
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

SCHEDULE 13D

Under the Securities Exchange Act of 1934

(Amendment No. 5)*

HYPERION DEFI, INC.

(Name of Issuer)

COMMON STOCK, par value \$0.0001 per share

(Title of Class of Securities)

30234E203

(CUSIP Number)

Andrew Schinder
Avenue Capital Group,, 11 West 42nd Street, 9th Floor
New York, NY, 10036
(212) 878-3520

(Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)

09/12/2025

(Date of Event Which Requires Filing of This Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§ 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box. ☐

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

SCHEDULE 13D

CUSIP No.	30234E203
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1	Name of reporting person Avenue Venture Opportunities Fund, L.P.
2	Check the appropriate box if a member of a Group (See Instructions) ☐ (a) ☐ (b)
3	SEC use only

4	Source of funds (See Instructions) OO	
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) ☐	
6	Citizenship or place of organization DELAWARE	
Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 0.00
	8	Shared Voting Power 0.00
	9	Sole Dispositive Power 0.00
	10	Shared Dispositive Power 0.00
11	Aggregate amount beneficially owned by each reporting person 141,716.00	
12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) ☒	
13	Percent of class represented by amount in Row (11) 2.5 %	
14	Type of Reporting Person (See Instructions) OO	

Comment for Type of Reporting Person: (1) Aggregate amount owned includes 141,716 shares of common stock held directly by Avenue Venture Opportunities Fund II, L.P. ("Fund"), but excludes 140,000 shares of common stock issuable upon exercise of a warrant to purchase shares of Issuer's common stock. Such warrant is exercisable at any time at Fund's option at a per share exercise price of \$4.00. As more fully described in Item 5, aggregate beneficial ownership by the Reporting Persons is limited to a 9.99% blocker, and the aggregate amount beneficially owned in row 11 and the percentage set forth in row 13 give effect to such blocker for each Reporting Person.

(2) Percent of class is based on 5,694,659 shares of Issuer's common stock outstanding as of August 11, 2025, as reported on Issuer's Form 10-Q for the quarter ending June 30, 2025.

SCHEDULE 13D

CUSIP No.	30234E203
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1	Name of reporting person Avenue Venture Opportunities Fund II, L.P.
2	Check the appropriate box if a member of a Group (See Instructions) ☐ (a) ☐ (b)
3	SEC use only
4	Source of funds (See Instructions) OO
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e)

	☐	
6	Citizenship or place of organization DELAWARE	
Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 0.00
	8	Shared Voting Power 0.00
	9	Sole Dispositive Power 0.00
	10	Shared Dispositive Power 0.00
11	Aggregate amount beneficially owned by each reporting person 212,575.00	
12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) ☒	
13	Percent of class represented by amount in Row (11) 3.7 %	
14	Type of Reporting Person (See Instructions) OO	

Comment for Type of Reporting Person: (1) Aggregate amount owned includes 212,575 shares of common stock held directly by Avenue Venture Opportunities Fund II, L.P. ("Fund II"), but excludes 210,000 shares of common stock issuable upon exercise of a warrant to purchase shares of common stock. Such warrant is exercisable at any time at Fund II's option at a per share exercise price of \$4.00. As more fully described in Item 5, aggregate beneficial ownership by the Reporting Persons is limited to a 9.99% blocker, and the aggregate amount beneficially owned in row 11 and the percentage set forth in row 13 give effect to such blocker for each Reporting Person.

(2) Percent of class is based on 5,694,659 shares of Issuer's common stock outstanding as of August 11, 2025, as reported on Issuer's Form 10-Q for the quarter ending June 30, 2025.

SCHEDULE 13D

CUSIP No.	30234E203
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1	Name of reporting person Avenue Capital Management II, L.P.
2	Check the appropriate box if a member of a Group (See Instructions) ☐ (a) ☐ (b)
3	SEC use only
4	Source of funds (See Instructions) OO
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) ☐
6	Citizenship or place of organization DELAWARE

Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 354,291.00
	8	Shared Voting Power 0.00
	9	Sole Dispositive Power 354,291.00
	10	Shared Dispositive Power 0.00
11	Aggregate amount beneficially owned by each reporting person 354,291.00	
12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) ☒	
13	Percent of class represented by amount in Row (11) 6.2 %	
14	Type of Reporting Person (See Instructions) IA	

Comment for Type of Reporting Person: (1) Avenue Capital Management II, L.P. is a registered investment adviser and is the manager ("Manager") of each of Fund I and Fund II, (the "Funds"). The general partner of each of Fund I and Fund II has delegated all management authority to Manager and therefore, Manager has sole voting and dispositive power over all securities of Issuer held by the Funds but disclaims beneficial ownership thereof except to the extent of its pecuniary interest, if any, therein. As more fully described in Item 5, aggregate beneficial ownership by the Reporting Persons is limited to a 9.99% blocker, and the aggregate amount beneficially owned in row 11 and the percentage set forth in row 13 give effect to such blocker for each Reporting Person.

