

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

**Post-Effective Amendment No. 1
to
FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

Sema4 Holdings Corp.
(Exact Name of Registrant as Specified in Its Charter)

Delaware
(State or Other Jurisdiction of
Incorporation or Organization)

8000
(Primary Standard Industrial
Classification Code Number)

85-1966622
(I.R.S. Employer
Identification Number)

333 Ludlow Street, North Tower, 8th Floor
Stamford, Connecticut 06902
(800) 298-6470

(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant’s Principal Executive Offices)

Eric Schadt
Chief Executive Officer
333 Ludlow Street, North Tower, 8th Floor
Stamford, Connecticut 06902
(800) 298-6470

(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent for Service)

Copies to:

Ethan Skerry
Per B. Chilstrom
Fenwick & West LLP
902 Broadway
New York, New York 10010
(212) 430-2600

Daniel Clark
General Counsel
Sema4 Holdings Corp.
333 Ludlow Street, North Tower, 8th Floor
Stamford, Connecticut 06902
(800) 298-6470

Approximate date of commencement of proposed sale to the public: From time to time 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.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) 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.

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.

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. (333-258467)

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,” “accelerated filer,” “smaller reporting company” and “emerging growth company” in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input checked="" type="checkbox"/>

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.

THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(a) OF THE SECURITIES ACT OF 1933, AS AMENDED, OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE SECURITIES AND EXCHANGE COMMISSION ACTING PURSUANT TO SAID SECTION 8(a), MAY DETERMINE.

EXPLANATORY NOTE

This Post-Effective Amendment No. 1 (this “Amendment”) to the Registration Statement on Form S-1 of Sema4 Holdings Corp. (File No. 333-258467), initially filed on August 4, 2021 and declared effective by the Securities and Exchange Commission on August 12, 2021 (the “Registration Statement”), is being filed as an exhibit-only filing solely (i) to file a consent of Ernst & Young LLP with respect to its report dated March 14, 2022 relating to the financial statements of Sema4 Holdings Corp. contained in its Annual Report on Form 10-K for the year ended December 31, 2021, which consent is filed herewith as Exhibit 23.1 (the “Consent”), and (ii) to incorporate by reference certain additional exhibits that were not previously filed with the Registration Statement (the “Additional Exhibits”). Accordingly, this Amendment consists only of the facing page, this explanatory note, Item 16 of Part II of the Registration Statement, the signature pages to the Registration Statement, and the Consent. The prospectus and the balance of Part II of the Registration Statement are unchanged hereby and have been omitted.

Part II-INFORMATION NOT REQUIRED IN PROSPECTUS

Item 16. Exhibits and Financial Statement Schedules.

The following exhibits are filed herewith or incorporated by reference herein:

