UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended March 31, 2025

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____ to

Commission File Number: 001-40591

HCW Biologics Inc.

(Exact Name of Registrant as Specified in its Charter)

Delaware	**82-5024477**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
2929 N. Commerce Parkway Miramar, Florida	**33025**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (954) 842–2024

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.0001 per share	**HCWB**	**The Nasdaq Stock Market LLC**

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☒
Emerging growth company	☒		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☒

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of May 13, 2025, the registrant had 1,439,219 shares of common stock, $0.0001 par value per share, outstanding.

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PART I—FINANCIAL INFORMATION

Item 1. Financial Statements.

HCW Biologics Inc.
Condensed Balance Sheets

	December 31, 2024	March 31, 2025 Unaudited
ASSETS		
Current assets:		
Cash and cash equivalents	$ 4,674,572	$ 1,107,613
Accounts receivable, net	582,201	87,493
Prepaid expenses	328,181	256,291
Other current assets	113,528	443,311
Total current assets	5,698,482	1,894,708
Investments	1,599,751	1,599,751
Property, plant and equipment, net	22,909,869	22,762,471
Other assets	28,476	28,476
Total assets	$ 30,236,578	$ 26,285,406
LIABILITIES AND STOCKHOLDERS' DEFICIT		
Liabilities		
Current liabilities:		
Accounts payable	$ 22,332,261	$ 19,734,057
Accrued liabilities and other current liabilities	981,940	1,173,695
Short-term debt, net	6,314,684	6,234,338
Total current liabilities	29,628,885	27,142,090
Debt, net	7,377,865	7,705,364
Total liabilities	37,006,750	34,847,454
Commitments and contingencies (Note 9)		
Stockholders' deficit:		
Common stock:		
Common, $0.0001 par value; 250,000,000 shares authorized and 44,541,295 shares issued at December 31, 2024; 250,000,000 shares authorized and 44,934,120 shares issued at March 31, 2025	4,454	4,493
Additional paid-in capital	93,781,511	94,186,471
Accumulated deficit	(100,556,137)	(102,753,012)
Total stockholders' deficit	(6,770,172)	(8,562,048)
Total liabilities and stockholders' deficit	$ 30,236,578	$ 26,285,406

See accompanying notes to the unaudited condensed interim financial statements.

HCW Biologics Inc.
Condensed Statements of Operations
(Unaudited)

	Three Months Ended March 31,	
	2024	2025
Revenues:		
Revenues	$ 1,126,712	$ 5,065
Cost of revenues	(511,965)	(4,052)
Net revenues	614,747	1,013
Operating expenses:		
Research and development	2,123,284	1,478,711
General and administrative	1,566,092	2,227,597
Legal expenses, net	4,419,034	(1,739,493)
Total operating expenses	8,108,410	1,966,815
Loss from operations	(7,493,663)	(1,965,802)
Interest expense	—	(255,822)
Other income, net	25,602	24,749
Net loss	$ (7,468,061)	$ (2,196,875)
Net loss per share, basic and diluted	$ (0.20)	$ (0.05)
Weighted average shares outstanding, basic and diluted	37,223,588	44,675,656

See accompanying notes to the unaudited condensed interim financial statements.

HCW Biologics Inc.
Condensed Statements of Changes in Stockholders' Equity (Deficit)
For the Three Months Ended March 31, 2024 and 2025
(Unaudited)

	Stockholders' Equity				
	Common Stock		Additional Paid-In Capital	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount			
Balance, January 1, 2024	36,025,104	$ 3,603	$ 83,990,437	$ (70,532,323)	$ 13,461,717
Issuance of Common Stock upon exercise of stock options	12,572	1	2,254	—	2,255
Issuance of Common Stock upon equity subscription	1,785,718	178	2,499,827	—	2,500,005
Stock-based compensation	—	—	244,685	—	244,685
Net loss	—	—	—	(7,468,061)	(7,468,061)
Balance, March 31, 2024	**37,823,394**	**$ 3,782**	**$ 86,737,203**	**$ (78,000,384)**	**$ 8,740,601**

	Stockholders' Deficit				
	Common Stock		Additional Paid-In Capital	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount			
Balance, January 1, 2025	44,541,295	$ 4,454	$ 93,781,511	$ (100,556,137)	$ (6,770,172)
Issuance of Common Stock upon exercise of stock options	8,210	1	1,653	—	1,654
Issuance of Common Stock to Square Gate	384,615	38	149,962	—	150,000
Issuance cost of Common Stock	—	—	(22,297)	—	(22,297)
Stock-based compensation	—	—	275,642	—	275,642
Net loss	—	—	—	(2,196,875)	(2,196,875)
Balance, March 31, 2025	**44,934,120**	**$ 4,493**	**$ 94,186,471**	**$ (102,753,012)**	**$ (8,562,048)**

See accompanying notes to the unaudited condensed interim financial statements.

HCW Biologics Inc.
Condensed Statements of Cash Flows
(Unaudited)

	Three Months Ended March 31,	
	2024	**2025**
Cash flows from operating activities:		
Net loss	$ (7,468,061)	$ (2,196,875)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	243,501	419,010
Stock-based compensation	244,685	275,642
Commitment fee	—	150,000
Changes in the carrying amount of right-of-use asset	(418)	—
Changes in operating assets and liabilities:		
Accounts receivable	631,873	494,708
Prepaid expenses and other assets	302,640	(257,894)
Accounts payable and other liabilities	2,498,451	(2,398,447)
Operating lease liability	(56,541)	—
Net cash used in operating activities	(3,603,870)	(3,513,856)
Cash flows from investing activities:		
Purchases of property and equipment	(129,709)	—
Net cash used in investing activities	(129,709)	—
Cash flows from financing activities:		
Proceeds from issuance of common stock	2,502,260	1,654
Proceeds from issuance of debt, net	1,750,000	—
Issuance costs for common stock	—	(22,297)
Debt repayment	(29,706)	(32,460)
Net cash provided by (used in) financing activities	4,222,554	(53,103)
Net increase (decrease) in cash and cash equivalents	488,975	(3,566,959)
Cash and cash equivalents at the beginning of the period	3,595,101	4,674,572
Cash and cash equivalents at the end of the period	$ 4,084,076	$ 1,107,613
Supplemental disclosure of cash flow information:		
Cash paid for interest, net of amounts capitalized	$ —	$ 244,269
Noncash operating, investing and financing activities:		
Capital expenditures accrued, but not yet paid	$ 2,192,255	$ —

See accompanying notes to the unaudited condensed interim financial statements.

HCW Biologics Inc.
Notes to Condensed Interim Financial Statements
(Unaudited)

1. Organization and Summary of Significant Accounting Policies

Organization

HCW Biologics Inc. (the "Company") is a biopharmaceutical company focused on discovering and developing novel immunotherapies to lengthen healthspan by disrupting the link between chronic, low-grade inflammation and age-related diseases. The Company believes age-related low-grade chronic inflammation, or "inflammaging," is a significant contributing factor to several chronic diseases and conditions, such as cancer, cardiovascular disease, diabetes, neurodegenerative diseases, and autoimmune diseases. The Company is located in Miramar, Florida and was incorporated in the state of Delaware in April 2018.

Reverse Stock Split

On March 31, 2025, at a Special Meeting of the Stockholders (the "Special Meeting"), the stockholders of the Company approved a reverse stock split of all outstanding shares of the Common Stock, and the Board approved a reverse stock split of the Common Stock at a final ratio of one-for-forty (1::40) (the "Reverse Stock Split"). The Reverse Stock Split was effective at 12:01 a.m. Eastern Time on April 11, 2025. The Common Stock commenced trading on a reverse split-adjusted basis when the markets opened on April 11, 2025, under the existing trading symbol "HCWB."

The stockholders approved two other proposals at the Special Meeting, including approval of the use of an equity line of credit up to $40.0 million and the principal terms for the conversion of up to $6.6 million of the outstanding principal of Secured Notes.

The condensed interim financial statements included in this Quarterly Report on Form 10-Q for the period ended March 31, 2025 contained herein, are presented without giving effect to the Reverse Stock Split, except where the context otherwise requires. See Note 10. Subsequent Events.

Liquidity and Going Concern

In accordance with ASC 205-40, Presentation of Financial Statements – Going Concern ("Topic 205-40"), we are required to evaluate whether there are conditions and events, considered in the aggregate, that raise substantial doubt about our ability to continue as a going concern for at least 12 months from the issuance date of the Company's condensed interim financial statements. This evaluation does not take into consideration the potential mitigating effect of management's plans that have not been fully implemented or are not within control of the Company as of the date the financial statements are issued. When substantial doubt exists under this methodology, management evaluates whether the mitigating effect of its plans sufficiently alleviates substantial doubt about the Company's ability to continue as a going concern. The mitigating effect of management's plans, however, is only considered if both (1) it is probable that the plans will be effectively implemented within one year after the date that the financial statements are issued, and (2) it is probable that the plans, when implemented, will mitigate the relevant conditions or events that raise substantial doubt about the entity's ability to continue as a going concern within one year after the date that the financial statements are issued.

As of March 31, 2025, the Company had not generated any revenue from commercial product sales of its internally developed immunotherapeutic products for the treatment of cancer and other age-related diseases. During its development activities, the Company has sustained operating losses, experienced negative operating cash flows and negative working capital position and it expects to continue to incur operating losses for the foreseeable future. Since inception to March 31, 2025, the Company incurred cumulative net losses of $100.0 million. These losses reflect the events previously reported in the Form 10-K/A filed on May 15, 2024 with the Securities and Exchange Commission ("SEC"), involving reserve for credit losses and other expenses of $6.6 million. The reserve for credit losses and other expenses arose from two events previously reported by the Company on the Form 8-K filed on January 12, 2024 and the Form 8-K filed on May 1, 2024.

On August 15, 2022, the Company entered into a loan and security agreement (the "2022 Loan Agreement") with Cogent Bank, pursuant to which it received $6.5 million in proceeds to purchase a property at which the Company planned to build a facility to manufacture biologics and upgrade its research laboratory facilities. The loan is secured by a first priority lien on the property. As of March 31, 2025, certain subcontractors had filed mechanics liens related to unpaid invoices issued in connection with construction of the Company's new manufacturing facilities and upgraded research laboratories. The 2022 Loan Agreement contains a provision for a discretionary default in the event that the Company fails to pay sums due in connection with construction of any improvements; however, as of the reporting date, the lender has not elected to do so. As of March 31, 2025, the Company has reflected this loan as Short-term debt, net, to reflect that the lender has the right to accelerate the loan under a discretionary default provision.

On January 22, 2025, the Company entered into a forbearance agreement with BE&K Building Group ("BE&K"), its general contractor, to allow the Company until March 31, 2025 to continue efforts to find the financing required to complete the construction and renovation of the property. Pursuant to the forbearance agreement, the Company made an initial payment of $1.0 million in partial satisfaction of amounts owing to BE&K and its subcontractors. As the Company reported in a Form 8-K, on April 17, 2025, the Company received a summons and a copy of a complaint filed by BE&K in the Circuit Court of the 17th Judicial Circuit in and for Broward County, Florida (the "BE&K Complaint"). Other Defendants named in the BE&K Complaint who are subcontractors elected to file counterclaims and cross-claims as part of their responses to the BE&K Complaint. Cogent Bank, also named as a Defendant in the BE&K Complaint, has not elected to take legal action at this time. In addition, on April 28, 2025, the Company received a summons and a copy of a complaint filed by Fisk Electric Company (which is a defendant in the BE&K Complaint) in the Circuit Court of the 17th Judicial Circuit in and for Broward County, Florida (the "Fisk Complaint") against the Company, BE&K, and the other defendants in the BE&K Complaint. The Company intends to respond in a timely fashion to the BE&K and Fisk Complaints and cross-claims.

To date, the Company has funded operations primarily through the sale of stock, issuance of Senior Notes and other debt, and revenues generated from the Company's exclusive worldwide license with Wugen, Inc. ("Wugen"), pursuant to which Wugen licensed limited rights to develop, manufacture, and commercialize cell therapy treatments for cancer based on two of the Company's internally-developed multi-cytokine fusion protein molecules, and its manufacturing and supply arrangement with Wugen. In the three months ended March 31, 2024 and 2025, the Company recognized revenues generated from the supply of clinical and research grade material to Wugen of $1.1 million and $5,065, respectively.

As reported in the Company's Form 8-K filed on July 18, 2024 and further described in Part II, Item 1. – "Legal Proceedings" below, as of July 13, 2024, the Company and Dr. Hing C. Wong, the Company's Founder and Chief Executive Officer, entered into a confidential Settlement Agreement and Release (the "Settlement Agreement") with ImmunityBio and its affiliates. The Settlement Agreement includes mutual general releases by and among the parties thereto. No party was required to make any monetary payments to any other party or person under the Settlement Agreement and each party will bear its own expenses incurred in connection with the matter. The Arbitration and related Complaint were dismissed on December 24, 2024. With the execution of the Settlement Agreement, the Company resolved the attendant uncertainties for the outcome of the Arbitration and additional complexities, and it launched its new financing plan.

In the accompanying condensed balance sheet as of March 31, 2025, the Company reported a balance of $12.4 million for legal fees incurred but not yet paid that were included within Accounts payable and an accrual of $10,000 for accrued legal fees within Accrued liabilities and other current liabilities. The Company is engaged in discussions with the law firms involved with this matter to arrange a reasonable payment plan with respect to those legal fees. In the three months ended March 31, 2025, the Company received a $2.0 million insurance payment, which was paid directly to the law firm who represented Dr. Wong for his defense during the Arbitration. The insurance payment is reported within Legal expenses, net in the condensed interim statement of operations.

In multiple closings that occurred from March to October 2024, the Company issued an aggregate of $6.9 million in Secured Notes, which are secured by the Company's shares of Wugen common stock. The Company's holdings in Wugen common stock are reported within Investments on the accompanying condensed interim financial statements. The holders of $6.6 million of the outstanding principal for the Secured Notes agreed to Principal Terms for the conversion into shares of the Company's common stock, par value $0.0001 ("Common Stock"), which were approved by the stockholders of the Company at the Special Meeting. On May 1, 2025, the converting holders of Secured Notes entered into the Second Amendment to Amended and Restated Senior Secured Note Purchase Agreement and Related Agreements to effect the conversion. The conversion occurred on May 7, 2025. See Note 10. Subsequent Events.

With the execution of the Settlement Agreement, the Company resolved the attendant uncertainties for the outcome of the Arbitration and additional complexities, and it launched its new financing plan. Since that time, the Company has issued $11.9 million through issuance of equity securities. In November 2024, the Company raised gross proceeds of $6.9 million in a registered direct offering and a concurrent private placement of common stock and warrants. The offering, priced above market under Nasdaq rules and closed on November 20, 2024. On May 15, 2025, the Company closed an equity offering with gross proceeds of $5.0 million.

As the Company disclosed in the Form 8-K filed on March 19, 2025, the Company and WY Biotech Co., Ltd. ("WY Biotech") agreed on the principal terms for an amendment to the WY Biotech License Agreement, an exclusive worldwide license agreement with WY Biotech for the rights to develop and commercialize one of HCWB's preclinical product candidates, HCW11-006, for *in vivo* applications (the "Agreement"). Under the amended terms, the parties agreed to restructure the payment schedule for the $7.0 million upfront license fees, including delaying the initial $4.0 million portion thereof that was originally due on or about March 17, 2025. There were no other material changes to the Agreement. In particular, the Company will retain the Opt-In Right thereunder, which gives the Company the option to assume all control and responsibility for the development, manufacture and commercialization of HCW11-006 for *in vivo* applications in the North America, South America, and Central America. The Company retains *ex vivo* rights. The Company completed its performance obligation to deliver a report on the characterization of the licensed molecule on May 13, 2025. As agreed under the amended terms, WY Biotech has 30 days to study this report and elect whether to continue with the Agreement, as which time the Agreement will be binding and the full $7.0 million upfront license fee will be due.

On February 20, 2025, the Company entered into an Equity Purchase Agreement (the "ELOC Purchase Agreement") and a related Registration Rights Agreement with Square Gate Capital Master Fund, LLC - Series 4 (the "Investor"), pursuant to which the Company will have the right, but not the obligation, to sell to the Investor, and the Investor will have the obligation to purchase from the Company, up to $20.0 million (the "Maximum Commitment Amount") worth of the Company's shares of Common Stock, at the Company's sole discretion, over the next 36 months (the "Put Shares"), subject to certain conditions precedent and other limitations. On March 12, 2025, the Company issued 384,615 shares of the Company's Common Stock (subject to adjustment for the Reverse Stock Split) to the Investor in payment of the Commitment Fee ("Commitment Shares"). At the Special Meeting, stockholders approved the Company's use of the ELOC Purchase Agreement. On April 16, 2025, the U.S. Securities and Exchange Commission ("SEC") declared a registration statement effective to register the Commitment Shares and shares required to sell up to $40.0 million of the Company's shares to the Investor, according to provisions of the ELOC Purchase Agreement. In addition, this registration statement also registered the underlying shares for the warrant issued in November 2024, which gives the holder the right to exercise the warrant for 6,717,000 shares of common stock at an exercise price of $1.03 per share (subject to adjustment for the Reverse Stock Split).

On March 3, 2025, the Nasdaq Hearings Panel (the "Panel") of The Nasdaq Stock Market LLC ("Nasdaq" or the "Exchange") granted the Company an extension in which to regain compliance with all Nasdaq continued listing rules for the Capital Markets tier. The Panel's determination follows a hearing on February 13, 2025, at which the Panel considered the Company's plan to regain compliance with Listing Rules 5450(a)(1), 5450(b)(2)(A) and 5450(b)(2&3)(C), the minimum bid price ("Bid Price"), the market value of publicly held securities ("MVPHS") and the market value of listed securities ("MVLS") rules, respectively. As a result of the extension and a clarifying amendment that the Company received on April 8, 2025, the Panel granted the Company's request for continued listing on the Exchange on the Capital Markets tier, provided that the Company demonstrates compliance with the Bid Price Rule by April 28, 2025, and all other Exchange continued listing rules by June 16, 2025.

As of the date of issuance of this Quarterly Report, the Company has completed several elements of its compliance plan to regain and maintain compliance with all Nasdaq Listing Rules. On March 31, 2025, there was a Special Meeting of the Stockholders of the Company, at which three matters were put to a vote, and all three proposals were approved, as noted below. Each proposal represented a critical element in the Company's plan to regain compliance with all Listing Rules for the Nasdaq Exchange.

On May 13, 2025, the Company received a letter from Nasdaq confirming that the Company has regained compliance with the Bid Price Rule, the public float requirement in Listing Rule 5550(a)(4) and the MVPHS Rule, as required by the Nasdaq Panel decision of April 8, 2025, as amended. The Company remains subject to the remaining terms of the Panel's April 8, 2025, decision to provide an extension to the compliance period for other Listing Rules.

