

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, DC 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 JUNE 30, 2019

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: 001-37685



PAVmed Inc.

(Exact Name of Registrant as Specified in Its Charter)

Delaware
(State or Other Jurisdiction of
Incorporation or Organization)

47-1214177
(IRS Employer
Identification No.)

One Grand Central Place
Suite 4600
New York, NY
(Address of Principal Executive Offices)

10165
(Zip Code)

(212) 949-4319
(Registrant's Telephone Number, Including Area Code)

Securities registered under Section 12(b) of the Exchange Act:

<u>Title of each class</u>	<u>Name of each exchange on which registered</u>
Common Stock, \$0.001 par value per share	The NASDAQ Stock Market LLC
Series Z Warrants, each to purchase one share of Common Stock	The NASDAQ Stock Market LLC
Series W Warrants, each to purchase one share of Common Stock	The NASDAQ Stock Market LLC

Securities registered under Section 12(g) of the Exchange Act: None

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 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, or a smaller reporting 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	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input checked="" type="checkbox"/>

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 August 12, 2019 there were 35,061,149 shares of the registrant's Common Stock, par value \$0.001 per share, outstanding.

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PART I. FINANCIAL INFORMATION
Item 1. Financial Statements

PAVMED INC.
and SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS
(unaudited)

	June 30, 2019	December 31, 2018
Assets		
Current assets		
Cash	\$ 6,908,068	\$ 8,222,119
Prepaid expenses and other current assets	97,576	238,040
Total current assets	7,005,644	8,460,159
Equipment, net	54,780	36,271
Total assets	7,060,424	8,496,430
Liabilities, Preferred Stock, and Stockholders' Deficit		
Current liabilities		
Accounts payable	1,427,056	1,738,837
Accrued expenses and other current liabilities	722,447	1,330,746
Senior Secured Convertible Note at fair value - face value principal of \$6,219,000 and \$7,750,00 as of June 30, 2019 and December 31, 2018, respectively	6,790,096	7,903,000
Total liabilities	8,939,599	10,972,583
COMMITMENTS AND CONTINGENCIES (NOTE 9)		
Stockholders' Equity (Deficit)		
Preferred stock, par value \$0.001, 20,000,000 shares authorized; Series B Convertible Preferred Stock, par value \$0.001, 1,113,201 and 1,069,941 shares issued and outstanding at June 30, 2019 and December 31, 2018, respectively		
	2,161,523	2,031,845
Common stock, par value \$0.001; 100,000,000 shares authorized, 34,139,220 and 27,142,979 shares issued and outstanding as of June 30, 2019 and December 31, 2018, respectively		
	34,139	27,143
Additional paid-in capital	40,518,952	32,619,282
Accumulated deficit	(44,251,062)	(36,992,911)
Total PAVmed Inc. Stockholders' Equity (Deficit)	(1,536,448)	(2,314,641)
Noncontrolling interest	(342,727)	(161,512)
Total Stockholders' equity (deficit)	(1,879,175)	(2,476,153)
Total Liabilities and Stockholders' Equity (Deficit)	\$ 7,060,424	\$ 8,496,430

See accompanying notes to the unaudited condensed consolidated financial statements.

PAVMED INC.
and SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(unaudited)

	Three Months Ended		Six Months Ended	
	June 30,		June 30,	
	2019	2018	2019	2018
Revenue	\$ —	\$ —	\$ —	\$ —
General and administrative expense	1,914,154	1,589,974	3,606,865	2,970,458
Research and development expense	1,405,060	1,148,811	2,856,010	1,712,029
Total operating expenses	<u>3,319,214</u>	<u>2,738,785</u>	<u>6,462,875</u>	<u>4,682,487</u>
Loss from operations	(3,319,214)	(2,738,785)	(6,462,875)	(4,682,487)
Other income (expense)				
Interest expense - Senior Secured Note	—	(500,304)	—	(1,000,608)
Change in fair value - Senior Secured Convertible Note	(161,108)	—	(720,059)	—
Debt extinguishment loss - Senior Secured Convertible Note	(258,811)	—	(259,812)	—
Series A and Series A-1 Exchange Offer - March 15, 2018 - incremental fair value - Series Z Warrants issued-upon-exchange of Series A-1 Warrants	—	—	—	(349,796)
Series W Warrants Exchange Offer - April 5, 2018 - incremental fair value - Series Z Warrants issued-upon-exchange of Series W Warrants	—	(766,456)	—	(766,456)
Modification - Series Z Warrant Agreement - June 1, 2018	—	(1,140,995)	—	(1,140,995)
Change in fair value - Series A Warrants derivative liability	—	—	—	(96,480)
Change in fair value - Series A Convertible Preferred Stock conversion option derivative liability	—	—	—	64,913
Other income (expense), net	(419,919)	(2,407,755)	(979,871)	(3,289,422)
Loss before provision for income tax	(3,739,133)	(5,146,540)	(7,442,746)	(7,971,909)
Provision for income taxes	—	—	—	—
Net loss - before noncontrolling interest	<u>(3,739,133)</u>	<u>(5,146,540)</u>	<u>(7,442,746)</u>	<u>(7,971,909)</u>
Net loss attributable to noncontrolling interest	145,522	81,200	314,273	81,200
Net loss - attributable to PAVmed Inc.	<u>(3,593,611)</u>	<u>(5,065,340)</u>	<u>(7,128,473)</u>	<u>(7,890,709)</u>
Less: Series B Convertible Preferred Stock dividends	(66,792)	(63,623)	(132,273)	(74,029)
Less: Series A-1 Convertible Preferred Stock dividends	—	—	—	(25,148)
Less: Series A Convertible Preferred Stock dividends	—	—	—	(26,487)
Series A and Series A-1 Exchange Offer - March 15, 2018 - incremental fair value - Series B Convertible Preferred Stock issued-upon-exchange of Series A Convertible Preferred Stock	—	—	—	(726,531)
Series A and Series A-1 Exchange Offer - March 15, 2018 - incremental fair value - Series B Convertible Preferred Stock issued-upon-exchange of Series A-1 Convertible Preferred Stock	—	—	—	199,241
Net loss attributable to PAVmed Inc. common stockholders	<u>\$ (3,660,403)</u>	<u>\$ (5,128,963)</u>	<u>\$ (7,260,746)</u>	<u>\$ (8,543,663)</u>
Net loss per share - attributable to PAVmed Inc. - basic and diluted	<u>\$ (0.13)</u>	<u>\$ (0.26)</u>	<u>\$ (0.26)</u>	<u>\$ (0.44)</u>
Net loss per share - attributable to PAVmed Inc. common stockholders - basic and diluted	<u>\$ (0.13)</u>	<u>\$ (0.27)</u>	<u>\$ (0.27)</u>	<u>\$ (0.48)</u>
Weighted average common shares outstanding - basic and diluted	<u>27,605,881</u>	<u>19,289,874</u>	<u>27,343,912</u>	<u>17,924,632</u>

See accompanying notes to the consolidated financial statements.

**PAVMED INC.
and SUBSIDIARIES**
CONDENSED CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIT)
for the THREE MONTHS ENDED JUNE 30, 2019

	PAVmed Inc. Stockholders' Equity (Deficit)							
	Series B Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Deficit	Noncontrolling Interest	Total
	Shares	Amount	Shares	Amount				
Balance at March 31, 2019	1,091,354	\$ 2,096,041	27,193,023	\$ 27,193	\$ 33,025,961	\$ (40,591,969)	\$ (225,760)	\$ (5,668,534)
Issue common stock - registered offerings, net	—	—	5,480,000	5,480	5,373,423	—	—	5,378,903
Issue common stock - Senior Secured Convertible Note	—	—	1,466,197	1,466	1,759,760	—	—	1,761,226
Series B Convertible Preferred Stock Dividends	21,847	65,482	—	—	—	(65,482)	—	—
Stock-based compensation	—	—	—	—	355,607	—	—	355,607
Stock-based compensation - majority-owned subsidiary	—	—	—	—	4,201	—	28,555	32,756
Loss	—	—	—	—	—	(3,593,611)	(145,522)	(3,739,133)
Balance as of June 30, 2019	<u>1,113,201</u>	<u>\$ 2,161,523</u>	<u>34,139,220</u>	<u>\$ 34,139</u>	<u>\$ 40,518,952</u>	<u>\$ (44,251,062)</u>	<u>\$ (342,727)</u>	<u>\$ (1,879,175)</u>

**PAVMED INC.
and SUBSIDIARIES**
CONDENSED CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIT)
for the SIX MONTHS ENDED JUNE 30, 2019

	PAVmed Inc. Stockholders' Equity (Deficit)							
	Series B Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Deficit	Noncontrolling Interest	Total
	Shares	Amount	Shares	Amount				
Balance at December 31, 2018	1,069,941	\$ 2,031,845	27,142,979	\$ 27,143	\$ 32,619,282	\$ (36,992,911)	\$ (161,512)	\$ (2,476,153)
Issue common stock - registered offerings, net	—	—	5,480,000	5,480	5,373,422	—	—	5,378,902
Issue common stock - Senior Secured Convertible Note	—	—	1,516,241	1,516	1,812,257	—	—	1,813,773
Series B Convertible Preferred Stock Dividends	43,260	129,678	—	—	—	(129,678)	—	—
Stock-based compensation	—	—	—	—	705,686	—	—	705,686
Stock-based compensation - majority-owned subsidiary	—	—	—	—	8,305	—	133,058	141,363
Loss	—	—	—	—	—	(7,128,473)	(314,273)	(7,442,746)
Balance as of June 30, 2019	<u>1,113,201</u>	<u>\$ 2,161,523</u>	<u>34,139,220</u>	<u>\$ 34,139</u>	<u>\$ 40,518,952</u>	<u>\$ (44,251,062)</u>	<u>\$ (342,727)</u>	<u>\$ (1,879,175)</u>

See accompanying notes to the consolidated financial statements.

PAVMED INC.
and SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN
SERIES A CONVERTIBLE PREFERRED STOCK and STOCKHOLDERS' EQUITY (DEFICIT)
for the THREE MONTHS ENDED JUNE 30, 2018

	PAVmed Inc. Stockholders' Equity (Deficit)							
	Series B Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Deficit	Noncontrolling Interest	Total
	Shares	Amount	Shares	Amount				
Balance at March 31, 2018	975,568	\$ 1,707,244	17,509,654	\$ 17,509	\$ 19,982,594	\$ (21,459,511)	\$ —	\$ 247,836
Equity Subscription Rights Offering, net of offering cost	—	—	9,000,000	9,000	9,199,326	—	—	9,208,326
Exchange Offer - April 5, 2018	—	—	—	—	766,456	—	—	766,456
Series Z Warrant Modification	—	—	—	—	1,140,995	—	—	1,140,995
Issue of common stock of majority-owned subsidiary	—	—	—	—	—	—	1,812	1,812
Share subscription receivable	—	—	—	—	—	—	(943)	(943)
Stock-based compensation	—	—	—	—	291,980	—	—	291,980
Stock-based compensation of majority-owned subsidiary	—	—	—	—	3,633	—	8,277	11,910
Net loss	—	—	—	—	—	(5,065,340)	(81,200)	(18,172,822)
Balance at June 30 2018	<u>975,568</u>	<u>\$ 1,707,244</u>	<u>26,509,654</u>	<u>\$ 26,510</u>	<u>\$ 31,384,984</u>	<u>\$ 26,524,851</u>	<u>\$ 72,054</u>	<u>\$ 6,521,833</u>

See accompanying notes to the consolidated financial statements.

**PAVMED INC.
and SUBSIDIARIES**
CONSOLIDATED STATEMENTS OF CHANGES IN
SERIES A CONVERTIBLE PREFERRED STOCK and STOCKHOLDERS' EQUITY (DEFICIT)
for the SIX MONTHS ENDED JUNE 30, 2018

	PAVmed Inc. Stockholders											
	PAVmed Inc. Stockholders' Equity (Deficit)											
	Series A Convertible Preferred Stock		Series B Convertible Preferred Stock		Series A-1 Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Deficit	Noncontrolling Interest	Total
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount				
Balance at December 31, 2017	249,667	\$ —	—	\$ —	357,259	\$ 1,032,650	14,551,234	\$ 14,551	\$ 14,012,053	\$ (17,907,611)	\$ —	\$ (2,848,357)
Underwritten public offering of common stock, net of offering cost	—	—	—	—	—	—	2,649,818	2,650	4,272,011	—	—	4,274,661
Equity Subscription Rights Offering, net of offering cost	—	—	—	—	—	—	9,000,000	9,000	9,199,326	—	—	9,208,326
Exercise - common stock purchase warrant, net of offering costs	—	—	—	—	—	—	308,602	309	20,604	—	—	20,913
Exchange Offer - March 15, 2018	(249,667)	—	975,568	1,707,244	(357,259)	(1,032,650)	—	—	1,406,640	(726,531)	—	1,354,703
Exchange Offer - April 5, 2018	—	—	—	—	—	—	—	—	766,456	—	—	766,456
Series Z Warrant Modification	—	—	—	—	—	—	—	—	1,140,995	—	—	1,140,995
Issue of common stock of majority-owned subsidiary	—	—	—	—	—	—	—	—	—	—	1,812	1,812
Share subscription receivable	—	—	—	—	—	—	—	—	—	—	(943)	943
Stock-based compensation	—	—	—	—	—	—	—	—	563,266	—	—	563,266
Stock-based compensation of majority-owned subsidiary	—	—	—	—	—	—	—	—	3,633	—	8,277	11,910
Net loss	—	—	—	—	—	—	—	—	—	(7,890,709)	(81,200)	(7,971,909)
Balance at June 30, 2018	—	\$ —	975,568	\$ 1,707,244	—	\$ —	26,509,654	\$ 26,510	\$ 31,384,984	\$ (26,524,851)	\$ (72,054)	\$ 6,521,833

See accompanying notes to the consolidated financial statements.

PAVMED INC.
and SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(unaudited)

	Six Months Ended June 30,	
	2019	2018
Cash flows from operating activities		
Net loss - before noncontrolling interest ("NCI")	\$ (7,442,746)	\$ (7,971,909)
Adjustments to reconcile net loss - before NCI to net cash used in operating activities		
Depreciation expense	6,549	3,605
Stock-based compensation	847,049	575,176
Change in fair value - Senior Secured Convertible Note	720,059	—
Debt extinguishment - Senior Secured Convertible Note	259,812	—
Interest expense added to principal of Senior Secured Note	—	194,570
Interest expense - amortization of debt discount - Senior Secured Note	—	611,467
Series A and Series A-1 Exchange Offer - March 15, 2018	—	349,796
Series W Warrants Exchange Offer - April 5, 2018	—	766,456
Modification expense - Series Z Warrant - June 1, 2018	—	1,140,995
Change in fair value - Series A Warrants derivative liability	—	96,480
Change in fair value - Series A Convertible Preferred Stock conversion option derivative liability	—	(64,913)
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	140,464	(1,603)
Accounts payable	(311,781)	432,792
Accrued expenses and other current liabilities	(608,299)	(38,267)
Net cash flows used in operating activities	<u>(6,388,893)</u>	<u>(3,902,149)</u>
Cash flows from investing activities		
Purchase of equipment	(25,058)	—
Net cash flows used in investing activities	<u>(25,058)</u>	<u>—</u>
Cash flows from financing activities		
Proceeds - issue of common stock - registered offerings	5,480,000	—
Payment - offering costs - registered offerings	(101,098)	—
Proceeds - issue of common stock in an underwritten public offering	—	4,388,099
Payment - offering costs - underwritten public offering	—	(113,438)
Proceeds - issue units - equity subscription rights offering	—	9,437,000
Payment - offering costs - equity subscription rights offering	—	(228,674)
Payment - Senior Secured Convertible Note - bi-monthly non-installment payments - cash	(279,002)	—
Proceeds - issue common stock - majority-owned subsidiary	—	869
Proceeds - issue of common stock upon exercise of warrants, net	—	20,913
Net cash flows provided by financing activities	<u>5,099,900</u>	<u>13,504,769</u>
Net (decrease) increase in cash	(1,314,051)	9,602,620
Cash, beginning of period	8,222,119	1,535,022
Cash, end of period	<u>\$ 6,908,068</u>	<u>\$ 11,137,642</u>

See accompanying notes to the consolidated financial statements.

PAVMED INC. AND SUBSIDIARY
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

Note 1 — The Company and Description of the Business

PAVmed Inc. (“PAVmed” or the “Company”) is a highly-differentiated multi-product technology medical device company organized to advance a broad pipeline of innovative medical technologies from concept to commercialization, employing a business model focused on capital efficiency and speed to market. Since inception on June 26, 2014, the Company’s activities have focused on advancing the lead products towards regulatory approval and commercialization, protecting its intellectual property, and building its corporate infrastructure and management team. The Company operates in one segment as a medical device company.

On May 8, 2018, Lucid Diagnostics Inc., a majority-owned subsidiary of the Company, was incorporated in the State of Delaware, and on May 12, 2018, Lucid Diagnostics Inc. entered into a license agreement with Case Western Reserve University (“CWRU”) with respect to the intellectual property and proprietary technologies referred to as EsoCheck™ and “EsoGuard™”.

To date, the Company has not recognized revenue. The ability to generate revenue depends upon the Company’s ability to successfully complete the development, obtain regulatory approval, and to initiate commercialization of its product candidates. Currently, the Company’s activities are focused principally on obtaining FDA clearance and initializing commercialization of the lead product candidates, including CarpX™, EsoGuard™, EsoCheck™, and PortIO™, along with advancing additional product candidates through their respective research and development phase, including DisappEAR™ and NextFlo™. The Company plans to incur research and development expenses for the foreseeable future from the continued development of its current and future product candidates.

The Company has financed its operations principally through the issuances of its common stock, preferred stock, warrants, and debt, including: proceeds from the April 28, 2016 closing of its IPO and more recently in 2019 from registered offerings of shares of common stock of the Company.

