UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-Q

■ QUARTERLY REPORT PURSUANT TO SECT	ION 13 OR 15(d) OF TI	HE SECURITIES EXCHANGE ACT OF 1934
For the quarterly	y period ended Septemb	er 30, 2023 or
☐ TRANSITION REPORT PURSUANT TO SECT	TON 13 OR 15(d) OF T	HE SECURITIES EXCHANGE ACT OF 1934
For the transiti	on period from	_to
Commis	sion File Number: 001-3	36829
	Pharmaceuticals	
(Exact name of	registrant as specified in	ı its charter)
Delaware		04-3475813
(State or other jurisdiction of incorporation or organiz	ation)	(I.R.S. Employer Identification No.)
9 Cedarbrook Drive, Cranbury, NJ		08512
(Address of principal executive office)		(Zip Code)
(D. 1)	(609) 659-8001	
· -	ephone number, includi	
Securities register	ed pursuant to Section 1	2(b) of the Act:
Title of each class Common Stock, \$0.01 par value per share	Trading Symbol(s) RCKT	Name of each exchange on which registered Nasdaq Global Market
Indicate by check mark whether the registrant (1) Exchange Act of 1934 during the preceding 12 months (and (2) has been subject to such filing requirements for t	or for such shorter period	
Indicate by check mark whether the registrant has pursuant to Rule 405 of Regulation S-T (§ 232.405 of th registrant was required to submit such files). Yes \boxtimes No	is chapter) during the pred	every Interactive Data File required to be submitted ceding 12 months (or for such shorter period that the
Indicate by check mark whether the registrant is a reporting company. See the definitions of "large accelerated of the Exchange Act.		accelerated filer, a non-accelerated filer, or a smaller ler" and "smaller reporting company" in Rule 12b-2
Large accelerated filer $oximes$		Accelerated filer \square
Non-accelerated filer \square		Smaller reporting company \square
		Emerging growth company \square
If an emerging growth company, indicate by check complying with any new or revised financial accounting		s elected not to use the extended transition period for ant to Section 13(a) of the Exchange Act. \Box
Indicate by check mark whether the registrant is a	shell company (as defined	d in Rule 12b-2 of the Exchange Act). Yes \square No \boxtimes
As of November 3, 2023, there were 90,158,895 s	hares of common stock, \$	0.01 par value per share, outstanding.

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Cautionary Statement Regarding Forward-Looking Statements

This Quarterly Report on Form 10-Q for the quarter ended September 30, 2023 contains forward-looking statements that involve risks and uncertainties, as well as assumptions that, if they do not materialize or prove incorrect, could cause our results to differ materially from those expressed or implied by such forward-looking statements. We make such forward-looking statements pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 and other federal securities laws. All statements other than statements of historical facts contained in this Quarterly Report on Form 10-Q are forward-looking statements. In some cases, you can identify forward-looking statements by words such as "aim," "anticipate," "believe," "can," "contemplate," "continue," "could," "design," "estimate," "expect," "future," "intend," "likely," "may," "plan," "potential," "predict," "project," "seek," "should," "strategy," "target," "will," "would," or the negative of these words or other comparable terminology. These forward-looking statements include, but are not limited to, statements about:

- federal, state, and non-U.S. regulatory requirements, including regulation of our current or any other future product candidates by the U.S. Food and Drug Administration ("FDA");
- the timing of and our ability to submit regulatory filings with the FDA and to obtain and maintain FDA or other regulatory authority approval of, or other action with respect to, our product candidates;
- our competitors' activities, including decisions as to the timing of competing product launches, pricing, and discounting;
- whether safety and efficacy results of our clinical trials and other required tests for approval of our product candidates
 provide data to warrant progression of clinical trials, potential regulatory approval, or further development of any of our
 product candidates;
- our ability to develop, acquire and advance product candidates into, enroll a sufficient number of patients into, and successfully complete, clinical studies, and our ability to apply for and obtain regulatory approval for such product candidates, within currently anticipated timeframes, or at all;
- our ability to establish key collaborations and vendor relationships for our product candidates and any other future product candidates;
- our ability to develop our sales and marketing capabilities or enter into agreements with third parties to sell and market any of our product candidates;
- our ability to obtain additional funding to conduct our planned research and development efforts;
- our ability to acquire additional businesses, form strategic alliances or create joint ventures and our ability to realize the benefit of such acquisitions, alliances, or joint ventures;
- our ability to successfully develop and commercialize any technology that we may in-license or products we may acquire;
- the development of our direct manufacturing capabilities for our AAV programs;
- our ability to successfully operate in non-U.S. jurisdictions in which we currently or in the future do business, including compliance with applicable regulatory requirements and laws;
- our ability to obtain and enforce patents to protect our product candidates, and our ability to successfully defend ourselves
 against unforeseen third-party infringement claims;
- anticipated trends and challenges in our business and the markets in which we operate;
- our estimates regarding our capital requirements; and
- our ability to obtain additional financing and raise capital as necessary to fund operations or pursue business opportunities.

We caution you that the foregoing list may not contain all of the forward-looking statements made in this Quarterly Report on Form 10-Q.

Any forward-looking statements in this Quarterly Report on Form 10-Q reflect our current views with respect to future events or to our future financial performance and involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance, or achievements to be materially different from any future results, performance or achievements expressed or implied by these forward-looking statements. We have included important factors in the cautionary statements included in this Quarterly Report on Form 10-Q, particularly in the "Risk Factors" section incorporated by reference from our Annual Report for the year ended December 31, 2022, on Form 10-K, that could cause actual results or events to differ materially from the forward-looking statements that we make. Given these uncertainties, you should not place undue reliance on these forward-looking statements. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures, or investments we may make or enter into.

You should read this Quarterly Report on Form 10-Q and the documents that we have filed as exhibits to this Quarterly Report on Form 10-Q completely and with the understanding that our actual future results, performance, or achievements may be materially different from what we expect. Except as required by law, we assume no obligation to update or revise these forward-looking statements for any reason, even if new information becomes available in the future.

This Quarterly Report on Form 10-Q also contains estimates, projections and other information concerning our industry, our business, and the markets for certain diseases, including data regarding the estimated size of those markets, and the incidence and prevalence of certain medical conditions. Information that is based on estimates, forecasts, projections, market research or similar methodologies is inherently subject to uncertainties and actual events, or circumstances may differ materially from events and circumstances reflected in this information. Unless otherwise expressly stated, we obtained this industry, business, market and other data from reports, research surveys, studies and similar data prepared by market research firms and other third parties, industry, medical and general publications, government data and similar sources. This Quarterly Report contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Unless stated otherwise, references in this Quarterly Report to "us," "we," "our," or our "Company" and similar terms refer to Rocket Pharmaceuticals, Inc.

PART I — FINANCIAL INFORMATION

Item 1. Financial Statements

Rocket Pharmaceuticals, Inc. Consolidated Balance Sheets (\$ in thousands, except shares and per share amounts)

Name		Septen	nber 30, 2023	Dec	ember 31, 2022
Current assets: S 25,557 \$ 140,517 Investments 211,514 215,877 Prepaid expenses and other current assets 9,694 7,666 Total current assets 466,865 364,060 Topoptry and equipment, net 65,534 29,000 Goodwill 39,154 39,154 Intragible assets 1,372 1,340 Bestricted cash 1,372 1,340 Deposits 542 608 Investments 4,089 1,972 Operating lease right-of-use assets 4,089 1,972 Finance lease right-of-use assets 4,089 1,972 Total assets 5,050 5,518,00 Total assets 5,080 5,518,00 Course Itabilities 3,060 6,064 Accounts payable and accrued expenses 5,060 3,060 Operating lease liabilities, current 1,079 7,73 Finance lease liability, current 1,073 1,736 Total current liabilities 5,050 62,12		(uı	naudited)		
Cash and cash equivalents \$ 225,657 \$ 140,517 Investments 211,514 215,877 Prepaid expenses and other current assets 9,694 7,666 Total current assets 446,865 364,060 Property and equipment, net 36,534 29,009 Goodwill 39,154 39,154 Intragible assets 25,150 25,724 Restricted cash 1,322 1,340 Deposits 542 608 Investments 4,099 1,972 Operating lease right-of-use assets 4,099 1,972 Finance lease right-of-use assets 4,099 1,972 Timance lease right-of-use asset 45,056 46,664 Total assets 5,98,022 5,518,00 Total cours payable and accrued expenses 8,002,24 3,666 Accounts payable and accrued expenses 8,002,24 3,666 Accounts payable and accrued expenses 8,002,24 3,666 Accounts payable and accrued expenses 8,062 3,666 Accounting please liabilities, current	Assets				
Prepaid expenses and other current assets	Current assets:				
Prepaid expenses and other current assets 9,694 7,666 Total current assets 446,865 364,066 Property and equipment, net 36,534 29,099 Goodwill 39,154 39,154 Intengible assets 25,150 25,724 Restricted cash 1,372 1,340 Deposits 542 608 Investments 4,089 1,972 Operating lease right-of-use assets 4,089 1,972 Finance lease right-of-use asset 4,5056 46,664 Total assets 5,987,02 5,518,007 Teachillities and stockholders' equity 200 773 Current labilities 1,079 773 Finance lease liabilities, current 1,079 773 Total current liabilities 33,476 39,169 Operating lease liability, on-current 19,34 19,269 Other liabilities 3,046 3,046 3,046 Operating lease liability, on-current 19,34 19,269 Other liabilities 5,056 62,12	Cash and cash equivalents	\$	225,657	\$	140,517
Total current assets 446,065 36,34 29,009 Property and equipment, net 36,34 29,009 Goodwill 39,154 39,154 Intangible assets 25,150 25,724 Restricted cash 1,372 1,340 Deposits 542 608 Investments 4,089 1,972 Operating lease right-of-use assets 4,089 1,972 Finance lease right-of-use asset 45,056 46,664 Total assets 5,98,702 551,807 Tabilities and stockholders' equity Current liabilities and stockholders' equity Current liabilities, current 1,079 773 Finance lease liability, current 1,079 773 Tial current liabilities 33,47 39,69 Operating lease liability, current 1,93 1,93 Finance lease liability, non-current 2,99 1,08 Finance lease liabilities, non-current 19,34 19,269 Other liabilities 36,0 2,595	Investments		211,514		215,877
Property and equipment, net 36,534 29,099 Goodwill 39,154 39,154 Intangible assets 25,150 25,724 Restricted cash 1,372 1,340 Deposits 542 608 Investments 4,089 1,972 Operating lease right-of-use assets 4,089 1,972 Finance lease right-of-use assets 4,089 1,972 Total assets 5,987,62 5,518,00 Total assets 3,0624 5,518,00 Contract liabilities and stockholders' equity Current liabilities 3,0624 5 Accounts payable and accrued expenses \$ 36,660 36,660 Operating lease liabilities, current 1,773 1,736 Triance lease liabilities, current 2,909 1,088 Total current liabilities 33,476 39,169 Operating lease liability, current 1,934 19,269 Total liabilities 5,7676 62,121 Colspan="2">Colspan="2">	Prepaid expenses and other current assets		9,694		7,666
Second S	Total current assets		446,865		364,060
Restricted cash	Property and equipment, net		36,534		29,009
Restricted cash 1,372 1,340 Deposits 542 608 Investments 4,089 1,972 Operating lease right-of-use assets 4,089 1,972 Finance lease right-of-use assets 45,056 46,664 Total assets 5,598,762 5,518,07 Total assets 5,598,762 5,518,07 Tabilities and stockholders' equity 1,079 773 Liabilities and stockholders' equity 1,079 773 Accounts payable and accrued expenses 3,0624 3,6660 Operating lease liabilities, current 1,079 773 Tinance lease liability, current 1,736 3,736 Total current liabilities 3,3476 39,169 Operating lease liability, non-current 19,341 19,269 Other liabilities 1,869 2,595 Total liabilities 5,767 62,121 Commitments and contingencies (Note 13) 5 62,121 Series A Convertible preferred stock; 300,000 shares designated as Series A; 0, share issued and outstanding - -	Goodwill		39,154		39,154
Deposits	Intangible assets		25,150		25,724
Directiments	Restricted cash		1,372		1,340
Properting lease right-of-use assets	Deposits		542		608
Finance lease right-of-use asset 45,056 46,664 Total assets \$ 598,762 \$ 551,807 Libilities and stockholders' equity Urrent liabilities: Accounts payable and accrued expenses \$ 30,624 \$ 36,660 Operating lease liability, current 1,079 773 Finance lease liability, current 33,476 39,169 Operating lease liabilities, non-current 19,341 19,080 Finance lease liability, non-current 19,341 19,080 Other liabilities 1,669 2,595 Other liabilities 57,676 62,121 Commitments and contingencies (Note 13) Stockholders' equity: Freferred stock, \$0.01 par value, authorized 5,000,000 shares Series B convertible preferred stock; 300,000 shares designated as Series B; of shares issued and outstanding \$ 5 Series B convertible preferred stock; 300,000 shares authorized; 90,146,602 and 79,120,741 shares outstanding \$ 7 Common stock, \$0.01 par value, 120,000,000 shares authorized; 90,146,602 and 79,120,741 shares outstanding at September 30, 2023 and December 31, 2022, respectively 901	Investments		-		43,276
Total assets \$ 598,762 \$ 551,807 Carbillities and stockholders' equity Current liabilities Accounts payable and accrued expenses \$ 30,624 \$ 36,660 Operating lease liabilities, current 1,079 7,73 Finance lease liabilities, current 1,173 1,736 Total current liabilities 33,476 39,169 Operating lease liabilities, non-current 2,990 1,088 Finance lease liability, non-current 19,341 19,269 Other liabilities 1,869 2,595 Total liabilities 57,676 62,121 Commitments and contingencies (Note 13) Stockholders' equity: Preferred stock, \$0.01 par value, authorized 5,000,000 shares Series A convertible preferred stock; 300,000 shares designated as Series A; ohares issued and outstanding -	Operating lease right-of-use assets		4,089		1,972
Current liabilities and stockholders' equity Current liabilities: Accounts payable and accrued expenses \$ 30,624 \$ 36,660 Operating lease liabilities, current 1,079 773 Finance lease liabilities, current 1,773 1,736 Total current liabilities 33,476 39,169 Operating lease liability, current 2,990 1,088 Finance lease liability, non-current 2,990 1,088 Finance lease liability, non-current 19,341 19,269 Other liabilities 1,869 2,595 Total liabilities 57,676 62,121 Commitments and contingencies (Note 13) Stockholders' equity: Preferred stock, \$0,01 par value, authorized 5,000,000 shares: Series A convertible preferred stock; 300,000 shares designated as Series A; 0 shares issued and outstanding - - Series B convertible preferred stock; 300,000 shares authorized; 90,146,602 and 79,120,741 shares outstanding - - Commitments and counting and December 31, 2022, respectively 901 791 Treasury stock, a cost, 0 common shares at September 30, 2023 and December 31, 2022, respectively 901 791 Treasury stock, a cost, 0 common shares at September 30, 2023 and 2,571 - (47) Additional paid-in capital 1,440,403 1,203,074 Accumulated other comprehensive loss (508) (357) Accumulated other comprehensive loss (508) (713,775) Total stockholders' equity 541,086 489,686	Finance lease right-of-use asset		45,056		46,664
Current liabilities: Accounts payable and accrued expenses \$ 30,624 \$ 36,660 Operating lease liabilities, current 1,079 773 Finance lease liability, current 1,773 1,736 Total current liabilities 33,476 39,169 Operating lease liability, non-current 2,990 1,088 Finance lease liability, non-current 19,341 19,269 Other liabilities 57,676 62,121 Commitments and contingencies (Note 13) 57,676 62,121 Stockholders' equity: Preferred stock, \$0.01 par value, authorized 5,000,000 shares: Series A convertible preferred stock; 300,000 shares designated as Series A; 0 shares issued and outstanding - - Series B convertible preferred stock; 300,000 shares authorized; 90,146,602 and 79,120,741 shares outstanding at September 30, 2023 and December 31, 2022, respectively 901 791 Treasury stock, at cost, 0 common shares at September 30, 2023 and 2,571 _ _ common shares at December 31, 2022, respectively 901 791 Treasury stock, at cost, 0 common shares at September 30, 2023 and 2,571 _ _	Total assets	\$	598,762	\$	551,807
Accounts payable and accrued expenses \$ 30,624 \$ 36,660 Operating lease liabilities, current 1,079 773 Finance lease liability, current 1,773 1,736 Total current liabilities 33,476 39,169 Operating lease liability, non-current 2,990 1,088 Finance lease liability, non-current 19,341 19,269 Other liabilities 57,676 62,121 Commitments and contingencies (Note 13) 57,676 62,121 Stockholders' equity: Preferred stock, \$0.01 par value, authorized 5,000,000 shares: Series A convertible preferred stock; 300,000 shares designated as Series B; 0 shares issued and outstanding - - Series B convertible preferred stock; 300,000 shares authorized; 90,146,602 and 79,123,312 shares issued and 90,146,602 and 79,120,741 shares outstanding at September 30, 2023 and December 31, 2022, respectively 901 791 Treasury stock, at cost, 0 common shares at September 30, 2023 and 2,571 common shares at December 31, 2022, respectively 901 791 Treasury stock, at cost, 0 common shares at September 30, 2023 and 2,571 - (47) Additional paid-in capital 1,440,403	Liabilities and stockholders' equity				
Operating lease liabilities, current 1,079 773 Finance lease liability, current 1,773 1,736 Total current liabilities 33,476 39,169 Operating lease liabilities, non-current 2,990 1,088 Finance lease liability, non-current 19,341 19,269 Other liabilities 1,869 2,595 Total liabilities 57,676 62,121 Commitments and contingencies (Note 13) *** *** ***	Current liabilities:				
Finance lease liability, current 1,773 1,736 Total current liabilities 33,476 39,169 Operating lease liabilities, non-current 2,990 1,088 Finance lease liability, non-current 19,341 19,269 Other liabilities 57,676 62,121 Commitments and contingencies (Note 13) Stockholders' equity: Preferred stock, \$0.01 par value, authorized 5,000,000 shares Series A convertible preferred stock; 300,000 shares designated as Series A; shares issued and outstanding a a Series B convertible preferred stock; 300,000 shares designated as Series B; oshares issued and outstanding a a Series B convertible preferred stock; 300,000 shares authorized; 90,146,602 and 79,123,312 shares issued and 90,146,602 and 79,120,741 shares outstanding at September 30, 2023 and December 31, 2022, respectively 901 791 Treasury stock, at cost, to common shares at September 30, 2023 and 2,571 common shares at December 31, 2022 a (47) Additional paid-in capital 1,440,403 1,203,074 Accumulated other comprehensive loss (508) (357) Accumulated deficit (899,710) (713,775) </td <td>Accounts payable and accrued expenses</td> <td>\$</td> <td>30,624</td> <td>\$</td> <td>36,660</td>	Accounts payable and accrued expenses	\$	30,624	\$	36,660
Finance lease liability, current 1,773 1,736 Total current liabilities 33,476 39,169 Operating lease liabilities, non-current 2,990 1,088 Finance lease liability, non-current 19,341 19,269 Other liabilities 57,676 62,121 Commitments and contingencies (Note 13) Stockholders' equity: Preferred stock, \$0.01 par value, authorized 5,000,000 shares Series A convertible preferred stock; 300,000 shares designated as Series A; shares issued and outstanding - - Series B convertible preferred stock; 300,000 shares designated as Series B; shares issued and outstanding - - Series B convertible preferred stock; 300,000 shares authorized; 90,146,602 and 79,123,312 shares issued and 90,146,602 and 79,120,741 shares outstanding at September 30, 2023 and December 31, 2022, respectively 901 791 Treasury stock, at cost, 0 common shares at September 30, 2023 and 2,571 common shares at December 31, 2022, respectively 901 791 Additional paid-in capital 1,440,403 1,203,074 Accumulated other comprehensive loss (508) (357) Accumulated deficit (899,710) (713,775	Operating lease liabilities, current		1,079		773
Total current liabilities 33,476 39,169 Operating lease liabilities, non-current 2,990 1,088 Finance lease liability, non-current 19,341 19,269 Other liabilities 1,869 2,595 Total liabilities 57,676 62,121 Commitments and contingencies (Note 13) Stockholders' equity: Preferred stock, \$0.01 par value, authorized 5,000,000 shares: Series A convertible preferred stock; 300,000 shares designated as Series A; 0 shares issued and outstanding - - Series B convertible preferred stock; 300,000 shares designated as Series B; 0 shares issued and outstanding - - Common stock, \$0.01 par value, 120,000,000 shares authorized; 90,146,602 and 79,120,741 shares outstanding at September 30, 2023 and December 31, 2022, respectively 901 791 Treasury stock, at cost, 0 common shares at September 30, 2023 and 2,571 common shares at December 31, 2022, respectively 901 791 Treasury stock, at cost, 0 common shares at September 30, 2023 and 2,571 common shares at December 31, 2022 - (47) Additional paid-in capital 1,440,403 1,203,074 Accumulated other comprehen			1,773		1,736
Finance lease liability, non-current 19,341 19,269 Other liabilities 1,869 2,595 Total liabilities 57,676 62,121 Commitments and contingencies (Note 13) Stockholders' equity: Preferred stock, \$0.01 par value, authorized 5,000,000 shares: Series A convertible preferred stock; 300,000 shares designated as Series A; 0 shares issued and outstanding - - - Series B convertible preferred stock; 300,000 shares designated as Series B; 0 shares issued and outstanding - - - Common stock, \$0.01 par value, 120,000,000 shares authorized; 90,146,602 and 79,123,312 shares issued and 90,146,602 and 79,120,741 shares outstanding at September 30, 2023 and December 31, 2022, respectively 901 791 Treasury stock, at cost, 0 common shares at September 30, 2023 and 2,571 common shares at December 31, 2022 - (47) Additional paid-in capital 1,440,403 1,203,074 Accumulated other comprehensive loss (508) (357) Accumulated deficit (899,710) (713,775) Total stockholders' equity 541,086 489,686			33,476	-	39,169
Finance lease liability, non-current 19,341 19,269 Other liabilities 1,869 2,595 Total liabilities 57,676 62,121 Commitments and contingencies (Note 13) Stockholders' equity: Preferred stock, \$0.01 par value, authorized 5,000,000 shares: Series A convertible preferred stock; 300,000 shares designated as Series A; 0 shares issued and outstanding - - - Series B convertible preferred stock; 300,000 shares designated as Series B; 0 shares issued and outstanding - - - Common stock, \$0.01 par value, 120,000,000 shares authorized; 90,146,602 and 79,123,312 shares issued and 90,146,602 and 79,120,741 shares outstanding at September 30, 2023 and December 31, 2022, respectively 901 791 Treasury stock, at cost, 0 common shares at September 30, 2023 and 2,571 common shares at December 31, 2022 - (47) Additional paid-in capital 1,440,403 1,203,074 Accumulated other comprehensive loss (508) (357) Accumulated deficit (899,710) (713,775) Total stockholders' equity 541,086 489,686	Operating lease liabilities, non-current		2,990		1,088
Total liabilities 57,676 62,121 Commitments and contingencies (Note 13) Stockholders' equity: Preferred stock, \$0.01 par value, authorized 5,000,000 shares: Series A convertible preferred stock; 300,000 shares designated as Series A; 0 shares issued and outstanding Series B convertible preferred stock; 300,000 shares designated as Series B; 0 shares issued and outstanding Common stock, \$0.01 par value, 120,000,000 shares authorized; 90,146,602 and 79,123,312 shares issued and 90,146,602 and 79,120,741 shares outstanding at September 30, 2023 and December 31, 2022, respectively 901 791 Treasury stock, at cost, 0 common shares at September 30, 2023 and 2,571 common shares at December 31, 2022 - (47) Additional paid-in capital 1,440,403 1,203,074 Accumulated other comprehensive loss (508) (357) Accumulated deficit (899,710) (713,775) Total stockholders' equity 54,000,000 shares at 89,000 shares at 89,000 shares outstanding at 9,000 shares outstanding at 8,000 shares issued and 90,146,602 and 79,120,741 shares outstanding at 8,000 shares issued and 90,146,602 and 79,120,741 shares outstanding at 8,000 shares issued and 90,146,602 and 79,120,741 shares outstanding at 8,000 shares issued and 90,146,602 and 79,120,741 shares outstanding at 8,000 shares issued and 90,146,602 and 79,120,741 shares outstanding at 8,000 shares issued and 90,146,602 and 79,120,741 shares outstanding at 8,000 shares issued and 90,146,602 and 79,120,741 shares outstanding at 8,000 shares at 8,000 shares authorized; 90,146,602 and 79,120,741 shares outstanding at 8,000 shares at 8,000 shares authorized; 90,146,602 and 79,120,741 shares outstanding at 8,000 shares authorized; 90,146,602 and 79,120,741 shares outstanding at 8,000 shares authorized; 90,146,602 and 79,120,741 shares outstanding at 8,000 shares authorized; 90,146,602 and 79,120,741 shares outstanding at 8,000 shares authorized; 90,146,602 and 79,120,741 shares outstanding at 8,000 shares authorized; 90,146,602 and 79,120,741 shares outstanding at 8,000 shar			19,341		19,269
Stockholders' equity: Preferred stock, \$0.01 par value, authorized 5,000,000 shares: Series A convertible preferred stock; 300,000 shares designated as Series A; 0 shares issued and outstanding Series B convertible preferred stock; 300,000 shares designated as Series B; 0 shares issued and outstanding Common stock, \$0.01 par value, 120,000,000 shares authorized; 90,146,602 and 79,123,312 shares issued and 90,146,602 and 79,120,741 shares outstanding at September 30, 2023 and December 31, 2022, respectively Treasury stock, at cost, 0 common shares at September 30, 2023 and 2,571 common shares at December 31, 2022 Additional paid-in capital Accumulated other comprehensive loss (508) (357) Accumulated deficit (899,710) (713,775) Total stockholders' equity	Other liabilities		1,869		2,595
Stockholders' equity: Preferred stock, \$0.01 par value, authorized 5,000,000 shares: Series A convertible preferred stock; 300,000 shares designated as Series A; 0 shares issued and outstanding Series B convertible preferred stock; 300,000 shares designated as Series B; 0 shares issued and outstanding Common stock, \$0.01 par value, 120,000,000 shares authorized; 90,146,602 and 79,123,312 shares issued and 90,146,602 and 79,120,741 shares outstanding at September 30, 2023 and December 31, 2022, respectively Preasury stock, at cost, 0 common shares at September 30, 2023 and 2,571 common shares at December 31, 2022 Additional paid-in capital Accumulated other comprehensive loss Cotal stockholders' equity Stock at Cost, 0 common shares at September 30, 2023 and 2,571 (47) Accumulated deficit (889,710) (713,775)	Total liabilities		57,676	-	62,121
Stockholders' equity: Preferred stock, \$0.01 par value, authorized 5,000,000 shares: Series A convertible preferred stock; 300,000 shares designated as Series A; 0 shares issued and outstanding Series B convertible preferred stock; 300,000 shares designated as Series B; 0 shares issued and outstanding Common stock, \$0.01 par value, 120,000,000 shares authorized; 90,146,602 and 79,123,312 shares issued and 90,146,602 and 79,120,741 shares outstanding at September 30, 2023 and December 31, 2022, respectively Treasury stock, at cost, 0 common shares at September 30, 2023 and 2,571 common shares at December 31, 2022 Additional paid-in capital Accumulated other comprehensive loss (508) (357) Accumulated deficit (899,710) (713,775) Total stockholders' equity					
Preferred stock, \$0.01 par value, authorized 5,000,000 shares: Series A convertible preferred stock; 300,000 shares designated as Series A; 0 shares issued and outstanding Series B convertible preferred stock; 300,000 shares designated as Series B; 0 shares issued and outstanding Common stock, \$0.01 par value, 120,000,000 shares authorized; 90,146,602 and 79,123,312 shares issued and 90,146,602 and 79,120,741 shares outstanding at September 30, 2023 and December 31, 2022, respectively Preasury stock, at cost, 0 common shares at September 30, 2023 and 2,571 common shares at December 31, 2022 Additional paid-in capital Accumulated other comprehensive loss (508) (357) Accumulated deficit Total stockholders' equity					
Series A convertible preferred stock; 300,000 shares designated as Series A; 0 shares issued and outstanding	Stockholders' equity:				
shares issued and outstanding	Preferred stock, \$0.01 par value, authorized 5,000,000 shares:				
Series B convertible preferred stock; 300,000 shares designated as Series B; 0 shares issued and outstanding	Series A convertible preferred stock; 300,000 shares designated as Series A; 0				
shares issued and outstanding - - Common stock, \$0.01 par value, 120,000,000 shares authorized; 90,146,602 and 79,123,312 shares issued and 90,146,602 and 79,120,741 shares outstanding at September 30, 2023 and December 31, 2022, respectively 901 791 Treasury stock, at cost, 0 common shares at September 30, 2023 and 2,571 common shares at December 31, 2022 - (47) Additional paid-in capital 1,440,403 1,203,074 Accumulated other comprehensive loss (508) (357) Accumulated deficit (899,710) (713,775) Total stockholders' equity 541,086 489,686	shares issued and outstanding		-		-
Common stock, \$0.01 par value, 120,000,000 shares authorized; 90,146,602 and 79,123,312 shares issued and 90,146,602 and 79,120,741 shares outstanding at September 30, 2023 and December 31, 2022, respectively 901 791 Treasury stock, at cost, 0 common shares at September 30, 2023 and 2,571 common shares at December 31, 2022 - (47) Additional paid-in capital 1,440,403 1,203,074 Accumulated other comprehensive loss (508) (357) Accumulated deficit (899,710) (713,775) Total stockholders' equity 541,086 489,686					
79,123,312 shares issued and 90,146,602 and 79,120,741 shares outstanding at September 30, 2023 and December 31, 2022, respectively 901 791 Treasury stock, at cost, 0 common shares at September 30, 2023 and 2,571 common shares at December 31, 2022 - (47) Additional paid-in capital 1,440,403 1,203,074 Accumulated other comprehensive loss (508) (357) Accumulated deficit (899,710) (713,775) Total stockholders' equity 541,086 489,686			-		-
at September 30, 2023 and December 31, 2022, respectively 901 791 Treasury stock, at cost, 0 common shares at September 30, 2023 and 2,571 common shares at December 31, 2022 - (47) Additional paid-in capital 1,440,403 1,203,074 Accumulated other comprehensive loss (508) (357) Accumulated deficit (899,710) (713,775) Total stockholders' equity 541,086 489,686					
Treasury stock, at cost, 0 common shares at September 30, 2023 and 2,571 - (47) Additional paid-in capital 1,440,403 1,203,074 Accumulated other comprehensive loss (508) (357) Accumulated deficit (899,710) (713,775) Total stockholders' equity 541,086 489,686			001		704
common shares at December 31, 2022 - (47) Additional paid-in capital 1,440,403 1,203,074 Accumulated other comprehensive loss (508) (357) Accumulated deficit (899,710) (713,775) Total stockholders' equity 541,086 489,686			901		/91
Accumulated other comprehensive loss(508)(357)Accumulated deficit(899,710)(713,775)Total stockholders' equity541,086489,686			-		(47)
Accumulated deficit (899,710) (713,775) Total stockholders' equity 541,086 489,686	Additional paid-in capital		1,440,403		1,203,074
Accumulated deficit (899,710) (713,775) Total stockholders' equity 541,086 489,686	Accumulated other comprehensive loss		(508))	(357)
	Accumulated deficit		(899,710)	(713,775)
	Total stockholders' equity		541,086		489,686
	Total liabilities and stockholders' equity	\$	598,762	\$	551,807

