Issuer Free Writing Prospectus dated February 6, 2020 Filed Pursuant to Rule 433 under the Securities Act of 1933 Relating to the Preliminary Prospectus dated February 4, 2020 Registration Statement No. 333-236256

RAPT THERAPEUTICS, INC.

This free writing prospectus relates only to, and should be read together with, the preliminary prospectus dated February 4, 2020 (the "Preliminary Prospectus") included in the Registration Statement on Form S-1 (File No. 333-236256) (the "Registration Statement") relating to the public offering of the common stock of RAPT Therapeutics, Inc. (the "Company"), which may be accessed through the following link:

https://www.sec.gov/Archives/edgar/data/1673772/000119312520024342/d131169ds1.htm

This free writing prospectus updates, supplements and corrects the Preliminary Prospectus and should be read together with the Preliminary Prospectus included in the Registration Statement.

Public offering price: \$30.00 per share

Common stock offered by us: 2,500,000 shares

Underwriters' option to purchase additional shares of common stock from us: 375,000 shares

Use of proceeds: We estimate that the net proceeds from the sale of our common stock in this offering will be approximately \$69.7 million (or approximately \$80.3 million if the underwriters exercise in full their option to purchase additional shares of our common stock), based on a public offering price of \$30.00 per share, after deducting underwriting discounts and commissions and offering expenses payable by us.

We currently expect to use the net proceeds from this offering, together with our existing cash and cash equivalents, as follows:

- Approximately \$20.0 million to \$25.0 million to further the clinical development of FLX475;
- · Approximately \$20.0 million to \$25.0 million to further the clinical development of RPT193; and
- The remaining proceeds for continued development of other future drug candidates, continued refinement of our proprietary drug discovery and development engine and other general corporate purposes.

Stock option awards: The disclosure set forth on pages 9, 65, and 67 in the Preliminary Prospectus regarding stock options granted after September 30, 2019 has been updated and corrected to the following:

555,439 shares of our common stock issuable upon the exercise of stock options granted after September 30, 2019, with a weighted-average exercise price of \$23.87 per share

Shares reserved for future issuance: The disclosure set forth on pages 9, 65, and 67 in the Preliminary Prospectus regarding shares reserved for future issuance under the 2019 Equity Incentive Plan has been updated and corrected to the following:

1,669,759 shares of our common stock reserved and available for future issuance under our 2019 Equity Incentive Plan

Restricted stock unit awards: The disclosure set forth on pages 9, 65, and 67 in the Preliminary Prospectus regarding exclusions from the number of shares to be outstanding after the offering has been updated and corrected to add the following:

56,500 shares subject to restricted stock unit awards granted after September 30, 2019

Director compensation information: The disclosure set forth in the table on page 151 of the Preliminary Prospectus under the section titled "Management—Non-Employee Director Compensation" has been updated with respect to the compensation earned or paid to Dr. Mary Ann Gray during fiscal 2019:

	Fees Earned		
	or Paid in	Option	
Name	Cash(\$)	Awards (\$)	Total (\$)
Mary Ann Gray	5,000	438,588	443,588

The Company has filed a registration statement (including a prospectus) with the SEC relating to the offering of its common stock to which this communication relates. Before you invest, you should read the prospectus in that registration statement and other documents the Company has filed with the SEC for more complete information about the Company and the offering of its common stock. You may get these documents for free by visiting EDGAR on the SEC Website at www.sec.gov. Alternatively, the Company, any underwriter, or any dealer participating in the offering will arrange to send you the prospectus if you request it from BMO Capital Markets Corp., Attention: Equity Syndicate Department, 3 Times Square, 25th Floor, New York, NY 10036, by telephone at (800) 414-3627 or by e-mail at bmoprospectus@bmo.com; Wells Fargo Securities, LLC, Attention: Equity Syndicate Department, 500 West 33rd Street, New York, New York 10001, or by email at cmclientsupport@wellsfargo.com, or by telephone at (800) 326-5897; UBS Securities LLC, Attention: Prospectus Department, 1285 Avenue of the Americas, New York, NY 10019, by telephone at (888) 827-7275 or by email at ol-prospectus-request@ubs.com; or Cantor Fitzgerald & Co., Attention: Capital Markets, 499 Park Avenue, 6th Floor, New York, New York 10022, or by email at prospectus@cantor.com.