Collectively, PAVmed Inc. and Lucid Diagnostics Inc. have proprietary rights to the trademarks used herein, including, among others, PAVmed™, Lucid Diagnostics™, Calvus™, CarpX™, DisappEAR™, EsoCheck™, EsoGuard™, EsoCheck™ Cell Collection Device™, EsoCheck™ CCD™, EsoCheck™ Technology, NextCath™, NextFlo™, PortIO™, and “Innovating at the Speed of Life”™. Solely as a matter of convenience, trademarks and trade names referred to herein may or may not be accompanied with the requisite marks of “™” or “®”, however, the absence of such marks is not intended to indicate, in any way, either of PAVmed Inc. or Lucid Diagnostics Inc. will not assert, to the fullest extent possible under applicable law, its rights or the rights to such trademarks and trade names.

Note 2 — Summary of Significant Accounting Policies

Basis of Presentation

The accompanying unaudited condensed consolidated financial statements include the accounts of the Company and its wholly-owned and majority-owned subsidiaries. All intercompany transactions and balances have been eliminated in consolidation. The Company holds a majority ownership interest and has controlling financial interest in Lucid Diagnostics Inc., with the corresponding noncontrolling interest included as a separate component of consolidated stockholders' equity, including the recognition in the consolidated statement of the net loss attributable to the noncontrolling interest based on the minority ownership interest in the Company's majority-owned subsidiary Lucid Diagnostics Inc. and the corresponding noncontrolling interest.

The condensed balance sheet as of December 31, 2018, which has been derived from audited financial statements, and the unaudited condensed consolidated financial statements, have been prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP"), and applicable rules and regulations of the United States Securities and Exchange Commission ("SEC") regarding interim financial reporting. As permitted under SEC rules, certain footnotes or other financial information normally required by U.S. GAAP have been condensed or omitted, and accordingly the balance sheet as of December 31, 2018 has been derived from audited consolidated financial statements at such date but does not include all of the information required by U.S. GAAP for complete financial statements. These unaudited condensed consolidated financial statements have been prepared on the same basis as the Company's annual financial statements, and in the opinion of management, include all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of the Company's financial information. Certain items have been reclassified to conform to the current period presentation.

The results of operations for the three and six months ended June 30, 2019 are not necessarily indicative of the results to be expected for the year ending December 31, 2019 or for any other interim period or for any other future periods. The accompanying unaudited condensed consolidated financial statements and related financial information should be read in conjunction with the audited financial statements and related notes thereto as of and for the year ended December 31, 2018 included in the Company's Annual Report on Form 10-K filed with the SEC.

Going Concern

During the six months ended June 30, 2019, the Company incurred a loss attributable to PAVmed common stockholders of \$7.3 million, and negative cash flows from operating activities of \$6.4 million. As of June 30, 2019, the Company had negative working capital of \$1.9 million inclusive of approximately \$6.8 million of the estimated fair value of the Senior Secured Convertible Note classified as a current liability and approximately \$6.9 million of cash.

The Company anticipates incurring operating losses and does not expect to experience positive cash flows from operating activities and may continue to incur operating losses as it completes the development of its products, seeks regulatory approvals and clearances of such products, and begin to commercially market such products. These factors, which have existed since inception, are expected to continue, and raise substantial doubt about the Company's ability to continue as a going concern within one year after the date the accompanying condensed consolidated financial statements are issued.

The Company's ability to fund its operations is dependent upon management's plans, which include raising additional capital, refinance the debt upon maturity, obtaining regulatory approvals for its products currently under development, commercializing and generating revenues from products currently under development, and continuing to control expenses. However, there is no assurance the Company will be successful in these efforts.

The Company's unaudited condensed consolidated financial statements have been prepared on a going concern basis which contemplates the realization of assets and satisfaction of liabilities and commitments in the normal course of business. The unaudited condensed consolidated financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities should the Company be unable to continue as a going concern.

Recent Accounting Pronouncements

Adoption of new accounting principles

In February 2016, the Financial Accounting Standards Board ("FASB") issued ASU No. 2016-02, *Leases (Topic 842)* ("ASU 2016-02"), which establishes a right-of-use ("ROU") model requiring a lessee to recognize a ROU asset and a lease liability for all leases with terms greater than 12 months. Leases will be classified as either finance or operating, with classification affecting the pattern of expense recognition in the income statement. The new standard is effective for fiscal years beginning after December 15, 2018, including interim periods with those fiscal years. A modified retrospective transition approach is required for leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements, with certain practical expedients available. The Company adoption of ASC 842 as of January 1, 2019 did not have an effect on the Company's unaudited condensed consolidated financial position, results of operations, and cash flows.

Note 2 — Summary of Significant Accounting Policies - continued

Recent Accounting Pronouncements - continued

Recently issued accounting pronouncements, not yet adopted:

In June 2018, the FASB issued its Accounting Standards Update (“ASU”) 2018-07, Compensation—Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting (“ASU 2018-07), which, upon the effective date, will result in non-employee stock-based compensation to be within the scope of ASC-718, and will supersede ASC 505-50. A principal change of the new guidance is to eliminate the ASC 505-50 required periodic fair value remeasure (“mark-to-market”) and use of the “contractual term” as an input to the Black-Scholes option pricing model to calculate the estimated fair value of stock options issued to non-employees, in favor of the ASC 718 one-time measurement of the grant date fair value and use of an “expected term” as such valuation input, for non-employee stock-based compensation expense, as is currently done for employee stock-based compensation expense.

The amended ASC-718 non-employee stock-based compensation provisions are effective for public companies for fiscal years beginning after December 15, 2018, including interim periods within such fiscal year, and for all other companies for fiscal years beginning after December 15, 2019, and interim periods within fiscal years beginning after December 15, 2020. Early adoption is permitted, but no earlier than a company’s adoption of ASC Topic 606, Revenue from Contracts with Customers (“ASC 606). With respect to the Company and its majority-owned subsidiary, the amended ASC-718 non-employee stock-based compensation provisions are required to be adopted by no later than January 1, 2020, resulting from the Company’s “JOBS Act EGC Election” as discussed Company’s Annual Report of Form 10-K for the year ended December 31, 2018. Additionally, the Company, under its “JOBS Act EGC Accounting Standards Election”, adopted ASC 606 as of January 1, 2019, which is the required adoption date of ASC 606 for private companies. At this time, the Company and its majority-owned subsidiary continue to apply the guidance of ASC-505-50 with respect to non-employee stock-based compensation, subject-to the future adoption date of the amended ASC-718 provisions with respect to non-employee stock-based compensation.

In August 2018, the FASB issued ASU 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement*, which modifies the disclosure requirements on fair value measurement. The guidance is effective for annual periods beginning after December 15, 2019 and interim periods within those annual periods, and early adoption is permitted. The Company is evaluating the impact of this guidance on its unaudited condensed consolidated financial statements.

In July 2017, the FASB issued ASU 2017-11, *Earnings Per Share (Topic 260), Distinguishing Liabilities from Equity (Topic 480), Derivatives and Hedging (Topic 815) - Part I - Accounting for Certain Financial Instruments with Down-Round Features, and Part II - Replacement of the Indefinite Deferral for Mandatorily Redeemable Financial Instruments of Certain Nonpublic Entities and Certain Mandatorily Redeemable Noncontrolling Interests with a Scope Exception*. Principally, ASU 2017-11 amendments simplify the accounting for certain financial instruments with down-round features. The amendments require companies to disregard the down-round feature when assessing whether the instrument is indexed to its own stock, for purposes of determining liability or equity classification. Companies that provide earnings per share (EPS) data will adjust their basic EPS calculation for the effect of the down-round feature when triggered (i.e., when the exercise price of the related equity-linked financial instrument is adjusted downward because of the down-round feature) and will also recognize the effect of the trigger within equity. Additionally, ASU 2017-11 also addresses “navigational concerns” within the FASB ASC related to an indefinite deferral available to private companies with mandatorily redeemable financial instruments and certain noncontrolling interests, which has resulted in the existence of significant “pending content” in the ASC. The FASB decided to reclassify the indefinite deferral as a scope exception, which does not have an accounting effect. The guidance of ASU 2017-11 is effective for public business entities, as defined in the ASC Master Glossary, for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years, and for all other entities, the amendments are effective for fiscal years beginning after December 15, 2019, and interim periods within fiscal years beginning after December 15, 2020. Earlier adoption is permitted for all entities as of the beginning of an interim period for which financial statements (interim or annual) have not been issued or have not been made available for issuance. The Company is evaluating the impact of this guidance on its unaudited condensed consolidated financial statements.

Note 3 — Prepaid Expenses and Other Current Assets

Prepaid expenses and other current assets consisted of the following as of:

	June 30, 2019	December 31, 2018
Security deposits	\$ 14,250	\$ 14,250
Advanced payments to service providers and suppliers	83,326	223,790
Total prepaid expenses and other current assets	<u>\$ 97,576</u>	<u>\$ 238,040</u>

Note 4 — Equipment, Net

	June 30, 2019	December 31, 2018
Research and development equipment	\$ 62,590	\$ 40,380
Computer equipment	19,432	16,584
Equipment, gross	82,022	56,964
Less: accumulated depreciation	(27,242)	(20,693)
Equipment, net	<u>\$ 54,780</u>	<u>\$ 36,271</u>

Depreciation expense recognized was \$3,281 and \$6,549 for the three and six months ended June 30, 2019, respectively, and \$1,802 and \$3,605 for the three and six months ended June 30, 2018, respectively.

Note 5 — Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consisted of the following as of:

	June 30, 2019	December 31, 2018
Bonus	\$ 115,400	\$ 873,621
Payroll	—	145,937
Vacation	102,180	38,763
Employee Stock Purchase Plan	15,381	—
License agreement fee	222,553	222,553
Milestone payment	75,000	—
Operating expenses	191,933	49,872
Total accrued expenses and other current liabilities	<u>\$ 722,447</u>	<u>\$ 1,330,746</u>

The accrued bonus as of June 30, 2019 represents the estimated amount recognized on a pro rata basis during 2019 of the guaranteed bonus payment to the Company's Chief Executive Officer ("CEO") under the CEO Employment Agreement. At December 31, 2018, the accrued bonus represents the guaranteed bonus payment to the CEO and discretionary bonus payments to the CEO and other employees.

The accrued payroll at December 31, 2018 represents earned but unpaid salary payable to the Company's CEO for the period July 1, 2017 to January 31, 2018, under the terms of the previous Senior Secured Note, and was subsequently paid in January 2019.

The Employee Stock Purchase Plan ("ESPP") payable represents employee authorized withheld payroll deductions payable under the PAVmed Inc. ESPP. See Note 9, *Stock-Based Compensation*, for a discussion of the PAVmed Inc. ESPP.

The accrued license agreement fee as of June 30, 2019 and December 31, 2018 is the remaining unpaid balance of the license fee incurred in connection with the "CWRU License Agreement". The accrued milestone payment is with respect to the achievement of a milestone under the "CWRU License Agreement", as discussed in Note 6, *Agreements Related to Acquired Intellectual Property Rights*.

Note 6 — Agreements Related to Acquired Intellectual Property Rights

Patent License Agreement - Case Western Reserve University

On May 12, 2018, Lucid Diagnostics Inc., a majority-owned subsidiary of the Company, entered into a patent license agreement with Case Western Reserve University (“CWRU”), for the exclusive worldwide license of the intellectual property rights for two distinct proprietary technologies, referred to as “EsoCheck™”, an esophageal cell sample collection device, and EsoGuard™, a panel of methylated DNA biomarkers - the “CWRU License Agreement”.

Under the CWRU License Agreement, Lucid Diagnostics Inc. recognized an accrued license fee of approximately \$273,000, including an initial payment of \$50,000, and subsequent quarterly payments of \$50,000 until such fee is paid-in-full, provided, however, the commencement of the quarterly payments is subject to Lucid Diagnostics Inc. consummation of a bona fide financing with an unrelated third-party in excess of \$500,000. In this regard, the remaining balance of the CWRU License Agreement is unpaid and has been recognized as an accrued expense liability as of June 30, 2019 and December 31, 2018. The CWRU License Agreement fee was recognized on the May 12, 2018 effective date as a current period research and development expense, with the remaining unpaid balance included in accrued expenses and other current liabilities.

The CWRU License Agreement also provides for potential payments upon the achievement of certain product development and regulatory clearance milestones. In this regard, upon FDA approval on June 21, 2019 of the EsoCheck™ device, the Company incurred a \$75,000 research and development expense in connection with such milestone. If Lucid Diagnostics Inc. does not meet certain milestones listed in the CWRU License Agreement, then CWRU has the right, in its sole discretion, to require the Company to transfer to CWRU a percentage, varying up to 100%, of the shares of common stock of Lucid Diagnostics Inc. held by the Company. Lucid Diagnostics Inc. will also be required to pay a minimum annual royalty commencing the year after the first commercial sale of products resulting from the commercialization of the licensed intellectual property, with the minimum amount rising based on net sales of such product(s), if any. Such contingent milestone and /or royalty payments, if any, will be recognized in the period in which such payment obligations are incurred.

Reimbursement of patent fees under the CWRU License Agreement recognized as research and development expense was \$47,186 and \$78,148 in three and six months ended June 30, 2019, respectively. There were no such expenses in the corresponding periods of the prior year.

Patent License Agreement - Tufts University - Antimicrobial Resorbable Ear Tubes

In November 2016, the Company executed a Patent License Agreement (the “Tufts Patent License Agreement”) with Tufts University and its co-owners, the Massachusetts Eye and Ear Infirmary and Massachusetts General Hospital (the “Licensors”). Pursuant to the Tufts Patent License Agreement, the Licensors granted the Company the exclusive right and license to certain patents in connection with the development and commercialization of antimicrobial resorbable ear tubes based on a proprietary aqueous silk technology conceived and developed by the Licensors. Reimbursement of patent fees under the Tufts Patent License Agreement recognized as research and development expense was \$29,390 and \$33,258 in the three and six months ended June 30, 2019, respectively, and \$25,876 and \$61,713 in the three and six months ended June 30, 2018, respectively.

The Tufts Patent License Agreement also provides for potential payments from the Company to the Licensors upon the achievement of certain product development and regulatory clearance milestones as well as royalty payments on net sales upon the commercialization of products developed utilizing the licensed patents. The Company will recognize as a current period expense for contingent milestone payments or royalties in the period in which such payment obligations are incurred, if any.

Note 7 — Related Party Transactions

Effective October 31, 2018, a management services agreement with HCP/Advisors LLC, an affiliate of a former director of the Company, expired and was not renewed by the Company, and as such, no expense was incurred in the current year period. In the prior year period, the Company previously incurred an expense of \$75,000 and \$150,000 in the three and six months ended June 30, 2018, with such fees included in “general and administrative expenses”.

Note 8 — Commitments and Contingencies

The Company’s corporate office lease is on a month-to-month basis, with a 5% per annum increase in the monthly lease payment effective February 1 of each year, and the lease agreement may be cancelled with three months written notice. Total rent expense incurred under the corporate office space lease arrangement was \$32,992 and \$65,461 for the three and six months ended June 30, 2019, respectively and \$31,421 and \$62,344 for the three and six months ended June 30, 2018, respectively.

In the ordinary course of our business, particularly as we begin commercialization of our products, the Company may be subject to certain other legal actions and claims, including product liability, consumer, commercial, tax and governmental matters, which may arise from time to time. The Company does not believe it is currently a party to any other pending legal proceedings. Notwithstanding, legal proceedings are subject to inherent uncertainties, and an unfavorable outcome could include monetary damages, and excessive verdicts can result from litigation, and as such, could result in a material adverse impact on the Company’s business, financial position, results of operations, and /or cash flows. Additionally, although the Company has specific insurance for certain potential risks, the Company may in the future incur judgments or enter into settlements of claims which may have a material adverse impact on the Company’s business, financial position, results of operations, and /or cash flows.

We have employment agreements with certain of the Company’s executive officers, which provide for minimum salary and a guaranteed bonus with respect to the employment agreement with the Chief Executive Officer and discretionary bonus payments under the respective employment agreements with other executive officers. The employment agreements also provide for potential severance payments under certain events as defined in the respective employment agreements. The contingent severance compensation payment(s) obligations under each respective employment agreement, if any, will be recognized as a current period expense if and when such payment obligation is incurred.

Note 9 — Stock-Based Compensation

PAVmed Inc. 2014 Long-Term Incentive Equity Plan

The PAVmed Inc. 2014 Long-Term Incentive Equity Plan (“PAVmed Inc. 2014 Equity Plan”), adopted by the Company’s board of directors and stockholders in November 2014, is designed to enable the Company to offer employees, officers, directors, and consultants, as defined, an opportunity to acquire a proprietary interest in the Company. The PAVmed Inc. 2014 Equity Plan provides for the granting of stock options, stock appreciation rights, restricted stock awards, and other stock-based awards subject to limitations under applicable law. All awards under the PAVmed Inc. 2014 Equity Plan are subject to approval by the compensation committee of the Company’s board of directors. Stock options and restricted stock awards are issued and outstanding under the PAVmed Inc. 2014 Equity Plan.

A total of 7,951,081 shares of common stock of PAVmed Inc. are reserved for issuance under the PAVmed Inc. 2014 Equity Plan, with 2,648,406 shares available for grant as of June 30, 2019, exclusive of 500,854 PAVmed Inc. stock options previously granted outside the PAVmed Inc. 2014 Equity Plan.

PAVmed Inc 2014 Equity Plan - Stock Options

	Number Stock Options	Weighted Average Exercise Price	Aggregate Intrinsic Value
PAVmed Inc. 2014 Equity Plan - Stock Options			
Outstanding stock options at December 31, 2018	3,327,140	\$ 4.40	
Granted	1,825,000	\$ 1.00	
Exercised	—	\$ —	
Forfeited	(48,611)	\$ 5.00	
Outstanding stock options at June 30, 2019	5,103,529	\$ 2.71	\$ 257,500
Vested and exercisable stock options at June 30, 2019	2,620,019	\$ 3.83	\$ 43,292
Unvested stock options at June 30, 2019	2,483,510	\$ 1.53	\$ 214,208

The aggregate intrinsic value is computed as the difference between the quoted price of the PAVmed Inc. common stock on each of June 30, 2019 and December 31, 2018 and the exercise price of the underlying PAVmed Inc. stock options, to the extent such quoted price is greater than the exercise price.

