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

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**SCHEDULE 13D**

**Under the Securities Exchange Act of 1934  
(Amendment No. 1)\***

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**IsoPlexis Corporation**  
(Name of Issuer)

**Common stock, par value \$0.001 per share**  
(Title of Class of Securities)

**465005106**  
(CUSIP Number)

**Paul Hodgdon**  
c/o Northpond Ventures, LLC  
7500 Old Georgetown Road, Suite 850  
Bethesda, MD 20814  
240-800-1200

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

**December 21, 2022**  
(Date of Event which Requires Filing of this Statement)

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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.

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**Note:** Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See §240.13d-7 for other parties to whom copies are to be sent.

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\* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

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, as amended (the "Exchange 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).

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|--|--|---|
| 1.   | Names of Reporting Persons.<br>Northpond Ventures, LP  |   |
| 2.   | Check the Appropriate Box if a Member of a Group (See Instructions)<br><br>(a) <input type="checkbox"/> (b) <input type="checkbox"/> |   |
| 3.   | SEC Use Only   |   |
| 4.   | Source of Funds (See Instructions)<br><br>OO   |   |
| 5.   | Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e)<br><br><input type="checkbox"/>                  |   |
| 6.   | Citizenship or Place of Organization<br><br>Delaware   |   |
| Number of shares beneficially owned by each reporting person with: | 7.   | Sole Voting Power<br><br>0                |
|  | 8.   | Shared Voting Power<br><br>6,727,570      |
|  | 9.   | Sole Dispositive Power<br><br>0           |
|  | 10.  | Shared Dispositive Power<br><br>6,727,570 |
| 11.  | Aggregate Amount Beneficially Owned by Each Reporting Person<br><br>6,727,570  |   |
| 12.  | Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions)<br><br><input type="checkbox"/>                 |   |
| 13.  | Percent of Class Represented by Amount in Row (11)<br><br>17.0%(1)   |   |
| 14.  | Type of Reporting Person (See Instructions)<br><br>PN  |   |

(1) Based on 39,575,989 shares of Common Stock reported to be outstanding by the Issuer on the Form 10-Q filed with the Securities and Exchange Commission on November 10, 2022.

|  |  |   |
|--|--|---|
| 1.   | Names of Reporting Persons.<br>Northpond Ventures GP, LLC  |   |
| 2.   | Check the Appropriate Box if a Member of a Group (See Instructions)<br><br>(a) <input type="checkbox"/> (b) <input type="checkbox"/> |   |
| 3.   | SEC Use Only   |   |
| 4.   | Source of Funds (See Instructions)<br><br>OO   |   |
| 5.   | Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e)<br><br><input type="checkbox"/>                  |   |
| 6.   | Citizenship or Place of Organization<br><br>Delaware   |   |
| Number of shares beneficially owned by each reporting person with: | 7.   | Sole Voting Power<br><br>0                |
|  | 8.   | Shared Voting Power<br><br>6,727,570      |
|  | 9.   | Sole Dispositive Power<br><br>0           |
|  | 10.  | Shared Dispositive Power<br><br>6,727,570 |
| 11.  | Aggregate Amount Beneficially Owned by Each Reporting Person<br><br>6,727,570  |   |
| 12.  | Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions)<br><br><input type="checkbox"/>                 |   |
| 13.  | Percent of Class Represented by Amount in Row (11)<br><br>17.0%(1)   |   |
| 14.  | Type of Reporting Person (See Instructions)<br><br>OO  |   |

(1) Based on 39,575,989 shares of Common Stock reported to be outstanding by the Issuer on the Form 10-Q filed with the Securities and Exchange Commission on November 10, 2022.