Since December 31, 2024, the Company completed the following transactions in furtherance of regaining compliance with the Nasdaq Listing Rule for the market value of listed securities under the alternative measure based on a minimum balance in stockholders' equity:

- An increase of $2.0 million on January 14, 2025, upon receipt of a $2.0 million insurance reimbursement for legal fees incurred for the defense of Dr. Hing C. Wong, the Company's Founder and Chief Executive Officer, in connection with the Arbitration.
- Access to up to $40.0 million through the ELOC Purchase Agreement. On February 20, 2025, the Company entered into the ELOC Purchase Agreement; and with a registration statement effective as of April 16, 2025, the Company may access up to $40.0 million of capital through the sale of stock to the Investor under the terms of the ELOC Purchase Agreement. The Company has not issued any shares under the ELOC Purchase Agreement as of the date of issuance of this Quarterly Report.

- On April 17, 2025, the Company formally applied to move to the Nasdaq Capital Markets tier, thus we will refer to the Listing Rules for that tier for the compliance with all Listing Rules.
- The Company completed the conversion of $6.6 million of the outstanding principal of the Secured Notes. Participating noteholders converted their outstanding principal into shares of the Company's Common Stock at a conversion price of $0.65 per share (post-split, $26.00 per share), received warrants that may be exercised for a period of five years to purchase $3.3 million of Common Stock at an exercise price of $0.65 per share (post-split, $26.00 per share), and rights to receive their pro rata shares of 49.1% of the proceeds of the liquidation of the Company's Wugen shares, if such an event occurs.
- On May 15, 2025, the Company closed an equity offering with gross proceeds of $5.0 million through a follow-on offering of an aggregate of 671,140 units at a purchase price of $7.45 per unit priced at-the-market under Nasdaq rules. Each unit consisted of one share of Common Stock or one Pre-Funded Warrants to purchase one share of Common Stock, with two warrants, each of which can be exercised for one share of Common Stock for $7.45 per share. In addition, the Company entered into a privately negotiated agreement with the holder of certain existing outstanding warrants to purchase up to 167,925 shares of common stock (the "Existing Warrants") to reduce the exercise price of such Existing Warrants from $41.20 per share to $7.45 per share.

As of March 31, 2025, the conclusion of a going concern assessment, before consideration of our financing plans, was that there is substantial doubt about the Company's ability to continue as a going concern. The Company considered future elements of its financing plan that were probable and likely to be implemented within the next year to determine if financing activities currently underway are sufficient mitigate the substantial doubt in the going concern analysis, in addition to considering continued operating losses and the burden of obligations for expenses incurred in connection with past legal proceedings. Management concluded that there were no mitigating circumstances which alleviated the substantial doubt over its ability to continue as a going concern. If the Company is not successful in raising additional capital through these activities, management intends to revise its business plan and reduce costs. If such revisions are insufficient, the Company may have to curtail or cease operations.

The accompanying condensed interim financial statements have been prepared on a going concern basis, which contemplates the realization of assets and satisfaction of liabilities in the ordinary course of business. The financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might result from the outcome of the uncertainties described above. The Company believes that substantial doubt exists regarding its ability to continue as a going concern for at least 12 months from the date of issuance of the Company's audited financial statements and that the substantial doubt that existed in its going concern analysis was not alleviated.

Summary of Significant Accounting Policies

Basis of Presentation

Unaudited Interim Financial Information

The accompanying unaudited condensed interim financial statements as of March 31, 2025 and for the three-month periods ended March 31, 2024 and 2025 have been prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP") for interim financial information and pursuant to Article 10 of Regulation S-X of the Securities Act of 1933, as amended (the "Securities Act"). Accordingly, they do not include all of the information and notes required by U.S. GAAP for complete financial statements. These unaudited condensed interim financial statements include only normal and recurring adjustments that the Company believes are necessary to fairly state the Company's financial position and the results of its operations and cash flows. The results for the three-month period ended March 31, 2025 are not necessarily indicative of the results expected for the full fiscal year or any subsequent interim period. The condensed interim balance sheet at December 31, 2024 has been derived from the audited financial statements at that date but does not include all disclosures required by U.S. GAAP for complete financial statements. Because all of the disclosures required by U.S. GAAP for complete financial statements are not included herein, these unaudited condensed interim financial statements and the notes accompanying them should be read in conjunction with the Company's audited financial statements for the year ended December 31, 2024 which appear in our Annual Report on Form 10-K for the year ended December 31, 2024 filed with the Securities and Exchange Commission (the "SEC") on March 28, 2025 (the "Annual Report") and in other filings with the SEC.

Segment Reporting

The Company operates and manages its business as one reportable and operating segment, which is the business of developing and commercializing novel immunotherapies for diseases promoted by chronic inflammation, especially age-related diseases. The Company's chief executive officer, who is the chief operating decision maker ("CODM"), reviews financial information on an aggregate basis for allocating and evaluating financial performance. In addition, our CODM is regularly provided with detailed results of preclinical and clinical data which is considered in his decision for the allocation of resources. See Note 8. Segment Reporting for further details. The single operating segment constitutes all of the Company activity, the chief operating decision maker regularly reviews the entity-wide operating results and performance. All long-lived assets are maintained in the United States of America.

Reclassification of Prior Period Presentation of Legal Expenses

Certain prior period amounts have been reclassified to distinguish between General and administrative expenses in the ordinary course of business and legal expenses incurred in connection with the arbitration and Settlement Agreement described in Liquidity and Going Concern in this Note 1. Reclassification of legal expenses incurred in connection with legal proceedings impacts the condensed interim statements of operations. There is no effect on reporting results of operations from prior periods.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts in the financial statements and accompanying notes. Management must apply significant judgment in this process. The Company evaluates its estimates and assumptions on an ongoing basis using historical experience and other factors and adjusts those estimates and assumptions when facts and circumstances dictate. Actual results could differ from estimates.

Fair Value Measurements

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") 820, Fair Value Measurement ("Topic 820"), establishes a fair value hierarchy for those instruments measured at fair value that distinguishes between fair value measurements based on market data (observable inputs) and those based on the Company's own assumptions (unobservable inputs). This hierarchy maximizes the use of observable inputs and minimizes the use of unobservable inputs. The three levels of inputs used to measure fair value are as follows:

Level 1: Observable inputs such as quoted prices in active markets;

Level 2: Inputs, other than the quoted prices in active markets, that are observable either directly or indirectly; and

Level 3: Unobservable inputs in which there is little or no market data, which require a reporting entity to develop its own assumptions.

Fair value measurements are classified based on the lowest level of input that is significant to the measurement. The Company's assessment of the significance of a particular input to the fair value measurement requires judgment, which may affect the valuation of the assets and liabilities and their placement within the fair value hierarchy levels. The determination of the fair values takes into account the market for the Company's financial assets and liabilities, the associated credit risk, and other factors as required. The Company considers active markets as those in which transactions for the assets or liabilities occur in sufficient frequency and volume to provide pricing information on an ongoing basis.

Revenue Recognition

The Company accounts for revenues in accordance with Accounting Standards Codification Topic 606, Revenue from Contracts with Customers ("Topic 606"). To determine revenue recognition for arrangements that fall within the scope of Topic 606, the Company performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the Company satisfies a performance obligation. The Company only applies the five-step model to contracts when it is probable that it will collect the consideration it is entitled to in exchange for the goods or services transferred to the customer.

At contract inception, the Company assesses the goods or services promised within each contract, determines those that are performance obligations, and assesses whether each promised good or service is distinct. The Company then recognizes as revenue the amount of the transaction price that is allocated to the respective performance obligation when (or as) the performance obligation is satisfied. To date, the Company's revenues have been generated exclusively from the Wugen License, which consists of licenses of intellectual property, cost reimbursements, upfront signing fees, milestone payments and royalties on future licensee's product sales. In addition, the Company and Wugen have an agreement for the supply of clinical and research grade materials under which the Company also recognized revenues.

License Grants:

For out-licensing arrangements that include a grant of a license to the Company's intellectual property, the Company considers whether the license grant is distinct from the other performance obligations included in the arrangement. For licenses that are distinct, the Company recognizes revenues from nonrefundable, upfront payments and other consideration allocated to the license when the license term has begun and the Company has provided all necessary information regarding the underlying intellectual property to the customer, which generally occurs at or near the inception of the arrangement.

Milestone and Contingent Payments:

At the inception of the arrangement and at each reporting date thereafter, the Company assesses whether it should include any milestone and contingent payments or other forms of variable consideration in the transaction price using the most likely amount method. If it is probable that a significant reversal of cumulative revenue would not occur upon resolution of the uncertainty, the associated milestone value is included in the transaction price. At the end of each subsequent reporting period, the Company re-evaluates the probability of achievement of each such milestone and any related constraint and, if necessary, adjusts its estimate of the overall transaction price. Since milestone and contingent payments may become payable to the Company upon the initiation of a clinical study or filing for or receipt of regulatory approval, the Company reviews the relevant facts and circumstances to determine when the Company should update the transaction price, which may occur before the triggering event. When the Company updates the transaction price for milestone and contingent payments, the Company allocates the changes in the total transaction price to each performance obligation in the agreement on the same basis as the initial allocation. Any such adjustments are recorded on a cumulative catch-up basis in the period of adjustment, which may result in recognizing revenue for previously satisfied performance obligations in such period. The Company's licensees will generally pay milestones payments subsequent to achievement of the triggering event.

Materials Supply:

The Company provides clinical and research grade materials so that licensees may develop products based on the licensed molecules. The amounts billed are recognized as revenue as the performance obligations are satisfied by the Company, once the Company determines that a contract exists.

On June 18, 2021, the Company entered into a master services agreement ("MSA") with Wugen for the supply of materials for clinical development of licensed products. Each of these transactions represents a single performance obligation that is satisfied over time. The Company recognizes revenue using an input method based on the costs incurred relative to the total expected cost, which determines the extent of the Company's progress toward completion. As part of the accounting for these arrangements, the Company must develop estimates and assumptions that require judgement to determine the progress towards completion. The Company reviews its estimate of the progress toward completion based on the best information available to recognize the cumulative progress toward completion as of the end of each reporting period, and makes revisions to such estimates, if facts and circumstances change during each reporting period. For each in process SOW, amounts are billed in the same quarter the costs are incurred.

For the three months ended March 31, 2024 and March 31, 2025, the Company recognized $1.1 million and $5,065 in revenue, respectively, all of which is related to sale of development supply materials to our licensee, Wugen.

Investments

The Company holds a minority interest in Wugen which is accounted for using the measurement alternative whereby the investment is recorded at cost less impairment, adjusted for observable price changes in orderly transactions for an identical or similar investment of the same investee. No impairment has been recognized. As of March 31, 2025 and December 31, 2024, the Company included $1.6 million for the investment in Wugen in Investments in the accompanying condensed interim balance sheets. The Company used its equity interest in Wugen to collateralize the Secured Notes. See Note 3. Debt, Net.

Subsequent to March 31, 2025, the Company transferred some of its rights to receive proceeds from the sale or liquidation of Wugen shares, if such an event occurs. See Note 10. Subsequent Events.

The Company invests excess cash in bills and notes issued by the U.S. Treasury which are classified as trading securities. As of December 31, 2024 and March 31, 2025, the Company had no Short-term investments.

Operating Leases

The Company determines if an arrangement is a lease at inception. Operating leases are included in Other assets, Accrued liabilities and other current liabilities, and Other liabilities on its condensed interim balance sheets. Operating lease Right of Use ("ROU") assets and operating lease liabilities are recognized based on the present value of the future minimum lease payments over the lease term at commencement date. As the Company's leases do not provide an implicit rate, the Company uses its incremental borrowing rate based on the information available at commencement date in determining the present value of future payments. The operating lease ROU asset also includes any lease payments made and excludes lease incentives and initial direct costs incurred. The Company has a lease agreement with lease and non-lease components, which are accounted for separately. For short-term leases with a term of one year or less, the Company uses the practical expedient and does not record an ROU asset or lease liability for such short-term leases.

Net Loss Per Share

Basic loss per share of common stock is computed by dividing net loss attributable to common stockholders by the weighted-average number of shares of common stock outstanding during each period. Diluted loss per share of common stock includes the effect, if any, from the potential exercise of stock options and unvested shares of restricted stock, which would result in the issuance of incremental shares of common stock. For diluted net loss per share, the weighted-average number of shares of common stock is the same for basic net loss per share due to the fact that when a net loss exists, dilutive securities are not included in the calculation as the impact is anti-dilutive.

2. Accrued Liabilities and Other Current Liabilities

As of December 31, 2024, the Company had a balance of $981,940 included in Accrued liabilities and other current liabilities in the audited condensed balance sheet, consisting of $422,000 for construction expenses, $49,000 for manufacturing expenses, $155,000 for legal fees, $121,000 for clinical expenses, $5,000 for bonus expense, $202,000 for salary expenses and $28,000 for other liabilities.

As of March 31, 2025, the Company had a balance of $1.2 million included in Accrued liabilities and other current liabilities in the accompanying condensed interim balance sheet, consisting of $422,000 for construction in progress, $49,000 for manufacturing expenses, $409,000 for legal fees, $127,000 for clinical expenses, $103,000 for salary and benefits and $54,000 for other liabilities.

3. Debt, Net

Cogent Bank Loan

On August 15, 2022, the Company entered the 2022 Loan Agreement with Cogent Bank, pursuant to which it received $6.5 million in proceeds to purchase a property where the Company planned to construct a manufacturing facility for biologics and upgraded research laboratory facilities. The loan is secured by a first priority lien on the building.

As of March 31, 2025, the Company had $6.3 million in principal outstanding under the 2022 Loan Agreement. The interest-only period was one year followed by 48 months of equal payments of principal and interest beginning on September 15, 2023 based on a 25-year amortization rate. The unamortized balance is due on August 15, 2027 (the "Maturity Date"), and bears interest at a fixed per annum rate equal to 5.75%. Upon the Maturity Date, a final payment of unamortized principal will be due. The Company is in compliance with covenants related to current payment of principal and interest as of March 31, 2025. The Company has the option to prepay the outstanding balance of the loan prior to the Maturity Date without penalty.

As of December 31, 2024 and March 31, 2025, certain subcontractors filed mechanics liens related to unpaid invoices issued in connection with the Company's construction of its new manufacturing facilities and upgraded research laboratories. The 2022 Loan Agreement contains a provision for a discretionary default in the event that the Company fails to pay sums due in connection with construction of any improvements; however, as of the reporting date, the lender has not elected to do so. As of December 31, 2024 and March 31, 2025, the Company has reflected this loan as Short-term debt, net, to reflect that the lender has the right to accelerate the loan under a discretionary default provision. As of March 31, 2025, $6.3 million is included in Short-term debt, net in the accompanying condensed interim balance sheet.

Senior Secured Notes

As of March 31, 2024, the Company issued $2.0 million of Secured Notes which were classified as non-current liabilities in the accompany condensed interim balance sheet. Purchasers (as defined in the Note Purchase Agreement) included: Dr. Hing C. Wong, Founder and Chief Executive Officer, who invested $620,000; Rebecca Byam, Chief Financial Officer, who invested $220,000; and Gary M. Winer, member of our Board of Directors, who invested $50,000, as well as unrelated parties. As of March 31, 2024, the Company received $1.8 million in cash payments for the Secured Notes. A check payment of $250,000, that has since cleared, is included in Secured note receivable in the accompanying condensed interim balance sheet.

As of March 31, 2025, the Company issued $6.9 million of Secured Notes which were classified as non-current liabilities in the accompanying condensed interim balance sheet. Purchasers included Dr. Hing C. Wong, Founder and Chief Executive Officer, who invested $2.4 million; Rebecca Byam, Chief Financial Officer, who invested $220,000; Lee Flowers, Senior Vice President of Business Development, who invested $25,000; Scott T. Garrett, the Chairman of the Company's board of directors, who invested $140,000; Gary M. Winer, a member of our board of directors, who invested $60,000; Rick S. Greene, a member of the board of directors, who invested $25,000, as well as unrelated parties.

As of July 2, 2024, existing investors in Secured Notes unanimously agreed to an Amended and Restated Note Purchase Agreement and related documents ("Amended and Restated Note Purchase Agreement"). On September 30, 2024, existing investors approved an amendment to the Amended and Restated Note Purchase Agreement which extended the last closing date to October 31, 2024. No other terms were changed. Under the terms of the Amended and Restated Note Purchase Agreement, the Secured Notes continue to bear interest at a rate of 9% per annum, payable quarterly in arrears. The Secured Notes will mature on August 30, 2026 (the "Maturity Date"), on which date the principal balance, accrued but unpaid interest and other amounts owed under the terms of the Amended and Restated Note Purchase Agreement shall be due and payable. The Company pledged its equity ownership interest in Wugen, which was equivalent to a 5.6% ownership stake in that company as of March 31, 2025 ("Pledged Collateral"). The Pledged Collateral will be held and released according to the terms of the Escrow Agreement, as security for the Secured Notes.

The Secured Notes have a Mandatory Prepayment provision, according to which the Company is required to prepay the Secured Notes before the Maturity Date under certain circumstances. In the event of a Mandatory Prepayment, Secured Notes may receive a bonus payment based on the gross proceeds of the sale of the Pledged Collateral. If the Secured Notes are repaid on the Maturity Date, holders will receive their pro rata share of a fixed bonus payment of $3.4 million in addition to payment of outstanding principal and accrued and unpaid interest. If a bonus payment is paid, then there is no prepayment penalty. The Amended and Restated Note Purchase Agreement also contains default provisions, according to which, following an event of default, the Company may be required to distribute the Pledged Collateral to the Purchasers on a pro rata basis based on a $10.0 million issuance of Secured Notes, in full satisfaction of the indebtedness evidenced by the Secured Notes. In the three months ended March 31, 2025, the Company recognized $273,059 in expenses for accretion of the fixed bonus payment due in the event the Secured Notes are repaid on the Maturity Date.

On May 7, 2025, certain Purchasers elected to convert $6.6 million of outstanding principal into shares of the Company's Common Stock, warrants to purchase Common Stock and rights to a portion of the Company's Wugen shares, according to Principal Terms of Conversion approved by the stockholders at the Special Meeting held on March 31, 2025. See Note 10. Subsequent Events.

4. Preferred Stock

As of December 31, 2024 and March 31, 2025, the Company had 10,000,000 shares of preferred stock authorized and no shares issued.

5. Net Loss Per Share

The following table summarizes the computation of the basic and diluted net loss per share:

	Three Months Ended March 31,	
	2024	2025
Numerator:		
Net loss	$ (7,468,061)	$ (2,196,875)
Denominator:		
Weighted-average common shares outstanding	37,223,588	44,675,656
Net loss per share, basic and diluted	$ (0.20)	$ (0.05)

The following table summarizes the outstanding potentially dilutive securities that have been excluded in the calculation of diluted net loss per share because their inclusion would be anti-dilutive:

	At March 31,	
	2024	2025
Common stock options	1,764,766	1,775,026
Potentially dilutive securities	1,764,766	1,775,026

6. Fair Value of Financial Instruments

The carrying amount of the Company's financial instruments, including cash and cash equivalents, accounts receivable, prepaid expenses and other current assets, U.S. government-backed securities with maturity dates up to one year, accounts payable and accrued liabilities, approximate fair value due to their short-term maturities.