During the six months ended June 30, 2019, an aggregate of 1,825,000 stock options were granted under the PAVmed Inc. 2014 Equity Plan, each with a ten year contractual term from date-of-grant, including:

March 2019 - 800,000 stock options granted to non-executive members of the Company’s board of directors and 950,000 stock options granted to employees and an executive member of the Company’s board of directors, with a grant date of March 7, 2019, an exercise price of \$1.00 per share of PAVmed Inc. common stock, and vesting ratably on a quarterly basis commencing March 31, 2019 and ending December 31, 2021; and,

May 2019 - 25,000 stock options granted to a non-employee consultant, with a grant date of May 21, 2019, an exercise price of \$1.10 per share of PAVmed Inc. common stock, and vesting ratably on a quarterly basis commencing June 30, 2019 and ending March 31, 2022; and,

June 2019 - 50,000 stock options granted to a new hire employee, with a grant date of June 3, 2019, an exercise price of \$1.08 per share of PAVmed Inc. common stock, and vesting ratably on a quarterly basis commencing June 30, 2019 and ending March 31, 2022.

In April 2019, 48,611 stock options previously granted under the PAVmed Inc. 2014 Equity Plan were forfeited upon expiring unexercised.

As of June 30, 2019, the weighted average remaining contractual term of outstanding stock options was 8.6 years for stock options outstanding and 7.8 years for stock options vested and exercisable, under the PAVmed Inc. 2014 Equity Plan.

PAVmed Inc 2014 Equity Plan - Restricted Stock Awards

On March 15, 2019, a total of 700,000 restricted stock awards were granted to employees under the PAVmed Inc. 2014 Equity Plan, representing a corresponding number of shares of common stock of the Company, which vest ratably on an annual basis commencing March 15, 2020 and ending March 15, 2022. The restricted stock awards are subject to forfeiture if the requisite service period is not completed. As of June 30, 2019, no restricted stock awards had vested.

Note 9 — Stock-Based Compensation - continued

PAVmed Inc Employee Stock Purchase Plan

The PAVmed Inc. Employee Stock Purchase Plan (“ESPP”), adopted by the Company’s board of directors effective April 1, 2019, with a reservation of 250,000 shares of PAVmed Inc. common stock, provides eligible employees the opportunity to purchase shares of PAVmed Inc. common stock through payroll deductions during six month periods, wherein the “purchase price per share” is the lower of 85% of the quoted closing price per share of PAVmed Inc. common stock at the beginning or end of each six month share purchase period. The PAVmed Inc. ESPP share purchase dates are April 1 and October 1, with an initial six month payroll deduction period of April 1, 2019 to September 30, 2019 with a corresponding share purchase date of October 1, 2019. The payroll deductions are included in accrued expense and other current liabilities, as discussed in Note 4, *Accrued Expense and Other Current Liabilities*.

Lucid Diagnostics Inc. 2018 Long-Term Incentive Equity Plan

The Lucid Diagnostics Inc. 2018 Long-Term Incentive Equity Plan (the “Lucid Diagnostics Inc. 2018 Equity Plan”) became effective on May 12, 2018 and is separate and apart from the PAVmed Inc. 2014 Equity Plan discussed above. The Lucid Diagnostics Inc. 2018 Equity Plan is designed to enable Lucid Diagnostics Inc. to offer employees, officers, directors, and consultants, as defined, an opportunity to acquire shares of common stock of Lucid Diagnostics Inc. The Lucid Diagnostics Inc. 2018 Equity Plan provides for the granting of stock options, stock appreciation rights, restricted stock awards, and other stock-based awards subject to limitations under applicable law. All awards are subject to approval by the Lucid Diagnostics Inc. board of directors. Stock options are issued and outstanding under the Lucid Diagnostics Inc. 2018 Equity Plan.

A total of 2,000,000 shares of common stock of Lucid Diagnostics Inc. are reserved for issuance under the Lucid Diagnostics Inc. 2018 Equity Plan, with 1,525,000 shares available for grant as of June 30, 2019, exclusive of 300,000 Lucid Diagnostics Inc. stock options previously granted outside the Lucid Diagnostics Inc. 2018 Equity Plan.

Lucid Diagnostics Inc 2018 Equity Plan - Stock Options

	Number Stock Options	Weighted Average Exercise Price
Lucid Diagnostics Inc. 2018 Equity Plan - Stock Options		
Outstanding stock options at December 31, 2018	375,000	\$ 0.60
Granted	400,000	\$ 1.00
Exercised	—	\$ —
Forfeited	—	\$ —
Outstanding stock options at June 30, 2019	<u>775,000</u>	<u>\$ 0.81</u>
Vested and exercisable stock options at June 30, 2019	<u>374,999</u>	<u>\$ 0.83</u>
Unvested stock options at June 30, 2019	<u>400,001</u>	<u>\$ 0.78</u>

During the six months ended June 30, 2019, an aggregate of 400,000 Lucid Diagnostics Inc. stock options were granted under the Lucid Diagnostics Inc. 2018 Equity Plan, each having a ten year contractual term from date-of-grant, including: 300,000 stock options granted to an employee of PAVmed Inc., with a grant date of February 18, 2019, an exercise price of \$1.00 per share of common stock of Lucid Diagnostics Inc., with 200,000 such stock options vesting immediately upon grant, and 100,000 of such stock options vesting ratably on a quarterly basis commencing March 31, 2019 and ending December 31, 2021; and, 100,000 stock options granted to an employee of PAVmed Inc., with a grant date of June 3, 2019, an exercise price of \$1.00 per share of common stock of Lucid Diagnostics Inc., vesting ratably on a quarterly basis commencing June 30, 2019 and ending March 31, 2022.

As of June 30, 2019, the weighted average remaining contractual term was 9.3 years for stock options outstanding and 9.3 years for stock options vested and exercisable, under the Lucid Diagnostics Inc. 2018 Equity Plan.

Note 9 — Stock-Based Compensation (continued)*Stock-Based Compensation Expense*

Consolidated stock-based compensation expense recognized for both the PAVmed Inc. 2014 Equity Plan and the Lucid Diagnostics Inc. 2018 Equity Plan, with respect to stock options and restricted stock awards, for the periods indicated, was as follows:

	Three Months Ended		Six Months Ended	
	June 30,		June 30,	
	2019	2018	2019	2018
General and administrative expenses	\$ 299,346	\$ 233,962	\$ 584,009	\$ 453,356
Research and development expenses	89,017	69,928	263,040	121,820
Total	\$ 388,363	\$ 303,890	\$ 847,049	\$ 575,176

The stock-based compensation expense related to stock options granted to employees and directors is based on the grant-date estimated fair value, and for stock options granted to non-employees is based on the vesting date estimated fair value, with the expense recognized on a straight-line basis over the award's requisite service period, which is generally the vesting period.

The consolidated research and development stock-based compensation expense presented above includes expense recognized by Lucid Diagnostics Inc. of \$4,202 and \$8,305 in the three and six months ended June 30, 2019, respectively, and \$3,633 in the three and six months ended June 30, 2018, with respect to stock options granted under the PAVmed Inc. 2014 Equity Plan to non-employees providing services to Lucid Diagnostics Inc., and \$28,555 and \$133,058 in the three and six months ended June 30, 2019 and \$8,277 in the three and six months ended June 30, 2018, with respect to stock options granted under the Lucid Diagnostics Inc. 2018 Equity Plan to PAVmed Inc. employees and to non-employees, each providing services to Lucid Diagnostics Inc.

As of June 30, 2019, with respect to PAVmed Inc. stock options, total unrecognized stock-based compensation expense of approximately \$1.7 million is expected to be recognized over the weighted average remaining requisite service period of 1.5 years; and, with respect to PAVmed Inc. restricted stock awards, total unrecognized stock-based compensation expense of approximately \$0.7 million is expected to be recognized over the weighted average remaining requisite service period of 2.7 years. As of June 30, 2019, with respect to Lucid Diagnostics Inc. stock options, total unrecognized stock-based compensation expense of approximately \$0.2 million is expected to be recognized over the weighted average remaining requisite service period of 2.2 years.

Stock-based compensation expense recognized for PAVmed Inc. stock options granted to employees and members of the board of directors was based on a weighted average estimated fair value of \$0.93 and \$1.23 per share of PAVmed Inc. common stock, during the six months ended June 30, 2019 and 2018, respectively, calculated using the following weighted average Black-Scholes valuation model assumptions:

	Six Months Ended June 30,	
	2019	2018
Risk free interest rate	2.3%	2.0%
Expected term of stock options (in years)	5.7	5.8
Expected stock price volatility	50%	50%
Expected dividend yield	0%	0%

Stock-based compensation expense recognized for PAVmed Inc. stock options granted to non-employees was based on a weighted average estimated fair value of \$1.90 and \$1.96 per share of PAVmed Inc. common stock, during the six months ended June 30, 2019 and 2018, respectively, calculated using the following weighted average Black-Scholes valuation model assumptions:

	Six Months Ended June 30,	
	2019	2018
Risk free interest rate	2.3%	2.6%
Expected term of stock options (in years)	8.7	9.0
Expected stock price volatility	60%	60%
Expected dividend yield	0%	0%

The PAVmed Inc. restricted stock awards granted to employees were measured at their grant date estimated fair value based on the date-of-grant quoted price per share of PAVmed Inc. common stock. The 700,000 restricted stock awards granted on March 15, 2019 had an aggregate fair value of \$742,000, recognized ratably over the requisite service period, which is the vesting period, commencing on the March 15, 2019 grant date and ending on the March 15, 2022 final vesting date. In this regard, the stock-based compensation expense recognized for such restricted stock awards in the three and six months ended June 30, 2019 was \$61,833 and \$82,444, respectively.

Note 9 — Stock-Based Compensation - continued

Stock-Based Compensation Expense - continued

Stock-based compensation expense recognized for Lucid Diagnostics Inc. stock options granted to employees during the three and six months ended June 30, 2019 was calculated using the following weighted average Black-Scholes valuation model assumptions:

	Six Months Ended June 30, 2019
Risk free interest rate	2.3%
Expected term of stock options (in years)	5.8
Expected stock price volatility	63%
Expected dividend yield	0%

There was no stock-based compensation expense recognized for Lucid Diagnostics Inc. stock options granted to employees in the corresponding prior year period.

Stock-based compensation expense recognized for Lucid Diagnostics Inc. stock options granted to non-employees during the six months ended June 30, 2019 and 2018 was calculated using the following weighted average Black-Scholes valuation model assumptions:

	Six Months Ended	
	June 30, 2019	June 30, 2018
Risk free interest rate	2.2%	2.9%
Expected term of stock options (in years)	9.1	9.9
Expected stock price volatility	62%	63%
Expected dividend yield	0%	0%

The Company uses the Black-Scholes valuation model to estimate the fair value of stock options granted under both the PAVmed Inc. 2014 Equity Plan and the Lucid Diagnostics Inc. 2018 Equity Plan, which requires the Company to make certain estimates and assumptions, with the weighted-average valuation assumptions for stock-based awards, as follows: weighted-average risk-free interest rate is based on the interest rate payable on U.S. Treasury securities in effect at the time of grant for a period commensurate with the assumed expected option term; expected term of stock options represents the period of time stock options are expected to be outstanding, which for employees is the expected term derived using the simplified method and for non-employees is the contractual term; expected stock price volatility is based on historical stock price volatilities of similar entities within the Company's industry over the period commensurate with the expected term of the stock option; and, expected dividend yield is based on annual dividends of \$0.00 as the Company has not historically paid, and does not expect to pay dividends for the foreseeable future.

Note 10 — Financial Instruments Fair Value Measurements

Recurring Fair Value Measurements

The fair value hierarchy table for the periods indicated is as follows:

	Fair Value Measurement on a Recurring Basis at Reporting Date Using ⁽¹⁾			
	Level-1 Inputs	Level-2 Inputs	Level-3 Inputs	Total
June 30, 2019				
Senior Secured Convertible Note	\$ —	\$ —	\$ 6,790,096	\$ 6,790,096
Totals	\$ —	\$ —	\$ 6,790,096	\$ 6,790,096
December 31, 2018				
Senior Secured Convertible Note	\$ —	\$ —	\$ 7,903,000	\$ 7,903,000
Totals	\$ —	\$ —	\$ 7,903,000	\$ 7,903,000

(1) As noted above, as presented in the fair value hierarchy table, Level-1 represents quoted prices in active markets for identical items, Level-2 represents significant other observable inputs, and Level-3 represents significant unobservable inputs.

Senior Secured Convertible Note

The Senior Convertible Note estimated fair value and face value principal, and the corresponding changes in estimated fair value and face value principal payable, as of each of the respective dates noted, are as follows:

	Fair Value	Face Value Principal Payable
Senior Secured Convertible Note - Six Months Ended June 30, 2019		
Balances - December 31, 2018	\$ 7,903,000	\$ 7,750,000
Less: repayment - bi-monthly Installment Amount - common stock	(193,750)	(193,750)
Less: repayment - Accelerated Installment Amount - common stock	(23,250)	(23,250)
Less: repayment - voluntary conversion price adjustments - common stock	(1,314,000)	(1,314,000)
Less: bi-monthly non-installment payments - cash	(279,002)	—
Less: bi-monthly non-installment payments - common stock	(22,961)	—
Fair value adjustment - six months ended June 30, 2019	720,059	—
Balances - June 30, 2019	\$ 6,790,096	\$ 6,219,000

In the six months ended June 30, 2019, the aggregate face value principal repayments of \$1,531,000 and \$22,961 of corresponding non-installment payments were settled by the issue of a total of 1,516,241 shares of common stock of the Company, and an additional \$279,002 of the non-installment payments were cash paid.

The fair value adjustments of \$720,059 as of June 30, 2019 was recognized as a current period expense, as no portion of such fair value adjustments resulted from instrument-specific credit risk of the Senior Convertible Note, as of the dates noted.

The estimated fair value of the Senior Convertible Note as of June 30, 2019 was computed using a combination of the present value of the Senior Convertible Note cash flows using a synthetic credit rating analysis' required rate of return and the Black-Scholes option pricing model, using the following assumptions:

Fair Value Assumptions	June 30, 2019
Senior Secured Convertible Note	
Fair value	\$ 6,790,096
Face value principal payable	\$ 6,219,000
Required rate of return	11.1%
Conversion price	\$ 1.60
Value of common stock	\$ 1.14
Expected term (years)	1.51
Volatility	53%
Risk free rate	1.8%
Dividend yield	0%

See Note 12, *Debt*, for further information with respect to the Senior Secured Convertible Note.

Note 11 — Debt

Senior Secured Convertible Note

In a private placement transaction with an institutional investor (“Investor”, “Lender”, and /or “Holder”) on December 27, 2018, the Company entered into a Securities Purchase Agreement under which it issued a Senior Secured Convertible Note, having an issue date of December 27, 2018, a contractual maturity date of December 31, 2020, a face value principal of \$7.75 million, and a stated interest rate of 7.875% per annum - the “Senior Convertible Note”.

Bi-Monthly Payments & Conversion

The Senior Convertible Note requires bi-monthly payments on the 15th calendar day and the last trading day of the month, commencing January 15, 2019 and ending December 31, 2020, including a contractually stated face value principal repayment, referred to as a bi-monthly Installment Amount, and a payment based on the outstanding face value principal and the 7.875% annual interest rate, referred to herein as a bi-monthly non-installment payment. The bi-monthly payments of January 15, 2019 through June 15, 2019 were non-installment payments only, and the bi-monthly payments from June 28, 2019 through December 31, 2020 include both the Installment Amount and the non-installment payment.

The Senior Convertible Note Installment Amount includes 35 bi-monthly payments of \$193,750 from June 28, 2019 through November 30, 2020, and two final payments of \$484,375 on each of December 15, 2020 and December 31, 2020, with such bi-monthly dates referred to as Installment Dates. Notwithstanding, future contractual Installment Amounts are reduced by additional face value principal repayments, with the reductions applied in reverse order of maturity of the bi-monthly Installment Amounts, starting with the final December 31, 2020 bi-monthly Installment Amount. In this regard, as of June 30, 2019, the future bi-monthly Installment Amounts have been reduced by an aggregate of \$1,337,250 resulting from conversions in excess of the contractual bi-monthly Installment Amount, including a series of “conversion price voluntary adjustments” and the “Accelerated Installment Amount”, each as discussed below.

At the election of the Holder, at any time after the December 27, 2018 issue date, the Senior Convertible Note may be converted into shares of common stock of the Company at an initial contractual conversion price of \$1.60 per share. As amended on April 11, 2019, commencing with the June 28, 2019 bi-monthly payment, the bi-monthly Installment Amount and non-installment payment will be paid by the issue of shares of common stock of the Company, subject to the satisfaction of customary equity conditions, including minimum price and volume thresholds, referred to as an Installment Conversion.

In addition to the bi-monthly Installment Amount, the Holder may elect to accelerate the conversion of future bi-monthly Installment Amounts, and interest thereon, referred to herein as an Acceleration Installment Amount, utilizing the then current conversion price of the most recent bi-monthly Installment Conversion, with such Accelerated Installment Amount subject to certain restrictions, as defined.

The Senior Convertible Note provides for a voluntary adjustment of the conversion price by at the discretion of the Company, with the consent of the Holder, wherein during the term of the Senior Convertible Note, the Company may at any time reduce the then current conversion price to any amount and for any period of time deemed appropriate by the board of directors of the Company. The Company’s board of directors have adopted guidelines surrounding such a Senior Convertible Note voluntary adjustment of the conversion price, if any, to be implemented by management when favorable market conditions exist for the Company to orderly and effectively reduce its outstanding debt to the investor. See below for a discussion of the conversion price voluntary adjustments.

Measurement and Recognition

The Senior Convertible Note is a debt host containing embedded features and /or options generally required to be bifurcated from the debt host and recognized as separate derivatives subject to initial and subsequent periodic estimated fair value measurements under FASB Topic ASC 815, *Derivatives and Hedging* (“ASC 815”). Notwithstanding, the Senior Convertible Note is being accounted for under the guidance of the “fair value option” (“FVO”) of FASB ASC Topic 825, *Financial Instruments* (“ASC 825”), including the FVO election provided for under ASC 825-10-15-4. As such, the Senior Convertible Note was initially measured at its December 27, 2018 issue-date estimated fair value and subsequently remeasured at estimated fair value on a recurring basis at each reporting period date, with changes in estimated fair value recognized as current period income or expense, to the extent such change is not the result of a change in the instrument-specific credit risk of the Senior Convertible Note. See Note 10, *Financial Instruments Fair Value Measurements*, for the Senior Convertible Note estimated fair value and face value principal and corresponding changes in fair value and face value principal payable.

