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

FORM 10-Q

(Mark One)

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

For the quarterly period ended June 30, 2020
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 001-33351

NEUROMETRIX, INC.
(Exact name of registrant as specified in its charter)

Delaware	**04-3308180**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
4B Gill Street Woburn, Massachusetts	**01801**
(Address of principal executive offices)	(Zip Code)

(781) 890-9989
(Registrant's telephone number, including area code)

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

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

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 x 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 and post such files).

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

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

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 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 x

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date: 3,784,657 shares of common stock, par value $0.0001 per share, were outstanding as of July 22, 2020.

NeuroMetrix, Inc.
Form 10-Q
Quarterly Period Ended June 30, 2020

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PART I – FINANCIAL INFORMATION

Item 1. Financial Statements

NeuroMetrix, Inc.
Balance Sheets

	June 30, 2020	December 31, 2019
	(Unaudited)	
Assets		
Current assets:		
Cash and cash equivalents	$ 5,434,983	$ 3,126,206
Accounts receivable, net	407,661	298,967
Inventories	1,191,998	1,163,714
Collaboration receivable	181,330	189,008
Prepaid expenses and other current assets	187,710	652,919
Total current assets	7,403,682	5,430,814
Fixed assets, net	238,359	273,448
Right to use asset	934,258	1,159,774
Other long-term assets	29,229	29,650
Total assets	$ 8,605,528	$ 6,893,686
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 190,835	$ 725,658
Accrued expenses and compensation	1,035,923	1,443,574
Accrued product returns	598,000	689,000
Lease obligation, current	594,026	588,546
Total current liabilities	2,418,784	3,446,778
Lease obligation, net of current portion	698,128	916,674
Total liabilities	3,116,912	4,363,452
Commitments and contingencies		
Stockholders' equity:		
Preferred stock	—	—
Convertible preferred stock	1	1
Common stock, $0.0001 par value; 25,000,000 shares authorized at June 30, 2020 and December 31, 2019; 3,784,657 and 1,400,674 shares issued and outstanding at June 30, 2020 and December 31, 2019, respectively	378	140
Additional paid-in capital	201,787,157	197,319,698
Accumulated deficit	(196,298,920)	(194,789,605)
Total stockholders' equity	5,488,616	2,530,234
Total liabilities and stockholders' equity	$ 8,605,528	$ 6,893,686

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

NeuroMetrix, Inc.
Statements of Operations
(Unaudited)

	Quarters Ended June 30,		Six Months Ended June 30,	
	2020	**2019**	**2020**	**2019**
Revenues	$ 1,359,979	$ 2,354,683	$ 3,532,015	$ 5,477,618
Cost of revenues	495,086	3,143,787	1,115,276	5,468,018
Gross profit (loss)	864,893	(789,104)	2,416,739	9,600
Operating expenses:				
Research and development	660,278	1,034,921	1,193,898	1,890,002
Sales and marketing	379,113	1,373,949	803,462	3,399,237
General and administrative	678,497	1,564,555	1,930,243	3,184,045
Total operating expenses	1,717,888	3,973,425	3,927,603	8,473,284
Loss from operations	(852,995)	(4,762,529)	(1,510,864)	(8,463,684)
Other income:				
Collaboration income	—	1,381,818	—	7,116,667
Other income	1,051	18,520	1,549	35,333
Total other income	1,051	1,400,338	1,549	7,152,000
Net loss	$ (851,944)	$ (3,362,191)	$ (1,509,315)	$ (1,311,684)
Net loss per common share applicable to common stockholders, basic and diluted	$ (0.28)	$ (3.72)	$ (0.68)	$ (1.56)

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

NeuroMetrix, Inc.
Statements of Changes in Stockholders' Equity
(Unaudited)

	Series B – F Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Deficit	Total
	Number of Shares	Amount	Number of Shares	Amount			
Balance at December 31, 2018	17,513.63	$ 18	738,029	$ 74	$ 197,114,310	$ (191,016,591)	$ 6,097,811
Stock-based compensation expense	—	—	—	—	44,093	—	44,093
Issuance of common stock upon conversion of preferred stock	(2,445.90)	(3)	93,000	9	(6)	—	—
Net income	—	—	—	—	—	2,050,507	2,050,507
Balance at March 31, 2019	15,067.73	15	831,029	83	197,158,397	(188,966,084)	8,192,411
Stock-based compensation expense	— —	—	—	—	19,933	—	19,933
Issuance of common stock upon conversion of preferred stock	(3,813.00)	(4)	144,981	15	(11)	—	—
Issuance of common stock under employee stock purchase plan	—	—	2,148	1	7,496	—	7,497
Net loss	—	—	—	—	—	(3,362,191)	(3,362,191)
Balance at June 30, 2019	11,254.73	$ 11	978,158	$ 99	$ 197,185,815	$ (192,328,275)	$ 4,857,650

	Series B Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Deficit	Total
	Number of Shares	Amount	Number of Shares	Amount			
Balance at December 31, 2019	200.00	$ 1	1,400,674	$ 140	$ 197,319,698	$ (194,789,605)	$ 2,530,234
Stock-based compensation expense	—	—	—	—	144,047	—	144,047
Issuance of common stock under at the market offering	—	—	256,078	25	453,432	—	453,457
Common stock issued to settle compensation obligations	—	—	31,000	3	43,748	—	43,751
Net loss	—	—	—	—	—	(657,371)	(657,371)
Balance at March 31, 2020	200.00	1	1,687,752	168	197,960,925	(195,446,976)	2,514,118
Stock-based compensation expense	—	—	—	—	128,862	—	128,862
Issuance of common stock under at the market offering	—	—	2,092,541	209	3,689,765	—	3,689,974
Issuance of common stock under employee stock purchase plan	—	—	4,364	1	7,605	—	7,606
Net loss	—	—	—	—	—	(851,944)	(851,944)
Balance at June 30, 2020	200.00	$ 1	3,784,657	$ 378	$ 201,787,157	$ (196,298,920)	$ 5,488,616

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

NeuroMetrix, Inc.
Statements of Cash Flows
(Unaudited)

