of Common Stock issuable through the fourth quarter of 2026 as in-kind dividends on the Series A Preferred Stock held by Chardan at the 6% annual dividend rate, assuming all dividends are paid in-kind, in each case without giving effect to the Beneficial Ownership Limitation. Pursuant to the Beneficial Ownership Limitation, Chardan is restricted from effecting any conversion of the Series A Preferred Stock or any exercise of the Placement Agent Warrants which would result in ownership in excess of 4.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock upon such conversion or exercise. The business address of Chardan is 1 Pennsylvania Plaza, Suite 4800, New York, New York 10119. Chardan is a broker-dealer and a member of the Financial Industry Regulatory Authority, Inc. Mr. Kerry Propper, Mr. Steven Urbach and Mr. Jonas Grossman, are Chardan's Chairman, Chief Executive Officer and President, respectively, and are each Members and Managers of Chardan Securities LLC, which holds a controlling interest in Chardan. The foregoing should not be construed in and of itself as an admission by any of Mr. Propper, Mr. Urbach or Mr. Grossman as to beneficial ownership of the securities beneficially owned by Chardan.
- (7) Avenue Venture Opportunities Fund, L.P. ("Avenue I") and Avenue Venture Opportunities Fund II, L.P. ("Avenue II" and, together with Avenue I, the "Lenders"), are each Delaware limited partnerships. Avenue Capital Management II, L.P. ("Avenue Capital") is a registered investment adviser and the manager of the Lenders. Avenue Capital has sole voting and dispositive power over all securities of the Company held by the Lenders. The address of Avenue I and Avenue II, and each of its affiliates, is 11 West 42nd Street, 9th Floor, New York, New York 10036.
- (8) Includes 96,049 shares of Common Stock and 140,000 shares of Common Stock issuable upon the exercise of the Lender Warrants. Pursuant to the beneficial ownership limitation set forth in the Lender Warrants, Avenue I is restricted from effecting any exercise of the Lender Warrants which would result in an excess of 9.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock upon such exercise.
- (9) Includes 144,075 shares of Common Stock and 210,000 shares of Common Stock issuable upon the exercise of the Lender Warrants. Pursuant to the beneficial ownership limitation set forth in the Lender Warrants, Avenue II is restricted from effecting any exercise of the Lender Warrants which would result in an excess of 9.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock upon such exercise.

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 Hyperion DeFi, Inc. (formerly known as 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 Hyperion DeFi, Inc. (formerly known as 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.hyperiondefi.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, as amended on April 30, 2025](#);
- [our Quarterly Report on Form 10-Q for the three months ended March 31, 2025 that we filed with the SEC on May 19, 2025](#);
- [our Quarterly Report on Form 10-Q for the three months ended June 30, 2025 that we filed with the SEC on August 13, 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](#), [March 20, 2025](#), [May 2, 2025](#), [May 2, 2025](#), [June 5, 2025](#), [June 24, 2025](#), [June 27, 2025](#), [July 2, 2025](#), [August 21, 2025](#), [September 8, 2025](#) and [September 24, 2025](#) (in all cases, 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:

Hyperion DeFi, 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.hyperiondefi.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 50,770,667 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	\$ 25,303
Legal fees and expenses	\$ 30,000
Accounting fees and expenses	\$ 10,000
Printing and engraving expenses	\$ 5,000
Total	\$ 70,303

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
<u>3.1</u>	<u>Third Amended and Restated Certificate of Incorporation</u>
<u>3.1.1</u>	<u>Certificate of Amendment to the Third Amended and Restated Certificate of Incorporation, dated June 12, 2018</u>
<u>3.1.2</u>	<u>Certificate of Amendment to the Third Amended and Restated Certificate of Incorporation, dated June 12, 2024</u>
<u>3.1.3</u>	<u>Certificate of Amendment to the Third Amended and Restated Certificate of Incorporation, dated January 31, 2025</u>
<u>3.1.4</u>	<u>Certificate of Amendment to the Third Amended and Restated Certificate of Incorporation, dated July 1, 2025</u>
<u>3.1.5</u>	<u>Certificate of Amendment to the Third Amended and Restated Certificate of Incorporation, dated August 20, 2025</u>
<u>3.2</u>	<u>Certificate of Designation of Series A Non-Voting Convertible Preferred Stock</u>
<u>3.3</u>	<u>Second Amended and Restated Bylaws</u>
<u>5.1**</u>	<u>Opinion of Covington & Burling LLP</u>
<u>23.1**</u>	<u>Consent of Covington & Burling LLP (included in Exhibit 5.1)</u>
<u>23.2*</u>	<u>Consent of Marcum LLP</u>
<u>24.1**</u>	<u>Power of attorney (included on signature page)</u>
<u>107**</u>	<u>Filing Fee Table</u>

* Filed herewith.

** Previously filed.

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 September 26, 2025.

HYPERION DEFI, INC.

By: /s/ Hyunsu Jung

Name: Hyunsu Jung

Title: Interim Chief Executive Officer and Director

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/ Hyunsu Jung</u> Hyunsu Jung	Interim Chief Executive Officer, Interim Chief Financial Officer, Chief Investment Officer and Director (Principal Executive, Financial and Accounting Officer)	September 26, 2025
<u>*</u> Michael Geltzeiler	Director	September 26, 2025
<u>*</u> Rachel Jacobson	Director	September 26, 2025
<u>*</u> Michael Rowe	Director	September 26, 2025
<u>*</u> Ellen Strahlman	Director	September 26, 2025
<u>/s/ Happy Walters</u> Happy Walters	Director	September 26, 2025

* /s/ Hyunsu Jung
Attorney-in-Fact

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-3 of our report dated April 15, 2025 with respect to the financial statements of Hyperion DeFi, Inc. (formerly known as Eyenovia, Inc.), for the year ended December 31, 2024 included in the Annual Report on Form 10-K. We also consent to the reference to us under the heading “Experts” in such Registration Statement.

/s/ Marcum LLP

New York, NY
September 26, 2025