In the three and six months ended June 30, 2019, the Company recognized a debt extinguishment loss of \$258,811 and \$259,812, respectively, resulting from the difference between the face value principal and corresponding non-installment payments, as noted above, and the fair value of the shares of common stock issued upon conversion, with such fair value measured as the respective issue date closing quoted price per share of the common stock of the Company.

Subsequent to June 30, 2019: with respect to the July 15, 2019 and July 31, 2019 bi-monthly payments, total Installment Amount of face value principal repayment of \$387,500 and the corresponding \$38,909 of bi-monthly non-installment payments were settled by the issue of a total of 491,773 shares of common stock of the Company, with a fair value of \$506,497. Additionally through August 12, 2019, total Acceleration Installment Amount face value principal repayments of \$380,500 and the corresponding \$328 of non-installment payment, was settled by the issue of 430,156 shares of common stock of the Company with a fair value of \$454,795, with the common stock fair value measured as the respective issue date closing quoted price per share of the common stock of the Company.

Note 11 — Debt - continued

Senior Secured Convertible Note - continued

Covenants and Other Provisions

The Company is subject to certain customary affirmative and negative covenants regarding the incurrence of indebtedness, the existence of liens, the repayment of indebtedness, the payment of cash in respect of dividends, distributions or redemptions, and the transfer of assets, and to have an unrestricted cash balance of at least \$1.75 million at each quarterly balance sheet date, among other provisions and covenants, including:

- * Through June 28, 2019, to the extent any portion of the Senior Convertible Note face value principal remains outstanding, the Company may not consummate the sale of any equity or equity-linked security at a price per share less than the initial conversion price of the Senior Convertible Note, without the consent of the Holder. After June 28, 2019, if any portion of the Senior Convertible Note remains outstanding, the Company may consummate the sale of any equity or equity-linked security provided the price per share is equal to or greater than the initial conversion price of the Senior Convertible Note and the aggregate consideration is less than or equal to \$5.0 million and compliance with the terms and conditions of the Senior Convertible Note as to the acceleration of Installment Repayments after giving effect to such issuance. These restrictions were waived by the Holder on April 11, 2019.
- * The Company agreed to hold a stockholder meeting by no later than June 28, 2019 to approve stockholder resolutions with respect to each of: approving an increase in the authorized shares of common stock of the Company to 100 million shares from the current 75 million shares; and approving the issuance of shares of common stock of the Company in connection with the Senior Convertible Note for the purposes of compliance with the stockholder approval rules of The Nasdaq Stock Market (“Nasdaq”). On June 26, 2019, the Company’s stockholders approved the Senior Convertible Note private placement transaction and also approved the increase to 100 million authorized shares.
- * During the three year period ended December 27, 2021, the Senior Convertible Note private placement investor may participate up to 50%, in future equity and equity-linked securities offered by the Company. The Company will not effect or enter an agreement to effect any variable rate transaction. On each of April 11, 2019, May 8, 2019, and June 25, 2019, the Investor waived the right to participate in the registered offerings of common stock of the Company in April, May, and June 2019, as such registered offerings are discussed in Note 14, *Stockholders’ Equity and Common Stock Purchase Warrants*.

Senior Secured Note

Interest expense recognized for the previous Senior Secured Note, which was repaid-in-full on December 27, 2018, was a total of \$500,304 and \$1,000,608 in the three and six months ended June 30, 2018, respectively, and was comprised of \$194,570 with respect to the 15% interest expense and \$305,734 related to the amortization of the debt discount, during the three months ended June 30, 2019; and, \$389,141 with respect to the 15% interest expense and \$611,467 related to the amortization of the debt discount, during the six months ended June 30, 2019.

Note 12 — Preferred Stock

The Company is authorized to issue 20 million shares of its preferred stock, par value of \$0.001 per share, with such designation, rights, and preferences as may be determined from time-to-time by the Company's board of directors.

There were 1,113,201 and 1,069,941 shares of Series B Convertible Preferred Stock (classified in permanent equity) issued and outstanding as of June 30, 2019 and December 31, 2018, respectively.

The Series B Convertible Preferred Stock is equity-classified, has a par value of \$0.001 per share, no voting rights, a stated value of \$3.00 per share, and is immediately convertible upon its issuance. At the holders' election, a share of Series B Convertible Preferred Stock is convertible into a number of shares of common stock of the Company at a common stock conversion exchange factor equal to a numerator and denominator of \$3.00, with each such numerator and denominator not subject to further adjustment, except for the effect of stock dividends, stock splits or similar events affecting the Company's common stock. The Series B Convertible Preferred Stock shall not be redeemed for cash and under no circumstances shall the Company be required to net cash settle the Series B Convertible Preferred Stock.

The PAVmed Inc. Certificate of Designation of Preferences, Rights, and Limitations of Series B Convertible Preferred Stock ("Series B Convertible Preferred Stock Certificate of Designation"), provides for dividends at a rate of 8% per annum based on the \$3.00 per share stated value of the Series B Convertible Preferred Stock, with such dividends compounded quarterly, accumulate, and are payable in arrears upon being declared by the Company's board of directors. The Series B Convertible Preferred Stock dividends from April 1, 2018 through October 1, 2021 are payable-in-kind ("PIK") in additional shares of Series B Convertible Preferred Stock. The dividends may be settled after October 1, 2021, at the option of the Company, through any combination of the issuance of additional Series B Convertible Preferred Stock, shares of common stock, and /or cash payment. The Series B Convertible Preferred Stock dividends are included in the calculation of basic and diluted net loss attributable to PAVmed Inc. common stockholders as applicable for each of the periods presented.

As of the six months ended June 30, 2019, the Company's board-of-directors have declared Series B Convertible Preferred Stock dividend payments totaling \$129,678 which have been settled by the issue of 43,260 shares of Series B Convertible Preferred Stock, including: dividends earned as of December 31, 2018 and payable January 1, 2019 of \$64,197 settled by the issue of 21,413 shares; and dividends earned as of March 31, 2019 and payable April 1, 2019 of \$65,481 settled by the issue of 21,847 shares. Subsequently, in August 2019, the Company's board-of-directors declared a Series B Convertible Preferred Stock dividend payment earned as of June 30, 2019 and payable July 1, 2019 of \$66,792 to be settled by the issue of 22,281 shares of Series B Convertible Preferred Stock. The July 1, 2019 Series B Convertible Preferred Stock dividend payment was not recognized as a dividend payable liability in the accompanying unaudited condensed consolidated balance sheet as the Company's board of directors had not declared such dividends payable as of June 30, 2019.

Note 13 — Stockholders' Equity and Common Stock Purchase Warrants

Common Stock

As of June 30, 2019 the Company is authorized to issue up to 100.0 million shares of common stock, par value of \$0.001 per share. There were 34,139,220 and 27,142,979 shares of common stock issued and outstanding as of June 30, 2019 and December 31, 2018, respectively, summarized as follows:

Shares of Common Stock Issued and Outstanding	
Issued and outstanding as of December 31, 2018	27,142,979
Registered offerings	5,480,000
Senior Secured Convertible Note conversion	1,516,241
Issued and outstanding as of June 30, 2019	34,139,220

- During the six months ended June 30, 2019, a total of 5,480,000 shares of common stock of the Company were issued in registered offerings, including 4,950,000 shares issued under common stock share subscription agreements entered into with individual investors and 530,000 shares issued under a placement agency agreement, resulting in total proceeds of \$5,480,000, before placement agent fees and legal fees of \$101,098.
- During the six months ended June 30, 2019, 1,516,241 shares of common stock of the Company were issued upon (partial) conversions of the Senior Secured Convertible Note. See Note 11, *Debt*, for further information with respect to the Senior Secured Convertible Note, including the issue of shares of common stock of the Company.

Subsequent to June 30, 2019, through August 12, 2019, an additional 921,929 shares of common stock of the Company were issued upon (partial) conversions of the Senior Secured Convertible Note. See Note 11, *Debt*, for further information with respect to the Senior Secured Convertible Note, including the issue of shares of common stock of the Company.

Common Stock Purchase Warrants

The following table summarizes outstanding warrants to purchase common stock of the Company at the dates indicated:

	Common Stock Purchase Warrants Issued and Outstanding at				
	June 30, 2019	Weighted Average Exercise Price /Share	December 31, 2018	Weighted Average Exercise Price	Expiration Date
Equity classified warrants					
Series Z Warrants	16,815,039	\$ 1.60	16,815,039	\$ 1.60	April 2024
UPO - Series Z Warrants	53,000	\$ 1.60	53,000	\$ 1.60	January 2022
Series W Warrants	381,818	\$ 5.00	381,818	\$ 5.00	January 2022
Series S Warrants	1,199,383	\$ 0.01	1,199,383	\$ 0.01	June 2032
Total	18,449,240	\$ 1.57	18,449,240	\$ 1.57	

Note 13 — Stockholders' Equity and Common Stock Purchase Warrants- continued

Noncontrolling Interest

The noncontrolling interest ("NCI") included as a component of consolidated total stockholders' equity for the periods indicated is as follows:

	Six Months Ended June 30, 2019	Year Ended December 31, 2018
NCI - equity (deficit) - beginning of period	\$ (161,512)	\$ —
Investment in majority-owned subsidiary	—	1,812
Net loss attributable to NCI	(314,273)	(204,072)
Lucid Diagnostics Inc. 2018 Equity Plan - stock-based compensation	133,058	40,748
NCI - equity (deficit) - end of period	\$ (342,727)	\$ (161,512)

The noncontrolling interest presented above is with respect to Lucid Diagnostics Inc., a majority-owned subsidiary of PAVmed Inc., formed in May 2018 in connection with the "CWRU License Agreement". As of June 30, 2019 and December 31, 2018, there were 10.0 million shares of common stock of Lucid Diagnostics Inc. issued and outstanding, of which PAVmed Inc. holds a 81.875% majority-interest ownership and has a controlling financial interest, with the remaining 18.125% minority-interest ownership held by CWRU and each of the three physician inventors of the of the intellectual property and proprietary technologies underlying the CWRU License Agreement. Accordingly, a provision of a noncontrolling interest (NCI) is included as a separate component of consolidated stockholders' equity, along with the recognition of a net loss attributable to the NCI.

See Note 7, *Agreements Related to Acquired Intellectual Property Rights*, for a discussion of the CWRU License Agreement, and Note 10, *Stock-Based Compensation*, for further information with respect to the Lucid Diagnostics Inc. 2018 Equity Plan.

Note 14 — Loss Per Share

The “Net loss per share - attributable to PAVmed Inc. - basic and diluted” and “Net loss per share - attributable to PAVmed Inc. common stockholders - basic and diluted” - for the respective periods indicated - is as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Numerator				
Net loss - as reported, before noncontrolling interest	\$ (3,739,133)	\$ (5,146,540)	\$ (7,442,746)	\$ (7,971,909)
Net loss attributable to noncontrolling interest	145,522	81,200	314,273	81,200
Net loss - as reported, attributable to PAVmed Inc.	\$ (3,593,611)	\$ (5,065,340)	\$ (7,128,473)	\$ (7,890,709)
Convertible Preferred Stock dividends ⁽¹⁾ :				
Series B	\$ (66,792)	\$ (63,623)	\$ (132,273)	\$ (74,029)
Series A-1	—	—	—	(25,148)
Series A	—	—	—	(26,487)
Series A and Series A-1 Exchange Offer - March 15, 2018 - deemed dividend - incremental fair value - Series B Convertible Preferred Stock issued-upon-exchange of Series A Convertible Preferred Stock	—	—	—	(726,531)
Series A and Series A-1 Exchange Offer - March 15, 2018 - Series B Convertible Preferred Stock issued-upon-exchange of Series A-1 Convertible Preferred Stock	—	—	—	199,241
Net loss attributable to PAVmed Inc. common stockholders	\$ (3,660,403)	\$ (5,128,963)	\$ (7,260,746)	\$ (8,543,663)
Denominator				
Weighted-average common shares outstanding basic and diluted ⁽²⁾⁽³⁾	27,605,881	19,289,874	27,343,912	17,924,632
Loss per share				
Basic and diluted				
- Net loss - as reported, attributable to PAVmed Inc.	\$ (0.13)	\$ (0.26)	\$ (0.26)	\$ (0.44)
- Net loss attributable to PAVmed Inc. common stockholders	\$ (0.13)	\$ (0.27)	\$ (0.27)	\$ (0.48)

- The convertible preferred stock dividends are included in the calculation of basic and diluted net loss attributable to PAVmed Inc. common stockholders for each respective periods presented, including: with respect to the prior year periods, the Series B Convertible Preferred Stock from March 16, 2018 to June 30, 2018, and each of the Series A-1 and Series A Convertible Preferred Stock from January 1, 2018 to March 15, 2018. See Note 12, *Preferred Stock*, for a further discussion of the dividends for each of the respective series of convertible preferred stock.
- Basic weighted-average number of shares of common stock outstanding for the period excludes common stock equivalent incremental shares, while diluted weighted average number of shares outstanding includes such incremental shares. Notwithstanding, as the Company was in a loss position for all periods presented, basic and diluted weighted average shares outstanding are the same, as the inclusion of the incremental shares would be anti-dilutive.
- The Series B Convertible Preferred Stock has the right to receive common stock dividends. As such, the Series B Convertible Preferred Stock would potentially been considered participating securities under the two-class method of calculating net loss per share. However, the Company has incurred net losses to-date, and the holders are not contractually obligated to share in the losses.

The following common stock equivalents have been excluded from the computation of diluted weighted average shares outstanding as their inclusion would be anti-dilutive:

	June 30,	
	2019	2018
Stock Options and Restricted Stock Awards - PAVmed Inc. 2014 Equity Plan	5,803,529	3,082,032
Unit purchase options - “UPO-Z” / “UPO-W” - as to shares of common stock	53,000	53,000
Unit purchase options - “UPO-Z” - as to shares underlying Series Z Warrants	53,000	—
Unit purchase options - “UPO-W” - as to shares underlying Series W Warrants	—	53,000
Series Z Warrants	16,815,039	16,815,039
Series W Warrants	381,818	381,818
Series S Warrants	1,199,383	1,199,383
Series B Convertible Preferred Stock	1,113,201	975,568
Total	25,418,970	22,559,840

Note 15 — Subsequent Events

Other Matters

Except as otherwise noted herein, the Company has evaluated subsequent events through the date of filing of this Quarterly Report on Form 10-Q and determined there to be no further events requiring adjustments to the unaudited condensed unaudited condensed consolidated financial statements and /or disclosures therein.

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

The following discussion and analysis of our unaudited condensed consolidated financial condition and results of operations should be read together with our Annual Report on Form 10-K for the year ended December 31, 2018 as filed with the SEC. Unless the context otherwise requires, references herein to "we", "us", and "our", and to the "Company" or "PAVmed" are to PAVmed Inc. and its subsidiaries, including its majority-owned subsidiary, Lucid Diagnostics Inc.

Forward-Looking Statements

This Quarterly Report on Form 10-Q, including the following discussion and analyses of our (unaudited) condensed consolidated financial condition and results of operations, contains forward-looking statements.

All statements, other than statements of historical facts, contained in this Quarterly Report on Form 10-Q, as well as "Risk Factors" section of this Annual Report on Form 10-K, including statements regarding our future results of operations and financial position, our estimates regarding expenses, future revenue, capital and operating expenditure requirements and needs for additional financing, our business strategy and plans and the objectives of management for future operations, and any statement of assumptions underlying or relating to the foregoing, are forward-looking statements. The words "may," "will," "should," "expects," "plans," "anticipates," "could," "intends," "target," "projects," "contemplates," "believes," "estimates," "predicts," "potential" or "continue" or the negative of these terms or other similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words.

We may not actually achieve the plans, intentions, and /or expectations disclosed in our forward-looking statements, and you should not rely on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations expressed or implied in the forward-looking statements we make. Factors which may cause such differences include, but are not limited to:

- our limited operating history;
- our financial performance, including our ability to generate revenue;
- our ability to obtain regulatory approval for commercialization of our products;
- the ability of our products to achieve market acceptance;
- our success in retaining or recruiting, or changes required in, our officers, key employees or directors;
- our reliance upon additional financings to fund ongoing operating losses;
- our ability to obtain additional financing;
- our ability to sustain status as a going concern;
- our ability to protect our intellectual property;
- our ability to complete strategic acquisitions;
- our ability to manage growth and integrate acquired operations;
- the liquidity and trading of our securities;
- our regulatory or operational risks;
- our status as an "emerging growth company" ("ECG") under the JOBS Act; and,
- the risks and uncertainties set forth in the "Risk Factors" section of our Annual Report on Form 10-K for the year ended December 31, 2018.

Furthermore, our forward-looking statements do not reflect the potential impact of any future financings, acquisitions, mergers, dispositions, joint ventures or investments we may make.

You should read this Quarterly Report on Form 10-Q and the Annual Report on Form 10-K for the year ended December 31, 2018, and the documents we have filed as exhibits to this Quarterly Report on Form 10-Q and the Annual Report on Form 10-K for the year ended December 31, 2018, completely and with the understanding our actual future results may be materially different from what we expect. We do not assume any obligation to update any forward-looking statements, whether as a result of new information, future events, or otherwise, except as required by applicable law.

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

Overview

PAVmed Inc. is a highly differentiated multi-product medical device company organized to advance a broad pipeline of innovative medical technologies we believe address unmet clinical needs and possess attractive market opportunities to commercialization. Since our inception on June 26, 2014, our activities have focused on advancing the lead products in our pipeline towards regulatory approval and commercialization, while protecting our intellectual property, and strengthening our corporate infrastructure and management team. As resources permit, we will continue to explore internal and external innovations that fulfill our project selection criteria without limiting ourselves to any target specialty or condition.

Our multiple products are in various phases of development and only EsoCheck™ has received clearance from the FDA. We have filed final nonprovisional patent applications for each of CarpX™ and PortIO™ and have obtained licenses for DisappEAR™ from Tufts University and a group of academic centers, and for EsoGuard™ and EsoCheck™ from Case Western Reserve University. In July 2018, we hired a Chief Commercial Officer to further develop and implement our commercialization strategy in the United States and commercialization partnerships worldwide. The following is a brief overview of our five lead medical technologies under development, including CarpX, EsoGuard and EsoCheck, PortIO, DisappEAR, and NextFlo™.