	Six Months Ended June 30,	
	2020	**2019**
Cash flows from operating activities:		
Net loss	$ (1,509,315)	$ (1,311,684)
Adjustments to reconcile net loss to net cash (used in) provided by operating activities:		
Depreciation	45,589	107,494
Stock-based compensation	272,909	64,026
Settlement of compensation obligation	43,751	—
Impairment charge against right of use asset	204,000	—
Inventory provision	—	2,595,884
Changes in operating assets and liabilities:		
Accounts receivable	(108,694)	356,287
Inventories	(28,284)	(1,207,451)
Collaboration receivable	7,678	—
Prepaid expenses and other current and long-term assets	465,630	(239,749)
Accounts payable	(534,823)	(287,260)
Accrued expenses and compensation	(599,201)	416,745
Accrued product returns	(91,000)	(360,051)
Deferred collaboration income	—	(1,956,522)
Net cash (used in) provided by operating activities	(1,831,760)	(1,822,281)
Cash flows from investing activities:		
Purchases of fixed assets	(10,500)	(7,587)
Net cash used in investing activities	(10,500)	(7,587)
Cash flows from financing activities:		
Net proceeds from issuance of stock	4,151,037	7,497
Proceeds from debt issuance	773,200	—
Repayment of debt	(773,200)	—
Net cash provided by financing activities	4,151,037	7,497
Net increase (decrease) in cash and cash equivalents	2,308,777	(1,822,371)
Cash and cash equivalents, beginning of period	3,126,206	6,780,429
Cash and cash equivalents, end of period	$ 5,434,983	$ 4,958,058
Supplemental disclosure of cash flow information:		
Common stock issued to settle employee compensation	$ 43,751	$ —

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

1. Business and Basis of Presentation

Our Business-An Overview

NeuroMetrix, Inc., or the Company, is a leading developer and manufacturer of diagnostic and therapeutic neurostimulation based medical devices that are used throughout the world. The Company has three FDA cleared commercial products. DPNCheck® is a point-of-care test that is used to evaluate peripheral neuropathies. ADVANCE™ is a point-of-care device that provides nerve conduction studies as an aid in diagnosing and evaluating patients suspected of having focal or systemic neuropathies. Quell® 2.0 is a wearable, mobile app enabled, neurostimulation device indicated for symptomatic relief and management of chronic pain and is available OTC. The Company maintains an active, industry-leading R&D program.

The accompanying financial statements have been prepared on a basis which assumes that the Company will continue as a going concern and which contemplates the realization of assets and satisfaction of liabilities and commitments in the normal course of business. The Company has reported recurring losses from operations and negative cash flows from operating activities. At June 30, 2020, the Company had an accumulated deficit of $196.3 million. These factors raise substantial doubt about the Company's ability to continue as a going concern for the one-year period from the date of issuance of these financial statements. The financial statements do not include any adjustments that might result from the outcome of this uncertainty. The Company held cash and cash equivalents of $5.4 million as of June 30, 2020. The Company believes that these resources and the cash to be generated from future product sales will be sufficient to meet its projected operating requirements into the third quarter of 2021. Accordingly, the Company will need to raise additional funds to support its operating and capital needs in the third quarter of 2021 and beyond.

The Company continues to face significant challenges and uncertainties. Among these uncertainties is the future effect on the Company's business of the COVID-19 pandemic which, in late first quarter of 2020 and throughout the second quarter of 2020, depressed sales of the Company's products. As a result, the Company's available capital resources may be consumed more rapidly than currently expected due to (a) decreases in sales of the Company's products, including decreases in customer orders related to the COVID-19 pandemic, and the uncertainty of future revenues from new products; (b) the effect of the COVID-19 pandemic on the Company's ability to obtain parts and materials from the Company's suppliers while continuing to staff critical production and fulfillment functions; (c) changes the Company may make to the business that affect ongoing operating expenses; (d) changes the Company may make in its business strategy; (e) regulatory developments affecting the Company's existing products; (f) changes the Company may make in its research and development spending plans; and (g) other items affecting the Company's forecasted level of expenditures and use of cash resources.

The Company may attempt to obtain additional funding through public or private financing, collaborative arrangements with strategic partners, or through additional credit lines or other debt financing sources to increase the funds available to fund operations. However, the Company may not be able to secure such funding in a timely manner or on favorable terms, if at all. Furthermore, if the Company issues equity or debt securities to raise additional funds, its existing stockholders may experience dilution, and the new equity or debt securities may have rights, preferences and privileges senior to those of the Company's existing stockholders. If the Company raises additional funds through collaboration, licensing or other similar arrangements, it may be necessary to relinquish valuable rights to its potential products or proprietary technologies, or grant licenses on terms that are not favorable to the Company. Without additional funds, the Company may be forced to delay, scale back or eliminate some of its sales and marketing efforts, research and development activities, or other operations and potentially delay product development in an effort to provide sufficient funds to continue its operations. If any of these events occurs, the Company's ability to achieve its development and commercialization goals would be adversely affected.

Unaudited Interim Financial Statements

The accompanying unaudited balance sheet as of June 30, 2020, unaudited statements of operations, changes in stockholders' equity and cash flows for the quarters and six months ended June 30, 2020 and 2019 have been prepared in accordance with accounting principles generally accepted in the United States of America for interim financial information and with the instructions to Form 10-Q and Article 8 of Regulation S-X. The accompanying balance sheet as of December 31, 2019 has been derived from audited financial statements prepared at that date, but does not include all disclosures required by accounting principles generally accepted in the United States of America. In the opinion of management, the financial statements include all normal and recurring adjustments considered necessary for a fair presentation of the Company's financial position and operating results. Operating results for the six months ended June 30, 2020 are not necessarily indicative of the results that may be expected for the year ending December 31, 2020 or any other period. These financial statements and notes should be read in conjunction with the financial statements for the year ended December 31, 2019 included in the Company's Annual Report on Form 10-K, as filed with the Securities and Exchange Commission, or the SEC, on January 28, 2020 (File No. 001-33351), or the Company's 2019 Form 10-K.

Revenues

Revenues include product sales, net of estimated returns. Revenue is measured as the amount of consideration the Company expects to receive in exchange for product transferred. Revenue is recognized when contractual performance obligations have been satisfied and control of the product has been transferred to the customer. In most cases, the Company has a single product delivery performance obligation. Accrued product returns are estimated based on historical data and evaluation of current information.

Accounts receivable are recorded net of the allowance for doubtful accounts, which represents the Company's best estimate of credit losses. Allowance for doubtful accounts was $70,000 as of June 30, 2020 and December 31, 2019.

Three customers accounted for 42% and one customer accounted for 20% of total revenues in the quarter and six months ended June 30, 2020, respectively. Two customers accounted for 31% and one customer accounted for 20% of total revenues in the quarter and six months ended June 30, 2019, respectively. Four customers accounted for 89% and two customers accounted for 62% of accounts receivable as of June 30, 2020 and December 31, 2019, respectively.