|  |  |   |
|--|--|---|
| 1.   | Names of Reporting Persons.<br>Northpond Capital, LP   |   |
| 2.   | Check the Appropriate Box if a Member of a Group (See Instructions)<br><br>(a) <input type="checkbox"/> (b) <input type="checkbox"/> |   |
| 3.   | SEC Use Only   |   |
| 4.   | Source of Funds (See Instructions)<br><br>OO   |   |
| 5.   | Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e)<br><br><input type="checkbox"/>                  |   |
| 6.   | Citizenship or Place of Organization<br><br>Delaware   |   |
| Number of shares beneficially owned by each reporting person with: | 7.   | Sole Voting Power<br><br>0                |
|  | 8.   | Shared Voting Power<br><br>2,080,961      |
|  | 9.   | Sole Dispositive Power<br><br>0           |
|  | 10.  | Shared Dispositive Power<br><br>2,080,961 |
| 11.  | Aggregate Amount Beneficially Owned by Each Reporting Person<br><br>2,080,961  |   |
| 12.  | Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions)<br><br><input type="checkbox"/>                 |   |
| 13.  | Percent of Class Represented by Amount in Row (11)<br><br>5.3%(1)  |   |
| 14.  | Type of Reporting Person (See Instructions)<br><br>PN  |   |

(1) Based on 39,575,989 shares of Common Stock reported to be outstanding by the Issuer on the Form 10-Q filed with the Securities and Exchange Commission on November 10, 2022.

|  |  |   |
|--|--|---|
| 1.   | Names of Reporting Persons.<br>Northpond Capital GP, LLC   |   |
| 2.   | Check the Appropriate Box if a Member of a Group (See Instructions)<br><br>(a) <input type="checkbox"/> (b) <input type="checkbox"/> |   |
| 3.   | SEC Use Only   |   |
| 4.   | Source of Funds (See Instructions)<br><br>OO   |   |
| 5.   | Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e)<br><br><input type="checkbox"/>                  |   |
| 6.   | Citizenship or Place of Organization<br><br>Delaware   |   |
| Number of shares beneficially owned by each reporting person with: | 7.   | Sole Voting Power<br><br>0                |
|  | 8.   | Shared Voting Power<br><br>2,080,961      |
|  | 9.   | Sole Dispositive Power<br><br>0           |
|  | 10.  | Shared Dispositive Power<br><br>2,080,961 |
| 11.  | Aggregate Amount Beneficially Owned by Each Reporting Person<br><br>2,080,961  |   |
| 12.  | Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions)<br><br><input type="checkbox"/>                 |   |
| 13.  | Percent of Class Represented by Amount in Row (11)<br><br>5.3%(1)  |   |
| 14.  | Type of Reporting Person (See Instructions)<br><br>OO  |   |

(1) Based on 39,575,989 shares of Common Stock reported to be outstanding by the Issuer on the Form 10-Q filed with the Securities and Exchange Commission on November 10, 2022.

|  |  |   |
|--|--|---|
| 1.   | Names of Reporting Persons.<br>Michael P. Rubin  |   |
| 2.   | Check the Appropriate Box if a Member of a Group (See Instructions)<br><br>(a) <input type="checkbox"/> (b) <input type="checkbox"/> |   |
| 3.   | SEC Use Only   |   |
| 4.   | Source of Funds (See Instructions)<br><br>OO   |   |
| 5.   | Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e)<br><br><input type="checkbox"/>                  |   |
| 6.   | Citizenship or Place of Organization<br><br>United States  |   |
| Number of shares beneficially owned by each reporting person with: | 7.   | Sole Voting Power<br><br>0                |
|  | 8.   | Shared Voting Power<br><br>8,808,531      |
|  | 9.   | Sole Dispositive Power<br><br>0           |
|  | 10.  | Shared Dispositive Power<br><br>8,808,531 |
| 11.  | Aggregate Amount Beneficially Owned by Each Reporting Person<br><br>8,808,531  |   |
| 12.  | Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions)<br><br><input type="checkbox"/>                 |   |
| 13.  | Percent of Class Represented by Amount in Row (11)<br><br>22.3%(1)   |   |
| 14.  | Type of Reporting Person (See Instructions)<br><br>IN  |   |

(1) Based on 39,575,989 shares of Common Stock reported to be outstanding by the Issuer on the Form 10-Q filed with the Securities and Exchange Commission on November 10, 2022.