 $\label{thm:companying} \textit{The accompanying notes are an integral part of these consolidated financial statements}.$

Rocket Pharmaceuticals, Inc. Consolidated Statements of Operations (\$ in thousands, except shares and per share amounts) (unaudited)

	Three Month		Nine Months Septembe	
	2023	2022	2023	2022
Revenue	\$ - \$	- \$	- \$	-
Operating expenses:				
Research and development	46,844	43,383	144,598	115,533
General and administrative	18,585	15,105	51,782	39,728
Total operating expenses	 65,429	58,488	196,380	155,261
Loss from operations	 (65,429)	(58,488)	(196,380)	(155,261)
Interest expense	(469)	(465)	(1,405)	(1,395)
Interest and other income, net	1,720	1,353	4,474	2,644
Accretion of discount and amortization of premium on investments, net	2,279	(156)	7,376	(1,128)
Net loss	\$ (61,899)	(57,756)\$	(185,935)\$	(155,140)
Net loss per share - basic and diluted	\$ (0.75) \$	(0.87)	(2.30)\$	(2.37)
Weighted-average common shares outstanding - basic and diluted	82,636,120	66,215,535	80,865,658	65,406,844

 $\label{thm:companying} \textit{The accompanying notes are an integral part of these consolidated financial statements.}$

Rocket Pharmaceuticals, Inc. Consolidated Statements of Comprehensive Loss (\$ in thousands) (unaudited)

	Thr	Three Months Ended September 30,			Nine Months Ended September 30,			
		2023		2022		2023		2022
Net loss	\$	(61,899)	\$	(57,756)	\$	(185,935)	\$	(155,140)
Other comprehensive loss:								
Net unrealized gain (loss) on investments		216		169		(151)		(435)
Total comprehensive loss	\$	(61,683)	\$	(57,587)	\$	(186,086)	\$	(155,575)

The accompanying notes are an integral part of these consolidated financial statements.

Rocket Pharmaceuticals, Inc. Consolidated Statements of Stockholders' Equity For the Three and Nine Months Ended September 30, 2023 and 2022 (\$ in thousands except share amounts) (unaudited)

						Additional	Accumulated		m . 1
	Commo	n Stock		Treasur	.,	Additional Paid-In	Other Comprehensive	Accumulated	Total Stockholders'
	Shares	Amount	_	Stock	y	Capital	Income/(Loss)	Deficit	Equity
Balance at December 31, 2022	79,123,312	\$ 7	91	\$	(47)\$	1,203,074		\$ (713,775)	\$ 489,686
Issuance of common stock pursuant to exercise of stock options	88,429		1		-	1,113	-	-	1,114
Issuance of common stock pursuant to vesting of restricted stock units	126,060		1		-	(1)	-	-	-
Issuance of common stock pursuant to exercise of warrants	126,093		1		-	6	-	-	7
Issuance of common stock pursuant to the at-the-market offering program, net of issuance costs	948,300		10		-	17,212	-	-	17,222
Unrealized comprehensive gain on investments	-		-		-	-	267	-	267
Stock-based compensation	-		-		-	8,915	-	-	8,915
Net loss					<u> </u>			(58,335)	(58,335)
Balance at March 31, 2023	80,412,194	8	04		(47)	1,230,319	(90)	(772,110)	458,876
Issuance of common stock pursuant to exercise of stock options	48,088		-		-	182	-	-	182
Issuance of common stock pursuant to vesting of restricted stock units	61,133		1		-	(1)	-	-	-
Unrealized comprehensive loss on investments	-		-		-	-	(632)	-	(632)
Stock-based compensation	-		-		-	10,245	-	-	10,245
Net loss			-			_		(65,701)	(65,701)
Balance at June 30, 2023	80,521,415	8	05		(47)	1,240,745	(722)	(837,811)	402,970
Issuance of common stock, net of issuance costs	9,453,418		94		-	188,790	-	-	188,884
Issuance of common stock pursuant to exercise of stock options	56,811		1		-	544	-	-	545
Issuance of common stock pursuant to vesting of restricted stock units	114,958		1		-	(1)	-	-	-
Unrealized comprehensive gain on investments	-		-		-	-	214	-	214
Sale of treasury stock	-		-		47	9	-	-	56
Stock-based compensation	-		-		-	10,316	-	-	10,316
Net loss							_	(61,899)	(61,899)
Balance at September 30, 2023	90,146,602	\$ 9	01	\$	- \$	1,440,403	\$ (508)	\$ (899,710)	\$ 541,086

The accompanying notes are an integral part of these consolidated financial statements.

Net loss

Balance at September 30, 2022

Rocket Pharmaceuticals, Inc. Consolidated Statements of Stockholders' Equity For the Three and Nine Months Ended September 30, 2023 and 2022 (\$ in thousands except share amounts) (unaudited)

Accumulated Other Additional Total Common Stock Treasury Paid-In Comprehensive Accumulated Stockholders' Shares Amount Stock Capital Income/(Loss) Deficit Equity 645 \$ Balance at December 31, 2021 64,505,889 \$ 946,152 (161)\$ (491,912)\$ 454,724 Issuance of common stock pursuant to 6,000 76 76 exercise of stock options Issuance of common stock pursuant to 10,168 vesting of restricted stock units Unrealized comprehensive loss on (468) (468) investments Stock-based compensation 6,270 6,270 (42,982)(42,982)Net loss Balance at March 31, 2022 64,522,057 645 952,498 (629 (534,894) 417,620 Issuance of common stock pursuant to exercise of stock options 2,387 3 3 Issuance of common stock pursuant to the at-the-market offering program, 13 17,229 17,242 net of issuance costs 1,313,450 Unrealized comprehensive loss on (136) (136)investments 7,369 Stock-based compensation 7,369 (54,402) (54,402) Net loss Balance at June 30, 2022 658 977,099 65,837,894 (765)(589,296) 387,696 Issuance of common stock pursuant to exercise of stock options 22,437 229 229 Issuance of common stock pursuant to the at-the-market offering program, net of issuance costs 1,978,472 20 29,278 29,298 Unrealized comprehensive gain on 169 169 Stock-based compensation 7,677 7,677

The accompanying notes are an integral part of these consolidated financial statements.

1,014,283

678

67,838,803

(57,756)

367,313

(57,756)

(647,052)

(596) \$

Rocket Pharmaceuticals, Inc. Consolidated Statements of Cash Flows (\$ in thousands) (unaudited)

	Nine Months Ended September 30,			
		2023		2022
Operating activities:				
Net loss	\$	(185,935)	\$	(155,140)
Adjustments to reconcile net loss to net cash used in operating activities:				
Depreciation and amortization of property and equipment		3,548		2,883
Amortization of finance lease right of use asset		1,615		1,605
Impairment of acquired intangible asset		574		-
Write down of property and equipment, net		291		177
Stock-based compensation		29,476		21,316
Amortization of premium and accretion of discount on investments, net		(7,076)		1,132
Changes in operating assets and liabilities:				
Prepaid expenses and other assets		(1,962)		(1,278)
Accounts payable and accrued expenses		(5,611)		7,189
Operating lease liabilities		120		(96)
Finance lease liability		109		134
Other liabilities		(726)		(43)
Net cash used in operating activities	·	(165,577)		(122,121)
Investing activities:	_			
Purchases of investments		(182,418)		(177,460)
Proceeds from maturities of investments		236,982		222,074
Payments made to acquire right of use asset		(36)		-
Purchases of property and equipment		(11,789)		(5,355)
Net cash provided by investing activities		42,739		39,259
Financing activities:	·			
Issuance of common stock, net of issuance costs		188,884		-
Issuance of common stock, pursuant to exercise of stock options		1,841		308
Issuance of common stock, pursuant to sale of treasury stock		56		-
Issuance of common stock, pursuant to the at-the-market offering				
program, net of issuance costs		17,222		46,540
Issuance of common stock, pursuant to exercise of warrants		7		-
Net cash provided by financing activities		208,010		46,848
Net change in cash, cash equivalents and restricted cash		85,172		(36,014)
Cash, cash equivalents and restricted cash at beginning of period		141,857		234,037
Cash, cash equivalents and restricted cash at end of period	\$	227,029	\$	198,023
cash, cash equivalents and restricted cash at end of period		<u> </u>		<u> </u>
Supplemental disclosure of non-cash financing and investing activities:				
Accrued purchases of property and equipment, ending balance	\$	1,670	\$	1,747
Operating lease liabilities		2,813		-
Unrealized loss on investments	\$	(151)	\$	(435)

 $\label{thm:companying} \textit{ notes are an integral part of these consolidated financial statements.}$

ROCKET PHARMACEUTICALS, INC.