Collaboration income

Collaboration income is recognized within Other income when contractual performance obligations, outside the ordinary activities of the Company, have been satisfied and control has been transferred to a collaboration partner. Collaboration income for each performance obligation is based on the fair value of such performance obligation relative to the total fair value of all performance obligations multiplied by the overall transaction price. A deferred collaboration income liability is recorded when payments are received prior to satisfaction of performance obligations. A collaboration receivable is recorded when amounts are owed to the Company under the collaboration agreements and related support services. The Company recognized Collaboration income net of costs, within Other income in the Statement of Operations of zero and $1,381,818, for the quarters ended June 30, 2020 and 2019, respectively. The Company recognized Collaboration income net of costs, within Other income in the Statement of Operations of zero and $7,116,667, for the six months ended June 30, 2020 and 2019, respectively.

Stock-based Compensation

Total compensation cost related to non-vested awards not yet recognized at June 30, 2020 was $270,740. The total compensation costs are expected to be recognized over a weighted-average period of 0.5 years.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make significant estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during reporting periods. Actual results could differ from those estimates.

2. Comprehensive Income (Loss)

For the quarters and six months ended June 30, 2020 and 2019, the Company had no components of other comprehensive income (loss) other than net income (loss) itself.

3. Net Loss Per Common Share

Basic and dilutive net income (loss) per common share were as follows:

	Quarters Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Net loss applicable to common stockholders	$ (851,944)	$ (3,362,191)	$ (1,509,315)	$ (1,311,684)
Weighted average number of common shares outstanding, basic	3,014,523	904,824	2,235,874	839,625
Dilutive convertible preferred stock	—	—	—	—
Weighted average number of common shares outstanding, dilutive	3,014,523	904,824	2,235,874	839,625
Net loss per common share applicable to common stockholders, basic and diluted	$ (0.28)	$ (3.72)	$ (0.68)	$ (1.56)

Shares underlying the following potentially dilutive weighted average number of common stock equivalents were excluded from the calculation of diluted net loss per common share because their effect was anti-dilutive for each of the periods presented:

	Quarters Ended June 30,		Six Months Ended June 30,	
	2020	2019	2020	2019
Options	163,481	48,222	163,774	48,512
Warrants	27,287	45,937	34,686	45,937
Convertible preferred stock	62	491,599	62	556,797
Total	190,830	585,758	198,522	651,246

4. Inventories

Inventories consist of the following:

	June 30, 2020	December 31, 2019
Purchased components	$ 775,463	$ 720,209
Finished goods	416,535	443,505
	$ 1,191,998	$ 1,163,714

5. Accrued Expenses and Compensation

Accrued expenses and compensation consist of the following:

	June 30, 2020	December 31, 2019
Technology fees	$ 450,000	$ 450,000
Professional services	293,000	454,000
Compensation	111,997	62,322
Advertising and promotion	26,000	68,000
Warranty	68,700	75,300
Other	86,226	333,952
	$ 1,035,923	$ 1,443,574

6. Leases

Operating Leases

The Company's lease on its Woburn, Massachusetts facilities (the “Woburn Lease”) extends through September 2025 with a monthly base rent of $13,846 and a 5-year extension option. The Company's lease on its Waltham, Massachusetts facilities, now inactive and offered for sublet, extends through February 2022 with an average monthly base rent of $41,074 and a 5-year extension option. At June 30, 2020, the Company recorded an impairment reserve of $604,000 that reduced the right of use asset for Waltham idle facility costs. The impairment charge for the quarter ended June 30, 2020 was $117,000 and was recorded within the Company's Statement of Operations as follows: $40,950 within research and development, $23,400 within sales and marketing, and $52,650 within general and administrative.

Future minimum lease payments under non-cancellable operating leases as of June 30, 2020 are as follows:

2020	321,594
2021	653,164
2022	247,347
2023	165,785
2024	165,785
2025	117,431
Total minimum lease payments	$ 1,671,106

Weighted-average discount rate, 14.7%	$ 378,952
Lease obligation, current portion	594,026
Lease obligation, net of current portion	698,128
	$ 1,671,106

Total recorded rent expense was $166,905 and $166,025, for the quarters ended June 30, 2020 and 2019, respectively. Total recorded rent expense was $333,809 and $332,049, for the six months ended June 30, 2020 and 2019, respectively. The Company records rent expense on its facility leases on a straight-line basis over the lease term. Weighted average remaining operating lease term was 3.3 years as of June 30, 2020.

7. Business Restructuring

In the second quarter of 2019, the Company was restructured to reduce operating costs and improve efficiency. Operations were consolidated in a single location, headcount was reduced, and excess inventory was written down to net realizable value. The total 2019 restructuring charge was $2.3 million. The total impairment charge in the quarter and six months ended June 30, 2020 was $117,000 and $204,000, respectively. The Company's Waltham facility was idled and as of June 30, 2020 had not been sublet, and a reserve of 604,000 was recorded against the Company's right to use for this asset.

The obligations relating to the business restructuring outstanding as of June 30, 2020 are presented below.

	June 30, 2020
Severance obligations:	
Provision	$ 224,773
Amounts paid out	(224,773)
Total	—
Relocation costs:	
Provision	100,000
Amounts paid out	(100,000)
Total	—
Impairment charge for idle facility	604,000
Amounts paid out	(204,000)
Total	400,000
Balance - June 30, 2020	$ 400,000

8. Fair Value Measurements

The following tables present information about the Company's assets and liabilities that are measured at fair value on a recurring basis for the periods presented and indicates the fair value hierarchy of the valuation techniques it utilized to determine such fair value. In general, fair values determined by Level 1 inputs utilize quoted prices (unadjusted) in active markets for identical assets or liabilities. Fair values determined by Level 2 inputs utilize data points that are observable such as quoted prices, interest rates, and yield curves. Fair values determined by Level 3 inputs are unobservable data points for the asset or liability, and include situations where there is little, if any, market activity for the asset or liability. All Company assets and liabilities measured at fair value utilize Level 1 inputs.

