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

FORM 10-Q

(Mark One)

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

For the quarterly period ended December 31, 2019

or

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

Commission File Number: 0-23837

Surmodics, Inc.

(Exact name of registrant as specified in its charter)

MINNESOTA	**41-1356149**
(State of incorporation)	**(I.R.S. Employer Identification No.)**

9924 West 74th Street, Eden Prairie, Minnesota 55344
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code:
(952) 500-7000

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

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, $0.05 par value	SRDX	Nasdaq Global Select Market

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

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

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

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

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

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

The number of shares of the registrant's Common Stock, $0.05 par value per share, as of February 4, 2020 was 13,590,159

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PART I. FINANCIAL INFORMATION

Item 1. Unaudited Condensed Financial Statements

Surmodics, Inc. and Subsidiaries

Condensed Consolidated Balance Sheets

(in thousands, except share and per share data)	December 31, 2019 *(Unaudited)*	September 30, 2019
ASSETS		
Current Assets:		
Cash and cash equivalents	$ 9,006	$ 30,361
Available-for-sale securities	39,256	24,931
Accounts receivable, net of allowance for doubtful accounts of $176 and $200 as of December 31, 2019 and September 30, 2019, respectively	7,681	8,993
Contract assets - royalties and license fees	7,847	8,210
Inventories, net	4,951	4,501
Income tax receivable	561	558
Prepaids and other	4,164	3,866
Total Current Assets	73,466	81,420
Property and equipment, net	30,766	29,748
Deferred income taxes	6,370	6,176
Intangible assets, net	13,785	14,226
Goodwill	26,546	26,171
Other assets	4,125	2,124
Total Assets	$ 155,058	$ 159,865
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Accounts payable	$ 2,396	$ 2,085
Accrued liabilities:		
Compensation	1,989	4,581
Accrued other	4,878	4,790
Deferred revenue	4,928	5,553
Contingent consideration	—	3,200
Total Current Liabilities	14,191	20,209
Deferred revenue, less current portion	10,907	11,628
Other long-term liabilities	6,634	5,512
Total Liabilities	31,732	37,349
Commitments and Contingencies (Note 16)		
Stockholders' Equity:		
Series A Preferred stock — $.05 par value, 450,000 shares authorized; no shares issued and outstanding	—	—
Common stock — $.05 par value, 45,000,000 shares authorized; 13,593,069 and 13,504,102 shares issued and outstanding as of December 31, 2019 and September 30, 2019, respectively	680	675
Additional paid-in capital	10,361	10,740
Accumulated other comprehensive income	1,432	396
Retained earnings	110,853	110,705
Total Stockholders' Equity	123,326	122,516
Total Liabilities and Stockholders' Equity	$ 155,058	$ 159,865

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

Surmodics, Inc. and Subsidiaries

Condensed Consolidated Statements of Operations

(In thousands, except per share data)	Three Months Ended December 31, 2019	2018
	(Unaudited)	
Revenue:		
Product sales	$ 9,974	$ 9,751
Royalties and license fees	10,148	10,096
Research, development and other	2,494	2,394
Total revenue	22,616	22,241
Operating costs and expenses:		
Product costs	3,203	3,523
Research and development	12,142	11,486
Selling, general and administrative	6,943	5,949
Acquired intangible asset amortization	594	606
Contingent consideration gain	—	(35)
Total operating costs and expenses	22,882	21,529
Operating (loss) income	(266)	712
Other income:		
Investment income, net	250	316
Interest expense	(40)	(37)
Foreign exchange (loss) gain	(47)	136
Other	1	7
Other income	164	422
(Loss) income before income taxes	(102)	1,134
Income tax benefit	250	176
Net income	$ 148	$ 1,310
Basic net income per share:	$ 0.01	$ 0.10
Diluted net income per share:	$ 0.01	$ 0.09
Weighted average number of shares outstanding:		
Basic	13,469	13,367
Diluted	13,769	13,827