Notes to Consolidated Financial Statements (\$ in thousands, except share and per share data) (Unaudited)

1. Nature of Business

Rocket Pharmaceuticals, Inc. ("Rocket" or the "Company") is a clinical-stage, multi-platform biotechnology company focused on the development of first, only and best in-class gene therapies, with direct on-target mechanism of action and clear clinical endpoints, for rare and devastating diseases. The Company has three clinical-stage ex vivo lentiviral vector ("LV") programs. These include programs for Fanconi Anemia ("FA"), a genetic defect in the bone marrow that reduces production of blood cells or promotes the production of faulty blood cells, Leukocyte Adhesion Deficiency-I ("LAD-I"), a genetic disorder that causes the immune system to malfunction, and Pyruvate Kinase Deficiency ("PKD"), a rare red blood cell autosomal recessive disorder that results in chronic nonspherocytic hemolytic anemia. Of these, both the Phase 2 FA program and the Phase 1/2 LAD-I program produced data read outs in 2022. In September 2023, the FDA accepted the Biologics License Application (BLA) and granted priority review for RP-L201 for the treatment of severe LAD-I. Treatment in the FA Phase 2 studies were completed in 2023 with regulatory filings in the United States ("U.S.") and Europe ("EU") for FA anticipated in 2024. Additional work on a gene therapy program for the less common FA subtypes C and G is ongoing. In the U.S., the Company also has a clinical stage in vivo adeno-associated virus ("AAV") program for Danon disease, a multi-organ lysosomal-associated disorder leading to early death due to heart failure. The Danon program is currently in an ongoing Phase 2 trial. Additionally, the Company has an AAV vector program targeting Plakophilin-2 Arrhythmogenic Cardiomyopathy ("PKP2-ACM"), an inheritable cardiac disorder that is characterized by a progressive loss of cardiac muscle mass, severe right ventricular dilation, dysplasia, fibrofatty replacement of the myocardium and a high propensity to arrhythmias and sudden death. This program, also referred to as Pegasus, received FDA clearance of an Investigational New Drug ("IND") application and we have initiated a Phase 1 study. As a result of the Company's acquisition of Renovacor Inc. ("Renovacor") (see Note 15 "Renovacor Acquisition"), the Company is able to utilize recombinant AAV9-based gene therapy designed to slow or halt progression of BAG3 Dilated Cardiomyopathy ("DCM"), which is the most common form of cardiomyopathy and is characterized by progressive thinning of the walls of the heart resulting in enlarged heart chambers that are unable to pump blood. The Company has global commercialization and development rights to all of these product candidates under royalty-bearing license agreements.

2. Risks and Liquidity

The Company has not generated any revenue and has incurred losses since inception. Operations of the Company are subject to certain risks and uncertainties, including, among others, uncertainty of drug candidate development, technological uncertainty, uncertainty regarding patents and proprietary rights, having no commercial manufacturing experience, marketing or sales capability or experience, dependency on key personnel, compliance with government regulations and the need to obtain additional financing. Drug candidates currently under development will require significant additional research and development efforts, including extensive preclinical and clinical testing and regulatory approval, prior to commercialization. These efforts require significant amounts of additional capital, adequate personnel infrastructure, and extensive compliance-reporting capabilities.

The Company's product candidates are in the development and clinical stage. There can be no assurance that the Company's research and development will be successfully completed, that adequate protection for the Company's intellectual property will be obtained, that any products developed will obtain necessary government approval or that any approved products will be commercially viable. Even if the Company's product development efforts are successful, it is uncertain when, if ever, the Company will generate significant revenue from product sales. The Company operates in an environment of rapid change in technology and substantial competition from pharmaceutical and biotechnology companies.

The Company's consolidated financial statements have been prepared on the basis of continuity of operations, realization of assets and the satisfaction of liabilities in the ordinary course of business. The Company has experienced negative cash flows from operations and had an accumulated deficit of \$899.7 million as of September 30, 2023. As of September 30, 2023, the Company had \$437.2 million of cash, cash equivalents and investments. The Company expects such resources will be sufficient to fund the Company's operating expenses and capital expenditure requirements through 2025.

On February 28, 2022, the Company entered into a sales agreement (the "Sales Agreement"), with Cowen and Company, LLC ("Cowen"), with respect to an at-the-market offering program pursuant to which the Company may offer and sell, from time to time at its sole discretion, shares of its common stock, par value \$0.01 per share, having an aggregate offering price of up to \$200 million (the "Shares") through Cowen as its sales agent. On September 12, 2023, the Company and Cowen entered into an amendment (the "Amended Sales Agreement") pursuant to which the aggregate offering amount available under the at-the-market offering program was reduced to \$180.0 million. Through September 30, 2023, the Company has sold 4.2 million shares of common stock for net proceeds of \$63.8 million pursuant to the at-the-market offering program (see Note 8 "Stockholders' Equity"), including 0.9 million shares for net proceeds of \$17.2 million during the nine months ended September 30, 2023.

On September 15, 2023, the Company completed a public offering of approximately 9.5 million shares of our common stock at a public offering price of \$16.00 per share and pre-funded warrants to purchase 3.1 million shares of common stock at a price of \$15.99 per warrant. The gross proceeds to Rocket from the public offering were approximately \$201.3 million, net of approximately \$12.4 million of offering costs, underwriting discounts and commissions, legal and other expenses for net proceeds from the offering of approximately \$188.9 million.

In the longer term, the future viability of the Company is dependent on its ability to generate cash from operating activities or to raise additional capital to finance its operations. The Company's failure to raise capital as and when needed could have a negative impact on its financial condition and ability to pursue its business strategies.

3. Basis of Presentation, Principles of Consolidation and Summary of Significant Accounting Policies

Basis of Presentation

The accompanying unaudited interim consolidated financial statements should be read in conjunction with the Company's consolidated financial statements for the year ended December 31, 2022 included in the Annual Report on Form 10-K filed with the Securities and Exchange Commission ("SEC") on February 28, 2023 ("2022 Form 10-K"). The unaudited interim consolidated financial statements have been prepared on the same basis as the audited annual financial statements and, in the opinion of management, reflect all adjustments, which include only normal recurring adjustments, necessary for the fair statement of the Company's consolidated financial position as of September 30, 2023 and the results of its operations and its cash flows for the three and nine months ended September 30, 2023. The financial data and other information disclosed in these consolidated notes related to the three and nine months ended September 30, 2023 and 2022 are unaudited. The results for the three and nine months ended September 30, 2023 are not necessarily indicative of results to be expected for the year ending December 31, 2023 and any other interim periods or any future year or period.

Significant Accounting Policies

The significant accounting policies used in the preparation of these consolidated financial statements for the three and nine months ended September 30, 2023 are consistent with those disclosed in Note 3 to the consolidated financial statements in the 2022 Form 10-K with most significant policies also being listed here.

Principles of Consolidation

The consolidated financial statements represent the consolidation of the accounts of the Company and its subsidiaries in conformity with accounting principles generally accepted in the United States ("U.S. GAAP"). All intercompany accounts have been eliminated in consolidation.

Use of Estimates

The preparation of the consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of expenses during the reporting period. Significant estimates and assumptions reflected in these consolidated financial statements include but are not limited to goodwill and intangible asset impairments, the accrual of research and development ("R&D") expenses, and the valuation of equity transactions and stock-based awards. Changes in estimates and assumptions are reflected in reported results in the period in which they become known. Actual results could differ from those estimates.

Cash, Cash Equivalents and Restricted Cash

Cash, cash equivalents and restricted cash consists of bank deposits, certificates of deposit and money market accounts with financial institutions. Cash equivalents are carried at cost which approximates fair value due to their short-term nature and which the Company believes do not have a material exposure to credit risk. The Company considers all highly liquid investments with maturities of three months or less from the date of purchase to be cash equivalents. The Company's cash and cash equivalent accounts, at times, may exceed federally insured limits. The Company has not experienced any losses in such accounts.

Restricted cash consists of deposits collateralizing letters of credit issued by a bank in connection with the Company's operating leases (see Note 12 "Leases" for additional disclosures) and a deposit collateralizing a letter of credit issued by a bank supporting the Company's corporate credit card. Cash, cash equivalents and restricted cash consist of the following:

	September 30, 2023			December 31, 2022		
Cash and cash equivalents	\$	225,657	\$	140,517		
Restricted cash		1,372		1,340		
Total cash, cash equivalents and restricted cash	\$	227,029	\$	141,857		

Concentrations of credit risk and off-balance sheet risk

Financial instruments that subject the Company to credit risk primarily consist of cash and cash equivalents and available-for-sale securities. The Company maintains its cash and cash equivalent balances with high-quality financial institutions and, consequently, the Company believes that such funds are subject to minimal credit risk. The Company's marketable securities consist of U.S. Treasury Securities, Corporate and Agency Bonds. The Company's investment policy limits the amounts the Company may invest in any one type of investment and requires all investments held by the Company to be at least AA+/Aa1 rated, thereby reducing credit risk exposure.

Investments

Investments consist of U.S. Treasury Securities, Corporate and Agency Bonds. Management determines the appropriate classification of these securities at the time they are acquired and evaluates the appropriateness of such classifications at each balance sheet date. The Company classifies its investments as available-for-sale pursuant to Financial Accounting Standards Board ("FASB") Accounting Standard Codification ("ASC") 320, Investments-Debt and Equity Securities. Investments are recorded at fair value, with unrealized gains and losses included as a component of accumulated other comprehensive income (loss) in stockholders' equity and a component of total comprehensive loss in the consolidated statements of comprehensive loss, until realized. Realized gains and losses are included in investment income on a specific-identification basis. The Company estimates expected credit losses for investments when unrealized losses exist. Unrealized losses that are credit related are recognized in the Company's consolidated statement of operations and unrealized losses that are not credit related are recognized in accumulated other comprehensive income (loss). For the three and nine months ended September 30, 2023 and 2022, there were no unrealized losses that were credit related. For the three and nine months ended September 30, 2023, there was \$0.2 million of net unrealized losses on investments, respectively. For the three and nine months ended September 30, 2022 there was \$0.2 million of net unrealized gains on investments and \$0.4 million of net unrealized losses on investments and \$0.4 million of net unrealized losses on investments, respectively.

Intangible Assets

Intangible assets related to in process research and development ("IPR&D") projects are considered to be indefinite-lived until the completion or abandonment of the associated R&D efforts. If and when development is complete, which generally occurs if and when regulatory approval to market a product is obtained, the associated assets would be deemed finite-lived and would then be amortized based on their respective estimated useful lives at that point in time. IPR&D intangible assets which are determined to have had a decrease in their fair value are adjusted downward and an expense is recognized in R&D expenses in the Consolidated Statements of Operations. These IPR&D intangible assets are tested at least annually or when a triggering event occurs that could indicate a potential impairment based on indicators including progress of R&D activities, changes in projected development of assets, and changes in regulatory environment and future commercial markets.

Fair Value Measurements

The Company is required to disclose information on all assets and liabilities reported at fair value that enables an assessment of the inputs used in determining the reported fair values. FASB ASC 820, Fair Value Measurements and Disclosures, establishes a hierarchy of inputs used when available. Observable inputs are inputs that market participants would use in pricing the asset or liability based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions about the inputs that market participants would use in pricing the asset or liability and are developed based on the best information available in the circumstances. The fair value hierarchy applies only to the valuation inputs used in determining the reported fair value of the investments and is not a measure of the investment credit quality. The three levels of the fair value hierarchy are described below:

- Level 1—Valuations based on unadjusted quoted prices in active markets for identical assets or liabilities that the Company has the ability to access at the measurement date.
- Level 2—Valuations based on quoted prices for similar assets or liabilities in markets that are not active or for which all significant inputs are observable, either directly or indirectly.
- Level 3—Valuations that require inputs that reflect the Company's own assumptions that are both significant to the fair value measurement and unobservable.

To the extent that valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment.

Accordingly, the degree of judgment exercised by the Company in determining fair value is greatest for instruments categorized in Level 3. A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. The fair value of the Company's financial instruments, including cash and cash equivalents, restricted cash, deposits, accounts payable and accrued expenses approximate their respective carrying values due to the short-term nature of most of these instruments.

Warrants

The Company accounts for stock warrants as either equity instruments, liabilities or derivative liabilities in accordance with ASC Topic 480, Distinguishing Liabilities from Equity and/or ASC Topic 815, Derivatives and Hedging, depending on the specific terms of the warrant agreement. Liability-classified warrants are recorded at their estimated fair values at each reporting period until they are exercised, terminated, reclassified or otherwise settled. Changes in the estimated fair value of liability-classified warrants are included in interest and other income in the Company's consolidated statement of operations.

Stock-Based Compensation

The Company measures the compensation expense of employee and non-employee services received in exchange for an award of equity instruments based on the fair value of the award on the grant date. That cost is recognized over the requisite service period of the awards on a straight-line basis with forfeitures recognized as they occur.

The Company classifies stock-based compensation expense in its consolidated statements of operations in the same manner in which the award recipient's payroll costs and services are classified or in which the award recipient's service payments are classified.

Income Taxes

In May 2022, the Company received a notice from the New York City Department of Finance regarding an audit of the NYC Biotechnology Credit for the tax periods ended December 31, 2018 through December 31, 2020, which was cleared as of September 30, 2023.

Recent Accounting Pronouncements

There were no recent accounting pronouncements that impacted the Company or which had a significant effect on the consolidated financial statements.

4. Fair Value of Financial Instruments

Items measured at fair value on a recurring basis are the Company's investments. The following table sets forth the Company's financial instruments that were measured at fair value on a recurring basis by level within the fair value hierarchy:

	Fair Value M	easurements as	as of September 30		0, 2023 Using:		
	Level 1	Level 2	Level 3		Total		
Assets:							
Cash equivalents:							
Money market mutual funds	\$ 41,363	\$ -	\$ -	\$	41,363		
	41,363	-	-		41,363		
Investments:							
United States Treasury securities	154,023	-	-		154,023		
Corporate Bonds	-	50,441	-		50,441		
Agency Bonds	-	7,050	-		7,050		
_	154,023	57,491			211,514		
Total assets	\$ 195,386	\$ 57,491	\$ -	\$	252,877		
				_			
Liabilities:							
Warrant liability	\$ -	\$ -	\$ 808	\$	808		
Total liabilities	\$ -	\$ -	\$ 808	\$	808		
Total habilities				_			
	Fair Value M	leasurements as	of December 31	. 202	2 Using:		
	Level 1	Level 2	Level 3	,	Total		
Assets:			Levers		10111		
Cash equivalents:							
Money market mutual funds	\$ 90,527	\$ -	\$ -	\$	90,527		
Commercial Paper	-	3,899	-	4	3,899		
United States Treasury Securities	3,848	-	-		3,848		
Corporate Bonds	-						
		8,618	-				
	94,375	8,618 12,517			8,618		
	94,375	8,618 12,517					
Investments:	94,375			_	8,618		
Investments: Commercial Paper	94,375	12,517		_	8,618 106,892		
Commercial Paper			-	_	8,618 106,892 1,151		
Commercial Paper United States Treasury securities	94,375	12,517 1,151	-		8,618 106,892 1,151 189,444		
Commercial Paper United States Treasury securities Corporate Bonds		1,151 - 60,905	-	_	8,618 106,892 1,151 189,444 60,905		
Commercial Paper United States Treasury securities	- 189,444 - -	12,517 1,151 - 60,905 7,653			8,618 106,892 1,151 189,444 60,905 7,653		
Commercial Paper United States Treasury securities Corporate Bonds		1,151 - 60,905	- - - - -		8,618 106,892 1,151 189,444 60,905		
Commercial Paper United States Treasury securities Corporate Bonds Agency Bonds	- 189,444 - - - 189,444	12,517 1,151 - 60,905 7,653 69,709	- - -	\$	8,618 106,892 1,151 189,444 60,905 7,653 259,153		
Commercial Paper United States Treasury securities Corporate Bonds	- 189,444 - -	12,517 1,151 - 60,905 7,653	-	\$	8,618 106,892 1,151 189,444 60,905 7,653		
Commercial Paper United States Treasury securities Corporate Bonds Agency Bonds Total assets	- 189,444 - - - 189,444	12,517 1,151 - 60,905 7,653 69,709	- - -	\$	8,618 106,892 1,151 189,444 60,905 7,653 259,153		
Commercial Paper United States Treasury securities Corporate Bonds Agency Bonds Total assets Liabilities:	189,444 - - 189,444 \$ 283,819	1,151 - 60,905 - 7,653 - 69,709 \$ 82,226	\$ -		8,618 106,892 1,151 189,444 60,905 7,653 259,153		
Commercial Paper United States Treasury securities Corporate Bonds Agency Bonds Total assets	- 189,444 - - - 189,444	12,517 1,151 - 60,905 7,653 69,709	- - -	\$ \$ \$	8,618 106,892 1,151 189,444 60,905 7,653 259,153		

The Company classifies its money market mutual funds and U.S. Treasury securities as Level 1 assets under the fair value hierarchy, as these assets have been valued using quoted market prices in active markets without any valuation adjustment. The Company classifies its Commercial Paper and Corporate and Agency Bonds as Level 2 assets as these assets are not traded in an active market and have been valued through a third-party pricing service based on quoted prices for similar assets.

The reconciliation of the Company's warrant liability, which is recorded as part of other liabilities in the consolidated balance sheets, measured at fair value on a recurring basis using unobservable inputs (Level 3) is as follows:

	Warran	t Liability_
Balance, December 31, 2022	\$	1,512
Fair value adjustments		(704)
Balance, September 30, 2023	\$	808

The Company utilizes a Black-Scholes model to value the warrant liability (see Note 10 "Warrants") at each reporting period, with changes in fair value recognized in the consolidated statements of operations. The estimated fair value of the warrant liability is determined using Level 3 inputs. Inherent in an options pricing model are assumptions related to expected share-price volatility, expected life, risk-free interest rate and dividend yield. The Company estimates the expected volatility of its common stock based on historical volatility of the Company and of a peer group, considering the expected remaining life of the warrants. The risk-free interest rate is based on the U.S. Treasury zero-coupon yield curve on the valuation date for a maturity similar to the expected remaining life of the warrants. The expected life of the warrants is assumed to be equivalent to their remaining contractual term. The dividend rate is based on the historical rate, which the Company anticipates will remain at zero.

The fair value of the warrant liability has been estimated with the following assumptions:

	September 30, 2023			
Stock price	\$	20.49	\$	18.39
Exercise price	\$	65.23	\$	65.23
Expected volatility		67.08%	ı	71.25%
Risk-free interest rate		5.22 %	ı	4.14%
Expected dividend yield		-		-
Expected life (years)		1.56		2.39
Fair value per warrant	\$	1.31	\$	2.45

5. Property and Equipment, Net

The Company's property and equipment consisted of the following:

	Sej	otember 30, 2023	Dec	cember 31, 2022
Laboratory equipment	\$	25,926	\$	21,905
Machinery and equipment		12,095		11,326
Computer equipment		244		244
Furniture and fixtures		2,753		2,135
Leasehold improvements		6,255		589
Internal use software		1,903		1,903
		49,176		38,102
Less: accumulated depreciation and amortization		(12,642)		(9,093)
Total property, plant and equipment, net	\$	36,534	\$	29,009

During the three and nine months ended September 30, 2023 the Company recognized \$1.2 million and \$3.5 million of depreciation and amortization expense, respectively. During the three and nine months ended September 30, 2022 the Company recognized \$1.1 million and \$2.9 million of depreciation and amortization expense, respectively.