		Fair Value Measurements at June 30, 2020 Using		
	June 30, 2020	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Cash equivalents	$ 2,838,321	$ 2,838,321	$ —	$ —
Total	$ 2,838,321	$ 2,838,321	$ —	$ —

		Fair Value Measurements at December 31, 2019 Using		
	December 31, 2019	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Cash equivalents	$ 698,807	$ 698,807	$ —	$ —
Total	$ 698,807	$ 698,807	$ —	$ —

9. Credit Facility and Paycheck Protection Program Loan

The Company's Loan and Security Agreement (the “Credit Facility”) with a bank expired April 30, 2020 and was not renewed. The Credit Facility had previously supported letters of credit in the amount of $226,731 issued in favor of the Company's landlords. These letters of credit remain outstanding and are secured by the Company's cash balances.

On April 28, 2020, the Company received a loan of $773,200 from a bank under the U.S. Small Business Administration (“SBA”) Paycheck Protection Program (the “PPP”) of the Coronavirus Aid, Relief, and Economic Security Act (the “CARES Act”). The Company planned to use the proceeds from the loan for covered payroll costs, rent and utilities in accordance with the relevant terms and conditions of the CARES Act. On May 6, 2020, following the issuance of new guidance from the SBA regarding specific eligibility requirements under the PPP, the Company initiated the immediate repayment of the full amount of the loan to the bank.

10. Stockholders’ Equity

Preferred stock and convertible preferred stock consist of the following:

	June 30, 2020	December 31, 2019
Preferred stock, $0.001 par value; 5,000,000 shares authorized at June 30, 2020 and December 31, 2019; no shares issued and outstanding at June 30, 2020 and December 31, 2019	$ —	$ —
Series B convertible preferred stock, $0.001 par value; 147,000 shares designated at June 30, 2020 and December 31, 2019; 200 shares issued and outstanding at June 30, 2020 and December 31, 2019	$ 1	$ 1
Series D convertible preferred stock, $0.001 par value; 21,300 shares designated at June 30, 2020 and December 31, 2019; no shares issued and outstanding at June 30, 2020 and December 31, 2019	$ —	$ —
Series E convertible preferred stock, $0.001 par value; 7,000 shares designated at June 30, 2020 and December 31, 2019; no shares issued and outstanding at June 30, 2020 and December 31, 2019	$ —	$ —
Series F convertible preferred stock, $0.001 par value; 10,621 shares designated at June 30, 2020 and December 31, 2019; no shares issued and outstanding at June 30, 2020 and December 31, 2019	$ —	$ —

2020 equity activity

In February 2020, the Company entered into an At Market Issuance Sales Agreement (the "Agreement") with respect to an at-the-market offering program ("ATM program"), under which the Company may offer and sell, from time to time at its sole discretion, shares of its common stock, par value $0.0001 per share (the "Common Stock"), having an aggregate offering price of up to $4,482,000 (the "Placement Shares"). The issuance and sale of the Placement Shares by the Company under the Agreement will be made pursuant to the Company's effective "shelf" registration statement on Form S-3. During the six months ended June 30, 2020, 2,348,619 shares of common stock were issued pursuant to the Agreement for net proceeds of $4,143,431.

In March 2020, the Company issued 31,000 shares of fully vested common stock with a value of $43,751 pursuant to a Separation Agreement between the Company and an employee. The shares issued reflected the $1.41 closing price of the Company's common stock as reported on the Nasdaq Capital Market on March 11, 2020.

In June 2020, the Company issued 4,364 shares of fully vested common stock with a value of $7,606 pursuant to the Company's 2010 Employee Stock Purchase Plan.

2019 equity activity

During the six months ended June 30, 2019, 2,998.2 shares of the Company's Series D Preferred Stock were converted into a total of 114,000 shares of Common Stock and 3,260.70 shares of the Company's Series E Preferred Stock were converted into a total of 123,981 shares of Common Stock.

11. Reverse Stock Split

On November 18, 2019, the Company effected a 1-for-10 reverse stock split of its Common Stock, or the Reverse Stock Split. The par value and other terms of the common stock were not affected by the Reverse Stock Split. Share, per share, and stock option amounts for all periods presented within the financial statements contained in the Quarterly Report on Form 10-Q, including the December 31, 2019 Balance Sheet amounts for Common Stock and additional paid-in capital, have been retroactively adjusted to reflect the Reverse Stock Split.

12. Commitments and Contingencies

The previously reported investigation by the Federal Trade Commission (the "Commission") regarding compliance of the Company's representations about its Quell® product with Sections 5 and 12 of the Federal Trade Commission Act was settled in March 2020. The defendants, Dr. Shai Gozani, NeuroMetrix, Inc. President and Chief Executive Officer, and the Company, did not admit any of the allegations in the Commission's proposed complaint. In the settlement, Dr. Gozani and the Company have agreed to certain modifications of Quell advertising claims. Further, the Commission was paid Four Million Dollars ($4,000,000) by Dr. Gozani, and the Company pledged to pay to the Commission future commercial milestone payments, if and when received, pursuant to a collaboration agreement with a third party. The settlement has been entered by the United States District Court for the District of Massachusetts.

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

You should read the following discussion of our financial condition and results of operations in conjunction with our financial statements and the accompanying notes to those financial statements included elsewhere in this Quarterly Report on Form 10-Q. This discussion contains forward-looking statements that involve risks and uncertainties. For a description of factors that may cause our actual results to differ materially from those anticipated in these forward-looking statements, please refer to the below section of this Quarterly Report on Form 10-Q titled "Cautionary Note Regarding Forward-Looking Statements." Unless the context otherwise requires, all references to "we", "us", the "Company", or "NeuroMetrix" in this Quarterly Report on Form 10-Q refer to NeuroMetrix, Inc.

Overview

NeuroMetrix develops and commercializes health care products that utilize non-invasive neurostimulation and digital medicine. Our core expertise in biomedical engineering has been refined over two decades of designing, building and marketing medical devices that stimulate nerves and analyze nerve response for diagnostic and therapeutic purposes. We created the market for point-of-care nerve testing and were first to market with sophisticated wearable technology for symptomatic relief of chronic pain. Our business is fully integrated with in-house capabilities spanning research and development, manufacturing, regulatory affairs and compliance, sales and marketing, product fulfillment and customer support. We derive revenues from the sale of medical devices and after-market consumable products and accessories. Our products are sold in the United States and select overseas markets. They are cleared by the U.S. Food and Drug Administration (FDA) and regulators in foreign jurisdictions where appropriate. We have two principal product lines:

- Point-of-care neuropathy diagnostic tests
- Wearable neurostimulation devices

Diabetes is a worldwide epidemic with an estimated affected population of over 400 million people. Within the United States, there are over 30 million people with diabetes and another 80 million people with pre-diabetes. The annual direct cost of treating diabetes in the United States exceeds $100 billion. Although there are dangerous acute manifestations of diabetes, the primary burden of the disease is in its long-term complications, which include cardiovascular disease, nerve disease and resulting conditions such as foot ulcers which may require amputation, eye disease leading to blindness, and kidney failure. The most common long-term complication of diabetes, affecting over 50% of the diabetic population, is nerve disease or neuropathy. Diabetic peripheral neuropathy (DPN) is the primary trigger for diabetic foot ulcers which may progress to the point of requiring amputation. People with diabetes have a 15-25% lifetime risk of foot ulcers and approximately 15% of foot ulcers lead to amputation. Foot ulcers are the most expensive complication of diabetes with a typical cost of $5,000 to $50,000 per episode. In addition, between 16% and 26% of people with diabetes suffer from chronic pain in the feet and lower legs.