EXHIBIT INDEX

Exhibit Number	Description	Incorporated by Reference			
		Form	Exhibit	Filing Date	Filed Herewith
2.1*	Agreement and Plan of Merger, dated February 9, 2021, by and among CMLS, Merger Sub and Legacy Sema4, as amended by Amendment to Agreement and Plan of Merger dated May 3, 2021	DEFM14A	Annex A	07/02/2021	
2.2*	Agreement and Plan of Merger and Reorganization, dated as of January 14, 2022, by and among, Orion Merger Sub I, Inc., Orion Merger Sub II, LLC, GeneDx, Inc., GeneDx Holding 2, Inc. and OPKO Health, Inc.	8-K	2.1	01/18/2022	
3.1*	Third Amended and Restated Certificate of Incorporation of Sema4 Holdings Corp.	8-K	3.1	07/28/2021	
3.2*	Restated Bylaws of Sema4 Holdings Corp.	8-K	3.2	07/28/2021	
4.1*	Specimen Warrant Certificate	S-1/A	4.3	08/24/2020	
4.2*	Warrant Agreement, dated as of September 1, 2020, by and between CM Life Sciences, Inc. and Continental Stock Transfer & Trust Company, as warrant agent	8-K	10.1	09/04/2020	
5.1*	Legal Opinion of Fenwick & West LLP	S-1	5.1	08/04/2021	
10.1*	Form of Director and Officer Indemnification Agreement.	8-K	10.4	07/28/2021	
10.2*	Subscription Agreement, dated as of February 9, 2021, by and among the Company and the subscriber parties thereto	8-K	10.1	02/11/2021	
10.3*	Amended and Restated Registration Rights Agreement, dated as of July 22, 2021, by and among the Company, certain equity holders of the Company named therein and certain equity holders of Sema4 named therein	8-K	10.2	07/28/2021	
10.4*	Lockup Agreement, dated as of February 9, 2021, by and among the Company and the stockholder parties identified therein	8-K	10.2	02/11/2021	
10.5*	Form of Stock Option Agreement under the 2021 Incentive Award Plan	8-K	10.6	07/28/2021	
10.6*	Form of RSU Agreement under the 2021 Incentive Award Plan	8-K	10.7	07/28/2021	
10.7*	Form of Earn-Out RSU Agreement	8-K	10.8	07/28/2021	
10.8*	2021 Incentive Award Plan	8-K	10.5	07/28/2021	
10.9*	2021 Employee Stock Purchase Plan	8-K	10.9	07/28/2021	
10.10*	Amended and Restated Employment Agreement of Eric Schadt.	8-K	10.10	07/28/2021	
10.11*	Employment Agreement of Isaac Ro.	8-K	10.11	07/28/2021	
10.12*	Employment Agreement of Dan Clark.	8-K	10.12	07/28/2021	
10.13*	Employment Agreement of James Coffin.	8-K	10.13	07/28/2021	
10.14*	Employment Agreement of Anthony Prentice.	8-K	10.14	07/28/2021	
10.15*	Employment Agreement of Kareem Saad.	8-K	10.15	07/28/2021	
10.16*	Employment Agreement of Karen White.	8-K	10.16	07/28/2021	

10.17*	Sub-Sublease, dated as of June 6, 2017, by and between Icahn School of Medicine at Mount Sinai and the Company, as amended July 31, 2019.	8-K	10.17	07/28/2021
10.18*	Sublease Agreement, dated as of November 8, 2019, by and between Marriott International, Inc. and the Company.	8-K	10.18	07/28/2021
10.19*	Sublease, dated as of June 1, 2017, by and between Icahn School of Medicine at Mount Sinai and the Company, as amended December 22, 2017.	8-K	10.19	07/28/2021
10.20*	Sublease, dated as of April 23, 2019, by and between Icahn School of Medicine at Mount Sinai and the Company.	8-K	10.20	07/28/2021
10.21*	Lease Agreement, dated as of January 31, 2020, by and between 1 Commercial Street Associates, LLC and the Company.	8-K	10.21	07/28/2021
10.22*	Master Services Agreement, dated as of April 2, 2018, by and among the Company, Icahn School of Medicine at Mount Sinai, The Mount Sinai Hospital, and the parties thereto, as amended July 31, 2019.	8-K	10.22	07/28/2021
10.23*	Master Services Agreement, dated as of May 10, 2018, by and between the Company and Icahn School of Medicine at Mount Sinai, as amended July 31, 2019.	8-K	10.23	07/28/2021
10.24*	Data Structuring and Curation Agreement, dated as of August 1, 2019, by and between Icahn School of Medicine at Mount Sinai and the Company.	8-K	10.24	07/28/2021
10.25*	BioMe Biospecimen and Data Access Agreement, dated as of July 19, 2019, by and between Icahn School of Medicine at Mount Sinai and the Company.	8-K	10.25	07/28/2021
10.26*	Non-Exclusive Patent License Agreement, dated as of June 1, 2017, by and between the Company and Icahn School of Medicine at Mount Sinai.	8-K	10.26	07/28/2021
10.27*	Supply Agreement, dated as of June 20, 2014, by and between the Company and Illumina, Inc., and amendments thereto.	8-K	10.27	07/28/2021
10.28*	Mount Sinai Genomics, Inc. 2017 Equity Incentive Plan, as amended, and forms of equity agreements thereunder.	S-8	99.6	09/27/2021
10.29*	Loan and Security Agreement, dated as of November 15, 2021, between Silicon Valley Bank, the Company and Sema4 OpCo, Inc.	10-Q	10.26	11/15/2021
10.30*	Form of Subscription Agreement, dated as of January 14, 2022 by and among the Company and the subscriber parties thereto.	8-K	10.1	01/18/2022
10.31*	Form of Shareholder Agreement, dated as of January 14, 2022, by and among the Company and the stockholder parties identified therein.	8-K	10.2	01/18/2022
10.32*	Form of Support Agreement dated as of January 14, 2022 by and among the Company and the stockholder parties identified therein.	8-K	10.3	01/18/2022
10.33*	Form of Lock-Up Agreement, by and among the Company and the stockholder parties identified therein.	8-K	10.4	01/18/2022
10.34*	Separation Agreement with James Coffin dated as of January 25, 2022.	8-K	10.1	01/31/2022
10.35*	Executive Chairman Agreement, dated as of January 17, 2022, by and between the Company and Jason Ryan.	10-K	10.31	03/14/2022
21.1*	List of Subsidiaries	10-K	21.1	03/14/2022