6. Intangible Assets and Goodwill

The Company's indefinite lived intangible assets consist of an acquired IPR&D asset and a mice colony model received in the acquisition of Renovacor. Intangible assets as of September 30, 2023 and December 31, 2022 are summarized as follows:

September 30, 2023		Carrying Value	Accumul Amortiza		Intang	ible Assets, Net
In process research & development	\$	25,150	\$	-	\$	25,150
Total intangible assets	\$	25,150	\$	-	\$	25,150
	Gross Carrying Value				_	
December 31, 2022		, ,	Accumul Amortiza		Intang	ible Assets, Net
December 31, 2022 In process research & development		, ,			Intang	-
	<u> </u>	Value	Amortiza		Intang \$	Net

The gross carrying value of intangible assets is due to the acquisition of Renovacor (see Note 15 "Renovacor Acquisition"). The decrease in gross carrying value of intangibles at September 30, 2023 compared to December 31, 2022 was due to an impairment charge related to a reduction in the estimated fair value of the mice colony model to reflect the limited benefit of the model.

The carrying value of Goodwill as of September 30, 2023 and December 31, 2022 was \$39.2 million and included \$8.3 million as a result of the acquisition of Renovacor (see Note 15 "Renovacor Acquisition").

7. Accounts Payable and Accrued Expenses

The Company's accounts payable and accrued expenses consisted of the following:

	ember 30, 2023	Dece	ember 31, 2022
Research and development	\$ 14,700	\$	19,100
Employee compensation	8,359		10,006
Property and equipment	1,670		2,095
Professional fees	4,042		1,436
Acquisition related expenses	-		1,153
Government grant payable	-		597
Other	1,853		2,273
Total accounts payable and accrued expenses	\$ 30,624	\$	36,660

8. Stockholders' Equity

At-the-Market Offering Program

On February 28, 2022, the Company entered into the Sales Agreement with Cowen with respect to an at-the-market offering program pursuant to which the Company may offer and sell, from time to time at its sole discretion, shares through Cowen as its sales agent. The shares to be offered and sold under the Sales Agreement, if any, will be offered and sold pursuant to the Company's shelf registration statement on Form S-3. The Company filed a prospectus supplement with the SEC on February 28, 2022 in connection with the offer and sale of the shares pursuant to the Sales Agreement. The Company will pay Cowen a cash commission of 3.0% of gross proceeds from the sale of the shares pursuant to the Sales Agreement. The Company has provided Cowen with customary indemnification and contribution rights. The Company reimbursed Cowen for certain expenses incurred in connection with the Sales Agreement. Through September 30, 2023, the Company sold 4.2 million shares under the at-the-market offering program for gross proceeds of \$65.8 million, less commissions of \$2.0 million for net proceeds of \$63.8 million. During the nine months ended September 30, 2023, the Company sold 0.9 million shares under the at-the-market offering program for gross proceeds of \$17.8 million, less commission of \$0.6 million for net proceeds of \$17.2 million. On September 12, 2023, the Company and Cowen entered into the Amended Sales Agreement pursuant to which the aggregate offering amount available under the at-the-market offering program was reduced to \$180.0 million.

Public Offering

On September 15, 2023, the Company completed a public offering of approximately 9.5 million shares of its common stock at a public offering price of \$16.00 per share and pre-funded warrants to purchase 3.1 million shares of common stock at a price of \$15.99 per warrant. The gross proceeds to Rocket from the public offering were approximately \$201.3 million, net of \$12.4 million of offering costs, underwriting discounts and commissions, legal and other expenses for net proceeds from the offering of \$188.9 million.

9. Stock-Based Compensation

Stock Option Valuation

The weighted average assumptions that the Company used in a Black-Scholes pricing model to determine the fair value of stock options granted to employees, non-employees and directors were as follows:

	Nine N	Nine Months Ended September 30,				
	2	023		2022		
Risk-free interest rate		3.98 %	2.40 %			
Expected term (in years)		5.84	5.82			
Expected volatility		73.35%	73.21 %			
Expected dividend yield		0.00%	0.00%			
Exercise price	\$	20.15	\$	15.79		
Fair value of common stock	\$	20.15	\$	15.79		

The following table summarizes stock option activity for the nine months ended September 30, 2023:

	Number of	A	Veighted Average Exercise	Weighted Average Contractual Term	ggregate intrinsic
	Shares		Price	(Years)	Value
Outstanding as of December 31, 2022	13,138,870	\$	14.52	5.46	\$ 118,767
Granted	2,275,212		20.15	6.46	
Exercised	(193,328)		9.52		2,013
Cancelled or forfeited	(331,085)		32.26		
Outstanding as of September 30, 2023	14,889,669	\$	15.05	5.43	\$ 127,116
Options vested and exercisable as of September 30, 2023	11,434,192	\$	13.24	4.33	\$ 122,157
Options unvested as of September 30, 2023	3,455,477	\$	21.03	9.08	\$ 4,959

The weighted average grant-date fair value per share of stock options granted during the nine months ended September 30, 2023 and 2022 was \$13.32 and \$15.79, respectively.

The total fair value of options vested during the nine months ended September 30, 2023 and 2022 was \$26.9 million and \$26.9 million, respectively.

Restricted Stock Units ("RSU")

The following table summarizes the Company's RSU activity for the nine months ended September 30, 2023:

		Weighted Average
	Number of	Grant Date
	Shares	Fair Value
Unvested as of December 31, 2022	992,874	\$ 16.49
Granted	976,015	19.63
Vested (1)	(302,271)	16.29
Forfeited	(60,514)	18.24
Unvested as of September 30, 2023	1,606,104	\$ 18.37

(1) Common stock issued is net of 120 shares related to taxes.

Stock-Based Compensation Expense

Stock-based compensation expense recognized by award type was as follows:

	Three Months Ended September 30,			Nine Months Ended September 30,				
		2023		2022		2023		2022
Stock options	\$	7,482	\$	6,694	\$	21,922	\$	19,332
Restricted stock units		2,834		983		7,554		1,984
Total stock-based compensation expense	\$	10,316	\$	7,677	\$	29,476	\$	21,316

Stock-based compensation expense by classification included within the consolidated statements of operations and comprehensive loss was as follows:

	Three Months Ended September 30,			Nine Months Ended September 30,				
	2023		2022		2023		2022	
Research and development	\$ 4,673	\$	3,040	\$	13,130	\$	8,247	
General and administrative	5,643		4,637		16,346		13,069	
Total stock-based compensation expense	\$ 10,316	\$	7,677	\$	29,476	\$	21,316	

As of September 30, 2023, the Company had an aggregate of \$62.1 million of unrecognized stock-based compensation expense related to both stock options and RSU grants, which is expected to be recognized over a weighted average period of 2.01 years.

10. Warrants

A summary of the warrants outstanding as of September 30, 2023 is as follows:

Exercise Price	Outstanding	Grant/Assumption Date	Expiration Date
\$57.11	603,386	December 21, 2020	December 21, 2030
33.63	301,291	August 9, 2021	August 9, 2031
22.51	153,155	December 17, 2021	December 17, 2031
22.51	153,155	December 17, 2021	December 17, 2031
65.23	617,050	December 1, 2022	April 23, 2025
65.23	760,086	December 1, 2022	December 1, 2026
\$0.01	3,126,955	September 15, 2023	N/A
Total	5,715,078		

The following table is a summary of changes in warrants to purchase common stock for the nine months ended September 30, 2023:

	Number of Warrant Shares		
	Outstanding and Exercisable	Exercis per S	se Price Share
Balance as of December 31, 2022	2,721,267		
Issued	3,126,955	\$	0.01
Exercised	(126,093)		0.06
Expired	(7,051)	\$	24.42
Balance as of September 30, 2023	5,715,078		

Warrants Issued in Public Offering

On September 15, 2023, the Company completed a public offering that included pre-funded warrants to purchase 3,126,955 shares of common shares at a price of \$0.01 per share (see Note 8 "Stockholders' Equity" and Note 17 ("Related Party Transactions").

Assumed Renovacor Public Warrants

In conjunction with the Renovacor acquisition (see Note 15 "Renovacor Acquisition"), Rocket assumed pre-acquisition public warrants ("Public Warrants") that were converted into Rocket warrants with a right to purchase 760,086 of Rocket common shares at an exercise price of \$65.23 per share.

The Company determined that the Public Warrants met all of the criteria for equity classification. Accordingly, upon closing of the Merger, the Public Warrants were recorded as a component of additional paid-in capital of \$3.4 million.

Assumed Renovacor Private Warrants

In conjunction with the Renovacor acquisition (see Note 15 "Renovacor Acquisition"), Rocket assumed pre-acquisition private warrants ("Private Warrants") that were converted into Rocket warrants with a right to purchase 617,050 of Rocket common shares at an exercise price of \$65.23 per share.

The Company determined that the Private Warrants did not meet all of the criteria for equity classification. Accordingly, the Company classifies the Private Warrants as derivative liabilities in its consolidated balance sheets. The Company measures the fair value of the warrants at the end of each reporting period and recognizes changes in the fair value from the prior period in the Company's operating results for the current period. See Note 4 "Fair Value of Financial Instruments" for discussion of fair value measurement of the warrant liability.

11. Net Loss Per Share

Basic and diluted net loss per share attributable to common stockholders was calculated as follows:

	Three Months Ended September 30, 2023 2022			Nine Months End 2023			eptember 30, 2022	
Numerator:		2023		2022		2023		2022
Net loss attributable to common stockholders	\$	(61,899)	\$	(57,756)	\$	(185,935)	\$	(155,140)
Denominator:								
Weighted-average common shares outstanding - basic and diluted		82,636,120		66,215,535		80,865,658		65,406,844
Net loss per share attributable to common stockholders - basic and diluted	\$	(0.75)	\$	(0.87)	\$	(2.30)	\$	(2.37)

The Company excluded the following potential shares of common stock, presented based on amounts outstanding at each period end, from the computation of diluted net loss per share attributable to common stockholders for the periods indicated because including them would have had an anti-dilutive effect:

	Three and Nine Month	Three and Nine Months Ended September 30,				
	2023	2022				
Warrants exercisable for common shares	2,588,123	1,218,038				
Restricted stock units convertible for common shares	1,606,104	895,869				
Options to purchase common shares	14,889,669	12,730,994				
	19,083,896	14,844,901				

12. Leases

The Company determines if an arrangement is a lease at inception. Operating and finance leases are presented in the Company's consolidated balance sheet as right-of-use assets from leases, current lease liabilities and long-term lease liabilities. Certain of the Company's lease agreements contain renewal options; however, the Company does not recognize right-of-use assets or lease liabilities for renewal periods unless it is determined that the Company is reasonably certain of renewing the lease at inception or when a triggering event occurs. As the Company's leases do not provide an implicit rate, the Company estimated the incremental borrowing rate in calculating the present value of the lease payments using an estimate of the Company's collateralized borrowing rate for debt with a similar term. The Company has utilized its incremental borrowing rate based on the long-term borrowing costs of comparable companies in the biotechnology industry. Since the Company elected to account for each lease component and its associated non-lease components as a single combined lease component, all contract consideration was allocated to the combined lease component. Some of the Company's lease agreements contain rent escalation clauses (including index-based escalations). For operating leases, the Company recognizes the minimum rental expense on a straight-line basis based on the fixed components of a lease arrangement. The Company will amortize this expense over the term of the lease beginning with the lease commencement date. Variable lease components represent amounts that are not fixed in nature and are not tied to an index or rate and are recognized as incurred.

Finance Lease

The Company has a lease for a facility in Cranbury, New Jersey, consisting of 103,720 square feet of space including areas for offices, process development, research, and development laboratories and 50,000 square feet dedicated to AAV Current Good Manufacturing Practice ("cGMP") manufacturing facilities to support the Company's pipeline (such lease, as amended, the "NJ Lease Agreement"). The NJ Lease Agreement has a 15-year term from September 1, 2019, with an option to renew for two consecutive five-year renewal terms.

Estimated rent payments for the NJ Lease Agreement are \$1.2 million per annum, payable in monthly installments, depending upon the nature of the leased space, and subject to annual base rent increases of 3%. The total commitment under the lease is estimated to be approximately \$29.3 million over the 15-year term of the lease. The Company paid a cash security deposit of \$0.3 million to the landlord in connection with the NJ Lease Agreement which has been reflected as part of deposits in the consolidated balance sheets as of September 30, 2023 and December 31, 2022.

Operating Leases

On June 7, 2018, the Company entered into a three-year lease agreement for office space in the Empire State Building in New York, NY (the "ESB Lease Agreement"). In connection with the ESB Lease Agreement, the Company established an irrevocable standby letter of credit (the "Empire LOC") for \$0.9 million. On March 26, 2021, the Company entered into Amendment No. 1 to the ESB Lease Agreement ("ESB Lease Amendment") that extended the term of the lease agreement to June 30, 2024, reduced the rent payments going forward, and reduced the Empire LOC to \$0.8 million. The Empire LOC serves as the Company's security deposit on the lease in which the landlord is the beneficiary and expires August 29, 2024.

The Company has a certificate of deposit of \$0.8 million with a bank as collateral for the Empire LOC which is classified as part of restricted cash in the consolidated balance sheets as of September 30, 2023 and December 31, 2022.

On January 4, 2018, in connection with the Reverse Merger with Inotek, the Company assumed an operating lease for Inotek's former headquarters in Lexington, Massachusetts, with a term which ended on February 28, 2023. In July 2018, the Company signed an agreement to sublease a portion of the Lexington, Massachusetts space and in September 2018, the Company signed an agreement to sublease the remaining portion of the Lexington, Massachusetts space. Rental income received under the sublease agreement totaled \$0.1 million and \$0.3 million for the three and nine months ended September 30, 2023 and 2022, respectively. Rental income is netted against rent expense in the consolidated statements of operations. A security deposit of \$0.2 million was returned to the Company in April 2023.

On November 15, 2022, the Company entered into a lease agreement with a lease term until October 31, 2024, for laboratory space in Madrid, Spain. The lease commenced on April 1, 2023 and the Company recognized a right-of-use asset and corresponding lease liability of approximately \$0.2 million each.

On December 1, 2022, in connection with the Renovacor acquisition (see Note 15 "Renovacor Acquisition"), the Company acquired the Renovacor operating leases for space at facilities in Hopewell, New Jersey and Cambridge, Massachusetts with remaining lease terms of approximately 10.25 and 1.3 years, respectively. As of September 30, 2023, lease commencement dates have occurred for all leases and the Company recognized total right-of-use assets of \$3.8 million with corresponding total lease liabilities of \$3.6 million at lease commencement dates, which include right-of-use assets of \$2.7 million and lease liabilities of \$2.6 million for leases that commenced in 2023. The Company intends to sublease both premises through the remainder of their lease terms.

Operating lease cost was \$0.3 million and \$1.0 million for the three and nine months ended September 30, 2023, respectively. Operating lease cost was \$0.2 million and \$0.6 million for the three and nine months ended September 30, 2022, respectively.

Rent expense was \$0.7 million and \$1.7 million for the three and nine months ended September 30, 2023, respectively. Rent expense was \$0.5 million and \$1.2 million for the three and nine months ended September 30, 2022, respectively.

The total restricted cash balance for the Company's operating and finance leases as of September 30, 2023 and December 31, 2022 was \$0.8 million.

Lease cost	Nine Months End September 30				
Operating lease cost	\$	1,026			
Finance lease cost:					
Amortization of right of use assets		1,615			
Interest on lease liabilities		1,405			
Total lease cost	\$	4,046			

The following table summarizes the future lease payments of the Company's operating and finance lease liabilities on an undiscounted cash flow basis and a reconciliation to the operating and finance lease liabilities as of September 30, 2023:

Fiscal Year Ending December 31,	Septe	September 30, 2023	
2023 (three months)	\$	322	
2024		903	
2025		538	
2026		545	
2027		506	
Thereafter		2,941	
Total lease payments	\$	5,755	
Less: interest		(1,686)	
Total operating lease liabilities	\$	4,069	
Fiscal Year Ending December 31,	Septe	mber 30, 2023	
2023 (three months)	\$	440	
2024		1,791	
2025		1,856	
2026		1,912	
2027		1,969	
Thereafter		43,031	
Total lease payments	\$	50,999	
Less: interest		(29,885)	
Total finance lease liability	\$	21,114	
Leases	Septe	mber 30, 2023	
Operating right-of-use assets	\$	4,089	
Operating current lease liabilities	\$	1,079	
Operating current lease liabilities	Ψ	2,990	
Total operating lease liabilities	\$	4,069	
Finance right-of-use assets	\$	45,056	
Finance current lease liability	\$	1,773	
Finance noncurrent lease liability		19,341	
Total finance lease liability	\$	21,114	
Other information			
Cash paid for amounts included in the measurement of lease liabilities:			
Operating cash flows from operating leases	\$	894	
Cash flows from finance lease	\$	1,296	
Weighted-average remaining lease term - operating leases		8.0 years	
Weighted-average remaining lease term - finance lease		20.9 years	
		•	
Weighted-average discount rate - operating leases		8.349	

13. Commitments and Contingencies

Litigation

From time to time, the Company may be subject to various legal proceedings and claims that arise in the ordinary course of its business activities. Although the results of litigation and claims cannot be predicted with certainty, the Company does not believe it is party to any other claim or litigation the outcome of which, if determined adversely to the Company, would individually or in the aggregate be reasonably expected to have a material adverse effect on its business. Regardless of the outcome, litigation can have an adverse impact on the Company because of defense and settlement costs, diversion of management resources and other factors.

Indemnification Arrangements

Pursuant to its bylaws and as permitted under Delaware law, the Company has indemnification obligations to directors, officers, employees or agents of the Company or anyone serving in these capacities. The maximum potential amount of future payments the Company could be required to pay is unlimited. The Company has insurance that reduces its monetary exposure and would enable it to recover a portion of any future amounts paid. As a result, the Company believes that the estimated fair value of these indemnification commitments is minimal.

Throughout the normal course of business, the Company has agreements with vendors that provide goods and services required by the Company to run its business. In some instances, vendor agreements include language that requires the Company to indemnify the vendor from certain damages caused by the Company's use of the vendor's goods and/or services. The Company has insurance that would allow it to recover a portion of any future amounts that could arise from these indemnifications. As a result, the Company believes that the estimated fair value of these indemnification commitments is minimal.

14. Agreements Related to Intellectual Property

The Company, directly and through its subsidiary Spacecraft Seven, LLC, has various license and research and collaboration arrangements. The transactions principally resulted in the acquisition of rights to intellectual property which is in the preclinical phase and has not been tested for safety or feasibility. In all cases, the Company did not acquire tangible assets, processes, protocols, or operating systems. The Company expenses the acquired intellectual property rights as of the acquisition date on the basis that the cost of intangible assets purchased from others for use in research and development activities has no alternative future uses.

15. Renovacor Acquisition

On September 19, 2022, the Company entered into an Agreement and Plan of Merger (the "Merger Agreement") with Renovacor, a Delaware corporation pursuant to which, on December 1, 2022, the Company acquired Renovacor (the "Renovacor Acquisition"). On December 1, 2022, pursuant to the terms of the Merger Agreement, (i) Merger Sub I merged with and into the Company (the "First Merger") and (ii) the Company, as the surviving company of the First Merger merged with and into Merger Sub II (the "Second Merger"), with Merger Sub II surviving the Second Merger. Subject to the terms and conditions of the Merger Agreement, at the closing of the Renovacor Acquisition each share of Renovacor's common stock outstanding immediately prior to the effective time of the First Merger were canceled and converted into the right to receive 0.1763 (the "Exchange Ratio") of fully paid and non-assessable shares of the Company common stock, which was determined on the basis of the exchange formula set forth in the Merger Agreement that was subject to adjustment depending on the level of the Renovacor's net cash at the closing. Prior to the market opening on December 1, 2022, Renovacor shares ceased to trade on NYSE and upon the closing of the acquisition, Renovacor's outstanding common stock were converted into 3,391,976 shares of Rocket common stock.

Total consideration for the Renovacor Acquisition was \$72.3 million, consisting of \$62.4 million for common stock outstanding, \$2.7 million for the portion of equity compensation attributable to the pre-combination service period, and \$7.2 million for assumed warrants. The consideration was based on the estimated fair values on the acquisition date of (i) 3,391,976 common shares issued for shares outstanding for common shares of Renovacor, (ii) estimated fair value of employee stock options to acquire 367,852 common shares of the Company, (iii) 28,798 common shares issued for employee time-vesting RSUs, and (iv) warrants to acquire 1,503,229 common shares (see Note 10 "Warrants").