Early detection of DPN is important because there are no treatment options once the nerves have degenerated. Today's diagnostic methods for DPN range from a simple monofilament test for lack of sensory perception in the feet to a nerve conduction study performed by a specialist. Our DPNCheck technology provides a rapid, low cost, quantitative test for peripheral nerve disease, including DPN. It addresses an important medical need and is particularly effective in screening large populations. DPNCheck has been validated in numerous clinical studies. We anticipated DPNCheck revenue growth in 2020; however, the effects of the COVID-19 pandemic on DPNCheck revenues are not yet capable of a clear assessment. We are investing R&D resources in the next generation technology to enhance the user experience, improve manufacturing, and restrict the potential use of non-compliant biosensors. Release of the new DPNCheck, forecast for late 2020 or early 2021, may also provide the opportunity for customer upgrades and expansion of product margins.

Chronic pain is a significant public health problem. It is defined by the National Institutes of Health (NIH) as pain lasting more than 12 weeks. This contrasts with acute pain, which is a normal bodily response to injury or trauma. Chronic pain conditions include low back pain, arthritis, fibromyalgia, neuropathic pain, cancer pain and many others. Chronic pain may be triggered by an injury or there may be an ongoing cause such as disease or illness. There may also be no clear cause. Pain signals continue to be transmitted in the nervous system over extended periods of time often leading to other health problems. These can include fatigue, sleep disturbance, decreased appetite, and mood changes, which cause difficulty in carrying out important activities and can contribute to disability and despair. In general, chronic pain cannot be cured. Treatment of chronic pain is focused on reducing pain and improving function. The goal is effective pain management.

Chronic pain affects over 100 million adults in the United States and more than 1.5 billion people worldwide. The estimated incremental impact of chronic pain on health care costs in the United States is over $250 billion per year and lost productivity is estimated to exceed $300 billion per year. The most common approach to chronic pain management is pain medication. This includes over-the-counter (OTC) internal and external analgesics as well as prescription pain medications, both non-opioid and opioid. The approach to treatment is individualized, drug combinations may be employed, and the results are often inadequate. Side effects, including the potential for addiction, are substantial. Increasingly, restrictions are being imposed on access to prescription opioids. Reflecting the complexity of chronic pain and the difficulty in treating it, we believe that inadequate relief leads 25% to 50% of pain sufferers to seek alternatives to prescription pain medications. These alternatives include nutraceuticals, acupuncture, chiropractic care, non-prescription analgesics, electrical stimulators, braces, sleeves, pads and other items. In total, these pain relief products and services account for approximately $20 billion in annual out-of-pocket spending in the United States.

Nerve stimulation is a long-established category of treatment for chronic pain. This treatment approach is available through implantable spinal cord stimulation requiring surgery with its attendant risks. Non-invasive approaches involving transcutaneous electrical nerve stimulation (TENS) have achieved limited efficacy in practice due to device limitations, ineffective dosing and low patient adherence.

Quell, our app-enabled wearable technology for chronic pain, is designed to address many TENS limitations. Over the past year we have restructured the Quell commercial model to achieve a positive net operating contribution after direct costs. Success in our continued efforts should position us to crossover to a net positive contribution during 2020. Most of our sales are direct-to-consumer via our e-commerce platform, www.QuellRelief.com.

When we are confident that we have secured this core commercial model, including efficient ad spending, our objective will turn to growth. This could encompass greater ad promotion in order to more rapidly expand the Quell user population, and it could include additional applications for the technology and, potentially, other markets.

Our GlaxoSmithKline (GSK) collaboration on Quell continues to be productive as we support GSK’s progress toward launch in markets outside the U.S. This collaboration was initiated in early 2018 and has delivered approximately $20.5 million to us in development milestones plus additional co-funded R&D.

Both DPNCheck and Quell are sophisticated neurotechnology products that are unique in their markets. Our goal for both products is the same: to optimize market positioning and financial performance for the benefit of our shareholders. It is possible that at a point in the future either of the product lines could be monetized, in whole or in part. For example, we may consider following the model we employed in selling to GSK rights to the Quell technology for markets outside the U.S.

Results of Operations

Comparison of Quarters Ended June 30, 2020 and 2019

Revenues

	Quarters Ended June 30,			
	2020	**2019**	Change	% Change
	(in thousands)			
Revenues	$ 1,360.0	$ 2,354.7	$ (994.7)	(42.2)%

Revenues include sales from Quell, DPNCheck and ADVANCE, our legacy neurodiagnostic product. Revenues were $1.4 million and $2.4 million during the second quarters of 2020 and 2019, respectively. Quell revenues of $0.4 million in the second quarter of 2020 declined from $0.8 million in the comparable 2019 period. DPNCheck revenues were $0.8 million and $1.2 million in the second quarters of 2020 and 2019, respectively. ADVANCE contributed $0.1 million and $0.3 million of revenue in the second quarters of 2020 and 2019, respectively. Product orders from late in the first quarter 2020 through the second quarter of 2020 were adversely affected by the economic effects of the COVID-19 pandemic.

Cost of Revenues and Gross Profit

	Quarters Ended June 30,			
	2020	**2019**	Change	% Change
	(in thousands)			
Cost of revenues	$ 495.1	$ 3,143.8	$ (2,648.7)	(84.3)%
Gross profit	$ 864.9	$ (789.1)	$ 1,654.0	(209.6)%

Gross margin was 63.6% in the second quarter of 2020 versus (33.5)% in the same period in the prior year. The negative gross margin in 2019 reflected a charge of $1.9 million to write down Quell Classic inventory to net realizable value. Excluding this charge, the gross margin rate in 2019 was 53.9%. The margin improvement in 2020 was due to improved profitability of Quell sales and increased weighting of our higher margin DPNCheck business within total revenue.

