UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-1

REGISTRATION STATEMENT UNDER
THE SECURITIES ACT OF 1933

Quanterix Corporation

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

3826

(Primary Standard Industrial Classification Code Number)

20-8957988

(I.R.S. Employer Identification Number)

113 Hartwell Avenue Lexington, MA 02421 (617) 301-9400

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

E. Kevin Hrusovsky
Executive Chairman, President and Chief Executive Officer
Quanterix Corporation
113 Hartwell Avenue
Lexington, MA 02421
(617) 301-9400

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

William T. Whelan, Esq. Megan N. Gates, Esq. John P. Condon, Esq. Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. One Financial Center Boston, MA 02111 (617) 542-6000 Brian P. Keane, Esq. General Counsel Quanterix Corporation 113 Hartwell Avenue Lexington, MA 02421 (617) 301-9400 Patrick O'Brien, Esq. Ropes & Gray LLP Prudential Tower 800 Boylston Street Boston, MA 02199 (617) 951-7000

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this registration statement.

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 check the following box. o

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. x Registration No. 333-221475

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. o

If this Form is a post-effective amendment filed pursuant to Rule 462(d) 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. o

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," "scelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer $\ \square$ Non-accelerated filer $\ x$ (Do not check if a smaller reporting company) Accelerated filer o Smaller reporting company o Emerging growth company x

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. o

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities
to be Registered

Common Stock, \$0.001 par value per share

Proposed Maximum
Aggregate Offering
Price(1)(2)
Price(1)(2)

Amount of
Registration Fee(3)

1,530.26

) Includes shares of our common stock that the underwriters have the option to purchase

Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended (the "Securities Act").

This registration fee is calculated pursuant to Rule 457(o) under the Securities Act. The \$12,291,200 proposed maximum aggregate offering price is in addition to the \$61,456,000 proposed maximum aggregate offering price registred pursuant to the Registration statement on Form S-1 (File No. 333-221475), which was declared effective on December 6, 2017. A registration fee was previously paid in connection with that registration statement.

This Registration Statement shall become effective upon filing with the Securities and Exchange Commission in accordance with Rule 462(b) promulgated under the Securities Act.

EXPLANATORY NOTE AND INCORPORATION BY REFERENCE

This registration statement on Form S-1 relates to the public offering of common stock of Quanterix Corporation contemplated by the registration statement on Form S-1 (File No. 333-221475), as amended, filed by Quanterix Corporation with the Securities and Exchange Commission (the "Commission") pursuant

to the Securities Act of 1933, as amended (the "Securities Act"), which was declared effective by the Commission on December 6, 2017 (the "Prior Registration Statement"). This registration statement is filed pursuant to Rule 462(b) promulgated under the Securities Act, solely to increase the maximum aggregate offering price in the public offering by \$12,291,200. The contents of the Prior Registration Statement, including all exhibits thereto, are hereby incorporated by reference herein.

The required opinions and consents are listed on the Exhibit Index attached hereto and filed herewith.

EXHIBIT INDEX

| Exhibit Number | Description of Exhibit |
|-------------------|---|
| 5.1 | Opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. |
| 23.1 | Consent of Ernst & Young LLP. |
| 23.2 | Consent of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. (included in Exhibit 5.1). |
| 24.1* | Power of Attorney. |
| | |

^{*} Included on the signature page to the Registrant's registration statement on Form S-1 (File No. 333-221475), filed with the Securities and Exchange Commission on November 9, 2017, and incorporated by reference herein.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant has duly caused this registration statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in Lexington, Massachusetts, on the 6th day of December, 2017.

QUANTERIX CORPORATION

/s/ E. Kevin Hrusovsky

E. Kevin Hrusovsky

Executive Chairman, President and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement on Form S-1 has been signed by the following persons in the capacities and on the dates indicated.

| Signature | Title | Date |
|--|--|------------------|
| /s/ E. Kevin Hrusovsky E. Kevin Hrusovsky | Executive Chairman, President and Chief Executive Officer and Director (principal executive officer) | December 6, 2017 |
| /s/ Joseph Driscoll Joseph Driscoll | Chief Financial Officer (principal financial officer and principal accounting officer) | December 6, 2017 |
| * Douglas G. Cole, M.D. | Director | December 6, 2017 |
| * John M. Connolly | Director | December 6, 2017 |
| * | Director | December 6, 2017 |
| Keith L. Crandell | Director | December 6, 2017 |
| Marijn Dekkers, Ph.D. * | Director | December 6, 2017 |
| Martin D. Madaus, Ph.D. | | December 6, 2017 |
| Paul M. Meister | _ | |
| David R. Walt, Ph.D. | Director | December 6, 2017 |
| *By: /s/ Joseph Driscoll Joseph Driscoll, Attorney-in-fact | | December 6, 2017 |