The total consideration for the acquisition of Renovacor of \$72.3 million consisted of the following:

	Shares	Value	Total
Stock consideration	3,391,976	\$ 18.39	\$ 62,378
Cash consideration ⁽¹⁾			29
Stock options	367,852		2,163
Time-vesting RSUs	28,798		512
Assumed warrants ⁽²⁾	1,503,229		7,183
Total consideration	5,291,855		\$ 72,265

- (1) Represents consideration paid for cash in lieu of fractional shares.
- (2) Assumed Renovacor Warrants of \$7,183 with \$5,671 classified as equity and \$1,512 classified as liabilities.

The acquisition has been accounted for as a business combination using the acquisition method of accounting which requires that assets acquired and liabilities assumed be recognized at their fair values as of the acquisition date and that the fair value of acquired IPR&D assets are classified as indefinite-life assets until the successful completion or abandonment of the associated research and development efforts.

The preliminary purchase price allocation resulted in the following amounts being allocated to the assets acquired and liabilities assumed at the acquisition date based on their respective preliminary fair values summarized below:

Working capital ⁽¹⁾	\$ (5,210)
Cash and cash equivalents	42,755
Property and equipment	1,414
Operating lease right-of-use assets	1,161
Other non-current assets	113
IPR&D	25,150
Other intangible asset	574
Operating lease liability	(970)
Deferred tax liability	 (1,061)
Net assets acquired	63,926
Goodwill	8,339
Purchase consideration	\$ 72,265

(1) Includes other receivables, prepaid expenses, account payable and accrued liabilities.

The fair value assigned to acquired IPR&D was based on the present value of expected after-tax cash flows attributable to Renovacor's most advanced AAV-based gene therapy targeting BAG3-DCM. The present value of expected after-tax cash flows was determined by estimating the after-tax costs to complete development into a commercially viable product, estimating future revenue and ongoing expenses to produce, and discounting the resulting net cash flows to present value. The cost and revenue projections used were reduced based on the assessed probabilities of different stages of development. Acquired IPR&D will be accounted for as an indefinite-lived intangible asset until regulatory approval in a major market or discontinuation of development.

The excess of purchase price over the fair value of amounts assigned to identifiable assets acquired and liabilities assumed represents the goodwill amount of \$8.3 million resulting from the acquisition. The goodwill recorded as part of the acquisition is primarily attributable to the broadening of the Company's portfolio and research capabilities, deferred taxes and the assembled workforce. The goodwill attributable to the acquisition has been recorded as a non-current asset in the Company's consolidated balance sheet and is not amortized, but subject to review for impairment annually.

16. CIRM Grants

LAD-1 CIRM Grant

On April 30, 2019, the California Institute for Regenerative Medicine ("CIRM") awarded the Company up to \$7.5 million under a CLIN2 grant award to support the clinical development of its LV-based gene therapy for RP-L201. Proceeds from the grant will help fund clinical trial costs as well as manufactured drug product for Phase 1/2 patients enrolled at the U.S. clinical site, University of California, Los Angeles ("UCLA") Mattel Children's Hospital, led by principal investigator Donald Kohn, M.D., UCLA Professor of Microbiology, Immunology and Molecular Genetics, Pediatrics (Hematology/Oncology), Molecular and Medical Pharmacology and member of the Eli and Edythe Broad Center of Regenerative Medicine and Stem Cell Research at UCLA. Through September 30, 2023, the Company has received \$5.9 million in total RP-L201 grants from CIRM. No additional milestones were achieved during the three and nine months ended September 30, 2023.

17. Related Party Transactions

In June 2023, the Company entered into a consulting agreement with the spouse of one of the Company's executive officers for information technology advisory services. The Company did not incur any expense for the three and nine months ended September 30, 2023, relating to services provided under this agreement.

In September 2023, in connection with the Company's public offering, the Company sold approximately 3.1 million pre-funded warrants to purchase shares of the Company's common stock to funds affiliated with RTW Investments, LP, the Company's largest shareholder (see Note 8 "Stockholders' Equity").

18. 401(k) Savings Plan

The Company has a defined contribution savings plan (the "Plan") under Section 401(k) of the Internal Revenue Code of 1986. This Plan covers substantially all employees who meet minimum age and service requirements and allows participants to defer a portion of their annual compensation on a pre-tax basis. Company contributions to the Plan may be made at the discretion of the Company's Board of Directors. The Company has elected the safe harbor match of 4% of employee contributions to the Plan, subject to certain limitations. The Company's matching contribution for the three and nine months ended September 30, 2023, was \$0.4 million and \$1.1 million, respectively. The Company's matching contribution for the three and nine months ended September 30, 2022, was \$0.2 million and \$0.7 million, respectively.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

You should read the following discussion and analysis of our financial condition and results of operations together with the consolidated financial statements and related notes that are included elsewhere in this Quarterly Report on Form 10-Q and our annual report on Form 10-K, filed on February 28, 2023 with the SEC (the "2022 Form 10-K"). This discussion contains forward-looking statements based upon current plans, expectations and beliefs that involve risks and uncertainties. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of various factors, including, but not limited to, those discussed in the 2022 Form 10-K and in this Quarterly Report on Form 10-Q. In preparing this MD&A, we presume that readers have access to and have read the MD&A in our 2022 Form 10-K. Unless stated otherwise, references in this Quarterly Report on Form 10-Q to "us," "we," "our," or our "Company" and similar terms refer to Rocket Pharmaceuticals, Inc.

We are a clinical-stage, multi-platform biotechnology company focused on the development of first, only and best-in-class gene therapies, with direct on-target mechanism of action and clear clinical endpoints, for rare and devastating diseases. We have three clinical-stage ex vivo lentiviral vector ("LV") programs. These include programs for Fanconi Anemia ("FA"), a genetic defect in the bone marrow that reduces production of blood cells or promotes the production of faulty blood cells, Leukocyte Adhesion Deficiency-I ("LAD-I"), a genetic disorder that causes the immune system to malfunction, and Pyruvate Kinase Deficiency ("PKD"), a rare red blood cell autosomal recessive disorder that results in chronic non-spherocytic hemolytic anemia. Of these, both the Phase 2 FA program and the Phase 1/2 LAD-I program produced data read outs in 2022. In September 2023, the FDA accepted the Biologics License Application (BLA) and granted priority review for RP-L201 for the treatment of severe LAD-I. Treatment in the FA Phase 2 studies were completed in 2023 with regulatory filings in the United States ("U.S.") and Europe ("EU") for FA anticipated in 2024. Additional work on a gene therapy program for the less common FA subtypes C and G is ongoing. In the U.S., we also have a clinical stage in vivo adeno-associated virus ("AAV") program for Danon disease, a multi-organ lysosomal-associated disorder leading to early death due to heart failure. The Danon program is currently in an ongoing Phase 2 trial. Additionally, we have an AAV vector program targeting Plakophilin-2 Arrhythmogenic Cardiomyopathy ("PKP2-ACM"), an inheritable cardiac disorder that is characterized by a progressive loss of cardiac muscle mass, severe right ventricular dilation, dysplasia, fibrofatty replacement of the myocardium and a high propensity to arrhythmias and sudden death. This program, also referred to as Pegasus, received FDA clearance of an Investigational New Drug ("IND") application and we have initiated a Phase 1 study. As a result of our acquisition of Renovacor, Inc. ("Renovacor"), we are now able to utilize recombinant AAV9-based gene therapy designed to slow or halt progression of BAG3 Dilated Cardiomyopathy ("DCM"), which is the most common form of cardiomyopathy and is characterized by progressive thinning of the walls of the heart resulting in enlarged heart chambers that are unable to pump blood. We have global commercialization and development rights to all of these product candidates under royalty-bearing license agreements.

Recent Developments

At-the-Market Offering Program

On February 28, 2022, we entered into the Sales Agreement with Cowen with respect to an at-the-market offering program pursuant to which we may offer and sell, from time to time at our sole discretion, shares through Cowen as our sales agent. The shares to be offered and sold under the Sales Agreement, if any, will be offered and sold pursuant to our shelf registration statement on Form S-3. We filed a prospectus supplement with the SEC on February 28, 2022 in connection with the offer and sale of the shares pursuant to the Sales Agreement. We will pay Cowen a cash commission of 3.0% of gross proceeds from the sale of the shares pursuant to the Sales Agreement. We also agreed to provide Cowen with customary indemnification and contribution rights. We reimbursed Cowen for certain expenses incurred in connection with the Sales Agreement. Through September 30, 2023, we sold 4.2 million shares under the at-the-market offering program for gross proceeds of \$65.8 million, less commissions of \$2.0 million for net proceeds of \$63.8 million. During the nine months ended September 30, 2023, we sold 0.9 million shares under the at-the-market offering program for gross proceeds of \$17.8 million, less commission of \$0.6 million for net proceeds of \$17.2 million. On September 12, 2023, the Company and Cowen entered into an amendment pursuant to which the aggregate offering amount available under the at-the-market offering program was reduced to \$180.0 million.

Public Offering

On September 15, 2023, we completed a public offering of approximately 9.5 million shares of our common stock at a public offering price of \$16.00 per share and pre-funded warrants to purchase 3.1 million shares of common stock at a price of \$15.99 per warrant (the"September 2023 Public Offering"). The gross proceeds to Rocket from the September 2023 Public Offering were approximately \$201.3 million, net of \$12.4 million of offering costs, underwriting discounts and commissions, legal and other expenses for net proceeds from the offering of \$188.9 million.

Gene Therapy Overview

Genes are composed of sequences of deoxyribonucleic acid ("DNA"), which provide the code for proteins that perform a broad range of physiologic functions in all living organisms. Although genes are passed on from generation to generation, genetic changes, also known as mutations, can occur in this process. These changes can result in the lack of production of proteins or the production of altered proteins with reduced or abnormal function, which can in turn result in disease.

Gene therapy is a therapeutic approach in which an isolated gene sequence or segment of DNA is administered to a patient, most commonly for the purpose of treating a genetic disease that is caused by genetic mutations. Currently available therapies for many genetic diseases focus on administration of large proteins or enzymes and typically address only the symptoms of the disease. Gene therapy aims to address the disease-causing effects of absent or dysfunctional genes by delivering functional copies of the gene sequence directly into the patient's cells, offering the potential for curing the genetic disease, rather than simply addressing symptoms.

We are using modified non-pathogenic viruses for the development of our gene therapy treatments. Viruses are particularly well suited as delivery vehicles because they are adept at penetrating cells and delivering genetic material inside a cell. In creating our viral delivery vehicles, the viral (pathogenic) genes are removed and are replaced with a functional form of the missing or mutant gene that is the cause of the patient's genetic disease. The functional form of a missing or mutant gene is called a therapeutic gene, or the "transgene." The process of inserting the transgene is called "transduction." Once a virus is modified by replacement of the viral genes with a transgene, the modified virus is called a "viral vector." The viral vector delivers the transgene into the targeted tissue or organ (such as the cells inside a patient's bone marrow). We have two types of viral vectors in development, LV and AAV. We believe that our LV and AAV-based programs have the potential to offer a significant therapeutic benefit to patients that is durable (long-lasting).

The gene therapies can be delivered either (1) *ex vivo* (outside the body), in which case the patient's cells are extracted and the vector is delivered to these cells in a controlled, safe laboratory setting, with the modified cells then being reinserted into the patient, or (2) *in vivo* (inside the body), in which case the vector is injected directly into the patient, either intravenously ("IV") or directly into a specific tissue at a targeted site, with the aim of the vector delivering the transgene to the targeted cells.

We believe that scientific advances, clinical progress, and the greater regulatory acceptance of gene therapy have created a promising environment to advance gene therapy products as these products are being designed to restore cell function and improve clinical outcomes, which in many cases include prevention of death at an early age. The FDA approval of several gene therapies in recent years indicates that there is a regulatory pathway forward for gene therapy products.

Pipeline Overview

The chart below shows the current phases of development of our programs and product candidates:

THERAPEU AREA	TIC	DISCOVERY	PRECLINICAL	PHASE 1	PHASE 2 (Pivotal)	Submission and Approval	DESIGNATIONS
	λĐ(LV RP-L102 Fanco	oni Anemia				RMAT, ATMP, Fast Track, Rare Pediatric, Orphan Drug (US/EU), PRIME
80	HEMATOLOGY	LV KRESLADI™ (m	narnetegragene auto	otemcel) Leukocyte	Adhesion Deficiency-	PDUFA Date: March 31, 2024	RMAT, ATMP, Fast Track, Rare Pediatric, Orphan Drug (US/EU), PRIME
	포	LV RP-L301 Pyruv	vate Kinase Deficie	ncy			RMAT, Fast Track, Orphan Drug (US/EU), PRIME
	AAV RP-A501 Danon Disease		RMAT, ATMP, Fast Track, Orphan Drug (US), Rare Pediatric, PRIME				
	A	AAV RP-A601 PK	P2-ACM				Fast Track, Orphan Drug (US)
	CARDIOV	AAV BAG3-DCM					
Wave 2 programs		Multiple Undisclo Candidates	osed				

Cardiovascular Programs

Danon Disease

Danon disease ("DD") is a multi-organ lysosomal-associated disorder leading to early death due to heart failure. DD is caused by mutations in the gene encoding lysosome-associated membrane protein 2 ("LAMP-2"), a mediator of autophagy. This mutation results in the accumulation of autophagic vacuoles, predominantly in cardiac and skeletal muscle. Male patients often require heart transplantation and typically die in their teens or twenties from progressive heart failure. Along with severe cardiomyopathy, other DD-related manifestations can include skeletal muscle weakness and intellectual impairment. There are no specific therapies available for the treatment of DD and medications typically utilized for the treatment of congestive heart failure ("CHF") are not believed to modify progression to end-stage CHF. Patients with end-stage CHF may undergo heart transplant, which currently is available to a minority of patients, is associated with significant short-and long-term complications and is not curative of the disorder in the long-term. RP-A501 is in clinical trials as an *in vivo* therapy for DD, which is estimated to have a prevalence of 15,000 to 30,000 patients in the U.S. and the EU.

DD is an X-linked dominant, monogenic rare inherited disorder characterized by progressive cardiomyopathy which is almost universally fatal in males even in settings where cardiac transplantation is available. DD predominantly affects males early in life and is characterized by absence of *LAMP2B* expression in the heart and other tissues. Preclinical models of DD have demonstrated that AAV-mediated transduction of the heart results in reconstitution of *LAMP2B* expression and improvement in cardiac function.

We currently have one AAV program targeting DD, RP-A501. We have treated seven patients in the RP-A501 Phase 1 clinical trial, which enrolled adult/older adolescent and pediatric male DD patients. This includes a first cohort evaluating a low-dose (6.7e13 genome copies (gc)/kilogram (kg)) in adult/older adolescent patients aged 15 or greater (n=3), a second cohort evaluating a higher dose (1.1e14 gc/kg) in adult/older adolescent patients aged 15 or greater (n=2), and a pediatric cohort at a low dose level (6.7e13 gc/kg; n=2).

As previously disclosed, a patient receiving therapy on the high dose cohort (1.1e14 gc/kg dose) had progressive heart failure and underwent a heart transplant at month five following therapy. This patient had more advanced disease than the four other adult/older adolescent patients who received treatment in the low and high dose cohorts, as evidenced by diminished baseline left ventricle ejection fraction (35%) on echocardiogram and markedly elevated left ventricle filling pressure prior to treatment. The patient's clinical course was characteristic of DD progression. The patient is doing well post-transplant.

Based on the initial efficacy observed in the low dose cohort and to mitigate complement-mediated safety concerns observed in the high dose cohort (thrombotic microangiopathy ("TMA")) and in agreement with the FDA, we are focusing on the low dose (6.7e13 gc/kg) and we will no longer administer doses of 1.1e14 gc/kg or higher in this trial. Additional safety measures have been implemented and are reflected in the updated trial protocol. These measures include exclusion of patients with end-stage heart failure, and a refined immunomodulatory regimen involving transient B- and T-cell mediated inhibition, with emphasis on preventing complement activation, while also enabling lower steroid doses and earlier steroid taper, with all immunosuppressive therapy discontinued 2-3 months following administration of RP-A501.

We are conducting a variety of efficacy assessments in the Phase I clinical study to measure the prospect of benefit for patients. These assessments include the following:

- New York Heart Association ("NYHA") Functional Classification is the most commonly used heart failure classification
 system. NYHA Class II is where a patient exhibits a slight limitation of physical activity, is comfortable at rest, and
 ordinary physical activity results in fatigue, palpitation and/or dyspnea. Class I is where a patient exhibits no limitation of
 physical activity and ordinary physical activity does not cause undue fatigue, palpitation and/or dyspnea. Class III and IV
 are considered more severe or advanced heart failure.
- Brain natriuretic peptide ("BNP") is a blood-based evaluation and a key marker of heart failure with prognostic significance in CHF and cardiomyopathies. Elevations in BNP are strongly associated with worsening heart failure and poor outcomes in cardiovascular disease.
- High sensitivity troponin I ("hsTnI") is a blood-based evaluation and a key marker of cardiac injury, one that is (like BNP) frequently elevated in DD patients and has been shown to be markedly elevated in patients with advanced stage disease.
- Echocardiographic measurements of heart thickness, most notably, left ventricular mass ("LVM") and maximal left ventricular wall thickness ("MLVWT"), indicate the degree of hypertrophy present in the heart.

- Kansas City Cardiovascular Questionnaire ("KCCQ") is a validated, patient-reported outcomes assessment that measures
 a patients perception of their heart failure symptoms, impact of disease on physical and social function, and the impact of
 their heart failure on overall health status and quality of life. Assessment scores range from 0 (very poor health status) to
 100 (excellent health status). Changes in KCCQ score of +/- 5 points are considered meaningful and have been shown to
 correlate with outcomes.
- Histologic examination of endomyocardial biopsies via hematoxylin and eosin ("H&E") histology and electron
 microscopy is used to detect evidence of DD-associated tissue derangements, including the presence of autophagic
 vacuoles and disruption of myofibrillar architecture, each of which are characteristic of DD-related myocardial damage.
- LAMP2B gene expression in endomyocardial biopsy samples is measured via both immunohistochemistry and Western blot and confirms the presence of LAMP2B protein in DD cardiac tissue following RP-A501 treatment.

In September 2022, we presented interim data for the ongoing Phase 1 trial of RP-A501 at the Heart Failure Society of America ("HFSA") meeting, including updated safety and initial efficacy parameters for the pediatric cohort and longer-term efficacy parameters for the low and high dose adult/older adolescent cohort (patients aged 15 and older; n=5) (data cut-off September 27, 2022). This data was also presented in November 2022 at the 75th American Heart Association ("AHA") Annual Meeting. During these presentations we provided incremental safety updates across cohorts. As previously outlined, RP-A501 was generally well tolerated at the 6.7e13 gc/kg dose level and no unexpected and serious drug product-related adverse events or severe adverse events were observed in both adult/older adolescent and pediatric low dose cohorts. All observed adverse effects at both doses were reversible and no lasting sequelae were observed with follow-up of 2-3 years from treatment for the adult/older adolescent cohort and 6-11 months for the pediatric cohort. Any early transaminase and creatinine kinase elevations returned to baseline or decreased, and any transient exacerbation of DD-associated skeletal myopathy resolved upon discontinuation of corticosteroid therapy. The updated safety data presented at HFSA in September 2022 and at AHA in November 2022 reconfirmed that RP-A501 was generally well tolerated at the low dose with a manageable safety profile across pediatric and adult/older adolescent cohorts.