Money market funds included in cash and cash equivalents and U.S. government-backed securities are measured at fair value based on quoted prices in active markets, which are considered Level 1 inputs. No transfers between levels occurred during the periods presented. The following table presents the Company's assets which were measured at fair value at December 31, 2024 and March 31, 2025:

	At December 31, 2024:			
	Level 1	Level 2	Level 3	Total
Assets:				
Money market funds	$ 3,748,325	$ —	$ —	$ 3,748,325
Total	$ 3,748,325	$ —	$ —	$ 3,748,325

	At March 31, 2025:			
	Level 1	Level 2	Level 3	Total
Assets:				
Money market funds	$ 590,524	$ —	$ —	$ 590,524
Total	$ 590,524	$ —	$ —	$ 590,524

7. Income Taxes

The Company computes its quarterly income tax expense/(benefit) by using a forecasted annual effective tax rate and adjusts for any discrete items arising during the quarter. The Company did not have a provision for income taxes (current or deferred tax expense) as of December 31, 2024 and March 31, 2025. The Company will continue to maintain a 100% valuation allowance on total deferred tax assets. The Company believes it is more likely than not that the related deferred tax assets will not be realized. As a result, the Company's effective tax rate will remain at 0.00% because no items either estimated or discrete items would impact the tax provision.

8. Segment Reporting

HCW Biologics, Inc. has one reportable segment: life science. The life science segment consists of operations focused on discovering and developing novel immunotherapies to lengthen health span by disrupting the link between chronic, low-grade inflammation and diseases. The Company's CODM is the chief executive officer.

The accounting policies of the life science segment are the same as those described in the summary of significant accounting policies. The CODM assesses performance for the life science segment based on net loss, which is reported on the statement of operations as net loss. The measure of segment assets is reported on the balance sheet as total assets.

The Company has not generated any product revenue from commercial product sales of internally-developed immunotherapeutic products for the treatment of diseases, as no products have been approved for commercial sale as of March 31, 2025. The Company expects to continue to incur significant expenses and operating losses for the foreseeable future as it advances molecules through all stages of development and clinical trials and, ultimately, seek approval for commercial sale.

As such, the CODM uses cash forecast models in deciding how to invest into the life science segment. Such cash forecast models are reviewed to assess the entity-wide operating results and performance in conjunction with monitoring the results of R&D experiments for preclinical compounds and clinical trial data for clinical-stage compounds. The assessment of results of preclinical and clinical studies are critical to the allocation of resources by the CODM.

There were no material changes to the measures for segment revenue, profit or loss, and other metrics since December 31, 2024. The tables below summarizes the significant expense categories regularly reviewed by the CODM for the three months ended March 31, 2024 and March 31, 2025:

	Three Months Ended March 31,	
	2024	2025
Revenues:		
Revenues	$ 1,126,712	$ 5,065
Cost of revenues	(511,965)	(4,052)
Net revenues	614,747	1,013
Operating expenses:		
Research and development expenses		
Salaries, benefits and related expenses	779,747	701,106
Manufacturing and materials	576,301	262,798
Preclinical expenses	285,091	177,111
Clinical trials	266,640	187,820
Overhead allocations	215,505	149,876
Total research and development expenses	2,123,284	1,478,711
General and administrative		
Salaries, benefits and related expenses	521,610	788,490
Professional services[(a)]	353,806	454,369
Facilities and office expenses	203,599	94,330
Depreciation expenses	67,081	61,237
Rent and occupancy expenses	42,716	49,750
Insurance	173,270	290,269
Taxes	34,155	32,592
Other expenses	169,855	183,501
Total general and administrative expenses	1,566,092	1,954,538
Other segment items[(b)]	4,393,432	(1,235,361)
Total operating expenses	8,082,808	2,197,888
Net segment loss	**$ (7,468,061)**	**$ (2,196,875)**

(a) Professional services consist primarily of audit and accounting advisory services, tax advisory services, corporate legal services related to SEC compliance, and legal fees related to patent filings.

(b) Other segment items include the following unusual or nonrecurring items:

	Three Months Ended March 31,	
	2024	2025
Arbitration legal fees, net	$ 4,419,034	$ (1,739,493)
Accretion of fixed bonus upon maturity of Senior Notes, net	—	273,059
Interest expense	—	255,822
Other income, net	(25,602)	(24,749)
Other segment items	**$ 4,393,432**	**$ (1,235,361)**

9. Commitments and Contingencies

Operating Leases

The Company has operating leases for approximately 12,250 square feet of space located in Miramar, Florida. On February 29, 2024, the lease on the Company's current location reached the end of its term and the Company entered a new one-year lease for the same location which commenced on March 1, 2024 and terminated on February 28, 2025. On January 27, 2025, the Company entered a new one-year lease for the same location which commenced on March 1, 2025 and terminates on February 28, 2026. As a lease of 12 months or less in duration and qualifies for a short-term lease exemption under ASC 842-20-25-2. The Company elected to account for this lease on a straight-line basis over the lease term and will not recognize a ROU asset and a lease liability as a result. The Company has no obligations under financing leases.

For the three months ended March 31, 2024 and 2025, rent expense recognized by the Company was $47,838 and $50,556, respectively, of which $23,453 and $26,476, respectively, are included in research and development in the accompanying condensed interim statements of operations.

Contractual Commitments

The Company has commitments with a third-party manufacturing organization to supply us with clinical grade materials. As of March 31, 2025, it is under contract for obligations of $12,500 it expects to pay during the year ending December 31, 2025. On January 22, 2025, the Company entered into a forbearance agreement with BE&K to allow the Company until March 31, 2025 to continue efforts to find the financing required to complete the construction and renovation of the building. Pursuant to the forbearance agreement, the Company made an initial payment of $1.0 million in partial satisfaction of amounts owing to BE&K and its subcontractors. Upon the expiration of the forbearance agreement, BE&K took additional legal actions. See Legal - *Other Matters* below. The Company has continued to pursue financing alternatives to provide the funding needed to come current in past amounts due and complete the construction and renovation of the property.

Project Financing

On January 10, 2024 (the “Termination Date”), the Company exercised its right to terminate its credit agreement (the “Credit Agreement”), dated April 21, 2023, with Prime Capital Ventures, LLC (the “Lender”), as permitted under the terms of the Credit Agreement. The termination followed repeated delays in funding and related concerns. There were no borrowings under the Credit Agreement as of the Termination Date, and the Company did not incur any penalties as a result of such termination under the terms of the Agreement. Upon exercising its right to terminate the Agreement, the Company was entitled to receive the return of the $5.3 million that the Company placed on deposit to establish an interest reserve account with the Lender. In the three months ended March 31, 2024, the Lender defaulted on its obligation to return the interest reserve deposit. Given the uncertainty of when or if funds will be recovered from the Lender, the Company recognized a reserve for a credit loss for $5.3 million as of December 31, 2023. The Company intends to pursue all available remedies to recover these funds, including legal actions, receivership and insurance.

Legal

Legal Proceedings

From time to time, the Company is a party to or otherwise involved in legal proceedings, including suits, assessments, regulatory actions and investigations generally arising out of the normal course of business. In addition, the Company enters into agreements that may include indemnification provisions, pursuant to which the Company agrees to indemnify, hold harmless and defend the indemnified parties for losses suffered or incurred by the indemnified party. When the Company believes that the outcome of such a matter will result in a liability that is probable to be incurred and result in a potential loss, or range of loss, that can be reasonably estimated, the Company will accrue a liability and make the appropriate disclosure in the footnotes to the financial statements.

Arbitration, Settlement and General Release

On December 23, 2022, Altor BioScience, LLC and NantCell, Inc. (collectively "ImmunityBio") initiated an arbitration against Dr. Hing C. Wong, the Company's Founder and Chief Executive Officer, in California alleging breach of contract and fiduciary duty, among other claims . On that same date, ImmunityBio filed a lawsuit against the Company in federal court alleging misappropriation of trade secrets, inducement of breach of contract and breach of fiduciary duty, among other claims against the Company. On April 26, 2023, the parties stipulated that ImmunityBio's action against the Company would be consolidated with the ImmunityBio Arbitration demand against Dr. Wong. On April 27, 2023, the Court approved the parties' stipulation and ordered the parties to Arbitration. On May 1, 2023, ImmunityBio filed a demand against the Company before JAMS. On May 3, 2023, ImmunityBio dismissed the federal court action without prejudice and the Court ordered the case dismissed without prejudice and closed the case. ImmunityBio's proceeding against the Company proceeded in Arbitration before JAMS and consolidated with the arbitration ImmunityBio initiated against Dr. Wong (the "Arbitration"). On March 26, 2024, ImmunityBio filed a complaint (the "Complaint") against the Company in the Chancery Court of the State of Delaware for the contribution of legal fees and expenses advanced to Dr. Wong.

As reported in the Company's Form 8-K filed on July 18, 2024 and described in Part II, Item 1. – "Legal Proceedings," as of July 13, 2024, the Company and Dr. Hing C. Wong, the Company's Founder and Chief Executive Officer, entered into a confidential Settlement Agreement and Release (the "Settlement Agreement") with Altor BioScience, LLC ("Altor"), NantCell, Inc. ("NantCell"), and ImmunityBio, Inc. (the parent of Altor and NantCell, together with Altor and NantCell, "ImmunityBio"), to resolve the previously disclosed Arbitration before JAMS brought by Altor and NantCell as well as the Complaint Altor filed against the Company in the Chancery Court of the State of Delaware for the contribution of legal fees and expenses advanced to Dr. Wong. The Settlement Agreement includes mutual general releases by and among the parties thereto. No party is required to make any monetary payments to any other party or person under the Settlement Agreement and each party will bear its own expenses incurred in connection with the matter. The Arbitration and the Complaint were dismissed as of December 31, 2024.

Other Matters

As the Company reported in a Form 8-K, on April 17, 2025, the Company received a summons and a copy of a complaint filed by BE&K in the Circuit Court of the 17th Judicial Circuit in and for Broward County, Florida (the "BE&K Complaint"). Other Defendants named in the BE&K Complaint who are subcontractors elected to filed counterclaims and cross-claims in response to the BE&K Complaint. Cogent Bank, also named as a Defendant in the BE&K Complaint, has not elected to take legal action at this time. In addition, on April 28, 2025, the Company received a summons and a copy of a complaint filed by Fisk Electric Company (which is a defendant in the BE&K Complaint) in the Circuit Court of the 17th Judicial Circuit in and for Broward County, Florida (the "Fisk Complaint") against the Company, BE&K, and the other defendants in the BE&K Litigation. . The Company intends to respond in a timely fashion to the BE&K and Fisk Complaints and cross-claims.

Inflationary Cost Environment, Banking Crisis, Supply Chain Disruption and the Macroeconomic Environment

The Company's operations have been affected by many headwinds, including inflationary pressures, including those brought about by tariffs and other economic policies, high interest rates, ongoing global supply chain disruptions resulting from increased geopolitical tensions such as the war in the Middle East, the conflict between Russia and Ukraine, China-Taiwan relations as well as U.S. trade policies, financial market volatility and currency movements. The Company has been impacted by inflation, and may continue to be so, when procuring materials required for the buildout of our new manufacturing and laboratory facilities, the costs for recruiting and retaining employees and other employee-related costs. Management employs a number of strategies to effectively navigate these issues, including product redesign, alternate sourcing, and establishing contingencies in budgeting and timelines. Future developments in these and other areas present material uncertainty and risk with respect to the Company's clinical trials, IND-enabling activities, buildout of the new manufacturing and laboratory facilities, as well as the Company's financial condition and results of operations. The extent and duration of such events and conditions, and resulting disruptions to our operations, are highly unpredictable.

10. Subsequent Events

Subsequent events have been evaluated through the date the financial statements were filed. In addition to the required recognition or disclosure disclosed in the footnotes herein, there were also the following subsequent events after the reporting date:

At the Special Meeting, Stockholders approved three proposals, including the Reverse Stock Split, the issuance of up to $40.0 million of shares of the Company's Common Stock to Investor under the terms of the ELOC Purchase Agreement, and the Principal Terms of Conversion for the conversion of at least $6.6 million of the outstanding principal of Secured Notes. Each proposal represented a critical element in the Company's plan to regain compliance with all Listing Rules for the Nasdaq Exchange.

Subsequent to March 31, 2025, the Company completed the following elements of its plan to regain compliance with all Nasdaq Listing Rules:

- On April 17, 2025, the Company formally applied to move to the Capital Markets tier, thus will refer to the Listing Rules for that tier for the compliance with all Listing Rules.
- The Reverse Split was effective on April 11, 2025. On April 28, 2025, the Company completed 10 consecutive trading days with a trading price for its listed securities at $1.00 or above, thus achieving compliance with the minimum bid price rule. The Company remains in compliance as of the date of issuance of this Quarterly Report.
- On April 16, 2025, after the SEC declared a registration statement effective, the Company has registered the underlying shares of Common stock for up to $40.0 million of shares issuable to Investor under the terms of a Equity Purchase Agreement.
- On April 16, 2025, after the SEC declared a registration statement effective, the Company has registered the underlying shares of Common Stock for the Common Stock Warrant issued in its November 2024 financing.
- On May 1, 2025, the noteholders of $6.6 million of outstanding principal of Secured Notes entered a definitive conversion agreement with the Company.

On April 17, 2025, the Company received a summons and a copy of a complaint filed by BE&K in the Circuit Court of the 17th Judicial Circuit in and for Broward County, Florida (the "BE&K Complaint"). The BE&K Complaint was filed by BE&K Building Group, LLC as Plaintiff and each of the Company, Cogent Bank, B&I Contractors, Southern Painting, Dash Door & Closer Service, Inc., Fisk Electric Company and Lotspeich Co. of Florida as Defendants. BE&K Building Group, LLC v. HCW Biologics, et al., CACE-25-004668 (Fla. 17th Cir. Ct. 2025) (the "BE&K Litigation"). The Company was also served with a cross claim from B&I Contractors and Dash Door & Closer Service, Inc. and a complaint filed by Fisk Electric Company. See Note 9. Commitments and contingencies - Legal, *Other Matters.*

On May 7, 2025, the noteholders of $6.6 million of the outstanding principal of the Secured Notes (participating noteholders) effected the conversion of the Secured Notes held by them into shares of the Company's Common Stock at a conversion price of $26.00 per share (adjusted for the Reverse Stock Split), warrants to purchase approximately $3.3 million of the Company's Common Stock at an exercise price of $26.00 per share (as adjusted for the Reverse Stock Split), and the right to their pro rata share of 49.1% of the proceeds of the Company's shares of Wugen common stock, if and when such shares are ever sold. This transaction was effected pursuant to the terms of a Second Amendment to Amended and Restated Senior Secured Note Purchase Agreement and Related Agreements dated as of May 1, 2025 (the "Conversion Agreement"). The conversion was completed on May 7, 2025, pursuant to the Conversion Amendment, the Secured Notes held by the participating noteholders were cancelled, and the Company issued unregistered shares of Common Stock (which are subject to a 180-day lock-up from the conversion date) and warrants to purchase up to $3.3 million of Common Stock that may be exercised at any time up to five years from the closing date (any such shares also subject to a 180-day lock-up from the conversion date).

As of May 5, 2025, the Company issued a total of $270,000 principal amount of unsecured convertible promissory notes that mature on May 5, 2026 with paid in kind interest accruing thereon, payable quarterly in arrears at 10% per annum (the "Convertible Bridge Notes"). In accordance with their terms, following the completion of a qualified offering, the Convertible Bridge Notes will be converted into shares of our Common Stock at the final offering price in an offering that closed on May 15, 2025. In addition, holders of the Convertible Bridge Notes have the right to receive a portion of the proceeds of the Company's shares of Wugen common stock, if and when such shares are ever sold, determined by the number of the Wugen shares equal to 0.25 multiplied by the original principal amount, in dollars, of the Convertible Bridge Notes. Investors included: $60,000 invested by Hing C. Wong, the Company's Founder and CEO; $100,000 invested by Scott T. Garrett, the Chairman of the Company's Board of Directors; and $10,000 invested by Gary M. Winer, a member of the Company's Board of Directors.

On May 13, 2025, the Company completed its performance obligation under the WY Biotech Agreement, as amended. By doing so, the Company delivered a technology transfer report which characterized the licensed molecules, HCW11-006. WY Biotech has a 30-day due diligence period during which it will assess the contents of this report. At the end of the due diligence period, WY may either elect to terminate the Agreement with no penalties or continue with the Agreement, as which point it would become binding.

On May 15, 2025, the Company closed on an equity offering with gross proceeds of $5.0 million through a follow-on offering of an aggregate of 671,140 units at a purchase price of $7.45 per unit priced at-the-market under Nasdaq rules. Each unit consisted of one share of Common Stock or one Pre-Funded Warrants to purchase one share of Common Stock, with two warrants, each of which can be exercised for one share of Common Stock for $7.45 per share. In addition, the Company has entered into a privately negotiated agreement with the holder of certain existing outstanding warrants to purchase up to 167,925 shares of common stock (the "Existing Warrants") to reduce the exercise price of such Existing Warrants from $41.20 per share to $7.45 per share. Also on May 15, 2025, the Company received a notification for exercise of 177,140 of its 513,140 Pre-Funded Warrants.

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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with (i) our unaudited condensed interim financial statements and related notes appearing elsewhere in this Quarterly Report on Form 10-Q and (ii) our audited financial statements and related notes and the discussion under the heading "Management's Discussion and Analysis of Financial Condition and Results of Operations" for the fiscal year ended December 31, 2023 included in the Annual Report on Form 10-K filed with the U.S. Securities and Exchange Commission (the "SEC") on March 28, 2025 (the "Annual Report"). Our historical results are not necessarily indicative of the results that may be expected for any period in the future. Unless the context requires otherwise, references in this Quarterly Report on Form 10-Q to the "Company," "HCW Biologics," "HCWB", "we," "us" and "our" refer to HCW Biologics Inc.

Forward-Looking Statements

This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. All statements other than statements of historical facts contained in this quarterly report, including statements regarding our future results of operations and financial position, business strategy, prospective products, product approvals, research and development costs, timing and likelihood of success of our clinical trials, plans and objectives of management for future operations, adequacy of our cash resources and working capital, future economic conditions or performance, and future results of anticipated products, are forward-looking statements. These statements 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 the forward-looking statements.

In some cases, you can identify forward-looking statements by terms such as "may," "will," "should," "expect," "plan," "anticipate," "could," "intend," "target," "project," "contemplates," "believes," "estimates," "predicts," "potential" or "continue" or the negative of these terms or other similar expressions. The forward-looking statements in this Quarterly Report on Form 10-Q are only predictions. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our business, financial condition and results of operations. These forward-looking statements are subject to certain risks and uncertainties that could cause actual results to differ materially from those anticipated in the forward-looking statements. Factors that might cause such a difference include, but are not limited to, those discussed in this report in Part II, Item 1A -"Risk Factors," in this Quarterly Report on Form 10-Q and in other filings we make with the SEC from time to time. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. Moreover, we operate in an evolving environment. New risk factors and uncertainties may emerge from time to time, and it is not possible for management to predict all risk factors and uncertainties. These forward-looking statements speak only as of the date hereof. Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise.