With respect to each of PAVmed Inc. and Lucid Diagnostics Inc., we have proprietary rights to the trademarks used herein, including, among others, PAVmed™, Lucid Diagnostics™, CalduS™, CarpX™, DisappEAR™, EsoCheck™, EsoGuard™, EsoCheck™ Technology, EsoGuard™ Technology, NextCath™, NextFlo™, PortIO™, and “Innovating at the Speed of Life”™, among others. Solely as a matter of convenience, trademarks and trade names referred to herein may or may not be accompanied with the requisite marks of “™” or “®”. However, the absence of such marks is not intended to indicate, in any way, either of PAVmed Inc. or Lucid Diagnostics Inc. will not assert, to the fullest extent possible under applicable law, its rights or the rights to such trademarks and trade names.

CarpX™

Our CarpX product is designed to be a minimally invasive device for the treatment of carpal tunnel syndrome (“CTS”) that is reimbursed under existing surgical codes. The Company believes CarpX will dramatically reduce recovery times compared to traditional open surgery and will target an estimated immediately addressable market opportunity exceeding \$1 billion with more than 600,000 traditional invasive CTS procedures performed in the United States each year. In addition, an estimated 1.5 million CTS patients continue to suffer in silence rather than undergoing traditional invasive surgery due to concerns over the prolonged recovery time associated with an open incision. CTS is the leading cause of worker’s compensation claims in the United States.

PAVmed has been working closely with the FDA to secure U.S. regulatory clearance of CarpX through the FDA’s 510(k) pathway, which is based on demonstrating substantial equivalence, or “SE,” to a previously cleared predicate device. CarpX is being manufactured in Massachusetts by a medical device contract manufacturer with lines scalable to accommodate demand for the foreseeable future following regulatory clearance. We have advanced, in partnership with our design and contract manufacturing partners, our CarpX product from concept to working prototypes, completed successful benchtop and cadaver testing confirming the device consistently cuts the transverse carpal ligament, as well as commercial design and development, and performed pre-submission verification and validation testing.

On November 27, 2017, we filed with the Federal Food and Drug Administration, or the “FDA,” a premarket notification submission for CarpX under section 510(k) of the Food, Drug and Cosmetic Act, or the “FDCA,” using a commercially available carpal tunnel release device as a predicate. The initial 510(k) application review period expired before the FDA’s branches were able to reach a consensus on SE and it therefore recommended a 510(k) re-submission following an in-person pre-submission meeting held on January 7, 2019. During this meeting, the FDA recommended clinical testing to definitively document CarpX procedural safety in humans and indicated data from a properly structured clinical study outside of the U.S. would be acceptable, precluding the need to engage in the FDA’s time-consuming Investigational Device Exemption, or “IDE,” process required for U.S. studies. PAVmed offered to amend its previously planned first-in-human, or “FIH,” clinical trial (ClinicalTrials.gov Identifier: NCT03747510) in New Zealand to meet this clinical testing recommendation and postponed the initiation of the amended study until study parameters were finalized with the FDA. We reached a consensus with the FDA on the parameters of the CarpX FIH safety study, including pre- and post-operative electrodiagnostic testing to document device safety. The CarpX FIH clinical trial is a single-arm, two-surgeon, 20-patient study of the CarpX procedure in carpal tunnel syndrome patients, with a device safety primary endpoint defined as the absence of certain serious device-related adverse events over a limited 90-day follow-up period.

In May 2019, the first group of nine patients with carpal tunnel syndrome underwent successful CarpX procedures as part of the first-in-human (FIH) clinical safety study PAVmed is conducting in support of our planned FDA 510(k) re-submission. The device functioned as a precision cutting instrument, consistent with its design and extensive preclinical testing. Complete division of the transverse carpal ligament, the protocol’s effectiveness endpoint, was confirmed by endoscopic visualization and there were no device-related adverse events. As per the protocol, these patients will undergo post-operative clinical follow-up at two weeks and 90 days, with repeat electrodiagnostic testing during the 90-day follow-up to document the protocol’s safety endpoint. The remaining patients in the clinical trial are expected to be completed in August 2019. Upon completion of 90-day follow-up for all patients in the FIH study, PAVmed will resubmit the CarpX 510(k) application incorporating the clinical safety and effectiveness data from the study. We will also be preparing to submit CarpX for CE Mark clearance in Europe which will incorporate data from the FIH clinical safety study.

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

Overview - continued

EsoCheck™ & EsoGuard™

cs Inc. ("Lucid"), our majority owned subsidiary, entered into a license agreement, or the "EsoGuard License Agreement," with Case Western Reserve University, or "CWRU," pursuant to which Lucid obtained the worldwide intellectual property rights to the "EsoGuard™ technology".

The "EsoGuard technology" is intended to detect the primary precursor condition to esophageal cancer, namely Barrett's Esophagus ("BE"), and includes two distinct proprietary technologies, the EsoCheck™ cell collection device, and the EsoGuard™ esophageal DNA assay. The EsoGuard (formerly EsoCheck Dx) esophageal DNA assay and the EsoCheck device, which collects cells from a targeted region of the esophagus in a five-minute office-based procedure, are revolutionary technologies licensed by Lucid. The EsoCheck cell collection device also has promising applications that are independent of EsoGuard.

The incidence of esophageal adenocarcinoma, or "EAC," the most common cancer of the esophagus, has quadrupled over the past 30 years. Its prognosis, however, remains dismal, with less than 20% of patients surviving five years. We are pursuing the development of the EsoGuard technology to provide the estimated 50 million at-risk patients a non-invasive, less costly test to detect BE to enable treatment of esophageal cancer at an early stage.

The primary cause of the EAC form of esophageal cancer is Gastroesophageal Reflux Disease, or "GERD," commonly known as chronic heartburn or acid reflux, wherein stomach acid refluxes into the esophagus. GERD affects 20-40% of Western adult populations, according to published epidemiological data. The repeated exposure to stomach acid can lead to pre-cancerous changes in the esophagus lining, a condition known as BE. Nearly all patients diagnosed with EAC have evidence of previously undetected BE. If detected before the EAC esophagus cancer develops, BE can be successfully treated, usually with non-surgical approaches. Heartburn symptoms, commonly seen in patients with acid reflux with or without BE, can easily be treated with over-the counter medications, while endoscopy, the current standard-of-care diagnostic test, is expensive, invasive, and requires sedation. As a result, widespread screening for BE is not currently practical or cost-effective.

EsoGuard™ technology is progressing through a two-phase regulatory and commercialization strategy which seeks to maximize the long-term commercial opportunity while providing near-term commercial milestones.

EsoGuard™ is a methylated DNA biomarker diagnostic test which has been shown in a published human study to be highly accurate at detecting BE, a precursor to highly lethal esophageal cancer in patients with chronic heart burn or acid reflux (GERD). Lucid believes that the EsoGuard diagnostic test, when performed on samples collected by EsoCheck, has the potential to save many lives through early BE detection. The estimated immediately addressable domestic market opportunity for EsoGuard is at least \$2 billion based on tens of millions of U.S. GERD patients who are BE screening candidates according to published guidelines.

The EsoGuard™ Laboratory Developed Test (LDT) validation process has been completed at the central reference laboratory in Cleveland. The process to secure Medicare and subsequently private payor reimbursement for the EsoGuard LDT is progressing steadily and on schedule. In March 2019, Lucid submitted EsoGuard to the American Medical Association (AMA) as the first step in the Proprietary Laboratory Analysis (PLA) process to secure a diagnostic Current Procedural Terminology (CPT) billing code. Since then EsoGuard has cleared three additional hurdles – technical advisory review, the CPT Editorial Review Panel, and the Center for Medicare and Medicaid Services (CMS) Clinical Laboratory Fee Schedule (CLFS) Annual Public Meeting in late June where actual proposed payment methodology and amounts were presented. In addition, Lucid has engaged a leading contract diagnostic organization to build custom EsoGuard specimen kits and perform key portions of the assay to support the marketing of the EsoGuard LDT.

In June 2019, we received 510(k) marketing clearance for the EsoCheck Cell Collection Device™ from the FDA, which determined that EsoCheck is substantially equivalent to legally marketed predicate devices for its indications for use, namely "the collection and retrieval of surface cells of the esophagus in the general population of adults, 22 years of age or older".

Lucid Diagnostics Inc. is also pursuing other indications for EsoCheck beyond its use to collect cells for the EsoGuard DNA test. It has engaged key advisors to begin utilizing EsoCheck in other common esophageal conditions such as Esophageal Candidiasis (a yeast infection of the esophagus which occurs in patients with compromised immune systems) and Eosinophilic Esophagitis (a common inflammatory condition of the esophagus).

The long-term strategy of Lucid Diagnostics Inc. is to secure a specific indication, based on published guidelines, for widespread BE screening using EsoGuard on samples collected with EsoCheck. This requires having the EsoGuard system cleared by the FDA as an In-Vitro Diagnostic (IVD) device, a process which is progressing at an accelerated pace in close collaboration with its medical and regulatory advisors, including the former director of the FDA's IVD office. An FDA pre-submission package outlining Lucid-sponsored clinical studies to be performed in support of this indication is complete and has been submitted along with a meeting request to discuss its clinical data requirements for a *de novo* or Pre-Market Approval (PMA) pathway submission.

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

Overview - continued

PortIO™

Our PortIO implantable intraosseous vascular access device is being developed for up to seven days of continuous use. The intraosseous route, which is well established, provides a means for infusing fluids, medications and other substances directly into the bone marrow cavity which communicates with the central venous circulation via nutrient and emissary veins.

We have advanced, in partnership with our design and contract manufacturing partners, our PortIO product from concept to working prototypes, benchtop, animal, and cadaver testing, commercial design and development, verification and validation testing. We are pursuing an FDA clearance for use in patients with a need for vascular access up to seven days, under *de novo* classification of section 513(f)2 of the FDCA. The broader "seven days" clearance is being pursued in discussion with FDA following our previous initial submission to the FDA for a 510(k) premarket notification for use in patients only requiring 24-hour emergency type vascular access. The FDA-requested long-term GLP animal study implants and explants have been completed as has supplemental acute animal and cadaver studies designed to support the findings of the GLP study. The data will be submitted to the FDA once pathologic analysis of the implant sites is completed. Based on encouraging animal data, we are planning a long-term (60-day implant duration) FIH series in dialysis patients in Colombia, South America and intend to fulfill the likely FDA request for human clinical data with an "outside-of-United States," or "OUS," study in New Zealand. CE Mark submission is also being planned and we continue to explore potential strategic partnerships including acquisition of PortIO. Of significance toward our belief PortIO will one day become the answer to solve many of the current drawbacks intravenous access devices regularly encounter, our supplemental animal testing demonstrated PortIO was effective as a long-term vascular access device for the infusion of a daily dose of antibiotics over 60 days and also demonstrated PortIO remained patent in another animal despite not being accessed for 60 days.

DisappEAR™

Our DisappEAR product is a resorbable pediatric ear tube based on a proprietary aqueous silk technology.

We have advanced the development of our DisappEAR product in partnership with our design and contract manufacturing partners and our academic partners at Tufts University and Harvard Medical School. A three-month animal study of the DisappEAR™ resorbable pediatric ear tube has been completed with excellent results. The resorbable ear tubes, machined from blocks of a proprietary silk technology, performed very well from a functional and anatomic point of view, retaining their position and remaining patent for the duration of the study. In addition, the ear tubes demonstrated unexpected surfactant properties which appear to provide several unique benefits over traditional plastic tubes, including enhanced flow of fluids in and out of the tube and potential intrinsic antimicrobial properties. Finally, there were no cases of otorrhea, which is a difficult to manage condition where pus and fluid drains out of the middle ear and into the ear canal. When traditional plastic ear tubes are used in clinical practice, as well as in this animal model, otorrhea typically occurs in at least 25-30% of recipients, despite administration of antibiotic ear drops. Additional animals are being followed for longer durations to confirm device stability and corroborate the low incidence of otorrhea. In vitro antimicrobial testing is also being performed to determine whether the surface properties have antimicrobial properties without the need for antibiotic coating.

NextFlo™

Our NextFlo product is being developed as a highly accurate intravenous infusion system with a new concept of variable flow resistors, whereby the variable resistor does not have to be mechanically linked to the infusion drive mechanism. We believe this technology will permit hospitals to return to gravity-driven infusions and eliminate expensive and troublesome electronic pumps for most of the over one million hospital infusions performed in the U.S. each day.

The NextFlo disposable intravenous (IV) infusion set has achieved a key milestone in its quest to eliminate the need for complex and expensive electronic infusion pumps for most of the estimated one million infusions of fluids, medications and other substances delivered each day in hospitals and outpatient settings in the United States. NextFlo is designed to deliver highly accurate gravity-driven infusions independent of the height of the IV bag. It maintains constant flow by incorporating a proprietary, passive, pressure-dependent variable flow-resistor consisting entirely of inexpensive, easy-to-manufacture disposable mechanical parts. NextFlo testing has demonstrated constant flow rates across a wide range of IV bag heights, with accuracy rates comparable to electronic infusion pumps. This major technological breakthrough has generated significant interest from potential strategic partners, and as a result, we are conducting a formal M&A process for NextFlo.

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

Overview - continued

Other Products

Although we have focused the majority of our resources on our lead products, we have additional products in our pipeline which are currently in different stages of development. We have completed initial design work on the first product in the NextCath™ product line, completed head-to-head testing of retention forces, comparing our working prototype to several competing products, which has validated our approach and advanced the commercial design and development process focusing on optimizing the self-anchoring helical portion as well as cost of materials and manufacturing processes.

We are evaluating which initial applications for our CalduSt™ disposable tissue ablation technology to pursue from a clinical and commercial point-of-view and will reinitiate development activity on this product once resources are available.

We are evaluating a number of product opportunities and intellectual property covering a spectrum of clinical conditions, which have been presented to us by clinician innovators and academic medical centers, for consideration of a partnership to develop and commercialize these products; we are also exploring opportunities to partner with larger medical device companies to commercialize our lead products as they move towards regulatory clearance and commercialization. In this regard, we remain actively engaged with our full-service regulatory consulting partner and who is working closely with our contract design, engineering and manufacturing partners as our products advance towards regulatory submission, clearance, and commercialization.

We are exploring other opportunities to grow our business and enhance shareholder value through the acquisition of pre-commercial or commercial stage products and /or companies with potential strategic corporate and commercial synergies consistent with our growth strategy.

Recent Developments

Regulatory

In June 2019, Lucid Diagnostics Inc., our majority owned subsidiary, received 510(k) marketing clearance for the EsoCheck Cell Collection Device™ from the FDA, which determined that EsoCheck is substantially equivalent to legally marketed predicate devices for its indications for use, namely “the collection and retrieval of surface cells of the esophagus in the general population of adults, 22 years of age or older”.

On August 22, 2018 we were notified by the FDA lead branch reviewing the 510(k) premarket notification submission for CarpX, the lead branch had not reached a consensus with the consulting branch within the review period allotted under the FDA's rules and regulations. Accordingly, the lead branch recommended we take the appropriate steps to extend the review process through resubmission of the 510(k) premarket notification following an in-person pre-submission meeting which was conducted on January 7, 2019. During this meeting, the FDA recommended clinical testing to definitively document CarpX procedural safety in humans and indicated data from a properly structured clinical study outside of the U.S. would be acceptable, precluding the need to engage in the FDA's time-consuming Investigational Device Exemption, or “IDE,” process required for U.S. studies. We offered to amend its previously planned first-in-human, or “FIH,” clinical trial (ClinicalTrials.gov Identifier: NCT03747510) in New Zealand to meet this clinical testing recommendation and postponed the initiation of the amended study until study parameters were finalized with the FDA. We reached a consensus with the FDA on the parameters of the CarpX FIH safety study, including pre- and post-operative electrodiagnostic testing to document device safety. The CarpX FIH clinical safety study is a single-arm, two-surgeon study of the CarpX procedure in approximately 20 carpal tunnel syndrome patients, with a device safety primary endpoint defined as the absence of certain serious device-related adverse events over a limited 90-day follow-up period.

In May 2019, we announced that the first group of nine patients with carpal tunnel syndrome underwent successful CarpX procedures as part of the first-in-human (FIH) clinical safety study we are conducting in support of our planned FDA 510(k) re-submission. The device functioned as a precision cutting instrument, consistent with its design and extensive preclinical testing. Complete division of the transverse carpal ligament, the protocol's effectiveness endpoint, was confirmed by endoscopic visualization and there were no device-related adverse events. As per the protocol, these patients will undergo post-operative clinical follow-up at two weeks and 90 days, with repeat electrodiagnostic testing during the 90-day follow-up to document the protocol's safety endpoint. The remaining patients in the clinical trial will be completed in August 2019. Upon completion of 90-day follow-up for all patients in the FIH study, PAVmed will resubmit the CarpX 510(k) application incorporating the clinical safety and effectiveness data from the study. We will also be preparing to submit CarpX for CE Mark clearance in Europe which will incorporate data from the FIH clinical safety study.

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

Overview - continued

Recent Developments - continued

Financing

As further discussed below under the section captioned *Liquidity and Capital Resources*, as of the six months ended June 30, 2019, we have raised approximately \$5.5 million before fees and expenses of approximately \$0.1 million from the issue of shares of our common stock in registered offerings.

In the six months ended June 30, 2019, the Senior Convertible Note Holder converted \$1,531,000 of face value principal and \$22,961 of corresponding earned but unpaid interest thereon (referred to as non-installment payments), into 1,516,241 shares of our common stock. During the three and six months ended June 30, 2019, we recognized a debt extinguishment loss of \$258,811 and \$259,812, respectively, resulting from the difference between the fair value of the shares issued, measured as the issue date closing price of the common stock, and the face value principal and interest settled upon conversion.