Operating Expenses

	Quarters Ended June 30			
	2020	**2019**	Change	% Change
	(in thousands)			
Operating expenses:				
Research and development	$ 660.3	$ 1,034.9	$ (374.6)	(36.2)%
Sales and marketing	379.1	1,373.9	(994.8)	(72.4)%
General and administrative	678.5	1,564.6	(886.1)	(56.6)%
Total operating expenses	$ 1,717.9	$ 3,973.4	$ (2,255.5)	(56.8)%

Research and Development

Research and development expense in the second quarter of 2020 decreased by 36.2% from the same period in the prior year due to reduced personnel related costs of $0.3 million.

Sales and Marketing

Sales and marketing expense in the second quarter of 2020 decreased by 72.4% from the same period in the prior year due to a $0.5 million reduction in Quell advertising spending and a $0.2 million reduction in consulting spending. In addition, personnel related costs decreased by $0.3 million.

General and Administrative

General and administrative expense in the second quarter of 2020 decreased by 56.6% from the same period in the prior year due to a reduction of $0.2 million in personnel related costs, a reduction of $0.5 million in outside professional service costs, primarily legal, and a decrease of $0.2 million in consulting spending.

Collaboration income

	Quarters Ended June 30,			
	2020	**2019**	Change	% Change
	(in thousands)			
Collaboration income	$ —	$ 1,381.8	$ (1,381.8)	(100.0)%

Collaboration income includes the development milestones funded by GSK under the Quell Collaboration.

Other income

	Quarters Ended June 30,			
	2020	**2019**	Change	% Change
	(in thousands)			
Other income	$ 1.1	$ 18.5	$ (17.4)	(94.1)%

Other income primarily includes interest income.

Comparison of Six Months Ended June 30, 2020 and 2019

Revenues

	Six Months Ended June 30,			
	2020	**2019**	Change	% Change
	(in thousands)			
Revenues	$ 3,532.0	$ 5,477.6	$ (1,945.6)	(35.5)%

Revenues include sales from Quell, DPNCheck and ADVANCE, our legacy neurodiagnostic product. During the six months ended June 30, 2020 total revenues decreased by $1.9 million, or 35.5%, from the six months ended June 30, 2019. Quell revenues of $1.0 million in the six months ended June 30, 2020 were lower than the prior year period by $1.5 million, or 59.1%, primarily due to the reduction of advertising promotion. DPNCheck revenues were $2.2 million and $2.4 million in the six months ended June 30, 2020 and 2019, respectively. ADVANCE contributed $0.4 million and $0.6 million of revenue in the six months ended June 30, 2020 and 2019, respectively. Product orders from late in the first quarter 2020 through the second quarter of 2020 were adversely affected by the economic effects of the COVID-19 pandemic.

Cost of Revenues and Gross Profit

	Six Months Ended June 30,			
	2020	2019	Change	% Change
	(in thousands)			
Cost of revenues	$ 1,115.3	$ 5,468.0	$ (4,352.7)	(79.6)%
Gross profit	$ 2,416.7	$ 9.6	$ 2,407.1	25,074.0 %

Our gross profit margin was 68.4% in the six months ended June 30, 2020 versus 0.2% in the same period in the prior year. The unusually low gross margin in 2019 reflected a charge of $2.6 million to write down Quell Classic inventory to net realizable value. Excluding this charge, the gross margin rate in 2019 was 47.5%. The margin improvement in 2020 was due to improved profitability of Quell sales and increased weighting of our higher margin DPNCheck business within total revenue.

Operating Expenses

	Six Months Ended June 30,			
	2020	2019	Change	% Change
	(in thousands)			
Operating expenses:				
Research and development	$ 1,193.9	$ 1,890.0	$ (696.1)	(36.8)%
Sales and marketing	803.5	3,399.2	(2,595.7)	(76.4)%
General and administrative	1,930.2	3,184.0	(1,253.8)	(39.4)%
Total operating expenses	$ 3,927.6	$ 8,473.2	$ (4,545.6)	(53.6)%

Research and Development

Research and development expense in the six months ended June 30, 2020 decreased by 36.8% from the same period in the prior year due to reduced personnel related costs of $0.6 million.

Sales and Marketing

Sales and marketing expense in the six months ended June 30, 2020 decreased by 76.4% from the same period in the prior year reflecting a reduction in advertising and promotion spending by $1.3 million. In addition, consulting costs decreased by $0.7 million and personnel related costs decreased by $0.5 million.

General and Administrative

General and administrative expense in the six months ended June 30, 2020 decreased by 39.4% from the same period in the prior year due to a reduction of $0.5 million in personnel related costs, and a reduction of $0.7 million in outside professional service costs, primarily legal.

Collaboration income

	Six Months Ended June 30,			
	2020	2019	Change	% Change
	(in thousands)			
Collaboration income	$ —	$ 7,116.7	$ (7,116.7)	(100.0)%

Collaboration income includes the development milestones funded by GSK under the Quell Collaboration.

Other income

	Six Months Ended June 30,			
	2020	**2019**	Change	% Change
	(in thousands)			
Other income	$ 1.6	$ 35.3	$ (33.7)	(95.5)%

Other income primarily includes interest income.

Liquidity and Capital Resources

Our principal source of liquidity is cash and cash equivalents of $5.4 million at June 30, 2020. Funding for our operations largely depends on revenues from the sale of our commercial products. A low level of market interest in Quell or DPNCheck, a decline in our consumables sales, unanticipated increases in our operating costs, and the continuing effects of the COVID-19 pandemic could have an adverse effect on our liquidity and cash.

	June 30, 2020	**December 31, 2019**	Change	% Change
	(in thousands)			
Cash and cash equivalents	$ 5,435.0	$ 3,126.2	$ 2,308.8	73.9%

During the six months ended June 30, 2020, our cash and cash equivalents increased by $2.3 million reflecting net proceeds of $4.1 million from common stock sales under our ATM program partially offset by $1.8 million cash used in operating activities.

In managing working capital, we focus on two important financial measurements:

	Quarters Ended June 30,		**Year Ended December 31,**
	2020	**2019**	**2019**
Days sales outstanding (days)	26	33	27
Inventory turnover rate (times per year)	1.7	5.5	3.5

Days sales outstanding (DSO) reflect customer payment terms which vary from payment on order to 60 days from invoice date. DSO was reduced during the quarter ended June 30, 2020 due to increased collection and lower receivables with terms.