Overview

HCW Biologics Inc. ("HCWB" or the "Company") is a clinical-stage biopharmaceutical company developing proprietary immunotherapies to treat diseases promoted by chronic inflammation, especially age-related and senescence-associated diseases. Our immunotherapeutics represent a new class of drug that we believe has the potential to fundamentally change the treatment of cancer and many other diseases and conditions that are promoted by chronic inflammation — and in doing so, improve patients' quality of life and possibly extend longevity. While chronic inflammation is possible at any age, it is more common as we age. In this case, the condition is known as inflammaging. The induction and retention of low-grade inflammation in an aging human body is mainly the result of the accumulation of non-proliferative but metabolically active senescent cells, which can also be caused by persistent activation of immune cells.

Chronic inflammation, including inflammaging, is believed to be a significant contributing factor to the cause for senescence-associated diseases and conditions that diminish health span, including many types of cancer, autoimmune diseases, and neurodegenerative diseases, as well as indications that impact quality-of-life that are not life-threatening. Senescence is a physiologic process important in promoting wound healing, tissue homeostasis, regeneration, embryogenesis, fibrosis regulation, and tumorigenesis suppression. However, accumulation of senescent cells with Senescence-Associated Phenotype ("SASP") proinflammatory factors has been implicated as a major source of chronic sterile inflammation leading to many aging-related pathologies. SASP factors, including proinflammatory cytokines, chemokines, and proteinases, drive an inflammation cycle. Senescence is considered a stress response and can be induced by a wide range of intrinsic and extrinsic insults. Over time, these insults cause normal tissue cells to enter a senescent state of irreversible growth arrest accompanied by the release of SASP factors. The inflammation cycle promoted by SASP factors also activates immune cells. Similar to senescent cells, prolonged activation of immune cells promote the release of highly proinflammatory cytokines. Unresolved activation of immune cells leads to chronic low-grade inflammation, which perpetuates this cycle.

Studies have shown that strategies to reduce or eliminate senescent cells can delay, prevent, and improve age-related dysfunctions, including cancer. Unfortunately, to date, there has been limited clinical success in targeting senescent cell accumulation or aberrant inflammasome activity using small molecule-based approaches. Preclinical research and preliminary results from first-in-human clinical trials indicate that our immunotherapeutic approach may achieve success for cancer indications, and many other age-related diseases and conditions. We believe our lead product candidates represent a novel immunotherapeutic approach and a clinically promising new class of senotherapeutic drugs for the treatment of age-related diseases.

The Company has developed two different drug discovery and development platforms, our legacy TOBI™ (Tissue factOr-Based fusIon) platform and our newly developed targeted platform technology – the T-cell Receptor β Chain constant region ("TRBC") platform:

- The TOBI platform is designed to engineer multi-functional fusion protein molecules and protein complexes. It employs a Tissue Factor ("TF") scaffold that can be packaged with multiple protein targets, including cytokines, chemokines, ligands, receptors, and single-chain antibodies.

- The Company invented its second-generation platform, the TRBC platform, to create novel immunotherapeutics designed to treat diseases, including cancer, as well as improve quality-of-life conditions. The immunotherapeutics created using the TRBC platform include multi-specific cytokines, targeted second-generation immune checkpoint inhibitors, and immune-cell engagers, which have the capabilities to activate subsets of immune cells that specifically target cancerous or infected cells.

As of July 13, 2024, the Company, Dr. Wong, Altor BioScience, LLC, NantCell, Inc. and ImmunityBio, Inc. (collectively, Altor BioScience, LLC, NantCell, Inc. and ImmunityBio Inc. will be referred to herein as "ImmunityBio"), entered into a Settlement Agreement that is described in Part I, Item 3. – "Legal Proceedings" below. The Settlement Agreement eliminated the uncertainty of the outcome of the previously disclosed Arbitration proceedings and provided clarity for the future direction and emphasis of our clinical development strategy. The settlement involved intellectual property the Company developed based on our proprietary TOBI drug discovery platform and its unique Tissue-Factor scaffold used to create protein-fusion molecules.

With clarity on ownership of intellectual property, the Company reassessed its clinical development pipeline and the future direction of our Company. Our expertise is in immunotherapeutic treatments and our clinical development pipeline will remain so. Our focus continues to be to develop protein-based immunotherapies that are administered by subcutaneous injection. We remain focused on diseases promoted by chronic inflammation driven by senescence, including cancer, especially age-related diseases. The diseases we will target will have no curative FDA approved treatments. Finally, we have selected programs that include life-threatening diseases, such as pancreatic and ovarian cancer, as well as "quality-of-life" indications, such as alopecia areata and senile lentigo. HCW9302 will remain one of our lead product candidates. Future drug discovery and new drug development will be based on TRBC Molecules. There are several potential candidates in each class of TRBC Molecules from which the Company will select lead molecules for each program. Part of this selection will be to determine which TRBC molecules will be developed in-house and which are more appropriate to develop through business development transactions, such as out-licensing agreements.

Our clinical development program is based on a few select lead product candidates which will be evaluated in Company-sponsored clinical trials in autoimmune disorders, solid tumors and quality-of-life conditions. We have a large portfolio of non-core programs and assets and, for these, we anticipate that clinical development will be conducted through licensing agreements and other business development transactions.

HCWB has an experienced team led by Dr. Hing C. Wong, our Founder and CEO, who discovered and developed the immunotherapeutic Anktiva® (also known as ALT-803, an IL-15 agonist receptor) through pivotal trials. This blockbuster immunotherapeutic treatment for cancer was sold to ImmunityBio, Inc. in 2017 in a $1.0 billion acquisition. Anktiva® was approved by the U.S. Food and Drug Administration ("FDA") for a bladder cancer indication in 2024.

Business Highlights

Financing

Our financing strategy includes capital raising through the issuance of securities as well as business development transactions, especially out-licensing certain rights outside of our focus areas. The Company continues to evaluate its portfolio to identify compounds which may be good candidates for licensing or other collaborations, where it will be to our advantage to leverage the expertise and financial strength of a partner in the development of a compound or market.

Amendment of WY Biotech License Agreement

As we reported in a Form 8-K filed on March 19, 2025, the Company and WY Biotech Co., Ltd. ("WY Biotech") agreed to amend their License, Research and Co-Development Agreement ("Agreement") dated November 17, 2024, due to a delay in WY Biotech coming to a definitive agreement with their designated contract development and manufacturing organization ("CDMO"). Under the amended terms, the Company expects to receive the license fee of $7.0 million in June 2025. The Company delivered a report that characterizes the licensed molecule on May 13, 2025. WY Biotech has 30-days to accept this report and elect to continue the Agreement.

There were no other material changes to the Agreement, which involves the grant to WY Biotech of an exclusive, world-wide license to use and apply HCW11-006, a preclinical molecule, for *in vivo* applications. In particular, the Company will retain the Opt-In Right thereunder, which gives the Company the option to assume all control and responsibility for the development, manufacture and commercialization of HCW11-006 for *in vivo* applications in the North America, South America, and Central America. The Company retains *ex vivo* rights.

$5.0 Million Equity Offering and Restructuring Existing Warrants

On May 15, 2025, the Company closed on an equity offering with gross proceeds of $5.0 million through a follow-on offering of an aggregate of 671,140 units at a purchase price of $7.45 per unit priced at-the-market under Nasdaq rules. Each unit consisted of one share of Common Stock or one Pre-Funded Warrants to purchase one share of Common Stock, with two warrants, each of which can be exercised for one share of Common Stock for $7.45 per share. In addition, the Company has entered into a privately negotiated agreement with the holder of certain existing outstanding warrants to purchase up to 167,925 shares of common stock (the "Existing Warrants") to reduce the exercise price of such Existing Warrants from $41.20 per share to $7.45 per share.

Project to Create Manufacturing Facility

The Company remains committed to establishing some control over our clinical supply of materials, and the supply of licensed molecules for our licensees. We have retained manufacturing rights for the licensed molecules under our license agreements. With the threat of pharmaceutical tariffs hanging over the biopharmaceutical industry, a growing list of major drug makers are bolstering their manufacturing footprints in the U.S.

On January 22, 2025, the Company entered a forbearance agreement with BE&K Building Group ("BE&K") and certain subcontractors filed mechanics liens related to unpaid invoices issued in connection with construction of the Company's new manufacturing facilities and upgraded research laboratories. The forbearance agreement terminated on March 31, 2025, and the Company did not have financing in place to satisfy the liens. On April 17, 2025, the Company received a summons and a copy of a complaint filed by BE&K in the Circuit Court of the 17th Judicial Circuit in and for Broward County, Florida (the "BE&K Complaint"). Subsequent to this filing date, certain other claims and cross claims were filed. See Part II, Item 1. – "Legal Proceedings." The Company intends to respond in a timely fashion to the BE&K claims and cross-claims. Cogent Bank has not joined in these legal proceedings.

The Company has continued to pursue financing alternatives to provide the funding needed to come current in past amounts due and complete the construction and renovation of the property.

Compliance with Nasdaq Listing Rules

On March 3, 2025, the Nasdaq Hearings Panel (the "Panel") of The Nasdaq Stock Market LLC ("Nasdaq" or the "Exchange") granted the Company an extension in which to regain compliance with all Nasdaq continued listing rules. The Panel's determination followed a hearing on February 13, 2025, at which the Panel considered the Company's plan to regain compliance with Listing Rules 5450(a)(1), 5450(b)(2)(A) and 5450(b)(2&3)(C), the minimum bid price ("Bid Price"), the market value of publicly held securities ("MVPHS") and the market value of listed securities ("MVLS") rules, respectively. As a result of the extension and a clarifying amendment the Company received on April 8, 2025, the Panel granted the Company's request for continued listing on the Exchange, provided that the Company demonstrates compliance with the Bid Price Rule by April 28, 2025, and all other Exchange continued listing rules by June 16, 2025.

On March 31, 2025, at a Special Meeting of the Stockholders (the "Special Meeting"), stockholders approved three important elements of the Company's compliance plan, including:

- Approval of a Reverse Split of the Company's common stock, which the Company effected on April 11, 2025 with a one-for-forty (1::40) ratio. As a result, Company regained compliance with the Nasdaq Listing Rule for Bid Price by the required date of April 28, 2025.
- Approval of the issuance of up to $40.0 million of our Common Stock under the ELOC Purchase Agreement. As a result, the Company filed a registration statement to register the shares under the ELOC Purchase Agreement, which the SEC declared effective on April 16, 2025. The Company has not issued any shares under the ELOC Purchase Agreement as of the date of issuance of this Quarterly Report.
- Approval of the Principal Terms for the conversion of at least $6.6 million of Secured Notes. The Company completed the conversion transaction on May 7, 2025.

On April 17, 2025, the Company formally applied to move to the Capital Markets tier, thus we will refer to the Listing Rules for that tier for the compliance with all Listing Rules.

We anticipate recognition of $7.0 million in revenues as a result of the upfront license fee from WY Biotech in June 2025. On May 13, 2025, the Company delivered the technology transfer report to WY Biotech. WY Biotech has 30 days to accept the report and elect to continue with the license agreement. Since November 2024 when we signed the WY Biotech License, the data generated from our internal research and external collaborators indicate that HCW-11-006 exhibits an unusual capacity of stimulating and expanding murine and human immune cells in vitro against tumor cells. We intend to co-author a pivotal publication that will be submitted to a top-tier, peer-reviewed scientific journal in the second quarter of 2025.

On May 13, 2025, the Company received a letter from Nasdaq confirming that the Company has regained compliance with the Bid Price Rule, the public float requirement in Listing Rule 5550(a)(4) and the MVPHS Rule, as required by the Nasdaq Panel decision of April 8, 2025, as amended. The Company remains subject to the remaining terms of the Panel's April 8, 2025, decision to provide an extension to the compliance period for other Listing Rules. The Company achieved compliance with the Bid Price rule on April 28, 2025, as required by the Nasdaq Panel. As of the date of issuance of this Quarterly Report, the Company continues to be in compliance with the Bid Price rule.

Several elements of our plan to regain compliance with the MVLS rule have been accomplished through the following transactions which have increased or have the potential to increase the Company's balance of stockholders' equity to reach the minimum of $2.5 million:

- An increase of $2.0 million recognized on January 14, 2025, when the Company received a $2.0 million insurance reimbursement for legal fees incurred for the defense of Dr. Hing C. Wong, the Company's Founder and Chief Executive Officer, in connection with the Arbitration.
- The Company may issue shares of Common Stock up to $40.0 million through a Equity Purchase Agreement. The Company has not issued any shares under the Equity Purchase Agreement as of the date of issuance of this Quarterly Report.
- An net increase of $5.8 million resulting from the conversion of the Secured Notes. The conversion was completed on May 7, 2025.

- The Company closed an equity financing with gross proceeds of $5.0 million on May 15, 2025. Thereafter, the Convertible Bridge Notes with outstanding principal of $270,000 will convert into common stock at a price of $7.45 per share, according to the terms of the agreement.

Clinical Development

HCW9302

On January 28, 2025, the Company received clearance of its IND from the FDA to initiate a first-in-human Phase 1 dose escalation clinical trial to evaluate one of its lead drug candidates, HCW9302, in patients with moderate-to-severe alopecia areata, a common autoimmune disease in humans that currently has no curative FDA approved treatments.

The Company intends to include up to five clinical sites in this study. Negotiations with three clinical sites are currently underway, and the Company estimates at least one site may open and initiate the study early in the third quarter of 2025.

HCW9302 is an injectable, first-in-kind interleukin 2 ("IL-2") fusion protein complex constructed using the Company's proprietary TOBI platform technology. Its mechanism of action involves binding to IL-2αβγ receptors predominantly expressed on regulatory T ("T_{reg}") cells, thereby activating and expanding T_{reg} cells that can suppress unwanted immune and inflammatory responses. The FDA recently cleared us to initiate a Phase 1 clinical study using HCW9302 to treat alopecia areata. Our strategy is to expand to other indications upon successful completion of the Phase 1 study.

HCW9302 is a fusion protein molecule that contains two IL-2 domains linked by an extracellular tissue factor domain. IL-2 signaling is essential for homeostasis of T_{reg} cells. Unfortunately, recombinant IL-2 has an unfavorable pharmacokinetic profile and induces cytokine release syndrome limiting its therapeutic use. HCW9302 provides a potential solution to this problem. It is designed to have the therapeutic advantages of IL-2 while being well tolerated. In our preclinical and non-human primate studies, we found that HCW9302 exhibited a longer serum half-life with an approximately 1,000-fold higher affinity for the IL2Rα than IL-2. In addition, preclinical studies have shown HCW9302 can be administered at a dosing range that expanded and activated T_{reg} cells but not $CD4^+$ effector T cells. $CD4^+$ effector T cells (also known as helper T cells) are crucial for immune responses, but under certain conditions, their excessive activation can lead to negative effects like inflammation, tissue damage, and autoimmune reactions, particularly when they become dysregulated and target self-antigens, contributing to conditions like multiple sclerosis, rheumatoid arthritis, and inflammatory bowel disease.

HCW9206

The Company recently announced results of studies of our proprietary compound, HCW9206, and its availability for commercialization. Given the results of the studies, HCW9201 has the potential to provide a solution for key challenges facing CAR-T therapies. While CAR-T therapy is a revolutionary technology that continues to play a pivotal role in treatment of cancer, autoimmune diseases, and age-related diseases, it faces challenges. In the result of the studies shared by the Company, we showed that HCW9206 has the potential to significantly reduce costs and improve clinical efficacy of engineered effector T cells. This data was first shared at the 2025 Annual Meeting of American Association of Immunologists.

HCW9206 is a proprietary fusion protein shown to be highly effective at generating chimeric T-cell receptor - T cells (CAR-Ts) for immunotherapy. HCW9206 is a novel class of immunotherapeutic drug that enables the combination of multiple immune stimulatory cytokines within a single molecule. The activity of HCW9206 was significantly better than that of standard methods employing anti-CD3/anti-CD28 and IL-2 regents for CAR lentiviral transduction and subsequent expansion of human CAR-Ts.

The Company's research collaborator Dr. Harris Goldstein's Lab at Albert Einstein College of Medicine, Bronx, New York, recently presented findings of these studies at the 2025 Annual Meeting of American Association of Immunologists (AAI 2025), Honolulu, HI. The poster presentation showed that HCW9206 is not only a better reagent than the current anti-CD3/anti-CD28/IL-2 method for CAR-T viral transduction, it also effectively expanded stem cell-like memory T cells (T_{scm}) carrying the CAR constructs. It is well known that the T_{scm} subset of T cells exhibits better targeted cell killing and persistence than other subsets of T cells, including memory T cells, following adoptive transfer into patients. In experimental humanized models in mice, adoptively transferred HCW9206-generated HIV- and CD19-specific CAR-T displayed more potency in the suppression of HIV-1 and leukemic cells with enhanced persistence, respectively, when compared with the same CAR-Ts generated with the standard methods. The results of these studies represent an alternative novel strategy for CAR-T cell production with the advantage of generating a large population of CAR-Ts with a T_{scm} cell phenotype, which should enhance the persistence of CAR-Ts in patients. This strategy will likely improve long-term survival

of disease-specific CAR-Ts following adoptive transfer and enable sustained suppression of malignancies, chronic infections and autoimmune diseases.

The GMP master cell bank of HCW9206 and its manufacturing process has been established, and its drug master file as an *ex vivo* reagent has been filed with the US Food and Drug Administration. The Company is now seeking commercial partnerships for HCW9206 regent sale and/or integration into CAR-T based manufacturing processes.

Trends and Uncertainties

Inflationary Cost Environment, Banking Crisis, Supply Chain Disruption and the Macroeconomic Environment

The Company's operations have been affected by many headwinds, including inflationary pressures, including those brought about by tariffs and other economic policies, high interest rates, ongoing global supply chain disruptions resulting from increased geopolitical tensions such as the war in the Middle East, the conflict between Russia and Ukraine, China-Taiwan relations as well as U.S. trade policies, financial market volatility and currency movements. These headwinds, specifically the supply chain disruptions, have adversely impacted our ability to procure certain services and materials, which in some cases impacts the cost and timing of clinical trials and IND-enabling activities. In addition, we have been impacted by inflation when procuring materials required for the buildout of our new manufacturing and laboratory facilities, the costs for recruiting and retaining employees and other employee-related costs. Further, rising interest rates would also increase borrowing costs to the extent that the Company takes on any additional debt. The Company uses a number of strategies to effectively navigate these issues, including product redesign, alternate sourcing, and establishing contingencies in budgeting and timelines. However, the extent and duration of such events and conditions, and resulting disruptions to our operations, are highly unpredictable.

For discussion of risks related to potential impacts of supply chain, inflation, geopolitical and macroeconomic challenges on our operations, business results and financial condition, see Item 1A. "Risk Factors" in our Annual Report.