Subsequent to June 30, 2019: with respect to the July 15, 2019 and July 31, 2019 bi-monthly payments, total Installment Amount of face value principal repayment of \$387,500 and the corresponding \$38,909 of bi-monthly non-installment payments were settled by the issue of a total of 491,773 shares of common stock of the Company, with a fair value of \$506,497. Additionally, through August 12, 2019, total Acceleration Installment Amount face value principal repayment of \$380,500 and the corresponding \$328 of non-installment payment, was settled by the issue of 430,156 shares of common stock of the Company with a fair value of \$454,795, with the common stock fair value measured as the respective issue date closing quoted price per share of the common stock of the Company.

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

Financial Results of Operations

Revenue

To date, we have not generated any revenues from product sales. Our ability to generate product revenue and become profitable depends upon our ability to successfully complete the development and initiate the commercialization of our products.

General and administrative expenses

General and administrative expenses consist primarily of salaries and related costs for personnel, including travel expenses for our employees in executive and research and development functions, facility-related costs, professional fees, accounting and legal services, consultants and expenses associated with obtaining and maintaining patents within our intellectual property portfolio.

We anticipate our general and administrative expenses will increase in the future prior to the potential regulatory approval of our first product, as we anticipate an increase in payroll and related expenses related to our preparation for commercial operations, including as it relates to sales and marketing. We also anticipate continued expenses related to being a public company, including audit, legal, regulatory and tax-related services associated with maintaining compliance as a public company, director and officer insurance premiums and investor relations costs.

Research and development expenses

Research and development expenses are recognized in the period they are incurred and consist principally of internal and external expenses incurred for the research and development of our products, including:

- consulting costs charged to us by various external contract research organizations we contract with to conduct preclinical studies and engineering studies;
- salary and benefit costs associated with our chief medical officer;
- costs associated with regulatory filings;
- patent license fees;
- cost of laboratory supplies and acquiring, developing and manufacturing preclinical prototypes;
- product design engineering studies; and
- rental expense for facilities maintained solely for research and development purposes.

We plan to incur research and development expenses for the foreseeable future as we continue the development of our products. Our current research and development activities are focused principally on obtaining FDA clearance and initializing commercialization of the lead products in our pipeline, CarpX™, EsoCheck™, and EsoGuard™, along with advancing our DisappEAR™ and NextFlo™ products through their respective development phase, with research and development activities on our other portfolio products commensurate with available capital resources. These planned research and development activities include the following:

- completion of engineering design studies for our products;
- finalization of engineering designs and documentation supporting our products;
- additional engineering and preclinical studies through our contract research partners;
- preparation and filing of regulatory submissions with the FDA for our products; and
- establishing and documenting manufacturing processes for our products.

The successful development of our products is uncertain and subject to numerous risks including, but not limited to:

- the scope, rate of progress and expense of our research and development activities;
- the scope, terms and timing of obtaining regulatory clearances;
- the expense of filing, prosecuting, defending and enforcing patent claims;
- the continued access to expertise through outsourced suppliers for engineering and manufacturing; and
- the cost, timing and our ability to manufacture sufficient prototype and commercial supplies for our products.

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

Financial Results of Operations - continued

Comparison of the Three Months Ended June 30, 2019 and 2018

	Three Months Ended June 30,	
	2019	2018
Revenue	\$ —	\$ —
Operating expense		
General and administrative expense	1,914,154	1,589,974
Research and development expense	1,405,060	1,148,811
Total operating expense	<u>3,319,214</u>	<u>2,738,785</u>
Loss from operations	(3,319,214)	(2,738,785)
Other income (expense)		
Interest expense - Senior Secured Note	—	(500,304)
Change in fair value - Senior Secured Convertible Note	(161,108)	—
Debt extinguishment loss - Senior Secured Convertible Note	(258,811)	—
Series W Warrants Exchange Offer - April 5, 2018	—	(766,456)
Modification - Series Z Warrant Agreement - June 1, 2018	—	(1,140,995)
Other income (expense), net	(419,919)	(2,407,755)
Loss before income tax	(3,739,133)	(5,146,540)
Provision for income taxes	—	—
Net loss - before noncontrolling interest	(3,739,133)	(5,146,540)
Net loss attributable to noncontrolling interest	145,522	81,200
Net loss - attributable to PAVmed Inc.	<u>(3,593,611)</u>	<u>(5,065,340)</u>
Less: Series B Convertible Preferred Stock dividends	(66,792)	(63,623)
Net loss attributable to PAVmed Inc. common stockholders	<u>\$ (3,660,403)</u>	<u>\$ (5,128,963)</u>

Revenue

As discussed above, to date, we have not generated any revenues from product sales. Our ability to generate product revenue and become profitable depends upon our ability to successfully complete the development and initiate the commercialization of our products.

Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations- continued**Financial Results of Operations - continued***Comparison of the Three Months Ended June 30, 2019 and 2018 - continued**General and Administrative Expense*

	Three Months Ended June 30,		\$ Change	%Change
	2019	2018		
Compensation and related personnel costs	\$ 449,370	\$ 257,708	\$ 191,682	74%
Stock-based compensation	299,346	233,962	65,384	28%
Outside professional services	887,993	906,963	(18,970)	-2%
Facility related costs	47,135	40,600	6,535	16%
Board related costs	61,250	62,500	(1,250)	-2%
Other operating costs	169,060	88,241	80,819	92%
Total general and administrative expense	\$ 1,914,154	\$ 1,589,974	\$ 324,180	20%

General and administrative expenses incurred in the three months ended June 30, 2019 were \$1,914,154 an increase of \$324,180 as compared to \$1,589,974 incurred for corresponding prior year period. The increased general and administrative expenses for the current year period is principally due to increased expenses related to compensation and related personnel costs of \$191,682, stock based compensation of \$65,384, and \$80,819 in other operating costs, partially offset by decreases of \$18,970 in outside professional services and \$1,250 in board related costs.

The increased compensation and related personnel costs expense in the three months ended June 30, 2019 as compared to the corresponding prior year period, resulted from higher salary and benefit expense related to the hiring of additional personnel and annual salary increases.

The stock-based compensation expense classified as general and administrative expense includes stock options granted to both employees and non-employees and restricted stock awards granted to employees - under the PAVmed Inc. 2014 Long-Term Incentive Equity Plan (“PAVmed Inc. 2014 Equity Plan”). The stock-based compensation expense classified as general and administrative expense of \$299,346 incurred during the three months ended June 30, 2019 increased by \$65,384 as compared to the corresponding prior year period, principally resulting from stock options granted in the prior year after June 30, 2018, along with additional stock options and restricted stock awards granted in 2019, resulting in the recognition of stock based expense in the current period for which there is no such expense in the corresponding prior year period. See our unaudited condensed consolidated financial statements Note 9, *Stock-Based Compensation*, for a discussion of stock-based compensation expense recognized with respect to the PAVmed Inc. 2014 Equity Plan.

The outside professional services expense of \$887,993 incurred in the three months ended June 30, 2019 as compared to the corresponding prior year period, decreased by \$18,970 principally resulting from decreased expenses of \$219,163 associated with professional fees for legal services, which were higher in the prior year period in connection with our financing transactions, including various securities exchanges (for more information refer to the Company’s Annual Report on Form 10-K for the year ended December 31, 2018 filed with the SEC on April 2, 2019); the absence in the current year period of \$75,000 expense recognized in connection with consulting agreements with entities and /or individuals affiliated with certain of our officers and /or former directors, including with respect to the HCP/Advisors consulting agreement, with such consulting agreement having an October 31, 2018 expiration date; and, decreased expenses of \$49,526 related to regulatory matters. These decreases were partially offset by increased expenses of \$82,533 related to intellectual property matters, \$201,631 related to investor relations and, \$40,555 related to marketing activities, including trade shows and promotion.

The facility related costs of \$47,135 incurred in the three months ended June 30, 2019 increased by \$6,535 as compared to the corresponding prior year period, principally resulted from higher shipping and delivery fees, and higher rent expense associated with our corporate offices.

The board of director related costs of \$61,250 for the three months ended June 30, 2019 decreased slightly by \$1,250 as compared to the corresponding prior year period, principally resulting from changes in various committee assignments of the non-executive members in the current year as compared to the corresponding period in the prior year.

The other operating costs in the three months ended June 30, 2019 of \$169,060 increased \$80,819 as compared to the prior year period, principally resulting from higher travel related and insurance expenses.

Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations- continued

Financial Results of Operations - continued

Comparison of the Three Months Ended June 30, 2019 and 2018 - continued

Research and Development Expense

	Three Months Ended June 30,		\$ Change	%Change
	2019	2018		
Compensation and related personnel costs	\$ 376,845	\$ 128,318	\$ 248,527	194%
Stock-based compensation	89,017	69,928	19,089	27%
Outside professional services	856,667	676,170	180,497	27%
Patent license fee	—	272,553	(272,553)	-100%
Milestone	75,000	—	75,000	100%
Other operating costs	7,531	1,842	5,689	309%
Total research and development expense	\$ 1,405,060	\$ 1,148,811	\$ 256,249	22%

Research and development expenses incurred for the three months ended June 30, 2019 totaled \$1,405,060, an increase of \$256,249 as compared to \$1,148,811 incurred for the corresponding prior year period. The increase in research and development expenses resulted principally from increased expenses of \$248,527 related to compensation and related personnel costs, \$19,089 related to stock-based compensation, \$180,497 of increased expenses incurred for outside professional services, \$75,000 for a milestone payment, and \$5,689 of increased other operating costs, partially offset by a \$272,553 patent license fee incurred in the prior year period.

The increased compensation and related personnel costs expense of \$248,527 in the three months ended June 30, 2019 as compared to the corresponding prior year period, resulted from higher salary expense related to additional personnel, as well as annual salary increases.

The consolidated stock-based compensation expense classified as research and development expense includes such expense related to stock options granted to both employees and non-employees under both the PAVmed Inc. 2014 Long-Term Incentive Equity Plan (“PAVmed Inc. 2014 Equity Plan”) and the Lucid Diagnostics Inc. 2018 Long-Term Equity Plan (“Lucid Diagnostics Inc. 2018 Equity Plan”). The stock-based compensation expense classified as research and development expense of \$89,017 incurred in the three months ended June 30, 2019 increased by \$19,089 as compared to the corresponding prior year period, principally resulting from stock options granted in 2019, resulting in the recognition of stock based compensation expense in the current period for which there is no such expense in the corresponding prior year period, as well as recognition for the full period in the current as compared to a partial period in the prior year. See our unaudited condensed consolidated financial statements Note 9, *Stock-Based Compensation*, for a discussion of stock-based compensation expense recognized with respect to each of the PAVmed Inc. 2014 Equity Plan and the Lucid Diagnostics Inc. 2018 Equity Plan.

The outside professional services of \$856,667 in the three months ended June 30, 2019 was an increase of \$180,497 as compared to the corresponding prior year period. The increased outside professional services research and development expense principally resulted from our emphasis of current research and development activities, including clinical trials and animal studies, being focused principally on completion of on-going efforts to obtain FDA clearance and initializing commercialization of each of the CarpX™, EsoGuard™, and PortIO™ products, initializing commercialization of our FDA approved EsoCheck™, and to continue to advance the development of our DisappEAR™ and NextFlo™ products, as discussed above under “Overview”.

The patent license fee expense of \$272,553 incurred in the three months ended June 30, 2018 was in connection with the “CWRU License Agreement” with respect to “EsoCheck™” and “EsoGuard™”, as discussed above.

The milestone expense of \$75,000 incurred in the three months ended June 30, 2019 is in connection with the “CWRU License Agreement” with respect to the June 21, 2019 FDA approval of the “EsoCheck™” esophageal cell sample collection device as discussed above.

The increased other operating expenses in the three months ended June 30, 2019 as compared to the prior year period, principally resulted from higher depreciation expense, workers’ compensation insurance expense, and travel related costs.

Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations- continued

Financial Results of Operations - continued

Comparison of the Three Months Ended June 30, 2019 and 2018 - continued

Other Income and Expense

Senior Secured Convertible Note - Change in Fair Value and Debt Extinguishment Loss

On December 27, 2018, in a private placement transaction with an institutional investor - referred to as “Investor”, “Lender”, and /or “Holder” - the Company entered into a Securities Purchase Agreement under which it issued a Senior Secured Convertible Note, having an issue date of December 27, 2018, a contractual maturity date of December 31, 2020, a face value principal of \$7.75 million, and a stated interest rate of 7.875% per annum - the “Senior Convertible Note”. At the election of the Holder, the Senior Convertible Note may be converted into shares of common stock of the Company.

The Senior Convertible Note is accounted for under the guidance of the “fair value option” (“FVO”) of Financial Accounting Standards Board (“FASB”) Accounting Standards Codification™ (“ASC”) Topic 825, *Financial Instruments*, (“ASC 825”) including the FVO election provided for under ASC 825-10-15-4. As such, the Senior Convertible Note was initially measured at its December 27, 2018 issue-date estimated fair value and subsequently remeasured at estimated fair value on a recurring basis at each reporting period date, with changes in estimated fair value recognized as current period income or expense, to the extent such change is not the result of a change in the instrument-specific credit risk of the Senior Convertible Note.

The Senior Convertible Note fair value adjustments resulted in the recognition of an expense of in other income (expense) of \$161,109 in the three months ended June 30, 2019. As the Senior Convertible Note was issued on December 27, 2018, there is no such fair value adjustment recognized in the corresponding prior year period.

In the three months ended June 30, 2019, the aggregate face value principal repayments of \$1,479,500 and \$22,916 of corresponding non-installment payments were settled by the issue of a total of 1,466,187 shares of common stock of the Company, and \$119,811 of the non-installment payments were cash paid.

During the three months ended June 30, 2019, the Company recognized a debt extinguishment loss of \$258,811, resulting from the difference between the face value principal and corresponding non-installment payments, as noted above, and the fair value of the shares of common stock issued upon conversion, with such fair value measured as the respective issue date closing quoted price per share of the common stock of the Company.

The estimated fair value of the Senior Convertible Note as of each of the respective dates noted were each computed using a combination of the present value of its cash flows using a synthetic credit rating analysis’ required rate of return and the Black-Scholes option pricing model, using the Company’s common stock price, the Company’s dividend yield, the risk-free rates based on U.S. Treasury security yields, estimated volatility in the value of the Company’s common stock, and the Senior Convertible Note stated conversion price.

See our unaudited condensed consolidated financial statements Note 10, *Financial Instruments Fair Value Measurements*, and Note 12, *Debt*, for a further discussion of the Senior Secured Convertible Note.

Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations- continued

Financial Results of Operations - continued

Comparison of the Three Months Ended June 30, 2019 and 2018 - continued

Other Income and Expense - continued

Senior Secured Note - Interest Expense

In July 2017, we previously entered into a Note and Security Purchase Agreement with Scopia Holdings LLC (“Scopia” or the “Lender”), whereupon Scopia delivering to us \$4.8 million in net cash proceeds, we issued to Scopia a Senior Secured Note with an initial principal of \$5.0 million, referred to herein as the “Senior Secured Note”, and also issued 2,660,000 Series S Warrants to Scopia to purchase a corresponding number of shares of common stock of the Company.

On December 27, 2018, concurrent with the issue of the Senior Convertible Note as discussed above, we repaid-in-full the previously issued Senior Secured Note, inclusive of the total outstanding principal payable and the accrued but unpaid interest expense payable as of December 27, 2018, with such repayment comprised of a \$5.0 million cash payment and the issue of 600,000 shares of our common stock.

The Senior Secured Note annual interest rate was 15.0%, with interest payable semi-annually in arrears on June 30 and December 30 of each calendar year, commencing December 30, 2017 (“15% interest expense”). The Senior Secured Note total interest expense of \$500,304 recognized in the three months ended June 30, 2018, was comprised of \$194,570 with respect to the 15% interest expense and \$305,734 related to the amortization of the debt discount.

For more information on the Senior Secured Note with Scopia Holdings, LLC refer to the Company’s Annual Report on Form 10-K for the year ended December 31, 2018 filed with the SEC on April 2, 2019.

Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations- continued

Financial Results of Operations - continued

Comparison of the Three Months Ended June 30, 2019 and 2018 - continued

Other Income and Expense - continued

Modification Expense - Series W Warrants Exchange Offer - April 5, 2018 ‘

A total of 5,075,849 Series Z Warrants were issued-upon-exchange of 10,151,682 Series W Warrants, in an exchange offer transaction referred to as the “Series W Warrants Exchange Offer” and the “April 5, 2018 Exchange Date”. For more information on the Series W Exchange Offer refer to the Company’s Annual Report on Form 10-K for the year ended December 31, 2018 filed with the SEC on April 2, 2019.

The Series W Warrant Exchange Offer, as discussed above, resulted in the recognition of a modification expense of \$766,456, which was recognized on the April 5, 2018 Exchange Date as a current period modification expense in other income (expense), with a corresponding increase to additional paid in capital, as the Series Z Warrants are equity classified.

Modification Expense - Series Z Warrant Agreement Amendment - June 1, 2018

The Series Z Warrant exercise price initially was \$3.00 per share through May 31, 2018, and then \$1.60 per share effective June 1, 2018, wherein, on May 15, 2018, the Company’s board of directors approved a reduction to the Series Z Warrant exercise price to \$1.60 per share, effective June 1, 2018. For more information on the Z Warrant exercise price modification refer to the Company’s Annual Report on Form 10-K for the year ended December 31, 2018 filed with the SEC on April 2, 2019

The Series Z Warrant exercise price adjustment to \$1.60 per share from \$3.00 per share, as discussed above, resulted in the recognition of a modification expense on the June 1, 2018 of \$1,140,995 included in other income (expense), with a corresponding increase to additional paid-in capital, as the Series Z Warrants are equity classified.

