
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

SCHEDULE 13D

**Under the Securities Exchange Act of 1934
(Amendment ____)***

Lyra Therapeutics, Inc.

(Name of Issuer)

Common Stock, \$0.001 par value
(Title of Class of Securities)

55234L 105
(CUSIP Number)

Alexander Rakitin
Perceptive Advisors LLC
51 Astor Place, 10th Floor
New York, NY 10003
(646) 205-5340

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

May 5, 2020
(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.

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

* 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 ("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).

1.	Names of Reporting Persons. Perceptive Advisors LLC	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3.	SEC Use Only	
4.	Source of Funds (See Instructions) AF	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6.	Citizenship or Place of Organization Delaware	
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 0
	8.	Shared Voting Power 3,222,561
	9.	Sole Dispositive Power 0
	10.	Shared Dispositive Power 3,222,561
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 3,222,561	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
13.	Percent of Class Represented by Amount in Row (11) 24.9%	
14.	Type of Reporting Person (See Instructions) IA	

1.	Names of Reporting Persons. Joseph Edelman	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3.	SEC Use Only	
4.	Source of Funds (See Instructions) AF	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6.	Citizenship or Place of Organization United States of America	
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 0
	8.	Shared Voting Power 3,222,561
	9.	Sole Dispositive Power 0
	10.	Shared Dispositive Power 3,222,561
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 3,222,561	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
13.	Percent of Class Represented by Amount in Row (11) 24.9%	
14.	Type of Reporting Person (See Instructions) IN	

1.	Names of Reporting Persons. Perceptive Life Sciences Master Fund, Ltd.	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3.	SEC Use Only	
4.	Source of Funds (See Instructions) WC	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6.	Citizenship or Place of Organization Cayman Islands	
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 0
	8.	Shared Voting Power 1,934,115
	9.	Sole Dispositive Power 0
	10.	Shared Dispositive Power 1,934,115
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 1,934,115	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
13.	Percent of Class Represented by Amount in Row (11) 14.96%	
14.	Type of Reporting Person (See Instructions) CO	

1.	Names of Reporting Persons. Perceptive LS (A), LLC	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3.	SEC Use Only	
4.	Source of Funds (See Instructions) WC	
5.	Check if Disclosure of Legal Proceedings Is Required Pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6.	Citizenship or Place of Organization Cayman Islands	
Number of Shares Beneficially Owned by Each Reporting Person With	7.	Sole Voting Power 0
	8.	Shared Voting Power 1,288,446
	9.	Sole Dispositive Power 0
	10.	Shared Dispositive Power 1,288,446
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 1,288,446	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
13.	Percent of Class Represented by Amount in Row (11) 9.97%	
14.	Type of Reporting Person (See Instructions) CO	

Item 1. Security and Issuer

This Schedule 13D relates to the shares of common stock, \$0.001 par value per share ("Common Stock"), of Lyra Therapeutics, Inc., a Delaware corporation (the "Issuer"), which has its principal executive offices at 480 Arsenal Way, Watertown, MA 02472.

Item 2. Identity and Background

- (a) This Schedule 13D is being filed by Perceptive Advisors LLC ("Perceptive Advisors"), Joseph Edelman ("Mr. Edelman"), Perceptive Life Sciences Master Fund, Ltd. (the "Master Fund"), and Perceptive LS (A), LLC ("Perceptive LS"), and together with Perceptive Advisors, Mr. Edelman, and the Master Fund, each of the foregoing, a "Reporting Person," and collectively, the "Reporting Persons"). Perceptive LS GP, LLC ("GP") is the manager of Perceptive LS. Perceptive Advisors serves as the investment advisor to the Master Fund, and Mr. Edelman is the managing member of Perceptive Advisors and the sole member of GP. The agreement among the Reporting Persons to file this Schedule 13D jointly in accordance with Rule 13d-1(k) of the Securities Exchange Act of 1934, as amended, is attached hereto as Exhibit 1.
- (b) The address of the principal business office of each of the Reporting Persons is 51 Astor Place 10th Floor, New York, NY 10003.
- (c) The principal business of Perceptive Advisors is purchasing, holding and selling securities for investment purposes. The principal business of the Master Fund and Perceptive LS is to invest in securities. The principal occupation of Mr. Edelman is as the managing member of Perceptive Advisors.
- (d) During the last five years, none of the Reporting Persons, nor to the Reporting Persons' knowledge, any of the persons listed in Schedule A, has been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors).
- (e) During the last five years, none of the Reporting Persons, nor to the Reporting Persons' knowledge, any of the persons listed in Schedule A, has been a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to a judgment, decree of final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.
- (f) Perceptive Advisors is a Delaware limited liability company. Mr. Edelman is a United States citizen. The Master Fund is a Cayman Islands corporation. Perceptive LS is a Delaware limited liability company.