MINTZ LEVIN

One Financial Center Boston, MA 02111 617-542-6000 617-542-2241 fax www.mintz.com

December 6, 2017

Quanterix Corporation 113 Hartwell Avenue Lexington, MA 02421

Ladies and Gentlemen:

We have acted as legal counsel to Quanterix Corporation, a Delaware corporation (the "Company"), in connection with the preparation and filing with the Securities and Exchange Commission (the "Commission") of (i) a Registration Statement (No. 333-221475) on Form S-1 (the "Initial Registration Statement"), and (ii) a second Registration Statement on Form S-1 (the "462(b) Registration Statement") filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended (the "Securities Act"), pursuant to which the Company is registering the offering for sale under the Securities Act of up to an aggregate of \$12,291,200 of additional shares (the "Shares") of the Company's common stock, par value \$0.001 per share (the "Common Stock").

The Shares are to be sold by the Company pursuant to an underwriting agreement (the "Underwriting Agreement") to be entered into by and among the Company and J.P. Morgan Securities LLC, Leerink Partners LLC and Cowen and Company, LLC, as representatives of the several underwriters to be named therein. The form of the Underwriting Agreement has been filed as Exhibit 1.1 to the Initial Registration Statement. This opinion is being rendered in connection with the filing of the 462(b) Registration Statement with the Commission. All capitalized terms used herein and not otherwise defined shall have the respective meanings given to them in the 462(b) Registration Statement.

In connection with this opinion, we have examined the Company's Amended and Restated Certificate of Incorporation, as amended, and By-Laws, each as currently in effect, and the form of the Underwriting Agreement; such other records of the corporate proceedings of the Company and certificates of the Company's officers as we have deemed relevant; the Initial Registration Statement and the exhibits thereto; and the 462(b) Registration Statement and the exhibits thereto.

In our examination, we have assumed the genuineness of all signatures, the legal capacity of natural persons, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as certified or photostatic copies and the authenticity of the originals of such copies.

Our opinion is limited to the General Corporation Law of the State of Delaware and we express no opinion with respect to the laws of any other jurisdiction. No opinion is expressed

Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.

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herein with respect to the qualification of the Shares under the securities or blue sky laws of any state or any foreign jurisdiction.

Please note that we are opining only as to the matters expressly set forth herein, and no opinion should be inferred as to any other matters. This opinion is based upon currently existing statutes, rules, regulations and judicial decisions, and we disclaim any obligation to advise you of any change in any of these sources of law or subsequent legal or factual developments which might affect any matters or opinions set forth herein.

Based upon the foregoing, we are of the opinion that the Shares, when issued and sold in accordance with the form of the Underwriting Agreement most recently filed as an exhibit to the Initial Registration Statement and the prospectus that forms a part of the Initial Registration Statement, will be validly issued, fully paid and non-assessable.

We understand that you wish to file this opinion with the Commission as an exhibit to the 462(b) Registration Statement in accordance with the requirements of Item 601(b)(5) of Regulation S-K promulgated under the Securities Act and to reference the firm's name under the caption "Legal Matters" in the prospectus which is incorporated by reference in the 462(b) Registration Statement, and we hereby consent thereto. In giving this consent, we do not admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission promulgated thereunder.

Very truly yours,

/s/ Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.

Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement on Form S-1 filed pursuant to Rule 462(b) of the Securities Act of 1933 of the reference to our firm under the caption "Experts" and to the incorporation by reference of our report dated July 20, 2017 (except for Note 14(a) as to which the date is August 31, 2017 and Notes 14(b), (c), (d) and (e), as to which the date is December 4, 2017) with respect to the consolidated financial statements of Quanterix Corporation included in Amendment No. 2 to the Registration Statement (Form S-1 No. 333-221475) and related Prospectus of Quanterix Corporation for the registration of shares of its common stock.

/s/ Ernst & Young LLP

Boston, Massachusetts December 6, 2017