**Item 1. Security and Issuer.**

This Amendment No. 1 to Schedule 13D amends and supplements statements on Schedule 13D filed on October 12, 2021 (the “Initial Statement”) with respect to the shares of Common Stock, \$.0001 par value (the “Common Stock”) of IsoPlexis Corporation, a Delaware corporation (the “Issuer” or “IsoPlexis”) having its principal executive office at 35 NE Industrial Rd., Branford, CT 06405. Each Item below amends and supplements the information disclosed under the corresponding Item of the Initial Statement. Unless otherwise indicated herein, capitalized terms used but not defined in this Amendment No. 1 shall have the same meaning herein as are ascribed to such terms in the Initial Statement. Except as set forth in this Amendment No. 1, the information contained in the Schedule 13D has not been updated or amended.

**Item 2. Identity and Background.**

There are no amendments to Item 2 of the Initial Statement.

**Item 3. Source and Amount of Funds or Other Consideration.**

There are no amendments to Item 3 of the Initial Statement.

**Item 4. Purpose of Transaction.**

Item 4 of the Initial Statement is hereby amended and supplemented as follows:

*Agreement and Plan of Merger*

On December 21, 2022, IsoPlexis entered into an Agreement and Plan of Merger (the “Merger Agreement”) with Berkeley Lights, Inc., a Delaware corporation (“Berkeley Lights”), and Iceland Merger Sub Inc., a Delaware corporation and a wholly owned subsidiary of Berkeley Lights (“Merger Sub”), pursuant to which, upon the terms and subject to the conditions set forth in the Merger Agreement and in accordance with the Delaware General Corporation Law, Merger Sub will be merged with and into IsoPlexis (the “Merger”), with IsoPlexis surviving the Merger as a wholly owned subsidiary of Berkeley Lights.

Pursuant to the Merger Agreement, at the effective time of the Merger (the “Effective Time”), each share of Common Stock issued and outstanding immediately prior to the Effective Time (other than shares of Common Stock owned (i) by IsoPlexis as treasury stock, (ii) by Berkeley Lights or Merger Sub (unless owned by Berkeley Lights or Merger Sub in a fiduciary, representative or other capacity on behalf of other persons) or (iii) by any wholly owned subsidiary of IsoPlexis or Berkeley Lights (other than Merger Sub and unless held in a fiduciary, representative or other capacity on behalf of other persons)) will be converted into the right to receive 0.6120 fully paid and nonassessable shares (the “Exchange Ratio”) of common stock, par value \$0.00005, of Berkeley Lights (“Berkeley Lights Common Stock”) (the “Merger Consideration”), together with cash in lieu of fractional shares of Berkeley Lights Common Stock, if any, and any unpaid dividends or other distributions. It is expected that the Merger will qualify as a tax-free reorganization for U.S. federal income tax purposes.

The foregoing description of the Merger Agreement does not purport to be complete and is qualified in its entirety by reference to the full text of the Merger Agreement, a copy of which is attached hereto as Exhibit B and incorporated herein by reference.

### *IsoPlexis Voting Agreement*

On December 21, 2022, concurrently with the execution of the Merger Agreement, Berkeley Lights, Merger Sub and IsoPlexis entered into a voting agreement (the "IsoPlexis Voting Agreement") with each of Brian Paul Miller, Brian P Miller and Giovanna R Miller, JTWROS, Connecticut Innovations, Incorporated, Northpond Capital, LP, Northpond Ventures, LP, North Sound Trading, LP, PCOF EQ AIV III, LP, Perceptive Credit Holdings III, LP, Perceptive Life Sciences Master Fund, Ltd., SMC Growth Capital Partners II, LP, SMC Holdings II, LP, SMC Private Equity Holdings, LP, Sean Mackay, The Miller Family 2011 Trust and Rong Fan (collectively, the "Specified IsoPlexis Stockholders"), pursuant to which, among other things, each Specified IsoPlexis Stockholder has (i) agreed to vote (or cause to be voted) all of its Common Stock (collectively, the "Covered Shares") in favor of, among other things, the adoption of the Merger Agreement and the approval of the transactions contemplated by the Merger Agreement and against alternative transactions and (ii) agreed, subject to certain exceptions, not to transfer its Covered Shares during the term of the IsoPlexis Voting Agreement; provided, that in the event that the board of directors of IsoPlexis changes its recommendation that IsoPlexis stockholders adopt the Merger Agreement, the aggregate number of Covered Shares will automatically be reduced on a pro rata basis so that the Covered Shares shall collectively only constitute 30% of the outstanding shares of Common Stock.