Schedule A attached hereto sets forth the information regarding the directors of the Master Fund.

Item 3. Source and Amount of Funds or Other Consideration

The Reporting Persons acquired beneficial ownership of the shares of the Common Stock in the transactions and at the prices described in Item 5(c). The source of the funds for acquiring these shares was the working capital of the Master Fund and Perceptive LS.

Item 4. Purpose of Transaction

The Reporting Persons acquired the shares of Common Stock set forth in Item 5(c) and hold their shares of Common Stock for investment purposes. Michael Altman and Konstantin Poukalov are directors of the Issuer. Each of Messrs. Altman and Poukalov are Managing Directors at Perceptive Advisors.

Each Reporting Person expects to continuously review such person's investment in the Issuer and, depending on various factors including but not limited to, the price of the shares of Common Stock, the terms and conditions of the transaction, prevailing market conditions and such other considerations as such Reporting Person deems relevant, may at any time or from time to time, and subject to any required regulatory approvals, acquire additional shares of Common Stock, preferred stock or other securities convertible into or exercisable or exchangeable for Common Stock from time to time on the open market, in privately- negotiated transactions, directly from the Issuer, or upon the exercise or conversion of securities convertible into or exercisable or exchangeable for Common Stock.

Each Reporting Person also may, at any time, subject to compliance with applicable securities laws and regulatory requirements dispose or distribute some or all of its of his Common Stock or such other securities as it or he owns or may subsequently acquire depending on various factors, including but not limited to, the price of the shares, the terms and conditions of the transaction and prevailing market conditions, as well as the liquidity and diversification objectives.

Consistent with their investment intent, each Reporting Person may from time to time discuss with the Issuer's management, directors, other shareholders and others, the Issuer's performance, business, strategic direction, capital structure, product development program, prospects and management, as well as various ways of maximizing stockholder value, which may or may not include extraordinary transactions.

Except as indicated herein, no Reporting Person, as a stockholder of the Issuer, has any plans or proposals that relates or would result in any of the transactions or other matters specified in clauses (a) through (j) of Item 4 of Schedule 13D. Each Reporting Person may, at any time and from time to time, review or reconsider its or his position and/or change its or his purpose and/or formulate plans or proposals with respect thereto.

Item 5. Interest in Securities of the Issuer

- (a) The information set forth in rows 11 and 13 of the cover pages to this Schedule 13D is incorporated by reference. The percentage set forth in row 13 is based on 12,924,563 outstanding shares of Common Stock, as reported by the Issuer in its Form 10-Q filed with the Securities and Exchange Commission on May 28, 2020.
- (b) The information set forth in rows 7 through 10 of the cover pages to this Schedule 13D is incorporated by reference.
- (c) Schedule B sets forth all transactions with respect to the shares of Common Stock effected during the past sixty days by any Reporting Person.
- (d) No person (other than the Reporting Persons) is known to have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, the shares of Common Stock subject to this Schedule 13D.
- (e) Not applicable.

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

Investor Rights Agreement

The Master Fund and Perceptive LS and certain of the Issuer's other investors have entered into an Investors' Rights Agreement, dated January 10, 2020 with the Issuer (the "Rights Agreement"). After the closing of the Issuer's initial public offering, the stockholders party to the Rights Agreement are entitled to certain registration rights, including the right to demand that the Issuer file a registration statement or request that their shares be covered by a registration statement that the Issuer is otherwise filing.

Lock-up Agreement

In connection with the Issuer's initial public offering, the Master Fund and Perceptive LS entered into a lock-up agreement (the "Lock-up Agreement") with the representatives of the several underwriters. Pursuant to the Lock-up Agreement, the Master Fund and Perceptive LS, subject to certain exceptions, agreed not to sell or otherwise transfer any shares of Common Stock or securities convertible into, exchangeable for or exercisable for Common Stock, for 180 days after the date of the prospectus relating to the initial public offering without the prior consent of the representatives.