Components of our Results of Operation

Revenues

We have no products approved for commercial sale and have not generated any revenue from commercial product sales of internally-developed immunotherapeutic products for the treatment of cancer and other age-related diseases. The principal source of our revenues to date have been generated from our Wugen License and Master Services Agreement (the "MSA") with Wugen. See Note 1 to our condensed interim financial statements included elsewhere in this Quarterly Report for these definitions and more information.

We derive revenue from a license agreement granting rights to Wugen to further develop and commercialize products based on two of our internally-developed molecules. Consideration under our contract included a nonrefundable upfront payment, development, regulatory and commercial milestones, and royalties based on net sales of approved products. Additionally, HCW Biologics retained manufacturing rights and has agreed to provide Wugen with clinical and research grade materials for clinical development and commercialization of licensed products under separate agreements. We assessed which activities in the Wugen License should be considered distinct performance obligations that should be accounted for separately. We develop assumptions that require judgement to determine whether the license to our intellectual property is distinct from the research and development services or participation in activities under the Wugen License.

Performance obligations relating to the granting a license and delivery of licensed product and R&D know-how were satisfied when transferred upon the execution of the Wugen License on December 24, 2020. The Company recognized revenue for the related consideration at a point in time. The revenue recognized from a transaction to supply clinical and research grade materials entered into under the MSA and covered by a Statement of Work ("SOW"), represents one performance obligation that is satisfied over time. The Company recognizes revenue generated for supply of material for clinical development using an input method based on the costs incurred relative to the total expected cost, which determines the extent of the Company's progress toward completion.

Operating Expenses

Our operating expenses are reported as research and development expenses and general and administrative expenses.

Research and Development

Our research and development expenses consist primarily of costs incurred for the development of our product candidates, which include:

- Employee-related expenses, including salaries, benefits, and stock-based compensation expense;
- Expenses related to manufacturing and materials, consisting primarily of expenses incurred in connection with CMOs, which produce cGMP materials for clinical trials on our behalf;
- Expenses associated with preclinical activities, including research and development and other IND-enabling activities;
- Expenses incurred in connection with clinical trials; and
- Other expenses, such as facilities-related expenses, direct depreciation costs for capitalized scientific equipment, and allocation for overhead.

We expense research and development costs as they are incurred. Costs for contract manufacturing are recognized based on an evaluation of the progress to completion of specific tasks using information provided to us by our vendors. Payments for these activities are based on the terms of the agreement, and the pattern of payments for goods and services will change depending on the material. Nonrefundable advance payments for goods or services to be received in the future for use in research and development activities are recorded as prepaid expenses and expensed as the related goods are delivered or the services are performed.

We expect research and development expenses to increase substantially for the foreseeable future as we continue the development of our product candidates. We cannot reasonably determine the nature, timing, and costs of the efforts that will be necessary to complete the development of, and obtain regulatory approval for, any of our product candidates. Product candidates in later stages of development generally have higher development costs than those in earlier stages. See "Risk Factors -- Risks Related to the Development and Clinical Testing of Our Product Candidates," in our Annual Report for a discussion of some of the risks and uncertainties associated with the development and commercialization of our product candidates. Any changes in the outcome of any of these risks and uncertainties with respect to the development of our product candidates in preclinical and clinical development could mean a significant change in the costs and timing associated with the development of these product candidates. For example, if the FDA or another regulatory authority were to delay our planned start of clinical trials or require us to conduct clinical trials or other testing beyond those that we currently expect or if we experience significant delays in enrollment in any of our planned 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 employee-related expenses, including salaries, related benefits, and stock-based compensation expense for employees in the executive, legal, finance and accounting, human resources, and other administrative functions. General and administrative expenses also include third-party costs such as insurance costs, fees for professional services, such as legal fees in the ordinary course of business, accounting advisors, auditing and tax services, facilities administrative costs, and other expenses.

We expect general and administrative expenses incurred in the normal course of business for other purposes, such as costs for recruitment and retention of personnel, service fees for consultants, advisors and accountants, as well as costs to comply with government regulations, corporate governance, internal control over financial reporting, insurance and other requirements for a public company, to continue to increase for the foreseeable future as we build our clinical programs.

Legal Expenses

Legal expenses include fees incurred by the Company in its own defense and that of Dr. Hing C. Wong, our Founder and Chief Executive Officer, with a legal matter brought against the Company and Dr. Wong by a former employer of Dr. Wong.

During the period ended December 31, 2022, Altor/NantCell initiated legal proceedings against Dr. Wong and the Company. On April 26, 2023, the parties stipulated that Altor/NantCell's action against the Company would be consolidated with the Altor/NantCell arbitration demand against Dr. Wong. On April 27, 2023, the U.S. District Court for the Southern District of Florida (the "Court") with jurisdiction over the lawsuit against the Company approved the parties' stipulation and ordered the parties to arbitration. On May 1, 2023, Altor/NantCell filed a demand against the Company before JAMS. On May 3, 2023, Altor/NantCell dismissed the federal court action without prejudice and the Court ordered the case dismissed without prejudice and closed the case. Proceedings against the Company and Dr. Wong were consolidated in the arbitration before JAMS (the "Arbitration"). On March 26,

2024, Altor/NantCell filed a complaint (the "Complaint") against the Company in the Chancery Court of the State of Delaware for the contribution of legal fees and expenses advanced to Dr. Wong. The Arbitration hearing was held on May 20, 2024 to May 31, 2024, after which the parties entered into settlement negotiations.

As reported in the Company's Form 8-K filed on July 18, 2024 and further described in Part I, Item 3. – "Legal Proceedings" below, as of July 13, 2024, the Company and Dr. Hing C. Wong, the Company's Founder and Chief Executive Officer, entered into a confidential Settlement Agreement and Release (the "Settlement Agreement") with Altor BioScience, LLC ("Altor"), NantCell, Inc. ("NantCell"), and ImmunityBio, Inc. (the parent of Altor and NantCell, together with Altor and NantCell, "ImmunityBio"), to resolve the previously disclosed Arbitration before JAMS brought by Altor and NantCell as well as a Complaint Altor filed against the Company in the Chancery Court of the State of Delaware for the contribution of legal fees and expenses advanced to Dr. Wong. The Settlement Agreement includes mutual general releases by and among the parties thereto. No party is required to make any monetary payments to any other party or person under the Settlement Agreement and each party will bear its own expenses incurred in connection with the matter. The Arbitration and related Complaint were dismissed as of December 31, 2024.

Interest Expense

Interest expense includes interest paid on debt. This includes interest due on the Cogent Bank loan and Secured Notes issued by the Company.

Other Income, Net

Other income, net consists of interest earned on our cash, cash equivalents, unrealized gains and losses related to our investments in U.S. government-backed securities, and other income and expenses related to non-operating activities.

Results of Operations

	Three Months Ended March 31,	
	2024	2025
Revenues:		
Revenues	$ 1,126,712	$ 5,065
Cost of revenues	(511,965)	(4,052)
Net revenues	614,747	1,013
Operating expenses:		
Research and development	2,123,284	1,478,711
General and administrative	1,566,092	2,227,597
Legal expenses, net	4,419,034	(1,739,493)
Total operating expenses	8,108,410	1,966,815
Loss from operations	(7,493,663)	(1,965,802)
Interest expense	—	(255,822)
Other income, net	25,602	24,749
Net loss	$ (7,468,061)	$ (2,196,875)

Comparison of the Three Months ended March 31, 2024 and March 31, 2025

Revenues

The Company recognized revenues of $1.1 million and $5,065 for the three months ended March 31, 2024 and 2025, respectively. Revenues were derived exclusively from the sale of licensed molecules to Wugen. There were no deferred revenues as of March 31, 2024 or March 31, 2025.

Research and Development Expenses

The following table summarizes our research and development expenses for the three months ended March 31, 2024 and March 31, 2025:

	Three Months Ended March 31,			
	2024	2025	$ Change	% Change
Salaries, benefits and related expenses	$ 779,747	$ 701,106	$ (78,641)	(10)%
Manufacturing and materials	576,301	262,798	(313,503)	(54)%
Preclinical expenses	285,091	177,111	(107,980)	(38)%
Clinical trials	266,640	187,820	(78,820)	(30)%
Other expenses	215,505	149,876	(65,629)	(30)%
Total research and development expenses	**$ 2,123,284**	**$ 1,478,711**	**$ (644,573)**	(30)%

Research and development expenses decreased by $644,573, or 30%, from $2.1 million for the three months ended March 31, 2024 to $1.5 million for the three months ended March 31, 2025. The decrease was primarily due to a decline in manufacturing and materials and preclinical expenses, but expenses in all categories declined.

Salaries, benefits, and related expenses decreased by $78,641, or 10%, from $779,747 for the three months ended March 31, 2024 to $701,106 for the three months ended March 31, 2025. This decrease was primarily attributable to decreases of $42,600 in salaries and $36,546 in employee benefits. Lower salaries can be attributed to maintaining the reduced headcount that resulted from a cost reduction program the Company put in place in the second quarter of 2024.

Manufacturing and materials expense decreased by $313,503, or 54%, from $576,301 for the three months ended March 31, 2024 to $262,798 for the three months ended March 31, 2025. In the three months ended March 31, 2024, costs were primarily attributable to the costs of production and materials related to manufacturing the high producing cell-line of HCW9101, which was substantially wrapped up prior to the three months ended March 31, 2025.

Expenses associated with preclinical activities decreased by $107,980, or 38%, from $285,091 for the three months ended March 31, 2024 to $177,111 for the three months ended March 31, 2025. In the three months ended March 31, 2024, toxicology and other IND-enabling studies were winding down, as we prepare to submit the IND application in the fourth quarter of 2024. The Company received clearance of its IND from FDA in the three months ended March 31, 2025.

Expenses associated with clinical activities decreased by $78,820, or 30%, from $266,640 for the three months ended March 31, 2024 to $187,820 for the three months ended March 31, 2025. In the three months ended March 31, 2024, the Company completed two clinical studies evaluating HCW9218 in cancer indications. The decline in expenses mainly consists of decreases in $57,656 in patient-related fees and $26,137 in collaborations, sponsorships and other professional fees, partially offset by an increase of $11,739 in other clinical trial costs for data management and similar activities.

Other expenses, which include overhead allocations, decreased by $65,629, or 30%, from $215,505 for the three months ended March 31, 2024 to $149,876 for the three months ended March 31, 2025. This decrease is primarily attributable to a $46,721 decrease allocation of depreciation for scientific equipment, a $16,824 decrease in expenses for equipment and supplies and a $6,437 decrease in travel and travel-related expenses, partially offset by a $4,351 increase in allocations for rent and utilities.

General and Administrative Expenses

The following table summarizes our general and administrative expenses for the three months ended March 31, 2024 and March 31, 2025:

	Three Months Ended March 31,			
	2024	2025	$ Change	% Change
Salaries, benefits and related expenses	$ 521,610	$ 788,490	$ 266,880	51%
Professional services	353,806	454,369	100,563	28%
Facilities and office expenses	203,599	94,330	(109,269)	(54)%
Accretion of fixed bonus upon maturity of Senior Notes, net	—	273,059	273,059	NM
Depreciation	67,081	61,237	(5,844)	(9)%
Rent and occupancy expense	42,716	49,750	7,034	16%
Other expenses	377,280	506,362	129,082	34%
Total general and administrative expenses	**$ 1,566,092**	**$ 2,227,597**	**$ 661,505**	42%

General and administrative expenses increased $661,505, or 42%, from $1.6 million for the three months ended March 31, 2024 to $2.2 million for the three months ended March 31, 2025. The increase is primarily due to increases in salaries and benefits and the accretion expense related to the fixed bonus payment due to the holders of the Secured Notes, in the event they are repaid on the Maturity Date.

Salaries, benefits and related expenses increased by $226,880, or 51%, from $521,610 for the three months ended March 31, 2024 to $788,490 for the three months ended March 31, 2025. The increase can be explained by a contra-expense recognized in the three months ended March 31, 2024, as a result of a waiver of $293,159 for performance-based bonuses due to officers of the Company that were earned in 2022 and deferred until the time they were waived. Excluding this unusual adjustment, in the three months ended March 31, 2025, salaries, benefits and related expenses decreased by $26,279, or 3%, from $814,769 for the three months ended March 31, 2024 to $788,490 for the three months ended March 31, 2025. Decreases of $45,625 in salaries and related payroll expenses and $10,707 in employee benefits, were partially offset by an increase of $30,053 in stock-based compensation expenses.

Professional services increased by $100,563, or 28%, from $353,806 for the three months ended March 31, 2024 to $454,369 for the three months ended March 31, 2025. Professional services include corporate legal services, legal services for procuring patents, as well as other professional services, such as auditing and tax advisory fees. The increase is primarily attributable to a $146,281 increase in fees incurred for professional services such as technical accounting advisors, consultants to advise the Company on regaining compliance with all Nasdaq listing rules, audit fees, and tax advisory fees, partially offset by a decrease of $53,506 in legal services related to patents. As a result of the Settlement Agreement, the Company agreed to maintain certain patent protection for rights retained under the Settlement Agreement as well as new patents related to the TRBC drug discovery and development platform and compounds created using this platform.

Facilities and office expenses decreased by $109,269, or 54%, from $203,599 for the three months ended March 31, 2024 to $94,330 for the three months ended March 31, 2025, primarily due to decreases of $94,753 in fees paid for licenses, software and IT services and $14,516 in expenses for utilities and other services, such as electricity and waste disposal.

Other expenses increased by $129, 082, or 34%, from $377,280 for the three months ended March 31, 2024 to $506,362 for the three months ended March 31, 2025. The increase is primarily attributable a $116,999 increase in insurance-related costs.

Legal Expenses

In the three months ended March 31, 2024, the Company incurred $4.4 million in legal expenses in connection with the Arbitration. The Company incurred legal expenses on its own behalf and on behalf of Dr. Wong in preparation for the hearing, which took place in May 2024. The Arbitration was settled on July 13, 2024, and the Arbitration and related Complaint were dismissed with prejudice as of December 31, 2024.

In the three months ended March 31, 2025, the Company incurred $260,507 of legal expenses related to the Arbitration. We anticipate we will continue to incur expenses for the costs of remaining in compliance with the terms of the Settlement Agreement.

Interest Expense

On August 15, 2022, we entered into a loan and security agreement with Cogent Bank to partially fund our purchase of the property we acquired on that same date (the "2022 Loan"). We borrowed $6.5 million under this agreement. Amounts outstanding on the term loan accrue interest at a rate per annum equal to 5.75%. We were obligated to make interest-only payments on this loan from September 2022 through August 2023 and principal and interest payments in 48 equal monthly installments, based on a 25-year maturity schedule, commencing September 15, 2023. Related to the 2022 Loan, in the three months ended March 31, 2024, we paid $93,789 in cash for interest. For the three months ended March 31, 2024, interest was capitalized. For the three months ended March 31, 2025, we paid interest expense of $91,035 related to the 2022 Loan.

From March 31, 2024 to October 30, 2024, the Company issued $6.9 million in Secured Notes in multiple closings. The Senior Notes bear interest at an annual rate of 9%, payable quarterly in arrears. During the three months ended March 31, 2025, the Company incurred $153,234 interest expenses related to the Senior Notes. In addition, the Company recognized $11,553 for the accretion of debt issuance costs included with Interest expense on the condensed interim statement of operations.

Other Income, Net

Other income, net had a de minimis decrease from $25,602 for the three months ended March 31, 2024 to $24,749 for the three months ended March 31, 2025.

Liquidity and Capital Resources

Sources of Liquidity

As of March 31, 2025, our principal source of liquidity was $1.1 million in cash and cash equivalents, including money market investments, and as a result, there was substantial doubt over whether the Company had sufficient capital to operate for the next twelve months from the issuance date of this Quarterly Report. We considered elements of our financing plan that were probable and likely to be implemented within the next year. While we have already begun to successfully execute our financing plan, including a $6.9 million financing in November 2024, a Equity Purchase Agreement that may allow the Company to sell shares to an Investor if certain conditions are met, and a license agreement with $7.0 million in minimum guarantees payments which the Company expects to receive in 2025, we concluded that remaining steps in our financing plan are not probable and thus they were not sufficient to include in our going concern analysis.

On August 15, 2022, the Company entered into a loan and security agreement (the "2022 Loan Agreement") with Cogent Bank, pursuant to which it received $6.5 million in proceeds to purchase a property at which the Company planned to build a facility to manufacture biologics and upgrade its research laboratory facilities. The loan is secured by a first priority lien on the property. As of March 31, 2025, certain subcontractors filed mechanics liens related to unpaid invoices issued in connection with construction of the Company's new manufacturing facilities and upgraded research laboratories. The 2022 Loan Agreement contains a provision for a discretionary default in the event that the Company fails to pay sums due in connection with construction of any improvements; however, as of the reporting date, the lender has not elected to do so. As of March 31, 2025, the Company has reflected this loan as Short-term debt, net, to reflect that the lender has the right to accelerate the loan under a discretionary default provision.

On January 22, 2025, the Company entered into a forbearance agreement with BE&K Building Group ("BE&K"), its general contractor, to allow the Company until March 31, 2025 to continue efforts to find the financing required to complete the construction and renovation of the property. Pursuant to the forbearance agreement, the Company made an initial payment of $1.0 million in partial satisfaction of amounts owing to BE&K and its subcontractors. As the Company reported in a Form 8-K, on April 17, 2025, the Company received a summons and a copy of a complaint filed by BE&K in the Circuit Court of the 17th Judicial Circuit in and for Broward County, Florida (the "BE&K Complaint"). Other Defendants named in the BE&K Complaint who are subcontractors elected to file counterclaims and cross-claims in response thereto. Cogent Bank, also named as a Defendant in the BE&K Complaint, has not elected to take legal action at this time. In addition, on April 28, 2025, the Company received a summons and a copy of a complaint filed by Fisk Electric Company (which is a defendant in the BE&K Litigation) in the Circuit Court of the 17th Judicial Circuit in and for Broward County, Florida (the "Fisk Complaint") against the Company, BE&K, and the other defendants in the BE&K Complaint. The Company intends to respond in a timely fashion to the BE&K and Fisk Complaints and cross-claims.

As reported in the Company's Form 8-K filed on July 18, 2024 and further described in Part II, Item 1. – "Legal Proceedings" below, as of July 13, 2024, the Company and Dr. Hing C. Wong, the Company's Founder and Chief Executive Officer, entered into a confidential Settlement Agreement and Release (the "Settlement Agreement") with ImmunityBio and its affiliates. The Settlement Agreement includes mutual general releases by and among the parties thereto. No party was required to make any monetary payments to any other party or person under the Settlement Agreement and each party will bear its own expenses incurred in connection with the matter. The Arbitration and related Complaint were dismissed on December 24, 2024. With the execution of the Settlement Agreement, we resolved the attendant uncertainties for the outcome of the Arbitration and additional complexities, and we launched our new financing plan.