The inventory turnover rate of 1.7 in the second quarter of 2020 reflected lower sales due to the impact of COVID-19. The inventory turnover rate during the quarter ended June 30, 2019 of 5.5 includes the effects of a $1.9 million inventory provision recorded in that quarter. Excluding this provision, the turnover rate was 1.1 during the quarter ended June 30, 2019.

The following sets forth information relating to our sources and uses of our cash:

	Six Months Ended June 30,	
	2020	2019
	(in thousands)	
Net cash used in operating activities (excluding collaboration income)	$ (1,831.8)	$ (6,582.4)
Net cash provided by collaboration income	—	4,760.1
Net cash used in operating activities	(1,831.8)	(1,822.3)
Net cash used in investing activities	$ (10.5)	—
Net cash provided by financing activities	4,151.0	—
Net cash (used) provided	$ 2,308.7	$ (1,822.3)

During the six months ended June 30, 2020, our operating activities consumed $1.8 million of cash offset by $4.2 million in net proceeds from sales of common stock.

We have reported recurring losses from operations and negative cash flows from operating activities. These factors raise substantial doubt about our ability to continue as a going concern for the one-year period from the date of issuance of these financial statements. The financial statements do not include any adjustments that might result from the outcome of this uncertainty. We held cash and cash equivalents of $5.4 million as of June 30, 2020. We believe that these resources and the cash to be generated from future product sales will be sufficient to meet our projected operating requirements into the third quarter of 2021. Accordingly, we will need to raise additional funds to support our operating and capital needs in the third quarter of 2021 and beyond.

We continue to face significant challenges and uncertainties. Among these uncertainties is the future effect on the Company's business of the COVID-19 pandemic which, in late first quarter of 2020 and throughout the second quarter of 2020, depressed sales of the Company's products. As a result, our available capital resources may be consumed more rapidly than currently expected due to (a) decreases in sales of our products, including decreases in customer orders related to the COVID-19 pandemic, and the uncertainty of future revenues from new products; (b) the effect of the COVID-19 pandemic on our ability to obtain parts and materials from our suppliers while continuing to staff critical production and fulfillment functions, (c) changes we may make to the business that affect ongoing operating expenses; (d) changes we may make in our business strategy; (e) regulatory developments affecting our existing products; (f) changes we may make in our research and development spending plans; and (g) other items affecting our forecasted level of expenditures and use of cash resources. We may attempt to obtain additional funding through public or private financing, collaborative arrangements with strategic partners, or through additional credit lines or other debt financing sources. However, we may not be able to secure such funding in a timely manner or on favorable terms, if at all. We filed a shelf registration statement on Form S-3 with the SEC covering shares of our common stock and other securities for sale, giving us the opportunity to raise funding when needed or otherwise considered appropriate at prices and on terms to be determined at the time of any such offerings. Pursuant to the instructions to Form S-3, we have the ability to sell shares under the shelf registration statement, during any 12-month period, in an amount less than or equal to one-third of the aggregate market value of our common stock held by non-affiliates. If we raise additional funds by issuing equity or debt securities, either through the sale of securities pursuant to a registration statement or by other means, our existing stockholders may experience dilution, and the new equity or debt securities may have rights, preferences and privileges senior to those of our existing stockholders. If we raise additional funds through collaboration, licensing or other similar arrangements, it may be necessary to relinquish valuable rights to our potential products or proprietary technologies, or grant licenses on terms that are not favorable to us. Without additional funds, we may be forced to delay, scale back or eliminate some of our sales and marketing efforts, research and development activities, or other operations and potentially delay product development in an effort to provide sufficient funds to continue our operations. If any of these events occurs, our ability to achieve our development and commercialization goals would be adversely affected.

Off-Balance Sheet Arrangements, Contractual Obligation and Contingent Liabilities and Commitments

As of June 30, 2020, we did not have any off-balance sheet financing arrangements.

Recent Accounting Pronouncements

In February 2016, the FASB issued Accounting Standards Update No. 2016-02, *Leases (Topic 842)* ("ASU 2016-02"). ASU 2016-02 required that lessees recognize virtually all of their leases on the balance sheet, by recording a right-of-use asset and lease liability. We adopted ASU 2016-02, using the modified retrospective method, upon its effective date of January 1, 2019. The impact of adoption was an increase to long-term assets and total liabilities of approximately $1.9 million as of January 1, 2019.

Cautionary Note Regarding Forward-Looking Statements

The statements contained in this Quarterly Report on Form 10-Q, including under the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and other sections of this Quarterly Report, include forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act, including, without limitation, statements regarding our or our management's expectations, hopes, beliefs, intentions or strategies regarding the future, such as our estimates regarding anticipated operating losses, future revenues and projected expenses, the effect of the COVID-19 pandemic on our operating capabilities, our future liquidity and our expectations regarding our needs for and ability to raise additional capital; our ability to manage our expenses effectively and raise the funds needed to continue our business; our belief that there are unmet needs for the management of chronic pain and in the diagnosis and treatment of diabetic neuropathy; our expectations surrounding Quell and DPNCheck; our expected timing and our plans to develop and commercialize our products; our ability to meet our proposed timelines for the commercial availability of our products; our ability to obtain and maintain regulatory approval of our existing products and any future products we may develop; regulatory and legislative developments in the United States and foreign countries; the performance of our third-party manufacturers; our ability to obtain and maintain intellectual property protection for our products; the successful development of our sales and marketing capabilities; the size and growth of the potential markets for our products and our ability to serve those markets; our estimate of our customer returns of our products; the rate and degree of market acceptance of any future products; our reliance on key scientific management or personnel; the payment and reimbursement methods used by private or government third party payers; and other factors discussed elsewhere in this Quarterly Report on Form 10-Q. The words "believe," "may," "will," "estimate," "continue," "anticipate," "intend," "expect," "plan" and similar expressions may identify forward-looking statements, but the absence of these words does not mean that a statement is not forward-looking. The forward-looking statements contained in this quarterly report are based on our current expectations and beliefs concerning future developments and their potential effects on us. There can be no assurance that future developments affecting us will be those that we have anticipated. These forward-looking statements involve a number of risks, uncertainties (some of which are beyond our control) or other assumptions that may cause actual results or performance to be materially different from those expressed or implied by these forward-looking statements. These risks and uncertainties include, but are not limited to, those factors described in the section titled "Risk Factors" in our Annual Report on Form 10-K. Should one or more of these risks or uncertainties materialize, or should any of our assumptions prove incorrect, actual results may vary from those projected in these forward-looking statements. We undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required under applicable securities laws.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

We do not use derivative financial instruments in our investment portfolio and have no foreign exchange contracts. Our financial instruments consist of cash and cash equivalents. We consider investments that, when purchased, have a remaining maturity of 90 days or less to be cash equivalents. The primary objectives of our investment strategy are to preserve principal, maintain proper liquidity to meet operating needs, and maximize yields. To minimize our exposure to an adverse shift in interest rates, we invest mainly in cash equivalents and short-term investments with a maturity of twelve months or less and maintain an average maturity of twelve months or less. We do not believe that a notional or hypothetical 10% change in interest rate percentages would have a material impact on the fair value of our investment portfolio or our interest income.