The foregoing summaries of the Rights Agreement and Lock-up Agreement do not purport to be complete and are qualified in their entirety by reference to the Rights Agreement and the Lock-up Agreement, each of which is filed as an exhibit hereto and incorporated by reference herein.

Item 7. Material to be Filed as Exhibits

- Exhibit 1 Joint Filing Agreement
- Exhibit 2 Eight Amended and Restated Investor Rights Agreement, dated January 10, 2020 (incorporated by reference to Exhibit 4.1 to the Issuer's Registration Statement on Form S-1 (File No. 333-236962))
- Exhibit 3 Form of Lock-up Agreement (incorporated by reference to Exhibit A to Exhibit 1.1 to the Issuer's Registration Statement on Form S-1 (File No. 333-236962))

SIGNATURES

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.

Dated: June 1, 2020

PERCEPTIVE ADVISORS LLC

By: /s/ Joseph Edelman
Name: Joseph Edelman
Title: Managing Member

/s/ Joseph Edelman
JOSEPH EDELMAN

PERCEPTIVE LIFE SCIENCES MASTER FUND, LTD.

By: Perceptive Advisors LLC

By: /s/ Joseph Edelman
Name: Joseph Edelman
Title: Managing Member

PERCEPTIVE LS (A), LLC

By: Perceptive LS GP, LLC

By: /s/ Joseph Edelman
Name: Joseph Edelman
Title: Member

Schedule A

The following sets forth the name, address, principal occupation, citizenship and beneficial ownership of the shares of Common Stock (to the extent not pursuant to Item 5(a)) of each director of the Master Fund.

Master Fund

<u>Name and Citizenship</u>	<u>Position</u>	<u>Principal Business Address</u>	<u>Beneficial Ownership of Shares of Common Stock</u>
Scott Dakers (United Kingdom)	Director	c/o Elian Fiduciary Services (Cayman) Limited 190 Elgin Avenue, George Town Grand Cayman KY1-9007 Cayman Islands	None
Ernest A. Morrison (United Kingdom)	Director	Cox Hallett Wilkinson Milner House 18 Parliament Street P.O. Box HM 1561 Hamilton HM FX Bermuda	None

Schedule B

Name	Date of Transaction	Number of Shares Acquires / (Disposed)	Transaction	Price per Share
Master Fund	May 5, 2020	625,000	Purchase	\$ 16.00
Master Fund	May 5, 2020	773,327	Conversion	(1)
Master Fund	May 5, 2020	470,739	Conversion	(1)
Master Fund	May 5, 2020	141,221	Warrant Exercise	\$ 8.63
Master Fund	May 5, 2020	(76,172)	Warrant Exercise	\$ 16.00
Perceptive LS	May 5, 2020	1,132,016	Conversion	(1)
Perceptive LS	May 5, 2020	339,604	Warrant Exercise	\$ 8.63
Perceptive LS	May 5, 2020	(183,174)	Warrant Exercise	\$ 16.00

(1) Represents the automatic conversion of shares of preferred stock upon the completion of the Issuer's initial public offering.

JOINT FILING AGREEMENT

The persons below hereby agree that the Schedule 13D to which this agreement is attached as an exhibit, as well as all future amendments to such Schedule 13D, shall be filed jointly on behalf of each of them. This agreement is intended to satisfy the requirements of Rule 13d-1(k)(1)(iii) under the Securities Exchange Act of 1934.

Dated: June 1, 2020

PERCEPTIVE ADVISORS LLC

By: /s/ Joseph Edelman
Name: Joseph Edelman
Title: Managing Member

/s/ Joseph Edelman
JOSEPH EDELMAN

PERCEPTIVE LIFE SCIENCES MASTER FUND, LTD.

By: Perceptive Advisors LLC

By: /s/ Joseph Edelman
Name: Joseph Edelman
Title: Managing Member

PERCEPTIVE LS (A), LLC

By: Perceptive LS GP, LLC

By: /s/ Joseph Edelman
Name: Joseph Edelman
Title: Member