UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-1 REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

Maravai LifeSciences Holdings, Inc.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

(Primary Standard Industrial Classification Code Number)

85-2786970 (I.R.S. Employer Identification No.)

10770 Wateridge Circle Suite 200 San Diego, California 92121 Telephone: (858) 546-0004

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

Carl W. Hull **Chief Executive Officer** 10770 Wateridge Circle Suite 200 San Diego, California 92121 Telephone: (858) 546-0004

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

Copies of all communications, including communications sent to agent for service, should be sent to:

Robert M. Hayward, P.C. Robert E. Goedert, P.C. Michael P. Keeley Kirkland & Ellis LLP 300 North LaSalle Street Chicago, IL 60654 (312) 862-2000

Alan F. Denenberg Davis Polk & Wardwell LLP 1600 El Camino Real Menlo Park, California 94025 (650) 752-2000

Approximate date of commencement of proposed sale to the public: As soon as practicable after this Registration Statement becomes effective.

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 follow	ing boy:

If this Form is filed to registered 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

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. \square Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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.

Accelerated filer Large accelerated filer Smaller reporting company Non-accelerated filer X Emerging growth company

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. □

			Proposed Maximum	_
		Proposed Maximum	Aggregate	
Title of Each Class of	Amount to be	Offering Price Per	Offering	Amount of
Securities to be Registered	Registered(1)	Share	Price(1)(2)(3)	Registration Fee
Class A Common Stock, par value \$0.01 per share	3,450,000	\$31.25	\$107,812,500	\$11,762.35

- Includes 450,000 shares subject to the underwriters' option to purchase additional shares. The shares being registered under this Registration Statement are in addition to the 17,250,000 shares registered pursuant to the Registration Statement on Form S-1 (File No. 333-255043)
- (2)Based on the public offering price per share.
- Calculated pursuant to Rule 457(a) under the Securities Act of 1933, as amended, for the purpose of determining the registration fee based on the public offering price per share of \$31.25. The registrant previously registered securities with a proposed maximum aggregate offering price not to exceed \$608,235,000 on the Registration Statement on Form S-1 (File No. 333-255043), which was declared effective by the Securities and Exchange Commission on April 7, 2021. In accordance with Rule 462(b) under the Securities Act, an additional amount of securities having a proposed maximum aggregate offering price of \$107,812,500 are hereby registered.

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 OF CERTAIN INFORMATION BY REFERENCE

This Registration Statement on Form S-1 is being filed with respect to the registration of additional shares of Class A common stock, par value \$0.01 per share, of Maravai LifeSciences Holdings, Inc., a Delaware corporation, pursuant to Rule 462(b) under the Securities Act of 1933, as amended. This Registration Statement includes the registration statement facing page, this page, the signature page, an exhibit index, an opinion of counsel regarding the legality of the securities being registered and a related consent and accountants' consent. This Registration Statement relates to the Registrant's Registration Statement on Form S-1 (File No. 333-255043), initially filed by the Registrant on April 5, 2021, declared effective by the Securities and Exchange Commission on April 7, 2021. The Registrant is filing this Registration Statement for the sole purpose of increasing the aggregate number of shares of Class A common stock offered by the selling stockholders by 3,450,000 shares, which includes 450,000 additional shares that the underwriters have the option to purchase. Pursuant to Rule 462(b), the contents of the Registration Statement on Form S-1 (File No. 333-255043), including the exhibits and the power of attorney thereto, are incorporated by reference into this Registration Statement.

EXHIBIT INDEX

Exhibit Number	Description			
5.1*	Opinion of Kirkland & Ellis LLP (filed as Exhibit 5.1 to the prior Registration Statement (File No. 333-255043), filed with the Securities and Exchange Commission on April 5, 2021).			
23.1	Consent of Independent Registered Public Accounting Firm.			
23.2*	Consent of Kirkland & Ellis LLP (included in Exhibit 5.1).			
24.1*	Powers of Attorney (included on signature page of the prior Registration Statement (File No. 333-255043), as filed with the Securities and Exchange Commission on April 5, 2021).			

^{*} Indicates previously filed.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of San Diego, State of California, on April 7, 2021.

MARAVAI LIFESCIENCES HOLDINGS, INC.

By: /s/ Carl W. Hull

Name: Carl W. Hull

Title: Chief Executive Officer

POWER OF ATTORNEY

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities indicated on April 7, 2021.

Signature	Title	Date
/s/ Carl W. Hull Carl W. Hull	Chief Executive Officer and Director (Principal Executive Officer)	April 7, 2021
/s/ Kevin Herde Kevin Herde	Chief Financial Officer (Principal Financial and Accounting Officer)	April 7, 2021
* Sean Cunningham	Director	April 7, 2021
* Benjamin Daverman	Director	April 7, 2021
* Susannah Gray	Director	April 7, 2021
* Robert B. Hance	Director	April 7, 2021
Jessica Hopfield	Director	April 7, 2021
* Gregory T. Lucier	Director	April 7, 2021
* Luke Marker	Director	April 7, 2021

*		
Constantine Mihas	Director	April 7, 2021
*		
Murali K. Prahalad	Director	April 7, 2021
*		
Anat Ashkenazi	Director	April 7, 2021
* The undersigned, by signing his name hereto, signs and executes this previously filed with the Securities and Exchange Commission on April		Attorney executed by the above named signatories and
/s/ Kevin Herde Kevin Herde	-	
Attorney-in-fact		

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 March 22, 2021, with respect to the consolidated financial statements of Maravai LifeSciences Holdings, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2020, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Redwood City, California April 7, 2021