(2) Aggregate amount beneficially owned excludes Warrants to purchase an aggregate of 250,000 shares of common stock held by the Funds.

(3) Percent of class is based on 5,694,659 shares of Common Stock of Issuer outstanding as of August 11, 2025, as reported on Issuer's Form 10-Q for the quarter ending June 30, 2025.

SCHEDULE 13D

CUSIP No.	30234E203
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1	Name of reporting person Avenue Venture Opportunities Partners, LLC
2	Check the appropriate box if a member of a Group (See Instructions) ☐ (a) ☐ (b)
3	SEC use only
4	Source of funds (See Instructions) OO
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) ☐
6	Citizenship or place of organization DELAWARE

Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 0.00
	8	Shared Voting Power 0.00
	9	Sole Dispositive Power 0.00
	10	Shared Dispositive Power 0.00
11	Aggregate amount beneficially owned by each reporting person 141,716.00	
12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) ☐	
13	Percent of class represented by amount in Row (11) 2.5 %	
14	Type of Reporting Person (See Instructions) OO	

Comment for Type of Reporting Person: (1) Avenue Venture Opportunities Partners, LLC ("AVOP") is the general partner of Fund. AVOP has delegated voting and dispositive power over securities held by Fund to Manager and disclaims beneficial ownership of securities held by Fund, except to the extent of its pecuniary interest, if any, therein. As more fully described in Item 5, aggregate beneficial ownership by the Reporting Persons is limited to a 9.99% blocker, and the aggregate amount beneficially owned in row 11 and the percentage set forth in row 13 give effect to such blocker for each Reporting Person.

(2) Percent of class is based on 5,694,659 shares of Issuer's common stock outstanding as of August 11, 2025, as reported on Issuer's Form 10-Q for the quarter ending June 30, 2025.

SCHEDULE 13D

CUSIP No.	30234E203
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1	Name of reporting person Avenue Venture Opportunities Partners II, LLC	
2	Check the appropriate box if a member of a Group (See Instructions) ☐ (a) ☐ (b)	
3	SEC use only	
4	Source of funds (See Instructions) OO	
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) ☐	
6	Citizenship or place of organization DELAWARE	
Number of Shares Beneficially Owned by Each Reporting	7	Sole Voting Power 0.00

Person With:	8	Shared Voting Power 0.00
	9	Sole Dispositive Power 0.00
	10	Shared Dispositive Power 0.00
11	Aggregate amount beneficially owned by each reporting person 212,575.00	
12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) ☐	
13	Percent of class represented by amount in Row (11) 3.7 %	
14	Type of Reporting Person (See Instructions) OO	

Comment for Type of Reporting Person: (1) Avenue Venture Opportunities Partners II, LLC ("AVOPII") is the general partner of Fund II. AVOPII has delegated voting and dispositive power over securities held by Fund II to Manager and disclaims beneficial ownership of securities held by Fund II, except to the extent of its pecuniary interest, if any, therein. As more fully described in Item 5, aggregate beneficial ownership by the Reporting Persons is limited to a 9.99% blocker, and the aggregate amount beneficially owned in row 11 and the percentage set forth in row 13 give effect to such blocker for each Reporting Person.

(2) Percent of class is based on 5,694,659 shares of Issuer's common stock outstanding as of August 11, 2025, as reported on Issuer's Form 10-Q for the quarter ending June 30, 2025.

SCHEDULE 13D

CUSIP No.	30234E203
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1	Name of reporting person GL Venture Opportunities Partners, LLC	
2	Check the appropriate box if a member of a Group (See Instructions) ☐ (a) ☐ (b)	
3	SEC use only	
4	Source of funds (See Instructions) OO	
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) ☐	
6	Citizenship or place of organization DELAWARE	
Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 0.00
	8	Shared Voting Power 0.00
	9	Sole Dispositive Power 0.00

	10	Shared Dispositive Power 0.00
11	Aggregate amount beneficially owned by each reporting person 141,716.00	
12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) ☐	
13	Percent of class represented by amount in Row (11) 2.5 %	
14	Type of Reporting Person (See Instructions) OO	

Comment for Type of Reporting Person: (1) GL Venture Opportunities Partners, LLC ("GLVOP") is the managing member of AVOP, the general partner of Fund. GL VOP has no voting or dispositive power over securities held by Fund and disclaims beneficial ownership of securities held by Fund, except to the extent of its pecuniary interest, if any, therein. As more fully described in Item 5, aggregate beneficial ownership by the Reporting Persons is limited to a 9.99% blocker, and the aggregate amount beneficially owned in row 11 and the percentage set forth in row 13 give effect to such blocker for each Reporting Person.