In the accompanying condensed balance sheet as of March 31, 2025, the Company reported a balance of $12.4 million for legal fees incurred but not yet paid that were included within Accounts payable and an accrual of $10,000 for accrued legal fees within Accrued liabilities and other current liabilities. The Company is engaged in discussions with the law firms involved with this matter to arrange a reasonable payment plan with respect to those legal fees. With the execution of the Settlement Agreement, the Company resolved the attendant uncertainties for the outcome of the Arbitration and additional complexities, and it launched its new financing plan. In the three months ended March 31, 2025, the Company received a $2.0 million insurance payment, which was paid directly to the law firm that represented Dr. Wong for his defense during the Arbitration. The insurance payment is reported within Legal expenses, net in the condensed interim statement of operations.

A benefit of reaching a Settlement Agreement and concluding the Arbitration is a release from restrictions related to protection of privileged information, which hampered investor ability to conduct due diligence. As a result, we believe that other avenues of financing are now available to us, namely, capital-raising activities for equity and equity-like investments as well as business development transactions such as out-licensing agreements for rights for our proprietary molecules. However, there can be

no assurance of our success in our capital-raising activities. If we are not successful in raising additional capital, we have the ability to revise our business plan and reduce costs. If such revisions are insufficient, we may have to curtail or cease operations.

As the Company disclosed in the Form 8-K filed on March 19, 2025, the Company and WY Biotech Co., Ltd. ("WY Biotech") agreed on the principal terms for an amendment to the WY Biotech License Agreement, an exclusive worldwide license agreement with WY Biotech for the rights to develop and commercialize one of HCWB's preclinical product candidates, HCW11-006, for *in vivo* applications (the "Agreement"). Under the amended terms, the parties agreed to restructure the payment schedule for the $7.0 million upfront license fees, including delaying the initial $4.0 million portion thereof that was originally due on or about March 17, 2025. There were no other material changes to the Agreement. In particular, the Company will retain the Opt-In Right thereunder, which gives the Company the option to assume all control and responsibility for the development, manufacture and commercialization of HCW11-006 for *in vivo* applications in the North America, South America, and Central America. The Company retains *ex vivo* rights. The Company completed its performance obligation to deliver a report on the characterization of the licensed molecule on May 13, 2025. As agreed under the amended terms, WY Biotech has 30 days to study this report and elect whether to continue with the Agreement, as which time the Agreement will be binding and the full $7.0 million upfront license fee will be due.

On February 20, 2025, the Company entered into a Equity Purchase Agreement (the "Equity Purchase Agreement") and a related Registration Rights Agreement with Square Gate Capital Master Fund, LLC - Series 4 (the "Investor"), pursuant to which the Company will have the right, but not the obligation, to sell to the Investor, and the Investor will have the obligation to purchase from the Company, up to $20.0 million (the "Maximum Commitment Amount") worth of the Company's shares of common stock, at the Company's sole discretion, over the next 36 months (the "Put Shares"), subject to certain conditions precedent and other limitations. On March 12, 2025, the Company issued 384,615 shares of the Company's Common Stock (subject to adjustment for the Reverse Stock Split) to the Investor in payment of the Commitment Fee ("Commitment Shares"). On April 16, 2025, the U.S. Securities and Exchange Commission ("SEC") declared a registration statement effective to register the Commitment Shares and shares required to sell up to $40.0 million of the Company's shares to the Investor, according to provisions of the Equity Purchase Agreement. In addition, this registration statement also registered the underlying shares for the warrant issued in November 2024, which gives the holder the right to exercise the warrant for 6,717,000 shares of common stock at an exercise price of $1.03 per share (subject to adjustment for the Reverse Stock Split).

In order to be able to optimize our financing strategy, the Company is focused on making progress to achieve full compliance with all Listing Rules for the Capital Markets tier. On March 3, 2025, the Nasdaq Hearings Panel (the "Panel") of The Nasdaq Stock Market LLC ("Nasdaq" or the "Exchange") granted the Company an extension in which to regain compliance with all Nasdaq continued listing rules for the Capital Markets tier. The Panel's determination follows a hearing on February 13, 2025, at which the Panel considered the Company's plan to regain compliance with Listing Rules 5450(a)(1), 5450(b)(2)(A) and 5450(b)(2&3)(C), the minimum bid price ("Bid Price"), the market value of publicly held securities ("MVPHS") and the market value of listed securities ("MVLS") rules, respectively. As a result of the extension and a clarifying amendment that the Company received on April 8, 2025, the Panel granted the Company's request for continued listing on the Exchange on the Capital Markets tier, provided that the Company demonstrates compliance with the Bid Price Rule by April 28, 2025, and all other Exchange continued listing rules by June 16, 2025.

The Company achieved the following elements of plan to regain compliance with all Nasdaq listing rules:

After a Reverse Stock Split became effective on April 11, 2025, on April 28, 2025, the Company met compliance requirements for Listing Rule for Bid Price by maintaining its trading stock price at $1.00 or above for a period of 10 consecutive trading days.

As of the date of issuance of this Quarterly Report, the Company is in compliance with the Bid Price rule. We are making progress toward regaining and maintaining compliance with Nasdaq Listing Rule for the market value of listed securities under the alternative rule related to maintaining a minimum balance of $2.5 million in stockholders' equity, through the following transactions:

- An increase of $2.0 million recognized on January 14, 2025, when the Company received a $2.0 million insurance reimbursement for legal fees incurred for the defense of Dr. Hing C. Wong, the Company's Founder and Chief Executive Officer, in connection with the Arbitration.
- Potential access to $40.0 million through the issuance of shares of Common Stock under the ELOC Purchase Agreement which the Company entered with Square Gate Capital Master Fund LLC - Series 4 on February 20, 2025. Such shares were registered under a registration statement that became effective as of April 16, 2025. The Company has not issued any shares under the ELOC Purchase Agreement as of the date of issuance of this Quarterly Report.

- An net increase of $5.8 million resulting from the conversion of the Secured Notes. On May 1, 2025, the Company entered into a definitive conversion agreement with the holders of $6.6 million of the outstanding principal of the Secured Notes, to convert the Secured Notes for shares of the Company's Common Stock, warrants to exercise to purchase up to $3.3 million of shares of Common Stock, and a portion of the proceeds from the sale of the Company's shares of Wugen common stock, if and when such an sale occurs. The conversion was completed on May 7, 2025.
- The Company issued equity securities to raise proceeds of $5.0 million on May 15, 2025. Thereafter, the Convertible Bridge Notes with outstanding principal of $270,000 will convert into common stock at a price of $7.45 per share, according to the terms of the agreement. See further discussion below.

On May 15, 2025, the Company completed a $5.0 million follow-on offering of an aggregate of 671,140 units at a purchase price of $7.45 per unit priced at-the-market under Nasdaq rules. Each unit consisted of one share of Common Stock or one Pre-Funded Warrants to purchase one share of Common Stock, with two warrants, each of which can be exercised for one share of Common Stock for $7.45 per share. In addition, the Company entered into a privately negotiated agreement with the holder of certain existing outstanding warrants to purchase up to 167,925 shares of common stock (the "Existing Warrants") to reduce the exercise price of such Existing Warrants from $41.20 per share to $7.45 per share.

On May 13, 2025, the Company delivered a technology transfer report to WY Biotech. Since November 2024 when we signed the WY Biotech License, the data generated from our internal research and external collaborators indicate that HCW-11-006 exhibits an unusual capacity for stimulating and expanding murine and human immune cells in vitro against tumor cells. We intend to co-author a pivotal publication that will be submitted to a top-tier, peer-reviewed scientific journal in the second quarter of 2025. We expect WY Biotech to elect to continue, in which case the Company will recognize $7.0 million in revenues in June 2025.

In addition to equity financings, a key strategy in our financing plan is identifying candidates in our sizeable molecule portfolio would be appropriate to develop through business development transactions, especially out-licensing. In the second quarter of 2025, we intend to begin our search for an appropriate partner to commercialize our Immune-Cell Engagers, including T-Cell Engagers, created using our TRBC drug discovery and development platform. However, if the Company is not successful in raising additional capital through these activities, management may need to revise its business plan and reduce costs. If such revisions are insufficient, the Company may have to curtail or cease operations.

The accompanying condensed interim financial statements have been prepared on a going concern basis, which contemplates the realization of assets and satisfaction of liabilities in the ordinary course of business. The financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might result from the outcome of the uncertainties described above. The Company believes that substantial doubt exists regarding its ability to continue as a going concern for at least 12 months from the date of issuance of the Company's condensed interim financial statements, without additional funding or financial support. After considering management's plan for financing and funds raised that are probable to occur within one year, as well as that the Company expects to continue to incur losses from operations for the foreseeable future, management concluded that the substantial doubt that existed in its going concern analysis as of March 31, 2025 was not alleviated.

Because of the numerous risks and uncertainties associated with the clinical development and commercialization of immunotherapeutics, we are unable to estimate the exact amount of capital requirements to pursue these activities. Our funding requirements will depend on many factors, including, but not limited to:

- timing, progress, costs, and results of our ongoing preclinical studies and clinical trials of our immunotherapeutic products;
- costs, timing, and outcome of regulatory review of our product candidates;
- number of trials required for regulatory approval;
- whether we enter into any cooperative, collaboration or co-development agreements and the terms of such agreements;
- whether we raise additional funding through bank loan facilities, other debt arrangements, out-licensing or joint ventures, cooperative agreements or strategic collaborations;
- effect of competing technology and market developments;
- cost of maintaining, expanding, and enforcing our intellectual property rights;
- impact of future arbitration, litigation, regulatory inquiries, or investigations, as well as costs to indemnify our officers and directors against third-party claims related to our patents and other intellectual property:

- cost and timing of buildout of the Company's new manufacturing and laboratory facilities, including manufacturing for biologics and upgraded research and development facilities, including risks of cost overruns and delays, and ability to obtain additional financing, if needed;
- impact of legal actions taken by BE&K and other lien holders related to foreclosure and other claims; and
- costs and timing of future commercialization activities, including product manufacturing, marketing, sales, and distribution, for any of our product candidates for which we receive regulatory approval.

A change in the outcome of any of these or other factors with respect to the clinical development and commercialization of our product candidates could significantly change the costs and timing associated with the development of that product candidate. Further, our operating plan may change, and we may need additional funds to meet operational needs and capital requirements for clinical trials and other research and development expenditures.

Comparison of the Cash Flows for the Three Months Ended March 31, 2024 and March 31, 2025

The following table summarizes our cash flows for the three months ended March 31, 2024 and March 31, 2025:

	Three Months Ended March 31,	
	2024	2025
Cash used in operating activities	$ (3,603,870)	$ (3,513,856)
Cash used in investing activities	(129,709)	—
Cash provided by (used in) financing activities	4,222,554	(53,103)
Net increase (decrease) in cash and cash equivalents	**$ 488,975**	**$ (3,566,959)**

Operating Activities

Net cash used in operating activities were $3.6 million for the three months ended March 31, 2024 and $3.5 million for the three months March 31, 2025.

Cash used in operating activities for the three months ended March 31, 2024 consisted primarily of net loss for the period of $7.5 million, partially offset by cash provided by operations from a $2.5 million increase from Accounts payable and other liabilities, a $631,873 decrease in Accounts receivable, and a $302,640 decrease in Prepaid expenses and other assets. Further offsets were provided by noncash adjustments arising from an addback of $243,501 for depreciation and amortization and an addback of $244,685 from stock-based compensation.

Cash used by operating activities for the three months ended March 31, 2025 consisted primarily of net loss for the period of $2.2 million, as well as cash used due to an decrease of $398,447 in Accounts payable and other liabilities, an increase of $257,894 in Prepaid expenses and other assets, and a $2.0 million payment for legal fees, as a result of an insurance reimbursement for legal fees incurred on behalf of Dr. Hing Wong, the Company's Founder and Chief Executive Officer, for his defense costs associated with the Arbitration, in prior periods, which was paid directly to the law firm involved. See Part II, Item 1, "Legal Proceedings." The uses were partially offset by cash provided by operations, which consisted of a $494,708 decrease in Account receivable and noncash adjustments of $419,010 for Depreciation, amortization and accretion, $275,642 for stock-based compensation and $150,000 for a Commitment Fee paid in shares of the Company's Common Stock.

Investing Activities

Cash used by investment activities for the three months ended March 31, 2024 consisted of $129,709 used for purchases of property and equipment. There was no cash used in or provided by investment activities in the three months ended March 31, 2025.

Financing Activities

During the three months ended March 31, 2024, the $4.2 million of cash provided by financing activities consisted of an increase arising from a $2.5 million private placement of the Company's common stock and cash received from the issuance of $1.8 million of Secured Notes. Subsequent to March 31, 2024, a check for the remaining $250,000 cleared to bring the total of cash received from the issuance of Secured Notes to $2.0 million. The increase in cash provided by financing activities were partially offset by a $29,706 decrease arising from debt repayment.

During the three months ended March 31, 2025, the $53,103 of cash used by financing activities consisted primarily of $32,460 for a debt repayment and $22,297 for issuance of Common Stock.

Critical Accounting Policies, Significant Judgements and Use of Estimates

Our management's discussion and analysis of our financial condition and results of operations is based on our unaudited condensed interim financial statements, which have been prepared in accordance with U.S. GAAP. The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported expenses incurred during the reporting periods. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgements about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. We believe that the accounting policies discussed below are critical to understanding our historical and future performance, as these policies relate to the more significant areas involving management's judgements and estimates.

Revenue Recognition

We recognize revenue under the guidance of Topic 606. To determine the appropriate amount of revenue to be recognized for arrangements determined to be within the scope of Topic 606, we perform the following five steps: (i) identification of the contract(s) with the customer, (ii) identification of the promised goods or services in the contract and determination of whether the promised goods or services are performance obligations, (iii) measurement of the transaction price, (iv) allocation of the transaction price to the performance obligations, and (v) recognition of revenue when (or as) we satisfy each performance obligation. We only apply the five-step model to contracts when it is probable that we will collect the consideration we are entitled to in exchange for the goods or services we transfer to our customer. See Note 1 to our condensed interim financial statements appearing elsewhere in this Quarterly Report on Form 10-Q for more information.

Other than the above, there have been no material changes to our critical accounting policies and estimates from those described under the heading "Management's Discussion and Analysis of Financial Condition and Results of Operations— Critical Accounting Policies, Significant Judgements and Use of Estimates" in our Annual Report.

Recent Accounting Pronouncements

See Note 1 to our Annual Report.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

As of March 31, 2025, we had cash and cash equivalents of $1.1 million including cash, cash equivalents and market investments. Our primary exposure to market risk is interest rate sensitivity, which is affected by changes in the general level of U.S. interest rates. We are exposed to market risk related to the marketability of our Wugen common stock reported within Investments in the accompanying condensed interim balance sheet. Until such time as these shares become publicly traded, we will have limited access to liquidity for these securities.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Our disclosure controls and procedures are designed to ensure that information required to be disclosed by us in reports that we file or submit under the Securities Exchange Act of 1934, as amended or the Exchange Act, is recorded, communicated to our management to allow timely decisions regarding required disclosure, summarized and reported within the time periods specified in the SEC's rules and forms. Any disclosure controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objective and management necessarily applies its judgement in evaluating the cost-benefit relationship of possible controls and procedures.

Under the supervision and with the participation of our management, including the Chief Executive Officer, or CEO, and Chief Financial Officer, or CFO, we conducted an evaluation of the effectiveness of our disclosure controls and procedures, as such term is defined under Rules 13a-15(e) and 15d-15(e) under the Exchange Act, as of March 31, 2025. Based on that evaluation, the CEO and CFO have concluded that, as of such date, our disclosure controls and procedures were effective.

Inherent Limitations of Internal Controls

While we strive to create a stronger control environment, we recognize that it is impossible for our internal controls over financial reporting to prevent all errors and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within our company have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of a simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the control. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. While we are committed to continuously improve and strengthen our control environment, over time, our internal controls over financial reporting may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. Projections of any evaluation of effectiveness to future periods are subject to the risk that internal controls over financial reporting may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act during the three months ended March 31, 2025 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II—OTHER INFORMATION

Item 1. Legal Proceedings.

From time to time, the Company is a party to or otherwise involved in legal proceedings, including suits, assessments, regulatory actions and investigations generally arising out of the normal course of business. Such proceedings can be costly, time consuming, and unpredictable. Therefore, no assurance can be given on the outcome of any proceeding or the potential impact on our results of operations or financial condition.

Settlement and General Release: Arbitration

During the period ended December 31, 2022, Altor/NantCell initiated legal proceedings against Dr. Wong and the Company. On April 26, 2023, the parties stipulated that Altor/NantCell's action against the Company would be consolidated with the Altor/NantCell Arbitration demand against Dr. Wong. On April 27, 2023, the U.S. District Court for the Southern District of Florida (the "Court") with jurisdiction over the lawsuit against the Company approved the parties' stipulation and ordered the parties to Arbitration. On May 1, 2023, Altor/NantCell filed a demand against the Company before JAMS. On May 3, 2023, Altor/NantCell dismissed the federal court action without prejudice and the Court ordered the case dismissed without prejudice and closed the case. Proceedings against the Company and Dr. Wong were consolidated in the Arbitration before JAMS. The Arbitration hearing was held from May 20, 2024 to May 31, 2024, after which the parties entered into settlement negotiations.

As reported in the Company's Form 8-K filed on July 18, 2024 and further described in Part I, Item 3. – "Legal Proceedings" below, as of July 13, 2024, the Company and Dr. Hing C. Wong, the Company's Founder and Chief Executive Officer, entered into a confidential Settlement Agreement and Release (the "Settlement Agreement") with Altor BioScience, LLC ("Altor"), NantCell, Inc. ("NantCell"), and ImmunityBio, Inc. (the parent of Altor and NantCell, together with Altor and NantCell, "ImmunityBio"), to resolve the previously disclosed Arbitration before JAMS brought by Altor and NantCell (the "Arbitration") as well as a complaint Altor filed against the Company in the Chancery Court of the State of Delaware for the contribution of legal fees and expenses advanced to Dr. Wong ("Complaint"). The Settlement Agreement includes mutual general releases by and among the parties thereto. No party is required to make any monetary payments to any other party or person under the Settlement Agreement and each party will bear its own expenses incurred in connection with the matter. In accordance with the provisions of the Settlement Agreement, upon completion of remedial procedures, the parties stipulated that the Arbitration and Complaint should be dismissed. The Arbitration and related Complaint were dismissed with prejudice on or about December 24, 2024.

Pursuant to the Settlement Agreement, the Company transferred and assigned to ImmunityBio ownership of certain intellectual property (including issued patents, pending patent applications, and know-how) for TOBI-based molecules. The Company retains the worldwide, perpetual, irrevocable, fully paid-up, royalty-free, exclusive right and license to exploit HCW9218 for all age-related diseases other than cancer. The Company also retains the right to develop treatments for all indications with respect to HCW9302 and HCW9206, which, along with HCW9218, are the lead product candidates in the Company's clinical development pipeline. ImmunityBio has the exclusive right to pursue oncology indications with all of the TOBI-based molecules designed with a TGF-β domain, including HCW9218. Under the Settlement Agreement ImmunityBio also receives an exclusive license to exploit fusion proteins, molecules and/or antibodies created utilizing the TOBI platform directed to the receptors of PDL-1, IL-7, IL-12, IL-18, IL-15, and IL-21 in the oncology field. The Company's ownership and rights with respect to HCW9302, HCW9206 and HCW9201 are expressly excluded from the rights transferred to ImmunityBio for oncology indications. In addition, ImmunityBio received a non-exclusive license to exploit HCW9201 administered by injection for oncology indications.

