

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549**

**SCHEDULE 13D
THE SECURITIES EXCHANGE ACT OF 1934
(Amendment No.)***

GenMark Diagnostics, Inc.
(Name of Issuer)

Common Stock, \$0.0001 par value
(Title of Class of Securities)

372309104
(CUSIP Number)

Eli Casdin
Casdin Capital, LLC
1350 Avenue of the Americas, Suite 2405
New York, New York
Telephone Number (212) 897-5438
(Name, Address and Telephone Number of Person Authorized to Receive
Notices and Communications)

March 20, 2018
(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 ss.240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box .

* 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.

CUSIP No. 372309104

1. NAME OF REPORTING PERSONS
I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)

Casdin Capital, LLC

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(a)
(b)

3. SEC USE ONLY

4. SOURCE OF FUNDS

AF

5. CHECK BOX 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

7. SOLE VOTING POWER

0

8. SHARED VOTING POWER

3,850,000

9. SOLE DISPOSITIVE POWER

0

10. SHARED DISPOSITIVE POWER

3,850,000

11. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

3,850,000

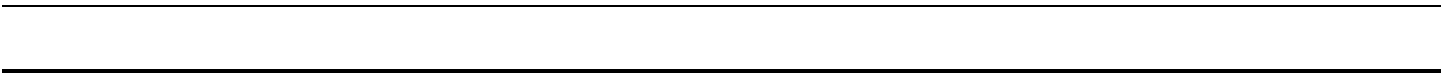
12. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES

13. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

7.0%

14. TYPE OF REPORTING PERSON

IA



CUSIP No. 372309104

1. NAME OF REPORTING PERSONS
I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)

Casdin Partners Master Fund, L.P.

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(a)
(b)

3. SEC USE ONLY

4. SOURCE OF FUNDS

WC

5. CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d)
OR 2(e)

6. CITIZENSHIP OR PLACE OF ORGANIZATION

Cayman Islands

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON

7. SOLE VOTING POWER

0

8. SHARED VOTING POWER

3,850,000

9. SOLE DISPOSITIVE POWER

0

10. SHARED DISPOSITIVE POWER

3,850,000

11. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

3,850,000

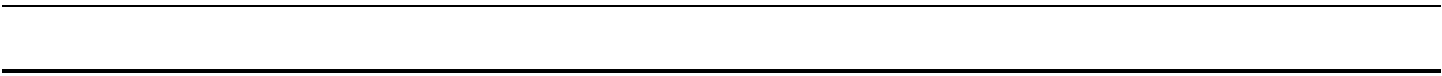
12. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES

13. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

7.0%

14. TYPE OF REPORTING PERSON

PN



CUSIP No. 372309104

1. NAME OF REPORTING PERSONS
I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)

Casdin Partners GP, LLC

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(a)
(b)

3. SEC USE ONLY

4. SOURCE OF FUNDS

AF

5. CHECK BOX 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

7. SOLE VOTING POWER

0

8. SHARED VOTING POWER

3,850,000

9. SOLE DISPOSITIVE POWER

0

10. SHARED DISPOSITIVE POWER

3,850,000

11. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

3,850,000

12. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES

13. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

7.0%

14. TYPE OF REPORTING PERSON

OO

CUSIP No. 372309104

1. NAME OF REPORTING PERSONS
I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)

Eli Casdin

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(a)

(b)

3. SEC USE ONLY

4. SOURCE OF FUNDS

AF

5. CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d)
OR 2(e)

6. CITIZENSHIP OR PLACE OF ORGANIZATION

United States of America

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON

7. SOLE VOTING POWER

0

8. SHARED VOTING POWER

3,850,000

9. SOLE DISPOSITIVE POWER

0

10. SHARED DISPOSITIVE POWER

3,850,000

11. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

3,850,000

12. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES

13. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

7.0%

14. TYPE OF REPORTING PERSON

IN



CUSIP No. 372309104

Item 1. Security and Issuer.

The name of the issuer is GenMark Diagnostics, Inc., a Delaware corporation (the "Issuer"). The address of the Issuer's principal executive offices is 5964 La Place Court, Carlsbad, California 92008-8829. This Schedule 13D relates to the Issuer's Common Stock, \$0.0001 par value (the "Shares").

Item 2. Identity and Background.

- (a), (f) This Schedule 13D is being filed jointly by Casdin Capital, LLC, a Delaware limited liability company ("Casdin"), Casdin Partners Master Fund, L.P., a Cayman Islands exempted limited partnership (the "Fund"), Casdin Partners GP, LLC, a Delaware limited liability company (the "GP") and Eli Casdin, a United States citizen (collectively, the "Reporting Persons").
 - (b) The principal business address for each of the Reporting Persons is 1350 Avenue of the Americas, Suite 2405, New York, New York 10019.
 - (c) Eli Casdin is the managing member of Casdin and the GP. The principal business of Casdin is serving as an investment adviser to its clients. The principal business of the GP is serving as the general partner to certain private funds. Casdin is the investment manager to the Fund and the GP is the general partner of the Fund. The principal business of the Fund is purchasing, holding and selling securities for investment purposes.
 - (d), (e) During the last five years, none of the Reporting Persons has been (a) convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors) or (b) 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 or 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. The Reporting Persons disclaim membership in a group.
-

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

The funds for the purchase of the Shares by the Fund came from the working capital of the Fund, over which the Reporting Persons, through their roles described above in Item 2(c), exercise investment discretion. No borrowed funds were used to purchase the Shares, other than borrowed funds used for working capital purposes in the ordinary course of business.