The IsoPlexis Voting Agreement will terminate upon the earliest to occur of (i) the Effective Time; (ii) the termination of the Merger Agreement in accordance with its terms or (iii) the date on which any amendment to the Merger Agreement is effected, or any waiver of IsoPlexis' rights under the Merger Agreement is granted, in each case, without the Specified IsoPlexis Stockholders' prior written consent, that (A) diminishes the Merger Consideration to be received by the stockholders of IsoPlexis, (B) changes the form of Merger Consideration payable to the stockholders of IsoPlexis, (C) extends the End Date or imposes any additional conditions to the consummation of the Merger or (D) affects any of the other material terms of certain specified provisions of the Merger Agreement in a manner that is materially adverse to any of the Specified IsoPlexis Stockholders in their capacity as such.

The foregoing description of the IsoPlexis Voting Agreement does not purport to be complete and is qualified in its entirety by reference to the full text of the IsoPlexis Voting Agreement, a copy of which is attached hereto as Exhibit C and is incorporated herein by reference.

### **Item 5. Interest in Securities of the Issuer.**

Item 5 of the Initial Statement is hereby amended and replaced in its entirety as follows:

The information contained in rows 7, 8, 9, 10, 11 and 13 on each of the cover pages of this Schedule 13D and the information set forth or incorporated in Items 2, 3 and 6 is incorporated by reference in its entirety into this Item 5.

(a) and (b)

Percentages set forth in this Amendment No. 1 were calculated based on 39,575,989 shares of Common Stock reported to be outstanding by the Issuer on the Form 10-Q filed with the Securities and Exchange Commission on November 10, 2022.

As of the date hereof, Northpond LP owns directly (and therefore is deemed the beneficial owner of) 6,727,570 shares of Common Stock, which represents approximately 17.0% of the number of shares of Common Stock outstanding. Northpond LP has the shared power to vote, or direct the voting of, and the shared power to dispose of, or direct the disposition of, the Common Stock held by it.

As the general partner of Northpond LP, Northpond GP may be deemed to be the indirect beneficial owner of the 6,727,570 shares of Common Stock beneficially owned by Northpond LP, which represents approximately 17.0% of the number of shares of Common Stock outstanding. Northpond GP has the shared power to vote, or direct the voting of, and the shared power to dispose of, or direct the disposition of, the Common Stock held by Northpond LP.

As of the date hereof, Northpond Capital owns directly (and therefore is deemed the beneficial owner of) 2,080,961 shares of Common Stock, which represents approximately 5.3% of the number of shares of Common Stock outstanding. Northpond Capital has the shared power to vote, or direct the voting of, and the shared power to dispose of, or direct the disposition of, the Common Stock held by it.

As the general partner of Northpond Capital, Northpond Capital GP may be deemed to be the indirect beneficial owner of the 2,080,961 shares of Common Stock beneficially owned by Northpond Capital LP, which represents approximately 5.3% of the number of shares of Common Stock outstanding. Northpond Capital GP has the shared power to vote, or direct the voting of, and the shared power to dispose of, or direct the disposition of, the Common Stock held by Northpond Capital LP.



Mr. Rubin is the sole managing member of each of Northpond GP and Northpond Capital GP. As a result of the foregoing relationships, Mr. Rubin may be deemed to be the indirect beneficial owner of the 8,808,531 shares of Common Stock beneficially owned by Northpond LP and Northpond Capital LP, which represents approximately 22.3% of the number of shares of Common Stock outstanding. Mr. Rubin has the shared power to vote, or direct the voting of, and the shared power to dispose of, or direct the disposition of, the Common Stock held by Northpond LP and Northpond Capital LP.