In the pediatric cohort, an improvement in NYHA Class (from Class II to I) was reported in both patients after 6 and 9 months of follow-up post-RP-A501. In the adult/older adolescent cohorts, improvement in NYHA Class (from II to I) was observed in three patients (two low-dose and one high-dose) who had closely monitored immunomodulation and stabilization of NYHA Class was observed in one low-dose adult patient without a closely monitored immunomodulatory regimen. Substantial improvements (reductions) in BNP, a key marker of heart failure, were observed in both pediatric patients at 6 and 9 months of follow-up, with levels at these assessments less than 50% of baseline values. Improvements (reductions) in hsTnI, a key marker of myocardial injury, were observed in both pediatric patients at 6 and 9 months of follow-up, with levels at these assessments less than 20% of baseline values. In the adult/older adolescent cohorts, reductions in hsTnI were observed in three low-dose patients and one high-dose patient, with reductions greater than 50% of baseline levels identified in these four patients on at least one assessment, and reductions sustained through 24-36 months of follow-up. Reductions in BNP of at least 25% below baseline values were identified in three low-dose patients and one high-dose patient on at least one assessment. In two of the adult/older adolescent patients, BNP levels were modestly above baseline at the most recent assessment; however baseline BNP levels were either within normal limits or mildly elevated for these two patients. In adult/older adolescent cohort patients with closely monitored immunomodulation (two low-dose and one highdose) left ventricular posterior wall thickness improved (approximately 15-25% decrease compared to pretreatment baseline) and reductions in left ventricular mass were identified in four patients, including the patient in the low-dose cohort for whom immunomodulation was not closely monitored. Severe and progressive wall thickening is a hallmark of the hypertrophic cardiomyopathy of Danon disease and is a major contributor to early mortality in male patients. Evidence of sustained cardiac LAMP2B gene expression by immunohistochemistry with qualitative improvement of vacuoles and cardiac tissue architecture on standard H&E and electron microscopy was observed at both dose levels in four of five patients in the adult/older adolescent cohorts and both patients in the pediatric cohort. Sustained cardiac LAMP2B gene expression by immunohistochemistry was observed in all three adult/older adolescent patients with a closely monitored immunomodulatory regimen through 24 months of follow-up. Importantly, genetic correction (as evidenced by myocardial vector copy numbers ("VCNs") and LAMP2 protein expression were accompanied by reductions in the relative area of autophagic vacuoles relative to overall myocardial area, with decreases in this ratio of at least 20% relative to baseline identified in four adult/older adolescent cohort patients (three of whom had reductions of at least 50%). Substantial reductions (>50% baseline) in vacuolar area were also identified in the one pediatric cohort patient for whom this parameter was evaluable at 6 months post-therapy. In addition to the improvements identified in NYHA Class, improvements in quality of life ("QOL") as reported via the KCCQ were noted in three of the adult/older adolescent patients who had closely monitored immunomodulation, and both of the pediatric cohort patients; KCCQ score at baseline was 50 for the initial pediatric patient and was 93 at the most recent 9 month assessment; KCCQ score at baseline was 52 for the second pediatric patient and was 81 at a preliminary 3 month assessment.

On December 22, 2022, we announced updates from our end-of-Phase 1 meeting with the FDA regarding RP-A501. During the meeting, we reviewed the positive Phase 1 dataset with the FDA and proposed a study design and endpoints for ongoing clinical development of the investigational gene therapy. Following discussions with the FDA, we anticipate proceeding with a dose of 6.7e13 GC/kg, and we anticipate utilizing a single arm open-label trial design with a robust natural history comparator, pursuant to the FDA's acknowledgment of the challenges associated with executing a randomized controlled trial in DD. The FDA has also expressed an openness to considering a biomarker-based composite endpoint supported by functional and quality-of-life assessments as measures of patient benefit. We look forward to continued dialogue with the FDA on the design for our proposed pivotal trial, including discussion of appropriate external controls for the study and appropriate endpoints to support accelerated approval. We are now in discussion with the FDA about a trial design that will enable evaluation of two pediatric patients treated with drug product manufactured at our inhouse cGMP AAV facility as an initial component of a modestly sized global pivotal study.

On January 9, 2023, we presented additional positive efficacy updates from our Phase I study of RP-A501 during the 41st Annual J.P. Morgan Healthcare Conference. The data presented included several additional months of follow-up, which showed further improvements in key biomarkers, echocardiographic and functional measures. A summary of these updates is provided in the table below. We also provided additional natural history comparator data, which showed the marked divergence of the course of Phase I patients from that of untreated patients in terms of key biomarkers (BNP) and functional measures (NYHA Class). Furthermore, RP-A501 continued to be well tolerated at 2-3 years post treatment in both adult/older adolescent high and low-dose cohorts and at 8 to 13 months in the pediatric cohort. In the pediatric cohort, no significant immediate or delayed toxicities, significant skeletal myopathy, or late transaminase elevation have been observed.

Improvement or Stabilization Observed Across Key Biomarker, Echo Findings and Functional Measures in Phase 1 RP-A501 study

Cohort	Patient ID	Most recent visit (months)	∆ hsTnl	Δ BNP	Δ LV mass	Δ LV max wall thickness	Δ NYHA class	A KCCQ score
Low dose pediatric	1008	12	↓86%	↓83%	↓29%¹	↓15%¹	11->1	+32.3
	1009	6	↓90%	↓62%	↓21%	↑3%	11->1	+26
Low dose adult/ adolescent	1001	36	↓98%	个8%	↓32%	↓9%	11 -> 112	+5.3
	1002	36	↓96%	↓94%	↓48%	↓40%	11->1	+17.8
	1005	30	↓46%	↑6%	↓14%	↓27%	11->1	+8.33
High dose adult/ adolescent	1006	24	↓63%	↓69%	↓27%	↓15%	11->1	+3.1

Darker Green = improved; Lighter Green = minimal change (stabilization)

Does not include pt 1007 in Ph1 trial who had advanced HF with EF<40% at enrollment and received HTx 5M following tx due to pre-existing advanced HF. Patient is currently stable.

- ¹ Patient 1008 echocardiographic parameters are M9 visit (M12 pending).
- ² Patient 1002 NYHA class depicted for M30 visit (M36 pending).
- ³ Patient 1005 KCCQ score depicted for M24 visit (M30 pending).

In addition to these clinical updates, we also provided updates on our in-house manufacturing activities. We have successfully produced 2 cGMP RP-A501 batches that have superior specifications to Phase I material in both titer and full versus empty particles. We believe the improved quality of our in-house manufactured product will allow for full dosing with lower total viral particles, potentially further optimizing the safety profile of RP-A501. Furthermore, we have agreement from the FDA on the continued utilization of HEK-293 cell-based process through commercialization as well as our comparability approach and potency assay.

In May 2023 we presented previously disclosed results from the Phase I study of RP-A501 at the ASGCT 26th Annual Meeting, As of the most recent date extraction, all six patients that remain in follow-up continued to show signs of improvement or stabilization.

Results from the ongoing Phase 1 DD trial represent one of the most comprehensive investigational gene therapy datasets for any cardiac condition. RP-A501 was generally well tolerated with evidence of durable treatment activity and improvement of DD for both pediatric patients with up to nine months of follow-up and four adult/older adolescent patients with up to 36 months of follow-up. All adult/older adolescent and pediatric patients who received a closely monitored immunomodulatory regimen showed improvements across tissue, laboratory, and imaging-based biomarkers, as well as in NYHA class (from II to I) and KCCQ scores with follow-up of six to 36 months.

On September 12, 2023, the Company announced that alignment was reached with the FDA on the global Phase 2 pivotal trial of RP-A501 for Danon disease. Danon disease is a uniformly fatal inherited cardiomyopathy that leads to mortality in the majority of male patients at age \sim 20 and females at age \sim 40, and for which there are no approved curative or disease-modifying therapies. The disease affects an estimated 15,000 to 30,000 patients in the U.S. and Europe. The global, single-arm, multi-center Phase 2 pivotal trial will evaluate the efficacy and safety of RP-A501 in 12 patients with Danon disease, including a pediatric safety run-in (n=2), with a natural history comparator and a dose level of 6.7 x 1013 GC/kg.

- To support accelerated approval, the study will assess the efficacy of RP-A501 as measured by the biomarker-based coprimary endpoint consisting of improvements in LAMP2 protein expression (≥ Grade 1, as measured by immunohistochemistry), and reductions in left ventricular mass.
- Key secondary endpoint is change in troponin. Additional secondary endpoints will include natriuretic peptide, Kansas City Cardiomyopathy Questionnaire, New York Heart Association class, event free survival to 24 months and treatment emergent safety events. These endpoints could support full approval with longer-term follow-up.
- A global natural history study will serve as an external comparator and run concurrently to the Phase 2 pivotal trial.
- In-house manufacturing has been completed with sufficient high-quality drug product produced to fully supply the Phase 2 pivotal study. Potency assays have been developed and qualified in accordance with FDA guidance.

We have filed Clinical Trial Application ("CTA") and Investigational Medicinal Product Dossier ("IMPD") for RP-A501 with the European Medicines Agency ("EMA") and Medical and Healthcare Products Regulatory Agency ("MHRA"). We are working towards initiation of Phase 2 pivotal trial activities in Europe and the UK.

Anticipated Milestones

On February 7, 2023, we announced that RP-A501 received regenerative medicine advanced therapy ("RMAT") designation from the FDA, and on May 31, 2023, we received priority medicines ("PRIME") designation from the EMA. On September 12, 2023, we announced our alignment with the FDA on our pivotal study design for RP-A501 in DD and we have initiated the global study.

Plakophilin-2 Arrhythmogenic Cardiomyopathy (PKP2-ACM)

Arrhythmogenic cardiomyopathy ("ACM") is an inheritable cardiac disorder that is characterized by a high propensity for arrhythmias and sudden death, a progressive loss of cardiac muscle mass, severe right ventricular dilation, dysplasia, and fibrofatty replacement of the myocardium. Most commonly, the cardiomyopathy initially manifests in the right ventricular free wall, so the disease was termed arrhythmogenic right ventricular dysplasia/cardiomyopathy (ARVD/ARVC). However, since left dominant and biventricular forms have also been observed, this has led more recently to the use of the term ACM. Mutations in the PKP2 gene comprise the most frequent genetically identified etiology of familial ACM. PKP2 encodes for the protein Plakophilin-2, which is a component of the desmosome, an intercellular complex involved in cell-cell adhesion. PKP2 is also involved in transcriptional regulation of calcium signaling between cardiomyocytes. Patients with mutations in PKP2 are typically heterozygous and demonstrate reduced expression of PKP2 in the myocardium. Mean presentation is at the age of 35, and patients have a very high lifetime risk of ventricular arrhythmias, structural ventricular abnormalities, and sudden cardiac death ("SCD").

There are no specific available medical therapies available that have been shown to be highly effective for ACM, and current treatment protocols follow standard ventricular arrhythmia and cardiomyopathy guidelines, which involve lifestyle modifications (i.e. exercise limitation) and include drug treatments such as beta blockers, anti-arrhythmics and diuretics. The use of these therapies is driven by the arrhythmia burden and severity of cardiomyopathy. These therapies do not modify the course of the disease, and generally provide only symptomatic and/or palliative support. Upon diagnosis, a substantial percentage of patients receive an implantable cardiac defibrillator ("ICD") for primary or secondary prevention of ventricular arrhythmias and SCD. Of note, ICDs are not curative, and breakthrough life-threatening arrythmias may persist with ongoing risk of death; ICDs furthermore do not prevent the progression to end-stage heart failure. ICD firings, although lifesaving, are physically and emotionally traumatic events. Patients whose condition progresses to end-stage heart failure are considered for cardiac transplantation which, while curative of underlying disease, is itself associated with significant morbidity and mortality. Hence there exists a high unmet medical need in this population. PKP2-ACM is estimated to have a prevalence of 50,000 patients in the US and EU.

We currently have one adeno-associated viral vector program targeting PKP2-ACM, RP-A601, which is a recombinant AAVrh.74 vector expressing PKP2a. PKP2-ACM is typically caused by heterozygous pathogenic mutations in the PKP2 gene resulting in reduced PKP2 expression in the myocardium. A once-administered gene therapy that addresses the root cause of the disease (PKP2 deficiency) early in the disease course, could mitigate the early electrical remodeling and diminish the risk of life-threatening arrhythmias and SCD associated with ACM, potentially impeding the development of irreversible cardiac structural changes. Prevention of syncopal episodes, life-threatening arrythmias, SCD, ICD shocks and the resulting anxiety, discomfort and hospitalizations is anticipated to result in a vastly improved quality of life and survival benefit. Furthermore, such an approach could spare patients the need for lifelong adherence to multiple arrhythmia and heart failure drugs that are nonspecific for PKP2-ACM and are associated with their own side effects, enabling patients an opportunity to live without exercise restrictions and with diminished concern for arrhythmias, palpitations, ICD shocks and progression to end-stage heart failure.

In May 2023 we presented preclinical efficacy data for RP-A601 at the American Society of Gene and Cell Therapy 26th Annual meeting. Nonclinical studies conducted by the Sponsor, RP-A601 have demonstrated efficacy in altering the natural history of PKP2-driven ACM. 100% of PKP2 cKO animals treated with the study drug exhibited extended survival to the longest timepoint measured (5 months), reduced cardiac dilation and fibrofatty replacement/fibrosis of the myocardium, preserved left ventricular function, and mitigation of the arrhythmic phenotype. Untreated PKP2 cKO mice had a median survival of approximately one month.

We have initiated a multi-center Phase 1 study for RP-A601. The multi-center Phase 1, dose escalation trial will evaluate the safety and preliminary efficacy of RP-A601 in at least six adult PKP2-ACM patients with ICDs and overall high risk for arrhythmias. The study will assess the impact of RP-A601 on PKP2 myocardial protein expression, cardiac biomarkers, and clinical predictors of life-threatening ventricular arrhythmias and sudden cardiac death. Patients in the dose-escalation trial will receive a single dose of RP-A601. The starting dose will be 8×10^{13} GC/kg.

Anticipated Milestones

We have achieved pre-clinical proof-of-concept for RP-A601 in an animal model representative of PKP2-ACM, completed pharmacology and GLP toxicology studies, produced GMP drug product, and developed an appropriate potency assay to support a Phase I study. On May 9, 2023, we announced FDA clearance of the IND. On June 8, 2023, we announced receipt of FDA Fast Track and Orphan Drug Designations and we have initiated a Phase 1 study.

BAG3 Dilated Cardiomyopathy

Dilated cardiomyopathy ("DCM") is the most common form of cardiomyopathy and is characterized by progressive thinning of the walls of the heart resulting in enlarged heart chambers that are unable to pump blood. A familial association of DCM can be identified in 20-50% of DCM patients, with up to 40% of familial patients having an identifiable genetic cause. Mutations in the BAG3 gene (BCL-2-associated athanogene 3) are among the more common pathogenic genetic variants observed in familial DCM and these variants are highly penetrant, with approximately 80% of individuals with disease-causing genetic variants in the BAG3 gene developing DCM at > 40 years of age. BAG3 protein is associated with a variety of cellular functions including cardiac contractility, protein quality control (as a co-chaperone), cardiomyocyte structural support and anti-apoptosis. BAG3 associated dilated cardiomyopathy (BAG3-DCM) leads to early onset, rapidly progressing heart failure and significant mortality and morbidity. We estimate that the prevalence of BAG3-associated DCM in the United States to be as many as 30,000 individuals.

Currently, DCM patients with a BAG3 mutation are treated with the standard of care for heart failure, which include angiotensin converting enzyme inhibitors, angiotensin receptor blockers, neprilysin inhibitors, beta-adrenergic receptor antagonists, or beta-blockers, aldosterone antagonists and/or diuretics, along with certain lifestyle changes, and do not address the underlying cause of disease. Patients who meet specific parameters may also undergo placement of an implantable cardioverter defibrillator, a cardiac resynchronization device or a combination of the two. There is no current therapy directly targeting the underlying mechanism of BAG3 associated DCM, and patients diagnosed with BAG3 associated DCM appear to progress to end-stage heart failure and death more rapidly than patients with DCM not associated with BAG3 variants. For example, approximately 19% of patients with BAG3-DCM require mechanical cardiac support, heart transplant, or have heart failure related death at 12 months after diagnosis, nearly twice the rate of similarly staged non-BAG3-DCM patients.

In December 2022 we completed our acquisition of Renovacor which provided Rocket with Renovacor's most advanced program, a recombinant AAV9-based gene therapy designed to deliver a fully functional BAG3 gene to augment BAG3 protein levels in cardiomyocytes and slow or halt progression of BAG3-DCM. Initial proof of concept for AAV9-BAG3 has been demonstrated in studies of BAG3-knockout mouse models, which show treated mice have improved ejection fraction versus untreated knockout mice and comparable ejection fraction to walk test controls at timepoints 4- and 6-weeks post injection.

Anticipated Milestones

We are in the process of evaluating the optimal development pathway for this program and plan to submit an IND for BAG3-DCM in 2024.

Hematology Programs

Fanconi Anemia Complementation Group A (FANCA)

FA, a rare and life-threatening DNA-repair disorder, generally arises from a mutation in a single FA gene. An estimated 60 to 70% of cases arise from mutations in the Fanconi-A ("FANCA") gene, which is the focus of our program. FA results in bone marrow failure, developmental abnormalities, myeloid leukemia, and other malignancies, often during the early years and decades of life. Bone marrow aplasia, which is bone marrow that no longer produces any or very few red and white blood cells and platelets leading to infections and bleeding, is the most frequent cause of early morbidity and mortality in FA, with a median onset before 10 years of age. Leukemia is the next most common cause of mortality, ultimately occurring in about 20% of patients later in life. Solid organ malignancies, such as head and neck cancers, can also occur, although at lower rates during the first two to three decades of life.

Although improvements in allogeneic (donor-mediated) hematopoietic stem cell transplant ("HSCT"), currently the most frequently utilized therapy for FA, have resulted in hematologic correction of the disorder, HSCT is associated with both acute and long-term risks, including transplant-related mortality, graft failure, and graft versus host disease ("GVHD"), a sometimes fatal side effect of allogeneic transplant characterized by painful ulcers in the GI tract, liver toxicity and skin rashes, as well as increased risk of subsequent cancers. Our gene therapy program in FA is designed to enable a minimally toxic hematologic correction using a patient's own stem cells early in the disease course and administered without conditioning. We believe that the development of a broadly applicable autologous gene therapy can be transformative for these patients.

Each of our hematology programs utilize third-generation, self-inactivating LV to correct defects in patients' HSCs, which are the cells found in bone marrow that are capable of generating blood cells over a patient's lifetime. Defects in the genetic coding of HSCs can result in severe, and potentially life-threatening anemia, which is when a patient's blood lacks enough properly functioning red blood cells to carry oxygen throughout the body. Stem cell defects can also result in severe and potentially life-threatening decreases in white blood cells resulting in susceptibility to infections, and in platelets responsible for blood clotting, which may result in severe and potentially life-threatening bleeding episodes. Patients with FA have a genetic defect that prevents the normal repair of genes and chromosomes within blood cells in the bone marrow, which frequently results in the development of bone marrow failure, acute myeloid leukemia ("AML") and myeloid dysplastic syndrome ("MDS"), types of blood cancers. FA patients also typically present with congenital defects. The average lifespan of an FA patient is estimated to be 30 to 40 years. The prevalence of FA in the U.S. and EU is estimated to be approximately 4,000 patients in total. In light of the efficacy seen in non-conditioned patients, the addressable annual market opportunity is now believed to be 400 to 500 patients collectively in the U.S. and EU.

We currently have one ex-vivo LV-based program targeting FA, RP-L102. RP-L102 is our lead LV-based program that we inlicensed from Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas ("CIEMAT"), which is a leading research institute in Madrid, Spain. Our Phase 2 registrational enabling clinical trials treating FA patients with RP-L102 at the Center for Definitive and Curative Medicine at Stanford University School of Medicine ("Stanford"), Great Ormond Street Hospital ("GOSH") in London and Hospital Infantil de Nino Jesus ("HNJ") in Spain completed treatment. The trial has treated a total of 12 patients from the U.S. and EU. Two additional patients were treated in the US Phase 1 study at Stanford such that a total of 14 patients have received RP-L102 on Rocket-sponsored clinical trials. Patients receive a single intravenous infusion of RP-L102 that utilizes fresh cells and "Process B" which incorporates a modified stem cell enrichment process, transduction enhancers, as well as commercial-grade vector and final drug product.