(2) Percent of class is based on 5,694,659 shares of Issuer's common stock outstanding as of August 11, 2025, as reported on Issuer's Form 10-Q for the quarter ending June 30, 2025.

SCHEDULE 13D

CUSIP No.	30234E203
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1	Name of reporting person GL Venture Opportunities Partners II, LLC	
2	Check the appropriate box if a member of a Group (See Instructions) ☐ (a) ☐ (b)	
3	SEC use only	
4	Source of funds (See Instructions) OO	
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) ☐	
6	Citizenship or place of organization DELAWARE	
Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 0.00
	8	Shared Voting Power 0.00
	9	Sole Dispositive Power 0.00
	10	Shared Dispositive Power 0.00

11	Aggregate amount beneficially owned by each reporting person 212,575.00
12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) ☐
13	Percent of class represented by amount in Row (11) 3.7 %
14	Type of Reporting Person (See Instructions) OO

Comment for Type of Reporting Person: (1) GL Venture Opportunities Partners II, LLC ("GLVOPII") is the managing member of AVOPII, the general partner of Fund II. GLVOPII has no voting or dispositive power over securities held by Fund II and disclaims beneficial ownership of securities held by Fund II, except to the extent of its pecuniary interest, if any, therein. As more fully described in Item 5, aggregate beneficial ownership by the Reporting Persons is limited to a 9.99% blocker, and the aggregate amount beneficially owned in row 11 and the percentage set forth in row 13 give effect to such blocker for each Reporting Person.

(2) Percent of class is based on 5,694,659 shares of Issuer's common stock outstanding as of August 11, 2025, as reported on Issuer's Form 10-Q for the quarter ending June 30, 2025.

SCHEDULE 13D

CUSIP No.	30234E203
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1	Name of reporting person Marc Lasry	
2	Check the appropriate box if a member of a Group (See Instructions) ☐ (a) ☐ (b)	
3	SEC use only	
4	Source of funds (See Instructions) OO	
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) ☐	
6	Citizenship or place of organization UNITED STATES	
Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 0.00
	8	Shared Voting Power 0.00
	9	Sole Dispositive Power 0.00
	10	Shared Dispositive Power 0.00
11	Aggregate amount beneficially owned by each reporting person 354,291.00	

12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) ☐
13	Percent of class represented by amount in Row (11) 6.2 %
14	Type of Reporting Person (See Instructions) IN

Comment for Type of Reporting Person: (1) Marc Lasry is the beneficial owner of GLVOP and GLVOP II and therefore is the ultimate beneficial owner of the Funds. Mr. Lasry does not have voting or dispositive power over securities held by the Funds. As more fully described in Item 5, aggregate beneficial ownership by the Reporting Persons is limited to a 9.99% blocker, and the aggregate amount beneficially owned in row 11 and the percentage set forth in row 13 give effect to such blocker for each Reporting Person.

(2) Percent of class is based on 5,694,659 shares of Issuer's common stock outstanding as of August 11, 2025, as reported on Issuer's Form 10-Q for the quarter ending June 30, 2025.

SCHEDULE 13D

Item 1. Security and Issuer

- (a) **Title of Class of Securities:**
COMMON STOCK, par value \$0.0001 per share
- (b) **Name of Issuer:**
HYPERION DEFI, INC.
- (c) **Address of Issuer's Principal Executive Offices:**
23461 South Pointe Drive, Suite 390, Laguna Hills, CALIFORNIA , 92653.

Item 1 Comment: This Amendment No. 5 (this "Amendment") amends the Schedule 13D, filed with the Securities and Exchange Commission (the "SEC") on May 15, 2025, as amended by Amendment No. 1, filed with the SEC on June 3, 2025, Amendment No. 2, filed with the SEC on June 13, 2025, Amendment No. 3, filed with the SEC on June 20, 2025, and Amendment No. 4, filed with the SEC on July 2, 2025 (collectively, the "Schedule 13D"), by the Reporting Persons with respect to the common stock, par value \$0.0001 per share (the "Common Stock"), of Hyperion DeFi, Inc. ("Issuer").

Only those items that are hereby reported are amended; all other items in the Schedule 13D remain unchanged. Information given in response to each item shall be deemed incorporated by reference, as applicable. Capitalized terms not defined in this Amendment have the meanings ascribed to them in the Schedule 13D.