Each Reporting Person disclaims beneficial ownership of the securities reported herein except to the extent of his or its pecuniary interest therein.

(c) Except as set forth in this Schedule 13D, none of the Reporting Persons have effected any transaction with respect to the Common Stock during the past 60 days.

(d) Except as set forth in this Schedule 13D, no person, other than the Reporting Persons, has the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, the Common Stock referred to in this Item 5. The limited partners of Northpond LP and Northpond Capital LP have the right to receive from Northpond LP and Northpond Capital LP, respectively, dividends that it receives from, or the proceeds that it receives from the sale of, the Common Stock referred to in this Item 5.

(e) Not applicable.

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

The information set forth or incorporated in Items 3, 4 and 5 are incorporated by reference in its entirety into this Item 6.

**Item 7. Material to Be Filed as Exhibits.**

**A. [Joint Filing Agreement by and among the Reporting Persons.](#)**

- B. Agreement and Plan of Merger, dated as of December 21, 2022, by and among IsoPlexis Corporation, Berkeley Lights, Inc. and Iceland Merger Sub Inc. (incorporated by reference to Exhibit 2.1 of the Issuer's Current Report on [Form 8-K](#) (File No. 001-40894) filed with the Commission on December 21, 2022).
- C. Voting Agreement, dated as of December 21, 2022, by and among Berkeley Lights, Inc., Iceland Merger Sub Inc., IsoPlexis Corporation and the stockholders party thereto (incorporated by reference to Exhibit 10.1 of the Issuer's Current Report on [Form 8-K](#) (File No. 001-40894) filed with the Commission on December 21, 2022).

**Signatures**

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

Dated: December 21, 2022

**Northpond Ventures, LP**

By: Northpond Ventures GP, LLC, its general partner

By: /s/ Patrick Smerkers

Name: Patrick Smerkers

Title: Chief Financial Officer

**Northpond Ventures GP, LLC**

By: /s/ Patrick Smerkers

Name: Patrick Smerkers

Title: Chief Financial Officer

**Northpond Capital, LP**

By: Northpond Capital GP, LLC, its general partner

By: /s/ Patrick Smerkers

Name: Patrick Smerkers

Title: Chief Financial Officer

**Northpond Capital GP, LLC**

By: /s/ Patrick Smerkers

Name: Patrick Smerkers

Title: Chief Financial Officer

By /s/ Michael P. Rubin

Name: Michael P. Rubin

**Joint Filing Agreement**

In accordance with Rule 13d-1(k)(1) promulgated under the Securities Exchange Act of 1934, as amended, the undersigned hereby agree that they are jointly filing this statement on Schedule 13D. Each of them is responsible for the timely filing of such statement and any amendments thereto, and for the completeness and accuracy of the information concerning such person contained therein; but none of them is responsible for the completeness or accuracy of the information concerning the other persons making the filing, unless such person knows or has reason to believe that such information is inaccurate.

IN WITNESS WHEREOF, the undersigned hereby execute this Joint Filing Agreement as of the 21st day of December, 2022.

**Northpond Ventures, LP**

By: Northpond Ventures GP, LLC, its general partner

By: /s/ Patrick Smerkers

Name: Patrick Smerkers

Title: Chief Financial Officer

**Northpond Ventures GP, LLC**

By: /s/ Patrick Smerkers

Name: Patrick Smerkers

Title: Chief Financial Officer

**Northpond Capital, LP**

By: Northpond Capital GP, LLC, its general partner

By: /s/ Patrick Smerkers

Name: Patrick Smerkers

Title: Chief Financial Officer

**Northpond Capital GP, LLC**

By: /s/ Patrick Smerkers

Name: Patrick Smerkers

Title: Chief Financial Officer

By: /s/ Michael P. Rubin

Name: Michael P. Rubin