23.1*	Consent of WithumSmith+Brown, PC, independent registered accounting firm for CMLS	S-1	23.1	08/04/2021	
23.2	Consent of Ernst & Young LLP, independent registered accounting firm for Sema4 Holdings Corp.				X
23.3*	Consent of Fenwick & West LLP (included as part of Exhibit 5.1)	S-1	23.3	08/04/2021	
24.1	Power of Attorney (included in the signature page to this registration statement).				X

+ Certain schedules and exhibits to this Exhibit have been omitted pursuant to Item 601(a)(5) or Item 601(b)(10)(iv), as applicable, of Regulation S-K. The Registrant agrees to furnish supplemental copies of all omitted exhibits and schedules to the Securities and Exchange Commission upon its request.

Management contract or compensatory plan or arrangement.

* Previously filed.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant has duly caused this post-effective amendment to registration statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Stamford, State of Connecticut, on the 14th day of March, 2022.

SEMA4 HOLDINGS CORP.

By: /s/ Eric Schadt
Eric Schadt
Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Eric Schadt, Daniel Clark and Joshua Ruch, and each of them, as his or her true and lawful attorneys-in-fact, proxies and agents, each with full power of substitution and resubstitution and full power to act without the other, for him or her in any and all capacities, to sign any and all amendments to this registration statement (including post-effective amendments or any abbreviated registration statement and any amendments thereto filed pursuant to Rule 462(b) increasing the number of securities for which registration is sought), and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact, proxies and agents full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully for all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact, proxies and agents, or their or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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

Signature	Title	Date
<u>/s/ Eric Schadt</u> Eric Schadt	Chief Executive Officer and Director <i>(Principal Executive Officer)</i>	March 14, 2022
<u>/s/ Isaac Ro</u> Isaac Ro	Chief Financial Officer <i>(Principal Financial Officer)</i>	March 14, 2022
<u>/s/ Shawn Assad</u> Shawn Assad	Chief Accounting Officer <i>(Principal Accounting Officer)</i>	March 14, 2022
<u>*</u> Jason Ryan	Executive Chairman and Director	March 14, 2022
<u>*</u> Joshua Ruch	Director	March 14, 2022
<u>*</u> Dennis Charney	Director	March 14, 2022
<u>*</u> Eli D. Casdin	Director	March 14, 2022
<u>*</u> Emily Leproust	Director	March 14, 2022

/s/ Keith Meister

Keith Meister

Director

March 14, 2022

*

Michael Pellini

Director

March 14, 2022

*

Nat Turner

Director

March 14, 2022

*

Rachel Sherman

Director

March 14, 2022

*By /s/ Dan Clark

Dan Clark

Attorney-in-fact

March 14, 2022

Consent of Independent Registered Public Accounting Firm

We consent to the use in this Registration Statement No. 333-258467 on Form S-1 of our report dated March 14, 2022 with respect to the consolidated financial statements of Sema4 Holdings Corp., included in the Prospectus Supplement of Sema4 Holdings Corp. dated March 14, 2022, which is a part of this Registration Statement.

/s/ Ernst & Young LLP

New York, New York

March 14, 2022