Resistance to mitomycin-C, a DNA damaging agent, in bone marrow stem cells at a minimum time point of one year post treatment is the primary endpoint for our ongoing Phase 2 study. Per agreement with the FDA and EMA, engraftment leading to bone marrow restoration exceeding a 10% mitomycin-C resistance threshold could support a marketing application for approval.

In October 2022, we presented data for RP-L102 at the European Society for Cell and Gene Therapy 29th Annual Meeting, including the clinical activity results presented at the ASGCT 2022 meeting. We also disclosed at least one of the additional three patients in our Phase 2 trial of RP-L102 for FA for whom there is less than 12 months of follow-up has demonstrated initial evidence of engraftment (as demonstrated by bone marrow mitomycin-C resistance and VCN in blood and bone marrow) at levels comparable to those seen in the five patients for whom there is longer-term evidence of progressive engraftment and phenotypic correction. We also disclosed that one of the initial five patients in this trial who had evidence of engraftment developed a T-cell lymphoblastic lymphoma approximately 22 months after RP-L102 administration. A surgical biopsy of the lymphoma indicated negligible gene markings (VCN of 0.003) at a juncture when concomitant VCN in blood and bone marrow were 0.26 and 0.42 respectively. These findings conclusively indicate that the lymphoma did not result from a LV-mediated insertion, as there were essentially no gene markings in the tumor (the very low but detectable VCN is likely the result of blood cells in the tumor specimen). FA is a cancerpredisposition syndrome and cancers may develop in patients under the age of 10. Importantly, the patient tolerated induction chemotherapy for the lymphoma without significant complications and is currently in a complete response. The presence of gene-corrected hematopoietic cells may have contributed to this patient's overall tolerance of chemotherapy.

In December 2022, we presented positive clinical data for RP-L102 at the 64th Annual Meeting of ASH. RP-L102 conferred phenotypic correction in at least six of 10 evaluable patients with \geq 12 months of follow-up as demonstrated by increased resistance to MMC in bone marrow derived colony forming cells, concomitant genetic correction and hematologic stabilization. A seventh patient has displayed evidence of progressively increasing genetic correction as demonstrated by peripheral blood and bone marrow VCN's, with recent development of MMC resistance and possible indicators of hematologic stability after 36 months of follow-up. The primary endpoint has been achieved, based on a trial protocol in which statistical and clinical significance requires a minimum of five patients to attain increased MMC resistance at least 10% above baseline at two or more timepoints and concomitant evidence of genetic correction and clinical stabilization. The safety profile of RP-L102 has been highly favorable, and the treatment, administered without any cytotoxic conditioning, has been well tolerated. No signs of bone marrow dysplasia, clonal dominance or insertional mutagenesis related to RP-L102 have been observed.

In May 2023 we presented updated clinical data for RP-L102 at the ASGCT 26th Annual Meeting. As of the data cut-off (April 17, 2023), RP-L102 conferred sustained genetic correction in eight of 12 evaluable patients and comprehensive phenotypic correction in seven of 12 evaluable patients with \geq 12 months of follow up as demonstrated by increased resistance to mitomycin-C (MMC) in bone marrow (BM)-derived colony forming cells and hematologic stabilization. The safety profile of RP-L102 continues to be highly favorable with no signs of bone marrow dysplasia, clonal dominance or insertional mutagenesis related to RP-L102. Polyclonal integration patterns have been observed in each of the seven patients with phenotypic, genetic, and hematologic evidence of engraftment. Pivotal trial enrollment and treatment have been completed.

Anticipated Milestones

Product filings for RP-L102 anticipated in the first half of 2024 in the U.S. and Europe. Rocket is finalizing the CMC package with the FDA.

Leukocyte Adhesion Deficiency-I (LAD-I)

LAD-I is a rare autosomal recessive disorder of white blood cell adhesion and migration, resulting from mutations in the *ITGB2* gene encoding for the Beta-2 Integrin component, CD18. Deficiencies in CD18 result in an impaired ability for neutrophils (a subset of infection-fighting white blood cells) to leave blood vessels and enter tissues where these cells are needed to combat infections. As is the case with many rare diseases, accurate estimates of incidence are difficult to confirm; however, several hundred cases have been reported to date. Most LAD-I patients are believed to have the severe form of the disease. Severe LAD-I is notable for recurrent, life-threatening infections and substantial infant mortality in patients who do not receive an allogeneic HSCT. Mortality for severe LAD-I has been reported as 60 to 75% by age two in the absence of allogeneic HCST.

We currently have one *ex-vivo* program targeting LAD-I, RP-L201. RP-L201 is a clinical program that we in-licensed from CIEMAT. UCLA and its Eli and Edythe Broad Center of Regenerative Medicine and Stem Cell Research is serving as the lead U.S. clinical research center for the registrational clinical trial for LAD-I, and HNJ and GOSH are serving as the lead clinical sites in Spain and London, respectively. This study has received a \$6.6 million CLIN2 grant award from the California Institute for Regenerative Medicine ("CIRM") to support the clinical development of gene therapy for LAD-I.

The open-label, single-arm, Phase 1/2 registration-enabling clinical trial of RP-L201 has treated nine severe LAD-I patients to assess the safety and tolerability of RP-L201. The first patient was treated at UCLA with RP-L201 in the third quarter of 2019. Enrollment is now complete in both the Phase 1 and 2 portions of the study; nine patients have received RP-L201 at 3 investigative centers in the U.S. and Europe.

In May 2022, we presented updated data at ASGCT's 25th Annual Meeting. The presentation included efficacy and safety interim data at three to 24 months of follow-up after infusion for all nine treated patients and overall survival data, including survival data for the seven patients with at least 12 months of follow-up after infusion as of the March 9, 2022 cut-off date. All patients, aged three months to nine years, demonstrated sustained CD18 restoration and expression on more than 10% of neutrophils (range: 20%-87%, median: 56%). At one year, the overall survival without allogeneic hematopoietic stem cell transplantation across the cohort is 100% based on the Kaplan-Meier estimate. As of the data cut-off, all nine patients are alive and clinically stable. All patients demonstrated a statistically significant reduction in the rate of all-cause hospitalizations and severe infections, relative to pretreatment. Evidence of resolution of LAD-I-related skin rash and restoration of wound repair capabilities has been shown along with sustained phenotypic correction. The tolerability profile of RP-L201 has been highly favorable in all patients with no RP-L201-related adverse events. Adverse events related to other study procedures, including busulfan conditioning, have been previously disclosed and consistent with the tolerability profiles of those agents and procedures.

In December 2022, we presented positive clinical data at the 64th Annual Meeting of ASH. The presentation included previously disclosed top-line data at three to 24 months of follow-up after RP-L201 infusion for all patients and overall survival data for seven patients at 12 months or longer after infusion. We observed 100% overall survival at 12 months post-infusion via Kaplan Meier estimate and a statistically significant reduction in all hospitalizations, infection and inflammatory-related hospitalizations and prolonged hospitalizations for all nine LAD-I patients with three to 24 months of available follow-up. Data also shows evidence of resolution of LAD-I-related skin rash and restoration of wound repair capabilities. The safety profile of RP-L201 has been highly favorable in all patients with no RP-L201-related serious adverse events to date.

In May 2023 at the ASGCT 26th annual meeting, we presented updated top-line data at 12 to 24 months of follow-up for all nine patients showing 100% overall survival at 12 months post-infusion. All patients continue to demonstrate evidence of resolution of LAD-I-related skin rash and restoration of wound repair capabilities, and the safety profile of RP-L201 remains highly favorable with follow-up of 12-36 months. No evidence of replication-competent lentivirus has been observed. Insertion site analyses indicate highly polyclonal integration patterns across the entire cohort.

Anticipated Milestones

BLA filing for RP-L201 has been accepted by the FDA with priority review and a Prescription Drug User Fee Act ("PDUFA") date of March 31, 2024.

Pyruvate Kinase Deficiency (PKD)

Red blood cell PKD is a rare autosomal recessive disorder resulting from mutations in the pyruvate kinase L/R ("PKLR") gene encoding for a component of the red blood cell ("RBC") glycolytic pathway. PKD is characterized by chronic non-spherocytic hemolytic anemia, a disorder in which RBCs do not assume a normal spherical shape and are broken down, leading to decreased ability to carry oxygen to cells, with anemia severity that can range from mild (asymptomatic) to severe forms that may result in childhood mortality or a requirement for frequent, lifelong RBC transfusions. The pediatric population is the most commonly and severely affected subgroup of patients with PKD, and PKD often results in splenomegaly (abnormal enlargement of the spleen), jaundice and chronic iron overload which is likely the result of both chronic hemolysis and the RBC transfusions used to treat the disease. The variability in anemia severity is believed to arise in part from the large number of diverse mutations that may affect the PKLR gene. Estimates of disease incidence have ranged between 3.2 and 51 cases per million in the white U.S. and EU population. Industry estimates suggest at least 2,500 cases in the U.S. and EU have already been diagnosed. Market research indicates the application of gene therapy to broader populations could increase the market opportunity from approximately 250 to 500 patients per year.

We currently have one *ex-vivo* LV-based program targeting PKD, RP-L301. RP-L301 is a clinical stage program that we inlicensed from CIEMAT.

This global Phase 1 open-label, single-arm, clinical trial is designed to enroll four to five adult and pediatric PKD patients in the U.S. and Europe and is intended to assess the safety, tolerability, and preliminary activity of RP-L301. Stanford serves as the lead site in the U.S. for adult and pediatric patients, HNJ serves as the lead site in Europe for pediatrics, and Hospital Universitario Fundación Jiménez Díaz serves as the lead site in Europe for adult patients. Four patients have been treated in the Phase 1 trial, including 2 adults and 2 pediatric patients (age 8-17); following safety evaluation in the adult cohort, the pediatric cohort was enrolled.

In December 2022, we presented positive clinical data at the 64th Annual Meeting of ASH. The presentation included positive updated data from two adult patients with significant anemia. At 24 months post-infusion, both patients have robust and sustained efficacy demonstrated by normalized hemoglobin (from baseline levels in the 7.0-7.5 g/dL range), improved hemolysis parameters, independence from red blood cell transfusions and improved quality of life both reported anecdotally and as documented via formal quality of life assessments. The safety profile appears highly favorable, with no RP-L301-related serious adverse events through 24 months post-infusion in both adult patients. Insertion site analyses in peripheral blood and bone marrow in both adult patients up to 12 months post-RP-L301 demonstrated highly polyclonal patterns and there has been no evidence of insertional mutagenesis.

In May 2023, we presented positive updated clinical data at the ASGCT 26th Annual Meeting (data cut-off May 3, 2023), which included up to 30 months of follow-up from the two treated adult patients and early clinical data from the first pediatric patient treated with RP-L301. Robust and sustained efficacy was observed in both adult patients at up to 30 months post-infusion evidenced by normalized hemoglobin (from baseline pre-treatment levels in the 7.0-7.5 g/dL range), improved hemolysis parameters, and red blood cell transfusion independence. Furthermore, both adult patients reported improved quality of life with documented improvements via formal quality of life assessments. The safety profile continues to appear highly favorable, with no RP-L301-related serious adverse events in either of the adult patients. Insertion site analyses in peripheral blood and bone marrow in both adult patients through 24 months post-RP-L301 demonstrated highly polyclonal patterns and there has been no evidence of insertional mutagenesis. The first pediatric patient infusion of RP-L301 was well tolerated, with engraftment achieved at day +15, hospital discharge less than one month following infusion, no RP-L301 related serious adverse events and early signs of efficacy. There were no red blood cell transfusion requirements following engraftment. Both adult and pediatric enrollment is completed in the Phase 1 study.

In October 2023, we presented positive updated clinical data at the 30th Annual Congress at ESGCT (data cut-off October 9, 2023), including up to 36 months of follow-up in the adult cohort and more limited follow-up of 6 months in the pediatric cohort. Sustained efficacy has been demonstrated in adult cohort including hemoglobin normalization, transfusion independence, decreased hemolysis, and quality of life improvement; hemoglobin improvement relative to pre-treatment baseline has been observed in pediatric cohort. Safety profile remains favorable.

Anticipated Milestones

Earlier this year, we announced receipt of FDA RMAT and EMA PRIME designation for RP-L301 based on the robust efficacy observed in the Phase 1 treated patients.

We have reached agreement with FDA on study design of Phase 2 pivotal trial of RP-L301. Based on positive safety and efficacy data from the Phase 1 study, Rocket has aligned with the FDA on the pivotal study design to support accelerated approval and is initiating a 10-patient, single-arm Phase 2 pivotal trial with a primary endpoint of \geq 1.5 point Hgb improvement at 12 months.

cGMP Manufacturing

Our 103,720 square foot manufacturing facility in Cranbury, New Jersey has been scaled up to manufacture AAV drug product for a planned Phase 2 pivotal study in DD. The facility also houses lab space for research & development and quality. We reached an understanding with the FDA on chemistry, manufacturing, and controls requirements to start AAV cGMP manufacturing at our inhouse facility as well as potency assay plans for a Phase 2 pivotal trial in DD. To further strengthen our manufacturing and commercial capabilities during 2022, we appointed Mayo Pujols, one of the most seasoned cell and gene therapy technical operations and manufacturing leaders in the industry, as our Chief Technical Officer.

Strategy

We seek to bring hope and relief to patients with devastating, undertreated, rare pediatric diseases through the development and commercialization of potentially curative first-in-class gene therapies. To achieve these objectives, we intend to develop into a fully-integrated biotechnology company. In the near and medium-term, we intend to develop our first-in-class product candidates, which are targeting devastating diseases with substantial unmet need, develop proprietary in-house analytics and manufacturing capabilities and continue to commence registration trials for our currently planned programs. In the medium and long-term, pending favorable data, we expect to submit BLAs for the rest of our suite of clinical programs, and establish our gene therapy platform and expand our pipeline to target additional indications that we believe to be potentially compatible with our gene therapy technologies. In addition, during that time, we believe that our currently planned programs will become eligible for priority review vouchers from the FDA that provide for expedited review. We have assembled a leadership and research team with expertise in cell and gene therapy, rare disease drug development and product approval.

We believe that our competitive advantage lies in our disease-based selection approach, a rigorous process with defined criteria to identify target diseases. We believe that this approach to asset development differentiates us as a gene therapy company and potentially provides us with a first-mover advantage.

Financial Overview

Since our inception, we have devoted substantially all of our resources to organizing and staffing the company, business planning, raising capital, acquiring or discovering product candidates and securing related intellectual property rights, conducting discovery, R&D activities for our product candidates and planning for potential commercialization. We do not have any products approved for sale and have not generated any revenue from product sales. From inception through September 30, 2023, we raised net cash proceeds of approximately \$1.0 billion from investors through both equity and convertible debt financing to fund operating activities.

Revenue

To date, we have not generated any revenue from any sources, including from product sales, and we do not expect to generate any revenue from the sale of products in the near future. If our development efforts for product candidates are successful and result in regulatory approval or license agreements with third parties, we may generate revenue in the future from product sales.

Operating Expenses

Research and Development Expenses

Our R&D program expenses consist primarily of external costs incurred for the development of our product candidates. These expenses include:

- expenses incurred under agreements with research institutions and consultants that conduct R&D activities including process development, preclinical, and clinical activities on our behalf;
- costs related to process development, production of preclinical and clinical materials, including fees paid to contract
 manufacturers and manufacturing input costs for use in internal manufacturing processes;
- · consultants supporting process development and regulatory activities; and
- costs related to in-licensing of rights to develop and commercialize our product candidate portfolio.

We recognize external development costs based on contractual payment schedules aligned with program activities, invoices for work incurred, and milestones which correspond with costs incurred by the third parties. Nonrefundable advance payments for goods or services to be received in the future for use in R&D activities are recorded as prepaid expenses.

Our direct R&D expenses are tracked on a program-by-program basis for product candidates and consist primarily of external costs, such as research collaborations and third-party manufacturing agreements associated with our preclinical research, process development, manufacturing, and clinical development activities. Our direct R&D expenses by program also include fees incurred under license agreements. Our personnel, non-program and unallocated program expenses include costs associated with activities performed by our internal R&D organization and generally benefit multiple programs. These costs are not separately allocated by product candidate and consist primarily of:

- salaries and personnel-related costs, including benefits, travel, and stock-based compensation, for our scientific personnel performing R&D activities;
- facilities and other expenses, which include expenses for rent and maintenance of facilities, and depreciation expense; and
- laboratory supplies and equipment used for internal R&D activities.

Our direct R&D expenses consist principally of external costs, such as fees paid to investigators, consultants, laboratories and Contract Research Organizations ("CROs") in connection with our clinical studies, and costs related to acquiring and manufacturing clinical study materials. We allocate salary and benefit costs directly related to specific programs. We do not allocate personnel-related discretionary bonus or stock-based compensation costs, costs associated with our general discovery platform improvements, depreciation or other indirect costs that are deployed across multiple projects under development and, as such, the costs are separately classified as other R&D expenses.

The following table presents R&D expenses tracked on a program-by-program basis as well as by type and nature of expense for the three and nine months ended September 30, 2023 and 2022.

	Three Months Ended September 30,			Nine Months Ended September 30,				
	2023 2022		2022	2023		2022		
Direct Expenses:						_		
Danon Disease (AAV) RP-A501	\$	9,744	\$	8,058	\$	23,140	\$	24,001
Plakophilin-2 Arrhythmogenic Cardiomyopathy (AAV) RP-A601		1,177		3,709		6,205		9,268
Leukocyte Adhesion Deficiency (LVV) RP-L201		2,767		5,719		15,907		15,814
Fanconi Anemia (LVV) RP-L102		6,109		7,141		19,397		16,228
Pyruvate Kinase Deficiency (LVV) RP-L301		883		433		2,470		1,919
Infantile Malignant Osteopetrosis (LVV) RP-L401 (1)		=		91		-		280
Other product candidates		827		980		4,259		2,451
Total direct expenses		21,507		26,131		71,378		69,961
Unallocated Expenses:					-			
Employee compensation	\$	12,085	\$	7,983	\$	34,982	\$	20,495
Stock based compensation expense		4,673		3,040		13,130		8,247
Depreciation and amortization expense		1,761		1,090		4,081		2,976
Laboratory and related expenses		4,497		3,033		13,736		3,940
Professional Fees		1,035		819		2,953		2,009
Other expenses		1,286		1,287		4,338		7,905
Total other research and development expenses	<u>-</u>	25,337		17,252		73,220		45,572
Total research and development expense	\$	46,844	\$	43,383	\$	144,598	\$	115,533

(1) Effective December 2021, a decision was made to no longer pursue Rocket-sponsored clinical evaluation of RP-L401; this program was returned to academic innovators. Costs to close out the study were incurred in 2022.

We cannot determine with certainty the duration and costs to complete current or future clinical studies of product candidates or if, when, or to what extent we will generate revenues from the commercialization and sale of any of our product candidates that obtain regulatory approval. We may never succeed in achieving regulatory approval for any of our product candidates. The duration, costs, and timing of clinical studies and development of product candidates will depend on a variety of factors, including:

- the scope, rate of progress, and expense of ongoing as well as any clinical studies and other R&D activities that we
 undertake:
- future clinical study results;
- uncertainties in clinical study enrollment rates;
- · changing standards for regulatory approval; and
- the timing and receipt of any regulatory approvals.

We expect R&D expenses to increase for the foreseeable future as we continue to invest in R&D activities related to developing product candidates, including investments in manufacturing, as our programs advance into later stages of development and as we conduct additional clinical trials. The process of conducting the necessary clinical research to obtain regulatory approval is costly and time-consuming, and the successful development of product candidates is highly uncertain. As a result, we are unable to determine the duration and completion costs of R&D projects or when and to what extent we will generate revenue from the commercialization and sale of any of our product candidates.

Our future R&D expenses will depend on the clinical success of our product candidates, as well as ongoing assessments of the commercial potential of such product candidates. In addition, we cannot forecast with any degree of certainty which product candidates may be subject to future collaborations, when such arrangements will be secured, if at all, and to what degree such arrangements would affect our development plans and capital requirements. We expect our R&D expenses to increase for the foreseeable future as we seek to further development of our product candidates.