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

Financial Results of Operations - continued

Comparison of the Six Months Ended June 30, 2019 and 2018

	Six Months Ended June 30,	
	2019	2018
Revenue	\$ —	\$ —
Operating expense		
General and administrative expense	3,606,865	2,970,458
Research and development expense	2,856,010	1,712,029
Total operating expense	<u>6,462,875</u>	<u>4,682,487</u>
Loss from operations	(6,462,875)	(4,682,487)
Other income (expense)		
Interest expense - Senior Secured Note	—	(1,000,608)
Change in fair value - Senior Secured Convertible Note	(720,059)	—
Debt extinguishment loss - Senior Secured Convertible Note	(259,812)	—
Series A and Series A-1 Exchange Offer - March 15, 2018	—	(349,796)
Series W Warrants Exchange Offer - April 5, 2018	—	(766,456)
Modification - Series Z Warrant Agreement - June 1, 2018	—	(1,140,995)
Change in fair value - Series A Warrants derivative liability	—	(96,480)
Change in fair value - Series A Convertible Preferred Stock conversion option derivative liability	—	64,913
Other income (expense), net	(979,871)	(3,289,422)
Loss before income tax	(7,442,746)	(7,971,909)
Provision for income taxes	—	—
Net loss - before noncontrolling interest	(7,442,746)	(7,971,909)
Net loss attributable to noncontrolling interest	314,273	81,200
Net loss - attributable to PAVmed Inc.	<u>(7,128,473)</u>	<u>(7,890,709)</u>
Less: Series B Convertible Preferred Stock dividends	(132,273)	(74,029)
Less: Series A-1 Convertible Preferred Stock dividends	—	(25,148)
Less: Series A Convertible Preferred Stock dividends	—	(26,487)
Series A and Series A-1 Exchange Offer - March 15, 2018 - incremental fair value - Series B Convertible Preferred Stock issued-upon-exchange of Series A Convertible Preferred Stock	—	(726,531)
Series A and Series A-1 Exchange Offer - March 15, 2018 - incremental fair value - Series B Convertible Preferred Stock issued upon exchange of Series A-1 Convertible Preferred Stock	—	199,241
Net loss attributable to PAVmed Inc. common stockholders	<u>\$ (7,260,746)</u>	<u>\$ (8,543,663)</u>

Revenue

As discussed above, to date, we have not generated any revenues from product sales. Our ability to generate product revenue and become profitable depends upon our ability to successfully complete the development and initiate the commercialization of our products.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations- continued**Financial Results of Operations** - continued*Comparison of the Six Months Ended June 30, 2019 and 2018 - continued**General and Administrative Expense*

	Six Months Ended June 30,		\$ Change	%Change
	2019	2018		
Compensation and related personnel costs	\$ 896,648	\$ 527,916	\$ 368,732	70%
Stock-based compensation	584,009	453,356	130,653	29%
Outside professional services	1,575,857	1,591,782	(15,925)	-1%
Facility related costs	99,621	76,180	23,441	31%
Board related costs	122,500	135,000	(12,500)	-9%
Other operating costs	328,230	186,224	142,006	76%
Total general and administrative expense	\$ 3,606,865	\$ 2,970,458	\$ 636,407	21%

General and administrative expenses incurred in the six months ended June 30, 2019 were \$3,606,865 an increase of \$636,407 as compared to \$2,970,458 incurred for corresponding prior year period. The increased general and administrative expenses for the current year period is principally due to increased expenses related to compensation and related personnel costs of \$368,732, stock based compensation of \$130,653, and \$142,006 in other operating costs, partially offset by decreases of \$15,925 in outside professional services and \$12,500 in board related costs.

The increased compensation and related personnel costs expense in the six months ended June 30, 2019 as compared to the corresponding prior year period, resulted from higher salary and benefit expense related to the hiring of additional personnel and annual salary increases.

The stock-based compensation expense classified as general and administrative expense includes stock options granted to both employees and non-employees and restricted stock awards granted to employees - under the PAVmed Inc. 2014 Long-Term Incentive Equity Plan ("PAVmed Inc. 2014 Equity Plan"). The stock-based compensation expense classified as general and administrative expense of \$584,009 incurred during the six months ended June 30, 2019 increased by \$130,653 as compared to the corresponding prior year period, principally resulting from stock options granted in the prior year after June 30, 2018, along with additional stock options and restricted stock awards granted in 2019, resulting in the recognition of stock based expense in the current period for which there is no such expense in the corresponding prior year period, as well as recognition for the full period in the current as compared to a partial period in the prior year. See our unaudited condensed consolidated financial statements Note 9, *Stock-Based Compensation*, for a discussion of stock-based compensation expense recognized with respect to the PAVmed Inc. 2014 Equity Plan.

The outside professional services expense of \$1,575,857 incurred during the six months ended June 30, 2019 as compared to the corresponding prior year period, decreased by \$15,925, principally resulting from decreased expenses of \$364,324 associated with professional fees for legal services, which were higher in the prior year period in connection with our financing transactions, including the various exchange offers, and the absence in the current year period of \$150,000 expense recognized in connection with consulting agreements with entities and /or individuals affiliated with certain of our officers and /or former directors, including with respect to the HCP/Advisors consulting agreement, with such consulting agreement having an October 31, 2018 expiration date. These decreases were partially offset by increased expenses of \$215,145 related to intellectual property matters, \$181,226 related to investor relations, \$81,425 related to marketing activities, including trade shows and promotion, and \$20,602 related to regulatory matters.

The facility related costs of \$99,621 incurred during the six months ended June 30, 2019 increased by \$23,441 as compared to the corresponding prior year period, principally resulted from higher shipping and delivery fees, and higher rent expense associated with our corporate offices.

The board of director related costs of \$122,500 for the six months ended June 30, 2019 decreased by \$12,500 as compared to the corresponding prior year period, principally resulting from the resignation of two non-executive members in February 2018.

The other operating costs in the six months ended June 30, 2019 of \$328,230 increased \$142,006 as compared to the prior year period, principally resulting from higher travel related and insurance expenses.

Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations- continued

Financial Results of Operations - continued

Comparison of the Six Months Ended June 30, 2019 and 2018 - continued

Research and Development Expense

	Six Months Ended June 30,		\$ Change	%Change
	2019	2018		
Compensation and related personnel costs	\$ 620,968	\$ 257,387	\$ 363,581	141%
Stock-based compensation	263,040	121,820	141,220	116%
Outside professional services	1,879,594	1,056,749	822,845	78%
Patent license fee	—	272,553	(272,553)	-100%
Milestone	75,000	—	75,000	100%
Other operating costs	17,048	3,520	13,888	395%
Total research and development expense	\$ 2,856,010	\$ 1,712,029	\$ 1,143,981	67%

Research and development expenses incurred for the six months ended June 30, 2019 totaled \$2,856,010, an increase of \$1,143,981 as compared to \$1,712,029 incurred for the corresponding prior year period. The increase in research and development expenses resulted principally from increased expenses of \$363,581 related to compensation and related personnel costs, \$141,220 related to stock-based compensation, \$822,845 of increased expenses incurred for outside professional services, \$75,000 for a milestone payment, and \$13,888 of increased other operating costs, partially offset by a \$272,553 patent license fee incurred in the prior year period.

The increased compensation and related personnel costs expense of \$363,581 in the six months ended June 30, 2019 as compared to the corresponding prior year period, resulted from higher salary expense related to additional personnel, as well as annual salary increases.

The consolidated stock-based compensation expense classified as research and development expense includes such expense related to stock options granted to both employees and non-employees under both the PAVmed Inc. 2014 Long-Term Incentive Equity Plan (“PAVmed Inc. 2014 Equity Plan”) and the Lucid Diagnostics Inc. 2018 Long-Term Equity Plan (“Lucid Diagnostics Inc. 2018 Equity Plan”). The stock-based compensation expense classified as research and development expense of \$263,040 incurred during the six months ended June 30, 2019 increased by \$141,220 as compared to the corresponding prior year period, principally resulting from stock options granted in 2019, resulting in the recognition of stock based compensation expense in the current period for which there is no such expense in the corresponding prior year period, as well as recognition for the full period in the current as compared to a partial period in the prior year. See our unaudited condensed consolidated financial statements Note 9, *Stock-Based Compensation*, for a discussion of stock-based compensation expense recognized with respect to each of the PAVmed Inc. 2014 Equity Plan and the Lucid Diagnostics Inc. 2018 Equity Plan.

The outside professional services of \$1,879,594 in the six months ended June 30, 2019 was an increase of \$822,845 as compared to the corresponding prior year period. The increased outside professional services research and development expense principally resulted from our emphasis of current research and development activities, including clinical trials and animal studies, being focused principally on completion of on-going efforts to obtain FDA clearance and initializing commercialization of each of the CarpX™, EsoGuard™, and PortIO™ products, initializing commercialization of our FDA approved EsoCheck™, and to continue to advance the development of our DisappEAR™ and NextFlo™ products, as discussed above under “Overview”.

The patent license fee expense of \$272,553 incurred in the six months ended June 30, 2018 was in connection with the “CWRU License Agreement” with respect to “EsoCheck™” and “EsoGuard™”, as discussed above.

The milestone expense of \$75,000 incurred in the six months ended June 30, 2019 is in connection with the “CWRU License Agreement” with respect to the June 21, 2019 FDA approval of the “EsoCheck™” esophageal cell sample collection device as discussed above.

The increased other operating expenses in the six months ended June 30, 2019 as compared to the prior year period, principally resulted from higher depreciation expense, workers’ compensation insurance expense, and travel related costs.

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

Financial Results of Operations - continued

Comparison of the Six Months Ended June 30, 2019 and 2018 - continued

Other Income and Expense

Senior Secured Convertible Note - Change in Fair Value and Debt Extinguishment Loss

With respect to the Senior Convertible Note fair value adjustments resulted in the recognition of an expense in other expense of \$720,059 in the six months ended June 30, 2019. As the Senior Convertible Note was issued on December 27, 2018, there is no such fair value adjustment recognized in the corresponding prior year period.

In the six months ended June 30, 2019, the aggregate face value principal repayments of \$1,531,000 and \$22,961 of corresponding non-installment payments were settled by the issue of a total of 1,516,241 shares of common stock of the Company, and \$279,002 of the non-installment payments were cash paid.

During the six months ended June 30, 2019, the Company recognized a debt extinguishment loss of \$259,812, resulting from the difference between the face value principal and corresponding non-installment payments, as noted above, and the fair value of the shares of common stock issued upon conversion, with such fair value measured as the respective issue date closing quoted price per share of the common stock of the Company.

The estimated fair value of the Senior Convertible Note as of each of the respective dates noted were each computed using a combination of the present value of its cash flows using a synthetic credit rating analysis' required rate of return and the Black-Scholes option pricing model, using the Company's common stock price, the Company's dividend yield, the risk-free rates based on U.S. Treasury security yields, estimated volatility in the value of the Company's common stock, and the Senior Convertible Note stated conversion price.

See our unaudited condensed consolidated financial statements Note 10, *Financial Instruments Fair Value Measurements*, and Note 12, *Debt*, for a further discussion of the Senior Secured Convertible Note.

Senior Secured Note - Interest Expense

With respect to the Senior Secured Note discussed above, total interest expense of \$1,000,608 was recognized in the six months ended June 30, 2018, comprised of \$389,141 with respect to the 15% interest expense and \$611,467 related to the amortization of the debt discount.

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

Financial Results of Operations - continued

Comparison of the Six Months Ended June 30, 2019 and 2018 - continued

Other Income and Expense - continued

Overview - "Series A and Series A-1 Exchange Offer" - March 15, 2018 Exchange Date

As more fully discussed in Company's Annual Report on Form 10-K for the year ended December 31, 2018 filed with the SEC on April 2, 2019, the "Series A and Series A-1 Exchange Offer", completed on March 15, 2018, was offered to and accepted by all holders of both the Series A Convertible Preferred Stock and Series A Warrants, and the Series A-1 Convertible Preferred Stock and Series A-1 Warrants, wherein shares of Series B Convertible Preferred Stock were issued-upon-exchange of shares of each of Series A and Series A-1 Convertible Preferred Stock and Series Z Warrants were issued-upon-exchange of each of Series A and Series A-1 Warrants - referred to as the "Series A and Series A-1 Exchange Offer" and the "March 15, 2018 Exchange Date".

The Series Z Warrants issued-upon-exchange of Series A-1 Warrants in the Series A and Series A-1 Exchange Offer, as such exchange offer is discussed above, resulted in the recognition of a modification expense of \$349,796, which was recognized on such exchange date as a current period modification expense in other income (expense) in the consolidated statement of operations, with a corresponding increase to additional paid in capital, as the Series Z Warrants are equity classified.

Modification Expense - Series W Warrants Exchange Offer - April 5, 2018

As discussed above and more fully in the Company's Annual Report on Form 10-K for the year ended December 31, 2018 filed with the SEC on April 2, 2019, A total of 5,075,849 Series Z Warrants were issued-upon-exchange of 10,151,682 Series W Warrants, in an exchange offer transaction referred to as the "Series W Warrants Exchange Offer" and the "April 5, 2018 Exchange Date". The Series W Warrant Exchange Offer resulted in the recognition of a modification expense on the April 5, 2018 Exchange Date of \$766,456, which was recognized on the April 5, 2018 Exchange Date as a current period modification expense in other income (expense), with a corresponding increase to additional paid in capital, as the Series Z Warrants are equity classified.

Modification Expense - Series Z Warrant Agreement Amendment - June 1, 2018

As discussed above and more fully in the Company's Annual Report on Form 10-K for the year ended December 31, 2018 filed with the SEC on April 2, 2019, the Series Z Warrant exercise price initially was \$3.00 per share through May 31, 2018, and then \$1.60 per share effective June 1, 2018. The Series Z Warrant exercise price adjustment resulted in the recognition of a modification expense on the June 1, 2018 effective date of the modification of the warrant exercise price of \$1,140,995 included in other income (expense), with a corresponding increase to additional paid-in capital, as the Series Z Warrants are equity classified.

Change in Fair Value - Derivative Liability - Series A Warrants Derivative Liability and Series A Convertible Preferred Stock Conversion Option

As discussed more fully in the Company's Annual Report on Form 10-K for the year ended December 31, 2018 filed with the SEC on April 2, 2019, the Series A Warrants derivative liability and the Series A-1 Convertible Preferred Stock conversion option derivative liability were each initially measured at fair value at the time of issuance and subsequently remeasured at estimated fair value on a recurring basis at each reporting period date, with changes in estimated fair value of each respective derivative liability recognized as other income or expense.

As of the March 15, 2018 Exchange Date of the Series A and Series A-1 Exchange Offer each of the corresponding Series A Warrants derivative liability and the Series A Convertible Preferred Stock conversion option derivative liability were each fully extinguished-upon-exchange as of the March 15, 2018 Exchange Date. Accordingly, there was no recognition of income or expense related to the change in estimated fair value of each such derivative liability after the March 15, 2018 Exchange Date.

In this regard, during the three months ended March 31, 2018, as of the March 15, 2018 Exchange Date, the change in the estimated fair value of each respective derivative liability resulted in the recognition of income of \$64,913 with respect to the Series A Convertible Preferred Stock conversion option derivative liability, with a corresponding decrease in each respective derivative liability.

Further, the March 15, 2018 Exchange Date adjustment to the estimated fair value of the Series A Warrants derivative liability resulted in the recognition of a net expense of \$96,480.

Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations- continued

Financial Results of Operations - continued

Non-GAAP Financial Measures

The factors described above resulted in net loss attributable to PAVmed Inc. common stockholders of \$3,660,403 and \$5,128,963 in the three months ended June 30, 2019 and 2018, respectively, and \$7,260,746 and \$8,543,663 in the six months ended June 30, 2019 and 2018, respectively.

To supplement our unaudited condensed consolidated financial statements presented in accordance with accounting principles generally accepted in the United States of America (“U.S. GAAP”) within this Quarterly Report on Form 10-Q, management provides certain non-GAAP financial measures (“NGFM”) of the Company’s financial results, including such amounts captioned: “net loss before interest, taxes, depreciation, and amortization” or “EBITDA”, and “non-GAAP Adjusted Loss”, as presented herein below. Importantly, we note the NGFM measures captioned “EBITDA” and “non-GAAP Adjusted Loss” are not recognized terms under U.S. GAAP, and as such, they are not a substitute for, considered superior to, considered separately from, nor as an alternative to, U.S. GAAP and /or the most directly comparable U.S. GAAP financial measures.

We believe the NGFM provide useful information by isolating certain expenses, gains, and losses, which are not necessarily indicative of our operating financial results and business outlook. In this regard, the presentation of the NGFM herein below, is to help the reader of our unaudited condensed consolidated financial statements to understand the effects of the impact on our (U.S. GAAP) consolidated statement of operations of each of the items as discussed above, including:

- * Stock-based compensation expense
- * Loss on extinguishment of debt in connection with the partial repayment of the Senior Secured Convertible Note
- * Change in estimated fair value of the Senior Secured Convertible Note
- * Modification expense recognized with respect to “Exchange Offers”
- * Change in estimated fair value of derivative liability of each of the Series A Warrant and the Series A Convertible Preferred Stock conversion option (through the March 15, 2018 Exchange Date of the Series A and Series A-1 Exchange Offer).

The NGFM are presented with the intent of providing greater transparency of information used by us in our financial performance analysis and operational decision-making. Additionally, we believe these NGFM provide meaningful information to assist investors, shareholders, and other readers of our unaudited condensed consolidated financial statements, in making comparisons to our historical financial results, and analyzing the underlying financial results of our operations. The NGFM are provided to enhance readers’ overall understanding of our current financial results and to provide further information to enhance the comparability of results between the current year period and the prior year period, however, notwithstanding, the NGFM are not intended to be a substitute for U.S. GAAP.