The Company retains ownership and control of the TOBI platform and TOBI-based molecules, with no restrictions under the Settlement Agreement on our ability to use the TOBI platform for protein-fusion molecules for non-oncology indications. We have rights to pursue oncology indications, in particular using HCW9302, HCW9206 and HCW9201. Further, the Company retains ownership of the Wugen license and shares of Wugen common stock transferred to the Company as the upfront licensing fee from Wugen for granting the Wugen license. For our molecule, HCW9218, we maintain the exclusive rights for clinical development and use of HCW9218 in the treatment of all non-oncological diseases. We retain ownership of our lead molecule, HCW9302, which expands T_{reg} cells and is designed to treat autoimmune diseases and other proinflammatory diseases, including cancer, and the ownership of HCW9206, a preclinical molecule which we are developing for the treatment of cancer and other age-related diseases. The Company agreed to provide ImmunityBio with a right of first refusal to enter a licensing agreement for oncology indications for HCW9206. We have no restrictions on the development of HCW9206 for our own clinical development activities, including oncology indications. Under the terms of the Settlement Agreement, ImmunityBio will own the cell line and supply for HCW9218, and the parties agreed that within six months from the date of the Settlement Agreement they will enter into a supply agreement providing the Company with a continuing supply of HCW9218 molecules. However, as of the reported date, the supply agreement of HCW9218 is not yet in place. The Company also retains *in vivo* rights to HCW9201, a combination of IL-12, IL-15, and IL-18 in a single protein complex which is designed to stimulate activation and proliferation signals in human NK cells. The Company retains ownership of the cell lines for HCW9302, HCW9206 and HCW9201, and thus will retain independent control over manufacturing and supply for these compounds.

Other Matters

As the Company reported in a Form 8-K, on April 17, 2025, the Company received a summons and a copy of a complaint filed by BE&K in the Circuit Court of the 17th Judicial Circuit in and for Broward County, Florida (the "BE&K Complaint"). Other Defendants named in the BE&K Complaint who are subcontractors elected to filed counterclaims and cross-claims in response thereto. Cogent Bank, also named as a Defendant in the BE&K Complaint, has not elected to take legal action at this time. In addition, on April 28, 2025, the Company received a summons and a copy of a complaint filed by Fisk Electric Company (which is a defendant in the BE&K Litigation) in the Circuit Court of the 17th Judicial Circuit in and for Broward County, Florida (the "Fisk Complaint") against the Company, BE&K, and the other defendants in the BE&K Complaint. The Company intends to respond in a timely fashion to the BE&K and Fisk Complaints and cross-claims.

Item 1A. Risk Factors.

There have been no material changes to the risk factors previously disclosed by us in our Annual Report. The risk factors included our Annual Report continue to apply to us and describe risks and uncertainties that could cause actual results to differ materially from the results expressed or implied by the forward-looking statements contained in this Quarterly Report. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our business, financial condition and results of operations.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

Sale of Unregistered Shares of Common Stock

On February 20, 2024 (the "Purchase Date"), we entered into subscription agreements (the "Subscription Agreements") with certain officers and directors of the Company, including our Founder and Chief Executive Officer, our Chief Financial Officer and the Chairman of the Company's Board of Directors, pursuant to which the Company sold an aggregate of 1,785,718 shares (the "Shares") of our common stock, par value $0.0001 per share (the "Common Stock"), at a purchase price of $1.40 per share for an aggregate purchase price of $2.5 million. The per share purchase price represents a 25% premium to the per share closing price of the Common Stock as reported on the Nasdaq Global Market on the Purchase Date and a 19% premium to the 5-day volume weighted average closing price per share of the Common Stock as reported on the Nasdaq Global Market for the period ending on the Purchase Date.

The Shares issued pursuant to the Subscription Agreements were not registered under the Securities Act of 1933, as amended, in in reliance upon exemptions provided by Section 4(a)(2) of the Securities Act of 1933, as amended, and Rule 506 of Regulation D promulgated thereunder.

Sale of Unregistered Warrants

On November 18, 2024, the Company entered into a securities purchase agreement ("SPA") with a single institutional investor (the "Purchaser") pursuant to which the Company agreed to offer and sell (i) in a registered direct offering (the "Registered Offering") (x) 4,160,000 shares (the "Shares") of the Company's Common Stock and (y) pre-funded warrants to purchase up to 2,557,000 shares of Common Stock (the "Pre-Funded Warrants") and (ii) in a concurrent private placement (the "Private Placement" and together with the Registered Offering, the "Offering"), unregistered warrants to purchase up to an aggregate of 6,717,000 shares of Common Stock ("Common Stock Warrants"). The combined purchase price for each Share and accompanying Common Stock Warrant to purchase one share of common stock was $1.03 per Share and the combined purchase price for each Pre-Funded Warrant and accompany Common Stock Warrant to purchase one share of Common Stock is $1.0299.

The gross proceeds to the Company from the Offering are approximately $6.9 million before deducting the placement agent's fees and other offering expenses payable by the Company. The Offering closed on November 20, 2024.

Issuance of Unregistered Shares of Common Stock for Commitment Shares

The Company issued 384,615 shares of the Company's Common Stock on March 12, 2025, which were subject to an adjustment for the Reverse Stock Split. These shares were issued in connection with an Equity Purchase Agreement ("EPA") and a Registration Rights Agreement (the "RRA") the Company entered into with Square Gate Capital Master Fund, LLC – Series 4, a series limited liability company organized in the State of Delaware (the "Investor"). Pursuant to Section 6.4(a) of the EPA, following expiration of the Investor's Due Diligence Period (as defined in the EPA), the Company is obligated to pay to the Investor a commitment fee of $150,000 (the "Commitment Fee"), which is required to be in the form of a number of shares of the Company's Common Stock, valued at the closing share price of the Common Stock on The Nasdaq Stock Market on February 19, 2025.

On April 16, 2025, the SEC declared the registration statement effective which registered the Commitment Shares, and the shares were transferred to the Investor. The Company released the Commitment Shares to the Investor, without restrictions. The number of shares issued to the Investor reflected the Reverse Stock Split, which was effective on April 11, 2025.

Issuer Repurchases of Equity Securities

None.

Item 3. Defaults Upon Senior Securities.

Not Applicable.

Item 4. Mine Safety Disclosures.

Not Applicable.

Item 5. Other Information.

Insider Adoption or Termination of Trading Arrangements

During the fiscal quarter ended March 31, 2025, none of our directors or officers informed us of the adoption, modification or termination of a "Rule 10b5-1 trading arrangement" or "non-Rule 10b5-1 trading arrangement," as those terms are defined in Regulation S-K, Item 408.

Secured Note Financing

On March 28, 2024, the Company entered into a senior secured note purchase agreement (the "Note Purchase Agreement") with the Purchasers (as defined in the Note Purchase Agreement), pursuant to which we agreed to issue senior secured notes in an aggregate principal amount of up to $10.0 million ("Secured Notes") to certain accredited investors, including unrelated parties as well as officers and directors of the Company. As of March 31, 2024, the Company had an initial closing and issued $2.0 million in Initial Secured Notes. As of June 30, 2024, all existing investors approved an Amended and Restated Note Purchase Agreement ("Amended and Restated Note Purchase Agreement"), with terms described below. As of September 30, 2024, the Amended and Restated Note Purchase Agreement was amended to extend the last closing date to issue Additional Secured Notes to October 31, 2024. See Exhibit 10.25. No other terms were amended. The material terms of the Additional Secured Notes are identical to the terms of the Initial

Secured Notes.

As of October 31, 2024, the Company issued an aggregate of $6.9 million of Secured Notes, with $2.9 million from the Company's officers and members of the board of directors, including $2.4 million purchased by Dr. Hing C. Wong, Founder and CEO, $220,000 purchased by Rebecca Byam, Chief Financial Officer, $140,000 purchased by Scott T. Garrett, Chairman of the board of directors, $60,000 purchased by Gary M. Winer, member of the board of directors, $25,000 purchased by Lee Flowers, Senior Vice President for Business Development, and $25,000 purchased by Rick S. Greene, member of the board of directors.

The Senior Notes bear interest at a rate of 9% per annum, payable quarterly in arrears, and mature on August 30, 2026 (the "Maturity Date"), on which date the principal balance, accrued but unpaid interest, and other amounts that may be due under the terms of the Amended and Restated Note Purchase Agreement shall be due and payable. The Secured Notes may be prepaid on or prior to December 31, 2024, but will be subject to a 5% prepayment penalty ("Premium Amount"). Thereafter, the Senior Notes may be repaid upon a Mandatory Redemption event or at the end of the term.

As a condition to entering into the Amended and Restated Note Purchase Agreement, the Company, Mercedes M. Sellek, P.A. ("Escrow Agent"), and the Purchasers entered into that certain Escrow Agreement and Amended and Restated Pledge Agreement, dated July 2, 2024, pursuant to which the Company agreed to pledge our equity ownership interest in Wugen, which was equivalent to a 5.6% ownership stake in that company as of December 31, 2024 (the "Pledged Collateral"), to be held and released by Escrow Agent according to the terms of the Escrow Agreement, as security for the Secured Notes.

Upon a qualifying event involving a transaction such as an acquisition, merger or initial public offering in which the Pledged Collateral can be sold or liquidated prior to the Maturity Date, subject to certain limitations (such as a threshold price per share in the case of an initial public offering), the Company agreed to repay all indebtedness (including accrued interest) related to the Secured Notes plus a Bonus Payment (as defined in the Amended and Restated Note Purchase Agreement). If there is no such mandatory redemption prior to the Maturity Date, the Company agreed to pay the holders of Secured Notes a Bonus Payment under certain circumstances.

Upon an Event of Default (as defined in the Amended and Restated Note Purchase Agreement), the Company will have a thirty (30) day cure period (the "Cure Period"), and if the Event of Default is not so cured at the end of the Cure Period, the Company is required to distribute the Pledged Collateral to the Purchasers on a *pro rata* basis, determined based on the issuance of $10.0 million in Secured Notes, in full satisfaction of the indebtedness evidenced by the Secured Notes.

The foregoing descriptions of the Amended and Restated Note Purchase Agreement, Amended and Restated Senior Notes, Escrow Agreement and Amended and Restated Pledge Agreement do not purport to be complete and are qualified in their entirety by reference to the full text of the Form of Amended and Restated Senior Secured Note Purchase Agreement, Form of Senior Secured Promissory Note, Form of the Amended and Restated Pledge Agreement and Form of Amended and Restated Escrow Agreement, copies of which are filed as Exhibit 10.21 (and Exhibit 10.25 for the first amendment thereto as amended on September 30, 2024), Exhibit 10.22, Exhibit 10.23 and Exhibit 10.24, respectively, to our Annual Report and on Form 10-K are incorporated herein by reference.

The issuance of the Additional Secured Notes was exempt from the registration requirements of the Securities Act of 1933, as amended, in accordance with Section 4(a)(2), as a transaction by an issuer not involving a public offering. In addition, our Board of Directors and the Audit Committee of our Board of Directors reviewed the transaction under our policy for Related Party Transactions (the "Policy") and determined that the issuance of the Additional Secured Notes was in compliance with the Policy.

On February 20, 2025, the Company and certain Noteholders agreed to Principal Terms for Conversion of their Secured Notes. Noteholders and the Company agreed that, subject to stockholder approval, at least $6.6 million principal amount of the Secured Notes will be converted into shares of our Common Stock at a conversion price of $0.65 per share ($26.00 per share, as adjusted for the Reverse Stock Split). As part of the conversion, the Company will issue warrants to purchase shares of our Common Stock to the converting Noteholders for up to an additional $3.3 million of shares of our Common Stock, at an exercise price of $0.65 per share ($26.00 per share, as adjusted for the Reverse Stock Split). Upon conversion, converting Noteholders would be subject to a lock-up period of 180 days from the date of conversion. Further, the Escrow Agreement will be amended such that the proceeds from the Pledged Collateral will be allocated among the Company and the converting Noteholders, as provided for in the Principal Terms. The conversion of principal amount of the Secured Notes will result in a dollar-for-dollar increase in stockholders' equity (partially offset by the carrying value of the portion of the Company's investment in the Pledged Collateral the proceeds of which will be paid to converting Noteholders), contributing to the Company's plan to gain compliance with the Nasdaq Minimum Shareholder Equity Rule and to maintaining listing of the our Common Stock on Nasdaq.

The Principal Terms of Conversion were approved at a Special Meeting of Stockholders held on March 31, 2025 and were effected pursuant to the terms of that certain Second Amendment to Amended and Restated Senior Secured Note Purchase Agreement and Related Agreements dated as of May 1, 2025 (the "Conversion Amendment"). On May 7, 2025, pursuant to the Conversion Amendment, the Secured Notes held by the participating noteholders were cancelled, and the Company issued unregistered shares of Common Stock and warrants to purchase an up to $3.3 million of Common Stock with terms as agreed in the Principal Terms for Conversion.

Item 6. Exhibits.

The exhibits filed or furnished as part of this Quarterly Report on Form 10-Q are set forth on the Exhibit Index, which Exhibit Index is incorporated herein by reference.

Exhibit Number	Description	Incorporated by Reference				Filed Herewith
		Form	File No.	Exhibit No.	Filing Date	
10.1	Equity Purchase Agreement, dated February 20, 2025, between the Company and Square Gate Master Fund - Series 4.	10-K	011-40591	10.33	03/28/2025	
10.2	Registration Rights Agreement, dated February 20, 2025, between the Company and Square Gate Master Fund - Series 4	10-K	011-40591	10.34	03/28/2025	
10.3	Definitive Proxy Statement dated February 21, 2025, on Form 14A, including Appendices	10-K	011-40591	10.35	03/28/2025	
10.4	Form of Promissory Note, dated May 8, 2025, between the Company and Holder					X
10.5	Form of Guaranty and Pledge Agreement, dated May 8, 2025, between the Dr. Hing C. Wong and Lender					X
10.6	Form of Unsecured Convertible Promissory Note, dated May 5, 2025, between the Company and Holder					X
10.7	Form of Placement Agency Agreement, dated May 13, 2025, between Company and Maxim Group LLC	8-K	011-40591	10.1	05/15/2025	
10.8	Form of Securities Purchase Agreement, dated May 13, 2025, between the Company and Purchaser	8-K	011-40591	10.2	05/15/2025	
10.9	Form of Pre-Funded Warrant Purchase Agreement, dated May 13, 2025, between Company and Holder	8-K	011-40591	4.2	05/15/2025	
10.10	Form of Common Stock Warrant Purchase Agreement, dated May 13, 2025, between Company and Holder	8-K	011-40591	4.1	05/15/2025	
10.11	Form of Common Stock Warrant, original issue date November 20, 2024, between Company and Holder, as amended	8-K	011-40591	4.3	05/15/2025	
31.1	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					X
31.2	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					X
32.1*	Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.					X
32.2*	Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.					X
101	The following materials from the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2024, formatted in Inline XBRL (eXtensible Business Reporting Language): (i) the Condensed Balance Sheets as of December 31, 2024 and March 31, 2025 (unaudited); (ii) the Condensed Statements of Operations for the three months ended March 31, 2024 (unaudited) and March 31, 2025 (unaudited); (iv) the Condensed Statements of Changes in Stockholders' Equity for the three months ended March 31, 2024 (unaudited) and March 31, 2025 (unaudited); (v) the Condensed Statements of Cash Flows for the three months ended March 31, 2024 (unaudited) and March 31, 2025						X

	(unaudited); and (vi) the notes to the Condensed Financial Statements (unaudited).	
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)	X

* This certification is deemed not filed for purpose of Section 18 of the Exchange Act or otherwise subject to the liability of that section, nor shall it be deemed incorporated by reference into any filing under the Securities Act or the Exchange Act.

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.

HCW Biologics Inc.

Date: May 15, 2025

By: /s/ Hing C. Wong
Hing C. Wong
Chief Executive Officer
(Principal Executive Officer)

Date: May 15, 2025

By: /s/ Rebecca Byam
Rebecca Byam
Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 10.4

THE SECURITIES REFERENCED HEREIN HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND HAVE BEEN ACQUIRED FOR INVESTMENT AND NOT WITH A VIEW TO, OR IN CONNECTION WITH, THE SALE OR DISTRIBUTION THEREOF. NO SUCH SALE OR DISTRIBUTION MAY BE EFFECTED WITHOUT AN EFFECTIVE REGISTRATION STATEMENT RELATED THERETO OR AN OPINION OF COUNSEL IN A FORM SATISFACTORY TO THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED UNDER THE SECURITIES ACT OF 1933, AS AMENDED.

FORM OF PROMISSORY NOTE

$150,000 May 8, 2025
Miramar, FL, United States

For value received, HCW BIOLOGICS INC., a Delaware corporation (the "Company"), promises to pay to [***] the "Holder"), the principal sum of One Hundred Fifty Thousand and No/100ths Dollars ($150,000) (the "Principal Amount") at Holder's principal address [***], or such other address as Holder may specify to the Company in writing. Interest shall accrue from the date of this Promissory Note (this "Note") as follows:

(a) $25,000 interest shall accrue on the date of this Note or such later date on which Holder funds the full Principal Amount to the Company via wire transfer to the account, and using the instructions, attached hereto as Exhibit A;

(b) if the Company has not paid the Principal Amount and the foregoing accrued interest amount (a total of $175,000) on or before August 7, 2025, an additional $25,000 of interest shall accrue on such date;

(c) if the Company has not paid the Principal Amount and the foregoing accrued interest amounts (a total of $200,000) on or before November 7, 2025, an additional $25,000 of interest shall accrue on such date; and

(d) if the Company has not paid the Principal Amount and the foregoing accrued interest amounts (a total of $225,000) before February 7, 2026 (the "Maturity Date"), the Company shall pay such amount in full on the Maturity Date.

This Note is subject to the following terms and conditions.

1. **Payment; Prepayment.** All payments from the Company to Holder shall be made in U.S. dollars at such place as the Holder hereof may from time to time designate in writing to

the Company. Payment shall be credited first to the accrued interest then due and payable and the remainder shall be applied to principal. This Note may be prepaid in whole, but not in part, by the Company, at its election, at any time prior to the Maturity Date.

2. **Stockholders, Officers and Directors Not Liable.** In no event shall any stockholder, officer or director of the Company be liable for any amounts due or payable pursuant to this Note.

3. **Interest Rate Limitation.** Notwithstanding anything to the contrary contained in this Note, Holder represents that the interest paid or agreed to be paid under this Note shall not exceed the maximum rate of non-usurious interest permitted by applicable law in their jurisdiction (the "Maximum Rate"). If the Holder shall receive interest in an amount that exceeds the Maximum Rate, the excess interest shall be applied to the principal remaining owed under this Note or, if it exceeds such unpaid principal, refunded to the Company. In determining whether the interest contracted for, charged, or received by the Holder exceeds the Maximum Rate, the Holder may, to the extent permitted by applicable law, (a) characterize any payment that is not principal as an expense, fee, or premium rather than interest, (b) exclude voluntary prepayments and the effects thereof, and (c) amortize, prorate, allocate, and spread in equal or unequal parts the total amount of interest throughout the contemplated term of this Note.