Item 2. Identity and Background

- (a) The information set forth in Item 2(a) of the Schedule 13D is incorporated by reference. The Reporting Persons expressly disclaim status as a "group" for purposes of this Amendment. The agreement among the Reporting Persons to file jointly in accordance with the provisions of Rule 13d-1(k)(1) under the Act is attached to the Schedule 13D as Exhibit 99.1 thereto. Other than those securities reported herein as being held directly by such Reporting Person, each Reporting Person disclaims beneficial ownership of all securities reported in this Amendment except to the extent of such Reporting Person's pecuniary interest, if any, therein.
- (b) The information set forth in Item 2(b) of the Schedule 13D is incorporated by reference.
- (c) The information set forth in Item 2(c) of the Schedule 13D is incorporated by reference.
- (d) The information set forth in Item 2(d) of the Schedule 13D is incorporated by reference.
- (e) The information set forth in Item 2(e) of the Schedule 13D is incorporated by reference.
- (f) The information set forth in Item 2(f) of the Schedule 13D is incorporated by reference.

Item 3. Source and Amount of Funds or Other Consideration

The information set forth in Item 3 of the Schedule 13D is incorporated herein by reference.

Item 4. Purpose of Transaction

(a) - (c) The information set forth in Item 4 of the Schedule 13D is incorporated by reference. This Amendment is being filed to report a change in Reporting Persons' beneficial ownership due to an increase in Issuer's outstanding shares of Common Stock.

Item 5. Interest in Securities of the Issuer

- (a) See Items 7-11 and Item 13 of the cover page for each Reporting Person. The Reporting Persons are subject to a blocker that limits their beneficial ownership to 9.99% of the outstanding shares of Common Stock of the Issuer (the "Blocker"). The aggregate beneficial ownership by each Reporting Person gives effect to the Blocker and therefore excludes shares of common stock issuable upon exercise of the Blocker.

rcise of the Warrants. The Blocker of 9.99% may be changed to up to 19.99% at the Reporting Persons' election upon at least 61 day s' notice to the Issuer.

- (b) See Items 7 through 11 of the cover page for each Reporting Person.
- (c) Not applicable.
- (d) The information set for in Item 5(d) of the Schedule 13D is incorporated by reference.
- (e) See Item 4.

Item 6. Contracts, Arrangements, Understandings or Relationships With Respect to Securities of the Issuer

The information set forth in Item 6 of the Schedule 13D is incorporated herein by reference.

Item 7. Material to be Filed as Exhibits.

Exhibit 99.1: Joint Filing Agreement by and among the Reporting Persons (filed as Exhibit 99.1 to Schedule 13D on May 15, 2025).
https://www.sec.gov/Archives/edgar/data/1682639/000182912625003724/avenueventure_ex99-1.htm

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Avenue Venture Opportunities Fund, L.P.

Signature: /s/ Andrew Schinder
Name/Title: Andrew Schinder POA for Marc Lasry, Member, GL Venture Opportunities Partners LLC, Man. Member Avenue Venture Opportunities Partners LLC, Gen. Ptnr.
Date: 09/17/2025

Avenue Venture Opportunities Fund II, L.P.

Signature: /s/ Andrew Schinder
Name/Title: Andrew Schinder POA for Marc Lasry, Member GL Venture Opportunities Partners II LLC, Man. Mbr Avenue Venture Opportunities Partners II LLC, Gen. Ptnr.
Date: 09/17/2025

Avenue Capital Management II, L.P.

Signature: /s/ Andrew Schinder
Name/Title: Andrew Schinder POA for Marc Lasry, Member of Avenue Capital Management II GenPar, LLC, General Partner
Date: 09/17/2025

Avenue Venture Opportunities Partners, LLC

Signature: /s/ Andrew Schinder
Name/Title: Andrew Schinder POA for Marc Lasry, Member of GL Venture Opportunities Partners, LLC, Managing Member
Date: 09/17/2025

Avenue Venture Opportunities Partners II, LLC

Signature: /s/ Andrew Schinder
Name/Title: Andrew Schinder POA for Marc Lasry, Member of GL Venture Opportunities Partners II, LLC, Managing Member
Date: 09/17/2025

GL Venture Opportunities Partners, LLC

Signature: /s/ Andrew Schinder

Name/Title: Andrew Schinder POA for Marc Lasry, Member
Date: 09/17/2025

GL Venture Opportunities Partners II, LLC

Signature: /s/ Andrew Schinder
Name/Title: Andrew Schinder POA for Marc Lasry, Member
Date: 09/17/2025

Marc Lasry

Signature: /s/ Andrew Schinder
Name/Title: Andrew Schinder POA for Marc Lasry
Date: 09/17/2025