Item 4. Controls and Procedures

(a) *Evaluation of Disclosure Controls and Procedures*. Our principal executive officer and principal financial officer, after evaluating the effectiveness of our disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) as of June 30, 2020, have concluded that, based on such evaluation, our disclosure controls and procedures were effective to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms, and is accumulated and communicated to our management, including our principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

(b) *Changes in Internal Controls*. There were no changes in our internal control over financial reporting, identified in connection with the evaluation of such internal control that occurred during the quarter ended June 30, 2020 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

While we are not currently a party to any material legal proceedings, we could become subject to legal proceedings in the ordinary course of business. We do not expect any such potential items to have a significant impact on our financial position.

Item 1A. Risk Factors

There have been no material changes in the risk factors described in "Item 1A. Risk Factors" of our Annual Report on Form 10-K for the year ended December 31, 2019 other than the updated risk factors noted below.

Our financial condition and results of operations could be adversely affected by the ongoing coronavirus outbreak.

Any outbreak of contagious diseases, such as COVID-19, or other adverse public health developments, could have a material and adverse effect on our business operations. Such adverse effects could include disruptions or restrictions on the ability of our customers, distributors and suppliers to maintain normal business activities. It could also affect the ability of our personnel to perform their normal responsibilities and could result in temporary closures of our facilities. Beginning in the first quarter of 2020, our volume of product orders has been adversely impacted by COVID-19, which has had an adverse effect on our revenues.

As COVID-19 continues to affect individuals and businesses around the globe, we will likely continue to experience disruptions that could severely impact our business, including:

- restrictions on the conduct of our business imposed by governmental regulators;
- diversion or prioritization of healthcare resources away from diagnostic testing which uses our medical devices by physician clinics, hospitals, home testing services and other healthcare providers;
- supply chain disruption, including delays in fulfillment or cancellations of purchase orders by our parts and services suppliers which would hamper our manufacturing capabilities;
- limitations on employee resources that would otherwise be focused on our business activities, including because of sickness of employees or their families or requirements imposed on employees to avoid contact with large groups of people; and
- disruption in our distribution channels, including shipping providers and distributors.

Our results of operations could continue to be adversely affected to the extent that COVID-19 or any other epidemic harms our business or the economy in general either domestically or in any other region in which we do business. The extent to which COVID-19 affects our operations will depend on future developments, which are highly uncertain and cannot be predicted with confidence, including the duration of the outbreak, new information that may emerge concerning the severity of COVID-19 and the actions to contain COVID-19 or treat its impact, among others, which could have an adverse effect on our business and financial condition.

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

None.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

None.

Item 6. Exhibits

See the Exhibit Index on the page immediately preceding the exhibits for a list of exhibits filed as part of this quarterly report, which Exhibit Index is incorporated herein by this reference.

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.

NEUROMETRIX, INC.

July 23, 2020 /s/ SHAI N. GOZANI, M.D., PH. D.

Shai N. Gozani, M.D., Ph. D.

Chairman, President and Chief Executive Officer

July 23, 2020 /s/ THOMAS T. HIGGINS

Thomas T. Higgins

Senior Vice President, Chief Financial Officer and Treasurer

EXHIBIT INDEX

Exhibit No.	Description
31.1	Certification of Principal Executive Officer Under Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended, and pursuant to Section 302(a) of the Sarbanes-Oxley Act of 2002. Filed herewith.
31.2	Certification of Principal Financial Officer Required Under Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as amended, and pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. Filed herewith.
32	Certification of Principal Executive Officer and Principal Financial Officer Required Under Rule 13a-14(b) or Rule 15d-14(b) of the Securities Exchange Act of 1934, as amended, and 18 U.S.C. Section 1350. Furnished herewith.
101	The following materials from the Company’s Quarterly Report on Form 10-Q for the quarter ended June 30, 2020, formatted in XBRL (eXtensible Business Reporting Language): (i) Balance Sheets at June 30, 2020 and December 31, 2019, (ii) Statements of Operations for the quarter and six months ended June 30, 2020 and 2019, (iii) Statements of Changes in Stockholders' Equity for the six months ended June 30, 2020 and 2019, (iv) Statements of Cash Flows for the six months ended June 30, 2020 and 2019, and (v) Notes to Financial Statements.

EXHIBIT 31.1

CERTIFICATION

I, Shai N. Gozani, M.D., Ph.D., certify that:

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

Date: July 23, 2020

/s/ SHAI N. GOZANI, M.D., PH. D.

Shai N. Gozani, M.D., Ph.D.

Chairman, President and Chief Executive Officer

EXHIBIT 31.2

CERTIFICATION

I, Thomas T. Higgins, certify that:

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

Date: July 23, 2020

/s/ THOMAS T. HIGGINS

Thomas T. Higgins

Senior Vice President, Chief Financial Officer and Treasurer

EXHIBIT 32

CERTIFICATION

Pursuant to section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of section 1350, chapter 63 of title 18, United States Code), each of the undersigned officers of NeuroMetrix, Inc., a Delaware corporation (the "Company"), does hereby certify, to such officer's knowledge, that:

The Quarterly Report for the quarter ended June 30, 2020 (the "Form 10-Q") of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and the information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ SHAI N. GOZANI, M.D., PH. D.

Shai N. Gozani, M.D., Ph.D.
Chairman, President and Chief Executive Officer

/s/ THOMAS T. HIGGINS

Thomas T. Higgins
Senior Vice President, Chief Financial Officer and Treasurer

July 23, 2020

This certification is being furnished and not filed, and shall not be incorporated into any document for any purpose, under the Securities Exchange Act of 1934 or the Securities Act of 1933.