4. **Founder Guaranty and Pledge**. The indebtedness evidenced by this Note shall be secured by a personal guaranty and pledge given by the Company's Founder and CEO, Dr. Hing C. Wong ("Guarantor") in accordance with the provisions of that certain Guaranty and Pledge Agreement of even date herewith between the Company and the Holder.

5. **Events of Default**. Upon the occurrence of any of the following events (each an "Event of Default"):

(a) The Company fails to pay all principal and accrued interest on the Maturity Date, subject to a five (5) day grace period; or

(b) The Company or the Guarantor shall (i) become insolvent or generally fail to pay, or admit in writing its inability or unwillingness to pay, debts as they become due; (ii) apply for, consent to or acquiesce in the appointment of a trustee, receiver, sequestrator or other custodian for the Company or any property thereof, or make a general assignment for the benefit of creditors; (iii) in the absence of such application, consent or acquiescence, permit or suffer to exist the appointment of a trustee, receiver, sequestrator or other custodian for the Company or for a substantial part of the property thereof, and such trustee, receiver, sequestrator or other custodian shall not be discharged within thirty (30) calendar days; (iv) permit or suffer to exist the commencement of any bankruptcy, reorganization, debt arrangement or other case or proceeding under any bankruptcy or insolvency law, or any dissolution, winding up or liquidation proceeding, in respect of the Company and, if any such case or proceeding is not commenced by the Company, such case or proceeding shall be consented to or acquiesced in by the Company or shall result in the entry of an order for relief or shall remain for thirty (30) calendar days undismissed; or (v) take any action authorizing, or in furtherance of, any of the foregoing.

6. **Action to Collect on Note.** If action is instituted to collect on this Note, the Company promises to pay all of the Holder's costs and expenses, including reasonable attorney's fees, incurred in connection with such action.

7. **Loss of Note.** Upon receipt by the Company of evidence satisfactory to it of the loss, theft, destruction or mutilation of this Note or any Note exchanged for it, and indemnity satisfactory to the Company (in case of loss, theft or destruction) or surrender and cancellation of such Note (in the case of mutilation), the Company will make and deliver in lieu of such Note a new Note of like tenor.

8. **Miscellaneous.**

(a) **Governing Law.** The validity, interpretation, construction and performance of this Note, and all acts and transactions pursuant hereto and the rights and obligations of the Company and Holder shall be governed, construed and interpreted in accordance with the laws of the state of Delaware, without giving effect to principles of conflicts of law.

(b) **Entire Agreement.** This Note constitutes the entire agreement and understanding between the Company and the Holder relating to the subject matter herein and supersedes all prior or contemporaneous discussions, understandings and agreements, whether oral or written between them relating to the subject matter hereof.

(c) **Amendments and Waivers.** Any term of this Note may be amended only with the written consent of the Company and the Holder. Any amendment or waiver effected in accordance with this Section 8(c) shall be binding upon the Company, the Holder and each transferee of this Note.

(d) **Successors and Assigns.** The terms and conditions of this Note shall inure to the benefit of and be binding upon the respective successors and assigns of the Company and the Holder. Notwithstanding the foregoing, the Holder may not assign, pledge, or otherwise transfer this Note without the prior written consent of the Company. Subject to the preceding sentence, this Note may be transferred only upon surrender of the original Note for registration of transfer, duly endorsed, or accompanied by a duly executed written instrument of transfer in form satisfactory to the Company. Thereupon, a new note for the same principal amount and interest will be issued to, and registered in the name of, the transferee. Interest and principal are payable only to the registered holder of this Note.

(e) **Notices.** Any notice, demand or request required or permitted to be given under this Note shall be in writing and shall be deemed sufficient when delivered personally or by overnight courier or sent by email, or 48 hours after being deposited in the U.S. mail as certified or registered mail with postage prepaid, addressed to the party to be notified at such party's address as set forth on the signature page, as subsequently modified by written notice, or if no address is specified on the signature page, at the most recent address set forth in the Company's books and records.

(f) **Counterparts.** This Note may be executed in any number of counterparts, each of which when so executed and delivered shall be deemed an original, and all of which together shall constitute one and the same instrument.

[Signature Page Follows]

IN WITNESS WHEREOF, the Company has executed this Promissory Note as of the date first set forth above.

THE COMPANY:

HCW BIOLOGICS INC.

By:_
Name: HING C. WONG
Title: Chief Executive Officer

Address:
2929 Commerce Parkway
Miramar, FL 33025
United States
Email: hingwong@hcwbiologics.com

AGREED TO AND ACCEPTED:

THE HOLDER:

By:_
Name:

EXHIBIT A

[***]

Exhibit 10.5

FORM OF GUARANTY AND PLEDGE AGREEMENT

HCW BIOLOGICS INC., a Delaware corporation (the "Company"), is issuing that certain Promissory Note of even date herewith in the principal amount of $150,000 to [***] (the "Lender") to memorialize the loan in such principal amount being funded by Lender to the Company on the date hereof (the "Loan")**.**

RECITALS:

WHEREAS, **DR. HING C. WONG** ("Guarantor") is the Founder and CEO, as well as a stockholder, of the Company; and

WHEREAS, Lender would not make the Loan if Guarantor did not execute and deliver to Lender this Guaranty and Pledge Agreement (the "Guaranty").

NOW, THEREFORE, for and in consideration of the Loan and as a material inducement to Lender to make the Loan:

AGREEMENT:

1. Guarantor hereby unconditionally and irrevocably guarantees the prompt payment by the Company of all principal, interest and all other sums payable by the Company under the Note and the faithful and prompt performance by the Company of each and every one of the terms, conditions and covenants of Note.

2. In addition, as collateral security for the payment and performance of all liabilities of the Company under the Note and the Guarantor hereunder, the Guarantor grants a security interest in and lien upon all property referred to in Exhibit A attached hereto and incorporated herein (the "Collateral"). The parties hereto expressly agree that all rights, assets and property at any time held in or credited to any securities account constituting Collateral shall be treated as financial assets as defined in the Uniform Commercial Code as in effect in any applicable state (the "UCC").

3. No notice of default need be given to Guarantor, it being specifically agreed and understood that the guaranty of the undersigned is a continuing guaranty under which Lender may proceed forthwith and immediately against the Company or against Guarantor following an Event of Default under the Note or for the enforcement of any rights which Lender may have as against the Company pursuant to or under the terms of the Note.

4. Further, the undersigned expressly agrees that his obligations hereunder shall in no ways be terminated, affected or impaired by reason of the granting by Lender of any indulgences to the Company or by reason of the assertion against the Company of any of the rights or remedies reserved to Lender pursuant to the provisions of the Note or by the relief of the Company from

any of the Company's obligations under the Note by operation of law or otherwise, the undersigned hereby waiving all suretyship defenses.

5. The undersigned further covenants and agrees that this Guaranty shall remain and continue in full force and effect as to any modification or extension of the Note whether or not the undersigned shall have received any notice of or consented to such renewal, modification or extension.

6. The undersigned further agrees that his liability hereunder shall be primary, and that in any right of action which shall accrue to Lender under the Note, Lender may, at her option, proceed against the undersigned and the Company, jointly and severally, and may proceed against the undersigned without having commenced any action against or having obtained any judgment against the Company.

7. The undersigned hereby further agrees to pay loss, damage, cost or expense, including reasonable attorneys' fees that Lender, her agents or beneficiaries, may suffer or incur in the successful enforcement of this Guaranty.

IN WITNESS WHEREOF, Guarantor has executed this Guaranty at Miramar, Florida on May 8, 2025.

GUARANTOR

_____

DR. HING C. WONG

EXHIBIT A

COLLATERAL

[***]

EXHIBIT 10.6

THE SECURITIES REFERENCED HEREIN HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND HAVE BEEN ACQUIRED FOR INVESTMENT AND NOT WITH A VIEW TO, OR IN CONNECTION WITH, THE SALE OR DISTRIBUTION THEREOF. NO SUCH SALE OR DISTRIBUTION MAY BE EFFECTED WITHOUT AN EFFECTIVE REGISTRATION STATEMENT RELATED THERETO OR AN OPINION OF COUNSEL IN A FORM SATISFACTORY TO THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED UNDER THE SECURITIES ACT OF 1933, AS AMENDED.

FORM OF UNSECURED CONVERTIBLE PROMISSORY NOTE

$ May 5, 2025
Miramar, FL, United States

For value received, HCW BIOLOGICS INC., a Delaware corporation (the "Company"), promises to pay to (the "Holder"), the principal sum of Dollars ($) or such lesser amount as is advanced by the Holder hereunder. Interest shall accrue from the date of this Secured Promissory Note (this "Note") on the unpaid principal amount then outstanding at a rate equal to ten percent (10%) per annum (the "Interest Rate"), computed as simple interest on the basis of a year of 365 days, to be paid in kind on a quarterly basis.

The Company and the Holder are parties to that certain Amended and Restated Senior Secured Note Purchase Agreement, dated as of July 2, 2024, among the Company, the Holder and each of the other purchasers listed on Exhibit B attached thereto (the "Purchase Agreement") as amended by that certain First Amendment to Amended and Restated Senior Secured Note Purchase Agreement dated as of September 30, 2024 (the "First Amendment") and that certain Second Amendment to Amended and Restated Senior Secured Note Purchase Agreement dated as of May 1, 2025 (the "Second Amendment", and together with the Purchase Agreement and the First Amendment, the "Previously Converted Note Purchase Agreement"); (2) that certain Amended and Restated Pledge Agreement dated as of July 2, 2024 (as amended, the "Pledge Agreement"); (3) that certain Amended and Restated Escrow Agreement dated as of July 2, 2024 (as amended, the "Escrow Agreement").

This Note is subject to the following terms and conditions.

1. **Basic Terms.**

(a) **Interest Payments; Maturity.** Accrued interest on this Note shall be payable in kind, quarterly in arrears. If not previously converted in accordance with Section 2 below, principal and any accrued but unpaid interest under this Note shall be due and payable on May 5, 2026 (the "Maturity Date"). Notwithstanding the foregoing, the entire unpaid principal sum of this Note, together with accrued and unpaid interest thereon, shall become immediately

due and payable upon the occurrence and during the continuance of an Event of Default (as defined below).

(b) **Payment; Prepayment.** All payments from the Company to Holder shall be made in U.S. dollars at such place as the Holder hereof may from time to time designate in writing to the Company. Payment shall be credited first to the accrued interest then due and payable and the remainder shall be applied to principal. This Note may be prepaid in whole or in part prior to the Maturity Date, at the election of the Company.

If the Company elects to redeem this Note pursuant to this Section 1(b), the Company shall give notice of such prepayment to Holder not less than ten (10) calendar days prior to the date fixed for prepayment, specifying (a) the date on which such prepayment is to be made, and (b) the principal amount of the Note to be redeemed on such date.

2. **Mandatory Conversion.** All principal and accrued interest under this Note shall be converted to shares of common stock par value $0.0001 per share of the Company ("Common Stock") promptly upon the first closing of a sale by the Company of shares of Common Stock to one or more purchasers, occurring between the date of this Note and the Maturity Date, pursuant to an effective registration statement filed with the Securities and Exchange Commission (a "Registered Offering"). The conversion price for such conversion shall be the same price per share of Common Stock sold in the Registered Offering (the "Conversion Price") such that this Note shall be converted into the number of shares of Common Stock determined by dividing the unpaid principal amount of this Note plus accrued interest by the Conversion Price, rounded to the nearest whole share, such shares being referred to as the "Conversion Shares". If the indebtedness under this Note is converted into Conversion Shares, Holder shall be deemed to have surrendered this Note on the conversion date and surrendered all rights hereunder.

3. **Lock-Up And Registration**. The Conversion Shares and Wugen Shares have not been and will not be registered upon issuance. The Holder represents, warrants and agrees that the Holder is acquiring the Conversion Shares and rights with respect to Wugen Shares for investment and not with a view to, or in connection with, the sale or distribution thereof. The Holder hereby agrees that no such sale or distribution of any Conversion Shares issued upon conversion hereof will be effected (a) in any manner during the 90-day period beginning on the conversion date (the "Lock-Up Period"), and (b) following the Lock-up Period without an effective registration statement related thereto or an opinion of counsel in a form satisfactory to the Company that such registration is not required under the Securities Act of 1933, as amended. Within a reasonable time following the end of the Lock-Up Period, the Company will prepare and file a resale registration statement with the U.S. Securities and Exchange Commission with respect to such shares and make commercially reasonable efforts to cause such registration statement to be declared effective as promptly as practicable thereafter.

4. **Additional Consideration**. In addition to the Conversion Price, the Holder shall receive the right to receive an additional share of the Wugen Proceeds (as defined in the Converted Note Purchase Agreement) pursuant to the provisions of this Section 3. As provided in the Converted Note Purchase Agreement, following a Mandatory Prepayment Event, the Company has the right to receive and retain 50.89% of the Wugen Proceeds (the "Company's Allocation"), and the Converting Purchasers (as defined therein) have the right to receive their Pro Rata Share

of 49.11% of the Wugen Proceeds. The Company hereby agrees that the Holder shall receive, out of the Company's Allocation, a portion of Wugen Proceeds with respect to a number of Pledged Shares (as defined in the Converted Note Purchase Agreement) equal to 0.25 multiplied by the original principal amount, in dollars, of this Note (the "Holder's Wugen Shares"). In addition, if a Mandatory Prepayment Event (as defined in the Converted Note Purchase Agreement) has not occurred on or before August 30, 2030, the Company shall deliver, or cause the Escrow Agent under the Escrow Agreement to deliver, the Holder's Wugen Shares to the Holder as promptly as commercially practicable thereafter.

5. **Stockholders, Officers and Directors Not Liable.** In no event shall any stockholder, officer or director of the Company be liable for any amounts due or payable pursuant to this Note.

6. **Interest Rate Limitation.** Notwithstanding anything to the contrary contained in this Note, Holder represent that the interest paid or agreed to be paid under this Note shall not exceed the maximum rate of non-usurious interest permitted by applicable law in their jurisdiction (the "Maximum Rate"). If the Holder shall receive interest in an amount that exceeds the Maximum Rate, the excess interest shall be applied to the principal remaining owed under this Note or, if it exceeds such unpaid principal, refunded to the Company. In determining whether the interest contracted for, charged, or received by the Holder exceeds the Maximum Rate, the Holder may, to the extent permitted by applicable law, (a) characterize any payment that is not principal as an expense, fee, or premium rather than interest, (b) exclude voluntary prepayments and the effects thereof, and (c) amortize, prorate, allocate, and spread in equal or unequal parts the total amount of interest throughout the contemplated term of this Note.

7. **Action to Collect on Note.** If action is instituted to collect on this Note, the Company promises to pay all of the Holder's costs and expenses, including reasonable attorney's fees, incurred in connection with such action.

8. **Loss of Note.** Upon receipt by the Company of evidence satisfactory to it of the loss, theft, destruction or mutilation of this Note or any Note exchanged for it, and indemnity satisfactory to the Company (in case of loss, theft or destruction) or surrender and cancellation of such Note (in the case of mutilation), the Company will make and deliver in lieu of such Note a new Note of like tenor.

9. **Miscellaneous.**

(a) **Governing Law.** The validity, interpretation, construction and performance of this Note, and all acts and transactions pursuant hereto and the rights and obligations of the Company and Holder shall be governed, construed and interpreted in accordance with the laws of the state of Delaware, without giving effect to principles of conflicts of law.

(b) **Entire Agreement.** This Note constitutes the entire agreement and understanding between the Company and the Holder relating to the subject matter herein and supersedes all prior or contemporaneous discussions, understandings and agreements, whether oral or written between them relating to the subject matter hereof.

(c) **Amendments and Waivers.** Any term of this Note may be amended only with the written consent of the Company and the Holder. Any amendment or waiver effected in accordance with this Section 9(c) shall be binding upon the Company, the Holder and each transferee of this Note.

(d) **Successors and Assigns.** The terms and conditions of this Note shall inure to the benefit of and be binding upon the respective successors and assigns of the Company and the Holder. Notwithstanding the foregoing, the Holder may not assign, pledge, or otherwise transfer this Note without the prior written consent of the Company. Subject to the preceding sentence, this Note may be transferred only upon surrender of the original Note for registration of transfer, duly endorsed, or accompanied by a duly executed written instrument of transfer in form satisfactory to the Company. Thereupon, a new note for the same principal amount and interest will be issued to, and registered in the name of, the transferee. Interest and principal are payable only to the registered holder of this Note.

(e) **Notices.** Any notice, demand or request required or permitted to be given under this Note shall be in writing and shall be deemed sufficient when delivered personally or by overnight courier or sent by email, or 48 hours after being deposited in the U.S. mail as certified or registered mail with postage prepaid, addressed to the party to be notified at such party's address as set forth on the signature page, as subsequently modified by written notice, or if no address is specified on the signature page, at the most recent address set forth in the Company's books and records.

(f) **Counterparts.** This Note may be executed in any number of counterparts, each of which when so executed and delivered shall be deemed an original, and all of which together shall constitute one and the same instrument.

[Signature Page Follows]

IN WITNESS WHEREOF, the Company has executed this Unsecured Convertible Promissory Note as of the date first set forth above.

THE COMPANY:

HCW BIOLOGICS INC.

By:_
Name:
Title:

Address:
2929 Commerce Parkway
Miramar, FL 33025
United States
Email: RebeccaByam@hcwbiologics.com

AGREED TO AND ACCEPTED:

THE HOLDER:

By:_
Name:

Address:
Email:

Exhibit 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER PURSUANT TO RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Hing C. Wong, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of HCW Biologics Inc. for the quarter ended March 31, 2025;

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 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 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):

   a) 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.

/s/ Hing C. Wong

Hing C. Wong
Founder and Chief Executive Officer
(Principal Executive Officer)

Date: May 15, 2025

Exhibit 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER PURSUANT TO RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Rebecca Byam, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of HCW Biologics Inc. for the quarter ended March 31, 2025;

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 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 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):

   a) 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.

/s/ Rebecca Byam
Rebecca Byam
Chief Financial Officer
(Principal Financial Officer)

Date: May 15, 2025

Exhibit 32.1

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 of HCW Biologics Inc. (the "Company") on Form 10-Q for the period ended March 31, 2025 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

Date: May 15, 2025

By: /s/ Hing C. Wong

Hing C. Wong
Founder and Chief Executive Officer
(Principle Executive Officer)

Exhibit 32.2

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 of HCW Biologics Inc. (the "Company") on Form 10-Q for the period ended March 31, 2025 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

Date: May 15, 2025

/s/ Rebecca Byam

By:

Rebecca Byam
Chief Financial Officer
(Principal Financial Officer)