Item 4. Purpose of Transaction.

The Reporting Persons have acquired their Shares of the Issuer for investment. The Reporting Persons have no plans or proposals as of the date of this filing which, other than as expressly set forth below, would relate to or would result in: (a) any extraordinary corporate transaction involving the Issuer; (b) any change in the present Board of Directors or management of the Issuer; (c) any material change in the present capitalization or dividend policy of the Issuer; (d) any material change in the operating policies or corporate structure of the Issuer; (e) any change in the Issuer's charter or by-laws; (f) the Shares of the Issuer ceasing to be listed from a national securities exchange or to ceasing to be authorized to be quoted in an inter-dealer quotation system of a registered national securities association; or (g) causing the Issuer becoming eligible for termination of registration pursuant to Section 12(g)(4) of the Securities Exchange Act of 1934.

The Reporting Persons, however, reserve the right, at a later date, to effect one or more of such changes and may dispose of or enter into other transactions in the shares they may be deemed to beneficially own.

The Reporting Persons have been and may continue to be in contact with members of the Issuer's management, the Issuer's Board of Directors, other significant shareholders and others regarding alternatives that the Issuer could employ to maximize shareholder value.

The Reporting Persons further reserve the right to act in concert with any other shareholders of the Issuer, or other persons, for a common purpose should it determine to do so, and/or to recommend courses of action to management and the shareholders of the Issuer.

Item 5. Interest in Securities of the Issuer.

(a) - (e) As of the date hereof, the Reporting Persons may be deemed to be the beneficial owners of 3,850,000 Shares, constituting 7.0% of the Shares, based upon 55,166,687* Shares outstanding.

Casdin has the sole power to vote or direct the vote of 0 Shares; has the shared power to vote or direct the vote of 3,850,000 Shares; has the sole power to dispose or direct the disposition of 0 Shares; and has the shared power to dispose or direct the disposition of 3,850,000 Shares.

The Fund has the sole power to vote or direct the vote of 0 Shares; has the shared power to vote or direct the vote of 3,850,000 Shares; has the sole power to dispose or direct the disposition of 0 Shares; and has the shared power to dispose or direct the disposition of 3,850,000 Shares.

The GP has the sole power to vote or direct the vote of 0 Shares; has the shared power to vote or direct the vote of 3,850,000 Shares; has the sole power to dispose or direct the disposition of 0 Shares; and has the shared power to dispose or direct the disposition of 3,850,000 Shares.

Eli Casdin has the sole power to vote or direct the vote of 0 Shares; has the shared power to vote or direct the vote of 3,850,000 Shares; has the sole power to dispose or direct the disposition of 0 Shares; and has the shared power to dispose or direct the disposition of 3,850,000 Shares.

The transactions by the Reporting Persons in the Shares during the past sixty days are set forth in Exhibit B. All such transactions were carried out in open market transactions.

*This outstanding Shares figure reflects the number of outstanding Shares at February 23, 2018, as reported in the Form 10-K filed by the Issuer on February 27, 2018.

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

Not Applicable

Item 7. Material to be Filed as Exhibits.

Exhibit A: Joint Filing Agreement

Exhibit B: Schedule of Transactions in Shares

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.

March 27, 2018

(Date)

Casdin Capital, LLC*

By: /s/ Eli Casdin

(Signature)

Eli Casdin, Managing Member

(Name/Title)

Casdin Partners Master Fund, L.P.

By: Casdin Partners GP, LLC, its general partner

By: /s/ Eli Casdin

(Signature)

Eli Casdin, Managing Member

(Name/Title)

Casdin Partners GP, LLC*

By: /s/ Eli Casdin

(Signature)

Eli Casdin, Managing Member

(Name/Title)

/s/ Eli Casdin*

Eli Casdin

* This reporting person disclaims beneficial ownership of these reported securities except to the extent of its pecuniary interest therein, and this report shall not be deemed an admission that any such person is the beneficial owner of these securities for purposes of Section 16 of the U.S. Securities Exchange Act of 1934, as amended, or for any other purpose.

Attention: Intentional misstatements or omissions of fact constitute Federal criminal violations (see 18 U.S.C. 1001).

AGREEMENT

The undersigned agree that this Schedule 13D, dated March 27, 2018, relating to the Common Stock, \$0.0001 par value of GenMark Diagnostics, Inc. shall be filed on behalf of the undersigned.

March 27, 2018

(Date)

Casdin Capital, LLC

By: /s/ Eli Casdin

(Signature)

Eli Casdin, Managing Member

(Name/Title)

Casdin Partners Master Fund, L.P.

By: Casdin Partners GP, LLC, its general partner

By: /s/ Eli Casdin

(Signature)

Eli Casdin, Managing Member

(Name/Title)

Casdin Partners GP, LLC

By: /s/ Eli Casdin

(Signature)

Eli Casdin, Managing Member

(Name/Title)

/s/ Eli Casdin

Eli Casdin

Schedule of Transactions in Shares

<u>Date of Transaction</u>	<u>Title of Class</u>	<u>Number of Shares Acquired</u>	<u>Number of Shares Disposed</u>	<u>Price Per Share*</u>
1/26/2018	Common Stock, \$0.0001 par value	270,000	0	\$5.93
2/26/2018	Common Stock, \$0.0001 par value	195,000	0	\$4.57
2/27/2018	Common Stock, \$0.0001 par value	155,000	0	\$4.71

*The price per share represents the average price for all trading by the Reporting Persons in the Shares on the relevant date.
