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

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**FORM S-1**  
**REGISTRATION STATEMENT**  
*Under*  
*The Securities Act of 1933*

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**Tyra Biosciences, Inc.**  
(Exact Name of Registrant as Specified in Its Charter)

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**Delaware**  
(State or Other Jurisdiction of  
Incorporation or Organization)

**2834**  
(Primary Standard Industrial  
Classification Code Number)

**83-1476348**  
(I.R.S. Employer  
Identification Number)

**2656 State Street**  
**Carlsbad, California 92008**  
**(619) 728-4760**  
(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

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**Todd Harris, Ph.D.**  
**President and Chief Executive Officer**  
**Tyra Biosciences, Inc.**  
**2656 State Street**  
**Carlsbad, California 92008**  
**(619) 728-4760**  
(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent For Service)

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*Copies to:*

**Matthew T. Bush**  
**Cheston J. Larson**  
**Jeffrey T. Woodley**  
**Latham & Watkins LLP**  
**12670 High Bluff Drive**  
**San Diego, California 92130**  
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**John S. Healy**  
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**2656 State Street**  
**Carlsbad, California 92008**  
**(619) 728-4760**

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**Samir A. Gandhi**  
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**Sidley Austin LLP**  
**555 California Street, Suite 2000**  
**San Francisco, CA 94104**  
**(650) 565-7000**

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**Approximate date of commencement of proposed sale to the public:** As soon as practicable after this Registration Statement is declared 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 following box.

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.  (File No. 333-258970)

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.

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

Large accelerated filer   
Non-accelerated filer

Accelerated filer   
Smaller reporting company   
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.

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**CALCULATION OF REGISTRATION FEE**

Title of Each Class of Securities to be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price(2)	Amount of Registration Fee(2)(3)
Common stock, \$0.0001 par value per share	2,070,000	\$16.00	\$33,120,000	\$3,614

- (1) Represents only the additional number of shares being registered and includes 270,000 additional shares of common stock that the underwriters have the option to purchase. This does not include the securities that the Registrant previously registered on the Registration Statement on Form S-1, as amended (File No. 333-258970) ("Prior Registration Statement").
- (2) Calculated in accordance with Rule 457(a) under the Securities Act of 1933, as amended.
- (3) The Registrant previously registered 10,350,000 shares of its common stock with an aggregate offering price not to exceed \$165,600,000 on the Prior Registration Statement, which was declared effective by the Securities and Exchange Commission on September 14, 2021. In accordance with Rule 462(b) under the Securities Act, an additional amount of securities having a proposed maximum aggregate offering price of \$33,120,000 are hereby registered, which includes shares that the underwriters have the option to purchase.

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**The Registration Statement shall become effective upon filing with the Securities and Exchange Commission in accordance with Rule 462(b) promulgated under the Securities Act of 1933, as amended.**

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## EXPLANATORY NOTE AND INCORPORATION BY REFERENCE

This Registration Statement on Form S-1 (this "Registration Statement") is being filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, for the sole purpose of increasing the aggregate number of shares of common stock offered by Tyra Biosciences, Inc. (the "Registrant") by 2,070,000 shares, 270,000 of which are subject to purchase upon exercise of the underwriters' option to purchase additional shares of the Registrant's common stock. The additional securities that are being registered for sale are in an amount and at a price that together represent no more than 20% of the maximum aggregate offering price set forth in the Calculation of Registration Fee table contained in the Registration Statement on Form S-1, as amended (File No. 333-258970) (the "Prior Registration Statement"). The information set forth in the Prior Registration Statement and all exhibits thereto are hereby incorporated by reference in this filing.

The required opinion and consents are listed on an Exhibit Index attached hereto and filed herewith.

## Exhibit Index

Exhibit Number	Description of Exhibit
5.1	<a href="#"><u>Opinion of Latham &amp; Watkins LLP (incorporated by reference to Exhibit 5.1 filed with the Prior Registration Statement on September 14, 2021)</u></a>
23.1	<a href="#"><u>Consent of Ernst &amp; Young LLP, independent registered public accounting firm</u></a>
23.2	<a href="#"><u>Consent of Latham &amp; Watkins LLP (included in Exhibit 5.1)</u></a>
24.1	<a href="#"><u>Power of Attorney (included on the signature page of the Prior Registration Statement on Form S-1 filed on August 20, 2021)</u></a>

## SIGNATURES

Pursuant to the requirements of the Securities Act, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Carlsbad, State of California, on this 14th day of September, 2021.

### TYRA BIOSCIENCES, INC.

By: /s/ Todd Harris, Ph.D.

Todd Harris, Ph.D.

President and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities held on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Todd Harris, Ph.D.</u> Todd Harris, Ph.D.	President, Chief Executive Officer and Director (principal executive officer)	September 14, 2021
<u>/s/ Esther van den Boom</u> Esther van den Boom	Chief Financial Officer (principal financial and accounting officer)	September 14, 2021
<u>*</u> Isan Chen, M.D.	Director	September 14, 2021
<u>*</u> Gilla Kaplan, Ph.D.	Director	September 14, 2021
<u>*</u> Nina Kjellson	Director	September 14, 2021
<u>*</u> Melissa McCracken, Ph.D.	Director	September 14, 2021
<u>*</u> Robert More	Director	September 14, 2021
<u>*</u> Jake Simson, Ph.D.	Director	September 14, 2021
<u>*</u> Siddarth Subramony, Ph.D.	Director	September 14, 2021
<u>*</u> Rehan Verjee	Director	September 14, 2021

\*By: /s/ Todd Harris, Ph.D.

Todd Harris Ph.D.

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 May 28, 2021 (except for the last paragraph of Note 12, as to which the date is September 9, 2021), with respect to the financial statements of Tyra Biosciences, Inc. included in Amendment No. 2 to the Registration Statement (Form S-1 No. 333-258970) and related Prospectus of Tyra Biosciences, Inc. for the registration of its common stock.

/s/ Ernst & Young LLP

San Diego, California  
September 14, 2021