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

Financial Results of Operations - continued

Non-GAAP Financial Measures - continued

A reconciliation to the most directly comparable U.S. GAAP measure to NGFM, as discussed above, for the periods noted, is as follows:

	Three Months Ended June 30,		
	2019	2018	\$ Change
Net loss attributable to PAVmed Inc. common stockholders	\$ (3,660,403)	\$ (5,128,963)	\$ 1,468,560
Series B Convertible Preferred Stock dividends	66,792	63,623	3,169
Net loss - attributable to PAVmed Inc	(3,593,611)	(5,065,340)	1,471,729
Adjustments			
Depreciation expense	3,282	1,802	1,480
Interest expense - Senior Secured Note	—	500,304	(500,304)
Income tax provision	—	—	—
EBITDA	(3,590,329)	(4,563,234)	(972,905)
Stock-based compensation expense	388,363	303,890	84,473
Change in fair value - Senior Secured Convertible Note	161,108	—	161,108
Debt extinguishment loss - Senior Convertible Note	258,811	—	258,811
Series W Warrants Exchange Offer - April 5, 2018	—	766,456	(766,456)
Series Z Warrants - June 1, 2018	—	1,140,995	(1,140,995)
Non-GAAP Adjusted Loss	\$ (2,782,047)	\$ (2,351,893)	\$ (430,154)
	Six Months Ended June 30,		
	2019	2018	\$ Change
Net loss attributable to PAVmed Inc. common stockholders	\$ (7,260,746)	\$ (8,543,663)	\$ 1,282,917
Series B Convertible Preferred Stock dividends	132,273	74,029	58,244
Series A-1 Convertible Preferred Stock dividends	—	25,148	(25,148)
Series A Convertible Preferred Stock dividends	—	26,487	(26,487)
Series A and Series A-1 Exchange Offer - March 15, 2018 - Series B Convertible Stock issued-upon-exchange of Series A Convertible Preferred Stock	—	726,531	(726,531)
Series A and Series A-1 Exchange Offer - March 15, 2018 - Series B Convertible Stock issued-upon exchange of Series A-1 Convertible Preferred Stock	—	(199,241)	199,241
Net loss - attributable to PAVmed Inc	(7,128,473)	(7,890,709)	762,236
Adjustments			
Depreciation expense	6,549	3,605	2,944
Interest expense - Senior Secured Note	—	1,000,608	(1,000,608)
Income tax provision	—	—	—
EBITDA	(7,121,924)	(6,886,496)	(235,428)
Stock-based compensation expense	847,049	575,176	271,873
Change in fair value - Senior Secured Convertible Note	720,059	—	720,059
Debt extinguishment loss - Senior Convertible Note	259,812	—	259,812
Series A and Series A-1 Exchange Offer - March 15, 2018	—	349,796	(349,796)
Series W Warrants Exchange Offer - April 5, 2018	—	766,456	(766,456)
Series Z Warrants - June 1, 2018	—	1,140,995	(1,140,995)
Change in fair value - Series A Warrants derivative liability	—	96,480	(96,480)
Change in fair value - Series A Convertible Preferred Stock conversion option derivative liability	—	(64,913)	64,913
Non-GAAP Adjusted Loss	\$ (5,295,004)	\$ (4,022,506)	\$ (1,272,498)

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

Liquidity and Capital Resources

Overview - Financing

Since our inception in June 2014, we have financed our operations principally through issuances of our common stock, preferred stock, common stock purchase warrants ("warrants"), and debt, as summarized below.

In the six months ended As of June 30, 2019, a total of 5,480,000 shares of common stock of the Company were issued in registered offerings, including 4,950,000 shares issued under common stock share subscription agreements entered into with individual investors and 530,000 shares issued under a placement agency agreement, resulting in total proceeds of \$5,480,000, before placement agent fees and legal fees of \$101,098.

With respect to the Senior Convertible, in the six months ended June 30, 2019, the aggregate face value principal repayments of \$1,531,000 and \$22,961 of corresponding non-installment payments were settled by the issue of a total of 1,516,241 shares of common stock of the Company, and an additional \$279,002 of the non-installment payments were cash paid.

Subsequent to June 30, 2019: with respect to the July 15, 2019 and July 31, 2019 bi-monthly payments, total Installment Amount of face value principal repayment of \$387,500 and the corresponding \$38,909 of bi-monthly non-installment payments were settled by the issue of a total of 491,773 shares of common stock of the Company, with a fair value of \$506,497. Additionally, through August 12, 2019, total Acceleration Installment Amount face value principal repayment of \$380,500 and the corresponding \$328 of non-installment payment, was settled by the issue of 430,156 shares of common stock of the Company with a fair value of \$454,795, with the common stock fair value measured as the respective issue date closing quoted price per share of the common stock of the Company.

* Additionally during 2018, we also completed exchange offers of private securities and a Tender Offer of public warrants, including:

In March 2018, in an exchange offer captioned the "Series A and Series A-1 Exchange Offer", we issued a total of 975,568 shares of Series B Convertible Preferred Stock for all of the issued and outstanding shares of each of the Series A Convertible Preferred Stock and the Series A-1 Convertible Preferred Stock, and we issued a total of 2,739,190 Series Z Warrants for all of the issued and outstanding of each of the Series A Warrants and the Series A-1 Warrants.

In April 2018, in an exchange offer captioned the "Series W Warrant Exchange Offer", we completed a Tender Offer whereby 96.4% of the then outstanding publicly traded Series W Warrants, or 10,151,682 Series W Warrants, were exchanged for 5,075, 849 Series Z Warrants.

The Series Z Warrants are publicly traded on the NASDAQ Capital Market under the symbol PAVMZ, and each Series Z Warrant may be exercised to purchase a share of our common stock, initially at \$3.00 per share through May 31, 2018, then \$1.60 per share effective June 1, 2018, as a result of our board of directors approval on May 15, 2018 of such exercise price adjustment.

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

Liquidity and Capital Resources - continued

Overview - Financing - continued

Senior Secured Convertible Note - December 27, 2018

As discussed above and in Note 11, *Financial Instruments Fair Value Measurements*, and Note 12, *Debt*, of the unaudited condensed consolidated financial statements, in a private placement transaction with an institutional investor ("Investor", "Lender", and/or "Holder") on December 27, 2018, we entered into a Securities Purchase Agreement under which it issued a Senior Secured Convertible Note, having an issue date of December 27, 2018, a contractual maturity date of December 31, 2020, a face value principal of \$7.75 million, and a stated interest rate of 7.875% per annum - the "Senior Convertible Note". At the election of the Holder, the Senior Convertible Note may be converted into shares of our common stock.

The Senior Convertible Note proceeds were \$7.0 million after payment of \$750,000 of lender fees. We incurred total offering costs of \$614,940, inclusive of the payment of a \$455,000 placement agent fee and legal fees, with such offering costs recognized as a current period expense on December 27, 2018.

The Senior Convertible Note is accounted for under the guidance of the "fair value option" ("FVO") of FASB ASC Topic 825, *Financial Instruments* ("ASC 825"), including the FVO election provided for under ASC 825-10-15-4. As such, the Senior Convertible Note was initially measured at its December 27, 2018 issue-date estimated fair value and subsequently remeasured at estimated fair value on a recurring basis at each reporting period date, with changes in estimated fair value recognized as current period income or expense, to the extent such change is not the result of a change in the instrument-specific credit risk of the Senior Convertible Note, as discussed below.

The Senior Convertible Note fair value adjustments resulted in the recognition of an expense of \$161,108 and \$720,059 in the three and six months ended June 30, 2019, respectively, and an expense of \$903,000 in the year ended December 31, 2018 with respect to the fair value adjustments as of the December 27, 2018 issue date and as of December 31, 2018, as presented above. As the Senior Convertible Note was issued on December 27, 2018, there is no such fair value adjustment recognized in the corresponding prior year period.

In the three and six months ended June 30, 2019, we recognized a debt extinguishment loss of \$258,811 and \$259,812, respectively, resulting from the difference between the face value principal and corresponding non-installment payments, as noted above, and the fair value of the shares of common stock issued upon conversion, with such fair value measured as the respective issue date closing quoted price per share of our common stock.

See our unaudited condensed consolidated financial statements Note 11, *Debt*, for further information with respect to the Senior Convertible Note.

Note and Security Purchase Agreement with Scopia Holdings LLC - July 3, 2017

As discussed above, we previously entered into a Note and Security Purchase Agreement with Scopia Holdings LLC which we repaid-in-full inclusive of the total outstanding principal payable and the accrued but unpaid interest expense payable as of December 27, 2018, with such repayment comprised of a \$5.0 million cash payment and the issue of 600,000 shares of our common stock. The Senior Secured Note total interest expense recognized of \$500,304 and \$1,000,608 in the three and six months ended June 30, 2018, respectively, was comprised of \$194,570 with respect to the 15% interest expense and \$305,734 related to the amortization of the debt discount, during the three months ended June 30, 2019; and, \$389,141 with respect to the 15% interest expense and \$611,467 related to the amortization of the debt discount, during the six months ended June 30, 2019.

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

Liquidity and Capital Resources - continued

Going Concern

The provisions of Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") Topic 205-40, *Presentation of Financial Statements - Going Concern* (ASC Topic 205-40) requires management to assess an entity's ability to continue as a going concern within one year of the date of the financial statements are issued. In each reporting period (including interim periods), an entity is required to assess conditions known and reasonably knowable as of the financial statement issuance date to determine whether it is probable an entity will not meet its financial obligations within one year from the financial statement issuance date. Substantial doubt about an entity's ability to continue as a going concern exists when conditions and events, considered in the aggregate, indicate it is probable the entity will be unable to meet its financial obligations as they become due within one year after the date the financial statements are issued.

We are an early stage and emerging growth company and are subject-to the corresponding risk of such companies. Since inception we have not generated any revenues and have incurred losses and negative cash flows from operating activities. We do not expect to generate positive cash flows from operating activities in the near future until we complete the development process and regulatory approvals of our products, and thereafter begin to commercialize and achieve substantial marketplace acceptance of our products.

We have incurred a net loss attributable to PAVmed Inc. common stockholders of approximately \$7.3 million and net cash flows used in operating activities of approximately \$6.4 million for the six months ended June 30, 2019. As of June 30, 2019, we have negative working capital of approximately \$1.9 million, with such working capital inclusive of approximately \$6.8 million of the estimated fair value of the Senior Secured Convertible Note classified as a current liability and approximately \$6.9 million of cash.

We anticipate incurring operating losses and do not expect to generate positive cash flows from operating activities, if any, for the next several years as we complete the development of our products, file for and request regulatory approvals and clearances of such products and begin to commercially market such products. These factors raise substantial doubt about our ability to continue as a going concern within one year after the date our unaudited condensed consolidated financial statements are issued.

Our ability to fund our operations is dependent upon management's plans, which include raising additional capital, refinancing our debt upon maturity, obtaining regulatory approvals for our products currently under development, commercializing and generating revenues from our products currently under development, and continuing to control expenses. However, there is no assurance we will be successful in these efforts.

A failure to raise sufficient capital, refinance our debt upon maturity, obtain regulatory approvals and clearances of our products, generate sufficient product revenues, or control expenditures, among other factors, will adversely impact our ability to meet our financial obligations as they become due and payable and to achieve our intended business objectives, and therefore raise substantial doubt regarding our ability to continue as a going concern within one year after the date our unaudited condensed consolidated financial statements are issued.

Our unaudited condensed consolidated financial statements have been prepared on a going concern basis which contemplates the realization of assets and satisfaction of liabilities and commitments in the normal course of business. The unaudited condensed consolidated financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities should we be unable to continue as a going concern.

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

Liquidity and Capital Resources - continued

Cash flows and liquidity

The cash flow sources and uses for operating, investing, and financing activities, for respective period presented is as follows:

	Six Months June 30,	
	2019	2018
Net cash flows (used in) or provided by:		
Operating activities	\$ (6,388,893)	\$ (3,902,149)
Investing activities	(25,058)	—
Financing activities	5,099,900	13,504,769
Net (decrease) increase in cash	(1,314,051)	9,602,620
Cash, beginning of period	8,222,119	1,535,022
Cash, end of period	\$ 6,908,068	\$ 11,137,642

Operating Activities

Net cash flows used in operating activities totaled \$6,388,893 and \$3,902,149 in the six months ended June 30, 2019 and 2018, respectively, consisting of: a net loss before noncontrolling interest of \$7,442,746 and \$7,971,909, respectively, and non-cash adjustments to the net loss before noncontrolling interest of cash flows provided of \$1,833,469 and \$3,673,632, and a change in operating assets and liabilities, net resulting in cash flows used of \$779,616 and cash flows provided of \$396,128 in the six months ended June 30, 2019 and 2018, respectively, as follows:

	Six Months Ended June 30,	
	2019	2018
<i>Non-Cash Adjustments</i>		
Depreciation expense	\$ 6,549	3,605
Stock-based compensation	847,049	575,176
Change in fair value - Senior Secured Convertible Note	720,059	—
Debt extinguishment - Senior Secured Convertible Note	259,812	—
Interest expense added to principal of Senior Secured Note	—	194,570
Interest expense - amortization of discount - Senior Secured Note	—	611,467
Series A and Series A-1 Exchange Offer - March 15, 2018	—	349,796
Series W Warrants Exchange Offer - April 5, 2018	—	766,456
Modification Expense - Series Z Warrant - June 1, 2018	—	1,140,995
Change in fair value - Series A Warrants derivative liability	—	96,480
Change in fair value - Series A Convertible Preferred Stock conversion option derivative liability	—	(64,913)
Sub-Total: non-cash adjustments, net	\$ 1,833,469	\$ 3,673,632
<i>Change in Operating Assets and Liabilities</i>		
Prepaid expenses and other current assets	\$ 140,464	\$ 1,603
Accounts payable	(311,781)	432,792
Accrued expenses and other current liabilities	(608,299)	(38,267)
Sub-Total: Change in operating assets and liabilities, net	\$ (779,616)	\$ 396,128

Investing Activities

Net cash flows used in investing activities was \$25,058 in the six months ended June 30, 2019 related to the purchases of equipment, including \$22,210 of research and development equipment and \$2,848 of computer equipment.

Financing Activities

Net cash flows provided by financing activities in the six months ended June 30, 2019 of \$5,099,900 included \$5,378,902 of proceeds net of offering costs from the issue of shares of our common stock in registered offerings, offset by the (cash) payment of \$279,002 of Senior Convertible Note bi-monthly non-installment payments. Net cash flows provided by financing activities of \$13,504,769 in the six months ended June 30, 2018 included \$9,208,326 proceeds net of offering costs with respect to the Equity Subscription Rights Offering ("ESRO") and \$4,274,661 of proceeds net of offering costs from the issue of shares of our common stock in an underwritten public offering, \$20,913 of net proceeds from the exercise of Series W Warrants and Series S Warrants, and \$869 with respect to the issue of shares of our majority-owned subsidiary Lucid Diagnostics Inc. upon its formation.

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

Critical Accounting Policies and Significant Judgments and Estimates

The discussion and analysis of our financial condition and results of operations is based on our unaudited condensed consolidated financial statements, which have been prepared in accordance with generally accepted accounting principles in the United States of America, or U.S. GAAP. The preparation of these unaudited condensed consolidated financial statements requires us to make estimates and assumptions affecting the reported amounts of assets, liabilities, and equity, along with the disclosure of contingent assets and liabilities at the date of the unaudited condensed consolidated financial statements and the reported amounts of expenses during the corresponding periods. In accordance with U.S. GAAP, we base our estimates on historical experience and on various other assumptions we believe are reasonable under the circumstances. Actual results may differ from these estimates under different assumptions or conditions. Please see Note 2 of Part I, Item 1 of this Quarterly Report on Form 10-Q for the summary of significant accounting policies. In addition, reference is made to Part I, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operation of our Annual Report on Form 10-K for the year ended December 31, 2018 (filed on April 2, 2019) with respect to our Critical Accounting Policies. There have been no other material changes to our critical accounting policies and estimates since our Annual Report on Form 10-K for the year ended December 31, 2018.

Item 4. Controls and procedures

Evaluation of disclosure controls and procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of June 30, 2019, the end of the period covered by this Quarterly Report on Form 10-Q.

Based on such evaluation, our Chief Executive Officer and Chief Financial Officer have concluded our disclosure controls and procedures as of June 30, 2019 have been designed and are functioning effectively to provide reasonable assurance the information required to be disclosed by us in reports filed under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure. We believe a controls system, no matter how well designed and operated, cannot provide absolute assurance the objectives of the controls system are met, and no evaluation of controls can provide absolute assurance all control issues and instances of fraud, if any, within a company have been detected.

Changes in internal control over financial reporting

No change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) occurred during the period covered by this report that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 6. Exhibits

The exhibits filed as part of this Quarterly Report on Form 10-Q are set forth in the Exhibit Index below.

EXHIBIT INDEX

Exhibit No.	Description
31.1	<u>Certification of Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002[†]</u>
31.2	<u>Certification of Principal Financial and Accounting Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002[†]</u>
32.1	<u>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[†]</u>
32.2	<u>Certification of Principal Financial and Accounting Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002[†]</u>
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema
101.CAL	Taxonomy Extension Calculation Linkbase
101.DEF	XBRL Taxonomy Extension Definition Linkbase
101.LAB	XBRL Taxonomy Extension Label Linkbase
101.PRE	XBRL Taxonomy Extension Presentation Linkbase

† Filed herewith

SIGNATURE

Pursuant to the requirements of Section 13 or 15(d) 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.

PAVmed Inc.

Date: August 14, 2019

By: */s/ Dennis M. McGrath*

Dennis M. McGrath
President and Chief Financial Officer
(Principal Financial and Accounting Officer)

CERTIFICATION BY PRINCIPAL EXECUTIVE OFFICER

I, Lishan Aklog, M.D., certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of PAVmed 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 and I are responsible for establishing and maintaining disclosure controls and procedures (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.

Date: August 14, 2019

By: /s/ Lishan Aklog, M.D.
Lishan Aklog, M.D.
Chief Executive Officer
(Principal Executive Officer)

CERTIFICATION BY PRINCIPAL FINANCIAL OFFICER

I, Dennis M. McGrath, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of PAVmed 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 and I are responsible for establishing and maintaining disclosure controls and procedures (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.

Date: August 14, 2019

By: /s/ Dennis M. McGrath

Dennis M. McGrath
President and Chief Financial Officer
(Principal Financial and Accounting Officer)

**CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report on Form 10-Q of PAVmed Inc. (the "Company") for the quarter ended June 30, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Lishan Aklog, M.D., Chief Executive Officer of the Company, hereby certifies, pursuant to 18 U.S.C. Section 1350, that to his knowledge:

- (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 results of operations of the Company.

Date: August 14, 2019

By: /s/ Lishan Aklog, M.D.

Lishan Aklog, M.D.
Chief Executive Officer
(Principal Executive Officer)

**CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report on Form 10-Q of PAVmed Inc. (the "Company") for the quarter ended June 30, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Dennis M. McGrath, Chief Financial Officer of the Company, hereby certifies, pursuant to 18 U.S.C. Section 1350, that to his knowledge:

- (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 results of operations of the Company.

Date: August 14, 2019

By: /s/ Dennis M. McGrath

Dennis M. McGrath
President and Chief Financial Officer
(Principal Financial and Accounting Officer)