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The successful development and commercialization of our product candidates is highly uncertain. This is due to the numerous risks and uncertainties associated with product development and commercialization, including the uncertainty of:

- the scope, progress, outcome and costs of our clinical trials and other R&D activities;
- the efficacy and potential advantages of our product candidates compared to alternative treatments, including any standard of care:
- the market acceptance of our product candidates;
- · obtaining, maintaining, defending, and enforcing patent claims and other intellectual property rights;
- significant and changing government regulation; and
- the timing, receipt, and terms of any marketing approvals.

A change in the outcome of any of these variables with respect to the development of our product candidates that we may develop could mean a significant change in the costs and timing associated with the development of our product candidates. For example, if the FDA or another regulatory authority were to require us to conduct clinical trials or other testing beyond those that we currently contemplate for the completion of clinical development of any of our product candidates that we may develop or if we experience significant delays in enrollment in any of our clinical trials, we could be required to expend significant additional financial resources and time on the completion of clinical development of that product candidate.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries and related benefit costs for personnel, including stock-based compensation and travel expenses for our employees in executive, operational, finance, legal, business development, and human resource functions. In addition, other significant general and administrative expenses include professional fees for legal, consulting, investor and public relations, auditing, and tax services as well as other expenses for rent and maintenance of facilities, insurance and other supplies used in general and administrative activities. We expect general and administrative expenses to increase for the foreseeable future due to anticipated increases in headcount to support the continued advancement of our product candidates. We also anticipate that as we continue to operate as a public company with increasing complexity, we will continue to incur increased accounting, audit, legal, regulatory, compliance and director and officer insurance costs as well as investor and public relations expenses.

Interest Expense

Interest expense for the three and nine months ended September 30, 2023 and 2022 related to our financing lease obligation for the Cranbury, NJ facility.

Interest and Other Income

Interest and other income related to interest earned from investments and cash equivalents, liability extinguishment and reduced fair value of warrant liability.

Critical Accounting Policies and Significant Judgments and Estimates

There have been no material changes in our critical accounting policies and estimates in the preparation of our consolidated financial statements during the three months ended September 30, 2023, compared to those disclosed in our 2022 Form 10-K.

Results of Operations

Comparison of the Three Months Ended September 30, 2023 and 2022

	Th	Three Months Ended September 30,				
		2023		2022		Change
Operating expenses:						
Research and development	\$	46,844	\$	43,383	\$	3,461
General and administrative		18,585		15,105		3,480
Total operating expenses		65,429		58,488		6,941
Loss from operations		(65,429)		(58,488)		(6,941)
Interest expense		(469)		(465)		(4)
Interest and other income, net		1,720		1,353		367
Accretion of discount and amortization						
of premium on investments, net		2,279		(156)		2,435
Total other income, net		3,530		732		2,798
Net loss	\$	(61,899)	\$	(57,756)	\$	(4,143)

Research and Development Expenses

R&D expenses increased \$3.5 million to \$46.8 million for the three months ended September 30, 2023 compared to the three months ended September 30, 2022. The increase in R&D expenses was primarily driven by increases in clinical trial costs of \$7.4 million, compensation and benefit expenses of \$4.5 million due to increased R&D headcount, license expenses of \$2.2 million, and non-cash stock compensation expense of \$1.6 million. Increases noted were offset by a decrease in manufacturing and development costs of \$9.0 million and cost of direct material of \$3.3 million.

General and Administrative Expenses

G&A expenses increased \$3.5 million to \$18.6 million for the three months ended September 30, 2023, compared to the three months ended September 30, 2022. The increase in G&A expenses was primarily driven by increases in commercial preparation related expenses, which consists of commercial strategy, medical affairs, market development and pricing analysis of \$2.5 million, non-cash stock compensation expense of \$1.0 million, and legal expenses of \$0.5 million, partially offset by reduction in acquisition related expenses of \$1.3 million.

Other Income, Net

Other income increased \$2.8 million to \$3.5 million for the three months ended September 30, 2023, compared to the three months ended September 30, 2022. The increase in other income was primarily driven by an increase in accretion of discount and amortization of premium on investments, net, of \$2.4 million and an increase in interest and other income, net, of \$0.4 million. The increase in interest and other income, net, of \$0.4 million was primarily due to a liability extinguishment of \$0.6 million, decreased fair value of warrant liability of \$0.2 million, increased interest rates of \$0.1 million, partially offset by an asset impairment of \$0.3 million.

Comparison of the Nine Months Ended September 30, 2023 and 2022

	Nine Months Ended September 30,				
		2023		2022	 Change
Operating expenses:					
Research and development	\$	144,598	\$	115,533	\$ 29,065
General and administrative		51,782		39,728	 12,054
Total operating expenses		196,380		155,261	41,119
Loss from operations		(196,380)		(155,261)	(41,119)
Interest expense		(1,405)		(1,395)	(10)
Interest and other income, net		4,474		2,644	1,830
Accretion of discount and amortization					
of premium on investments, net		7,376		(1,128)	8,504
Total other income, net		10,445		121	10,324
Net loss	\$	(185,935)	\$	(155,140)	\$ (30,795)

Research and Development Expenses

R&D expenses increased \$29.1 million to \$144.6 million for the nine months ended September 30, 2023 compared to the nine months ended September 30, 2022. The increase in R&D expenses was primarily driven by increases in costs for compensation and benefits of \$16.8 million due to increased R&D headcount, clinical trial costs of \$10.8 million, non-cash stock compensation expense of \$4.9 million, license expenses of \$2.2 million, and laboratory supplies of \$0.9 million. Increases noted were offset by decreases in manufacturing and development costs of \$7.3 million and cost of direct material of \$1.9 million.

General and Administrative Expenses

G&A expenses increased \$12.1 million to \$51.8 million for the nine months ended September 30, 2023, compared to the nine months ended September 30, 2022. The increase in G&A expenses was primarily driven by increases in commercial preparation related expenses of \$4.9 million, non-cash stock compensation expense of \$3.3 million, compensation and benefits of \$2.0 million due to increased G&A headcount, and legal expenses of \$1.2 million.

Other Income, Net

Other income increased \$10.3 million to \$10.4 million for the nine months ended September 30, 2023, compared to the nine months ended September 30, 2022. The increase in other income was primarily driven by an increase in accretion of discount and amortization of premium on investments, net, of \$8.5 million and interest and other income, net, of \$1.8 million. The increase in interest and other income, net, of \$1.8 million was due to increased interest rates of \$1.2 million and reduced fair value of warrant liability of \$0.7 million, a liability extinguishment of \$0.6 million, partially offset by an asset impairment of \$0.3 million.

Liquidity and Capital Resources

We have not generated any revenue and have incurred losses since inception. Operations of the Company are subject to certain risks and uncertainties, including, among others, uncertainty of drug candidate development, technological uncertainty, uncertainty regarding patents and proprietary rights, having no commercial manufacturing experience, marketing or sales capability or experience, dependency on key personnel, compliance with government regulations and the need to obtain additional financing. Drug candidates currently under development will require significant additional R&D efforts, including extensive preclinical and clinical testing and regulatory approval, prior to commercialization. These efforts require significant amounts of additional capital, adequate personnel infrastructure, and extensive compliance-reporting capabilities.

Our drug candidates are in the development and clinical stage. There can be no assurance that our R&D will be successfully completed, that adequate protection for our intellectual property will be obtained, that any products developed will obtain necessary government approval or that any approved products will be commercially viable. Even if our product development efforts are successful, it is uncertain when, if ever, we will generate significant revenue from product sales. We operate in an environment of rapid change in technology and substantial competition from pharmaceutical and biotechnology companies.

Our consolidated financial statements have been prepared on the basis of continuity of operations, realization of assets and the satisfaction of liabilities in the ordinary course of business. Rocket has incurred net losses and negative cash flows from its operations each year since inception. Rocket incurred net losses of \$185.9 million for the nine months ended September 30, 2023, and \$221.9 million for the year ended December 31, 2022. We have experienced negative cash flows from operations and as of September 30, 2023 and December 31, 2022, we had an accumulated deficit of \$899.7 million and \$713.8 million, respectively. As of September 30, 2023, we had \$437.2 million of cash, cash equivalents and investments. We expect such resources will be sufficient to fund our operating expenses and capital expenditure requirements through 2025. We have funded our operations primarily through the sale of equity.

In the longer term, our future viability is dependent on our ability to generate cash from operating activities or to raise additional capital to finance our operations. If we raise additional funds by issuing equity securities, our stockholders will experience dilution. Any future debt financing into which we enter may impose upon us additional covenants that restrict our operations, including limitations on our ability to incur liens or additional debt, pay dividends, repurchase our common stock, make certain investments and engage in certain merger, consolidation, or asset sale transactions. Any debt financing or additional equity that we raise may contain terms that are not favorable to us or our stockholders. Our failure to raise capital as and when needed could have a negative impact on our financial condition and ability to pursue our business strategies.

Cash Flows

	Nine Months Ended September 30,			
		2023		2022
Net cash used in operating activities	\$	(165,577)	\$	(122,121)
Net cash provided by investing activities		42,739		39,259
Net cash provided by financing activities		208,010		46,848
Net increase (decrease) in cash, cash equivalents and restricted cash	\$	85,172	\$	(36,014)

Operating Activities

During the nine months ended September 30, 2023, operating activities used \$165.6 million of cash and cash equivalents, primarily resulting from our net loss of \$185.9 million offset by net non-cash charges of \$28.4 million, including non-cash stock-based compensation expense of \$29.5 million, depreciation and amortization expense of \$5.2 million, partially offset by accretion of discount on investments of \$7.1 million. Changes in our operating assets and liabilities for the nine months ended September 30, 2023 included a decrease in accounts payable and accrued expenses of \$5.6 million, an increase in our prepaid expenses of \$2.0 million, and a decrease in other liabilities of \$0.7 million.

During the nine months ended September 30, 2022, operating activities used \$122.1 million of cash and cash equivalents, primarily resulting from our net loss of \$155.1 million offset by net non-cash charges of \$27.1 million, including non-cash stock-based compensation expense of \$21.3 million, amortization of premium on investments of \$1.1 million, and depreciation and amortization expense of \$2.9 million. Changes in our operating assets and liabilities for the nine months ended September 30, 2022, consisted of an increase in accounts payable and accrued expenses of \$7.2 million and an increase in our prepaid expenses of \$1.3 million.

Investing Activities

During the nine months ended September 30, 2023, net cash provided by investing activities was \$42.7 million, primarily resulting from proceeds of \$237.0 million from the maturities of investments, offset by purchases of investments of \$182.4 million, and purchases of property and equipment of \$11.8 million.

During the nine months ended September 30, 2022, net cash provided by investing activities was \$39.3 million, primarily resulting from proceeds of \$222.1 million from the maturities of investments, offset by purchases of investments of \$177.5 million, and purchases of property and equipment of \$5.4 million.

Financing Activities

During the nine months ended September 30, 2023, net cash provided by financing activities was \$208.0 million, consisting primarily of proceeds related to the September 2023 Public Offering of \$188.9 million, \$17.2 million from the sale of shares through our at-the-market facility and \$1.8 million from the exercise of stock options.

During the nine months ended September 30, 2022, net cash provided by financing activities was \$46.8 million, consisting primarily of proceeds of \$46.6 million from the sale of shares through our at-the-market facility.

Contractual Obligations and Commitments

Information regarding contractual obligations and commitments may be found in Note 13 of our unaudited interim consolidated financial statements in this Quarterly Report on Form 10-Q. We do not have any off-balance sheet arrangements that are material or reasonably likely to become material to our financial condition or results of operations.

Recently Issued Accounting Pronouncements

There were no recent accounting pronouncements that impacted the Company, or which had a significant effect on the consolidated financial statements.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

Our exposure to market risk is principally confined to our cash, cash equivalents and marketable securities. We invest in U.S. treasury securities, corporate and agency bonds, which as of September 30, 2023, were classified as available-for-sale. We maintain our cash and cash equivalent balances with high-quality financial institutions and, consequently, we believe that such funds are subject to minimal credit risk. Our investment policy limits the amounts that we may invest in any one type of investment and requires all investments held by the Company to be at least AA+/Aa1 rated, thereby reducing credit risk exposure.

Based on a hypothetical 100 basis point decrease in market interest rates, the potential losses in future earnings and fair value of risk-sensitive financial instruments are immaterial, although the actual effects may differ materially from the hypothetical analysis. While we believe our cash, cash equivalents, and marketable securities do not contain excessive risk, we cannot provide absolute assurance that, in the future, our investments will not be subject to adverse changes in market value. In addition, we maintain significant amounts of cash, cash equivalents, and marketable securities at one or more financial institutions that are in excess of federally insured limits. Given the potential instability of financial institutions, we cannot provide assurance that we will not experience losses on these deposits. We do not utilize interest rate hedging agreements or other interest rate derivative instruments.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our principal executive and our principal financial and accounting officers, evaluated, as of the end of the period covered by this Quarterly Report on Form 10-Q, the effectiveness of our disclosure controls and procedures. Based on that evaluation of our disclosure controls and procedures as of September 30, 2023, our principal executive officer and interim principal financial and accounting officer concluded that our disclosure controls and procedures as of such date are effective at the reasonable assurance level. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act are recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by us in the reports we file or submit under the Exchange Act is accumulated and communicated to our management, including our principal executive officer and interim principal financial and accounting officer, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and our management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Inherent Limitations of Internal Controls

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions or that the degree of compliance with the policies or procedures may deteriorate.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting during the period covered by this report that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

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PART II - OTHER INFORMATION

Item 1. Legal Proceedings

From time to time, the Company may be subject to various legal proceedings and claims that arise in the ordinary course of its business activities. Although the results of litigation and claims cannot be predicted with certainty, the Company does not believe it is party to any other claim or litigation the outcome of which, if determined adversely to the Company, would individually or in the aggregate be reasonably expected to have a material adverse effect on its business. Regardless of the outcome, litigation can have an adverse impact on the Company because of defense and settlement costs, diversion of management resources and other factors.

Item 1A. Risk Factors

Our material risk factors are disclosed in Item 1A of our 2022 Form 10-K. There have been no material changes from the risk factors previously disclosed in such filing.

Item 2. Unregistered Sales of Equity Securities, Use of Proceeds and Issuer Purchases of Equity Securities

None.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

During the three months ended September 30, 2023, none of our directors or officers adopted or terminated a "Rule 10b5-1 trading arrangement" or "non-Rule 10b5-1 trading arrangement," as each term is defined in Item 408(a) of Regulation S-K.

Item 6. Exhibits

Exhibit	
Number	Description of Exhibit
2.1	Agreement and Plan of Merger and Reorganization, dated as of September 12, 2017, by and among Inotek Pharmaceuticals Corporation, Rocket Pharmaceuticals, Ltd., and Rome Merger Sub (incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8- K (001-36829), filed with the SEC on
	September 13, 2017)
<u>2.2</u>	Agreement and Plan of Merger, dated September 19, 2022, by and among Rocket Pharmaceuticals, Renovacor, Inc., Zebrafish Merger Sub, Inc. and Zebrafish Merger Sub
	II, LLC (incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K (001-36829), filed with the SEC on September 20, 2022).
<u>3.1</u>	Seventh Amended and Restated Certificate of Incorporation of Rocket Pharmaceuticals, Inc., effective as of February 23, 2015(incorporated by reference to Exhibit 3.1 to the Company's Annual Report on Form 10-K (001-36829), filed with the SEC on March 31, 2015)
<u>3.2</u>	Certificate of Amendment (Reverse Stock Split) to the Seventh Amended and Restated Certificate of
	Incorporation of the Registrant, effective as of January 4, 2018
	(incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K (001-36829), filed with the SEC on January 5, 2018)
<u>3.3</u>	Certificate of Amendment (Name Change) to the Seventh Amended and Restated Certificate of Incorporation of the Registrant, effective January 4, 2018 (incorporated by reference to Exhibit 3.2 to the Company's Current Report on Form 8-K (001-36829), filed with the SEC on January 5, 2018)
<u>3.4</u>	Certificate of Amendment (Declassify Board of Directors) to the Seventh Amended and Restated Certificate
	of Incorporation of the Registrant, effective as of June 25,
	2018 (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K (001-36829), filed with the SEC on June 25, 2019
<u>3.5</u>	Amended and Restated By-Laws of Rocket Pharmaceuticals, Inc., effective as of March 29, 2018
<u>515</u>	(incorporated by reference to Exhibit 3.2 to the Company's Current Report on Form 8-K (001-36829), filed
	with the SEC on April 4, 2018)
<u>4.1</u>	Form of Pre-Funded Warrant (incorporated by reference to Exhibit 4.1 to the Company's Current Report on
	Form 8-K (001-36829), filed with the SEC on September 15, 2023)
<u>10.1</u>	Amendment No. 1 to Sales Agreement, dated as of September 12, 2023, between Rocket Pharmaceutical Inc. and Cowen and Company, LLC (incorporated by reference to Exhibit 1.1 to the Company's Current Report on Form 8-K (001-36829), filed with the SEC on September 13, 2023)
10.2	Underwriting Agreement, dated September 12, 2023, among Rocket Pharmaceuticals, Inc. and J.P. Morgan Securities LLC, Morgan Stanley & Co. LLC, Leerink Partners LLC and Cowen and Company, LLC, as representative of the several underwriters named in Schedule A thereto (incorporated by reference to Exhibit
<u>31.1*</u>	1.1 to the Company's Current Report on Form 8-K (001-36829), filed with the SEC on September 15, 2023) Certification of Principal Executive Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2*	Certification of Principal Financial Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1**	Certification of Principal Executive Officer and Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the inline XBRL document.
101.SCH	Inline XBRL Taxonomy Extension Schema Document.
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.
101.CAL	Inline XBRL Taxonomy Extension Calculation Document.
101.LAB	Inline XBRL Taxonomy Extension Labels Linkbase Document.
101.PRE	Inline XBRL Taxonomy Extension Presentation Link Document.
104	Cover Page Interactive Data File (the cover page XBRL tags are embedded within the Inline XBRL document)

^{*} Filed herewith.

^{**} The certification furnished in Exhibit 32.1 hereto is deemed to be furnished with this Quarterly Report on Form 10-Q and will not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, except to the extent that the Registrant specifically incorporates it by reference

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SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

ROCKET PHARMACEUTICALS, INC.

November 7, 2023 By: /s/ Gaurav Shah, MD

Gaurav Shah, MD

Chief Executive Officer and Director (Principal Executive Officer)

November 7, 2023 By: /s/ John Militello

John Militello

VP of Finance, Senior Controller and Treasurer

 $(Interim\ Principal\ Financial\ Officer\ and\ Principal\ Accounting$

Officer)

CERTIFICATIONS

- I, Gaurav Shah, MD, certify that:
- 1. I have reviewed this quarterly report on Form 10-Q for the period ended September 30, 2023 of Rocket Pharmaceuticals, Inc.;
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 7, 2023 By /s/ Gaurav Shah, MD :

Gaurav Shah, MD

Chief Executive Officer and Director
(Principal Executive Officer)

CERTIFICATIONS

I, John Militello, certify that:

- 1. I have reviewed this quarterly report on Form 10-Q for the period ended September 30, 2023 of Rocket Pharmaceuticals, Inc.;
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions
 about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on
 such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 7, 2023

/s/ John Militello

John Militello
VP of Finance, Senior Controller and Treasurer
(Interim Principal Financial Officer and Principal
Accounting Officer)

CERTIFICATION PURSUANT TO

18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO

SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the quarterly report on Form 10-Q of Rocket Pharmaceuticals, Inc. (the "Company") for the period ended September 30, 2023, as filed with the United States Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers hereby certifies, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350, that to his knowledge:

- 1) the Report which this statement accompanies fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- 2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 7, 2023 By /s/ Gaurav Shah, MD

Gaurav Shah, MD Chief Executive Officer and Director

(Principal Executive Officer)

Date: November 7, 2023 By /s/ John Militello

John Militello

VP of Finance, Senior Controller and Treasurer (Interim Principal Financial Officer and Principal

Accounting Officer)