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

Surmodics, Inc. and Subsidiaries

Condensed Consolidated Statements of Comprehensive Income

(In thousands)	Three Months Ended December 31, 2019	2018
	(Unaudited)	
Net income	$ 148	$ 1,310
Other comprehensive income (loss):		
Unrealized holding gains on available-for-sale securities, net of tax	(5)	4
Foreign currency translation adjustments	1,041	(538)
Other comprehensive income (loss)	1,036	(534)
Comprehensive income	$ 1,184	$ 776

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

Surmodics, Inc. and Subsidiaries

Condensed Consolidated Statements of Stockholders' Equity

(In thousands)	Three Months Ended December 31, 2019 and 2018					
	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income	Retained Earnings	Total Stockholders' Equity
	Shares	Amount				
Balance at September 30, 2019	13,504	$ 675	$ 10,740	$ 396	$ 110,705	$ 122,516
Net income	—	—	—	—	148	148
Other comprehensive loss, net of tax	—	—	—	1,036	—	1,036
Issuance of common stock	125	7	(7)	—	—	—
Common stock options exercised, net	8	—	91	—	—	91
Purchase of common stock to pay employee taxes	(44)	(2)	(1,856)	—	—	(1,858)
Stock-based compensation	—	—	1,393	—	—	1,393
Balance at December 31, 2019	13,593	$ 680	$ 10,361	$ 1,432	$ 110,853	$ 123,326
Balance at September 30, 2018	13,398	$ 670	$ 7,607	$ 2,718	$ 97,615	$ 108,610
Net impact from adoption of ASC Topic 606	—	—	—	—	5,498	5,498
Net income	—	—	—	—	1,310	1,310
Other comprehensive income, net of tax	—	—	—	(534)	—	(534)
Issuance of common stock	128	6	(6)	—	—	—
Common stock options exercised, net	1	—	36	—	—	36
Purchase of common stock to pay employee taxes	(44)	(2)	(2,528)	—	—	(2,530)
Stock-based compensation	—	—	1,231	—	—	1,231
Balance at December 31, 2018	13,483	$ 674	$ 6,340	$ 2,184	$ 104,423	$ 113,621

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

Surmodics, Inc. and Subsidiaries

Condensed Consolidated Statements of Cash Flows

(in thousands)	Three Months Ended December 31, 2019	2018
	(Unaudited)	
Operating Activities:		
Net income	$ 148	$ 1,310
Adjustments to reconcile net income to net cash used in operating activities:		
Depreciation and amortization	1,804	1,756
Stock-based compensation	1,393	1,231
Payment of contingent consideration obligations in excess of acquisition-date value	(608)	(2,041)
Contingent consideration gain	—	(35)
Deferred taxes	(194)	310
Gain on strategic investment	—	(7)
Provision for bad debts	(27)	63
Other	50	12
Change in operating assets and liabilities:		
Accounts receivable and contract asset	1,726	(762)
Inventories	(413)	(161)
Prepaids and other	(800)	(649)
Accounts payable	529	190
Accrued liabilities	(3,112)	(3,737)
Income taxes	(59)	(496)
Deferred revenue	(1,346)	(2,389)
Net cash used in operating activities	(909)	(5,405)
Investing Activities:		
Purchases of property and equipment	(1,671)	(2,066)
Purchases of available-for-sale securities	(21,758)	(10,098)
Maturities of available-for-sale securities	7,425	20,000
Cash received from sale of strategic investment	—	7
Net cash (used in) provided by investing activities	(16,004)	7,843
Financing Activities:		
Issuance of common stock	91	36
Payments for taxes related to net share settlement of equity awards	(1,964)	(2,661)
Payment of contingent consideration obligations	(2,592)	(9,064)
Net cash used in financing activities	(4,465)	(11,689)
Effect of exchange rate changes on cash and cash equivalents	23	(15)
Net change in cash and cash equivalents	(21,355)	(9,266)
Cash and Cash Equivalents:		
Beginning of period	30,361	23,668
End of period	$ 9,006	$ 14,402
Supplemental Information:		
Cash paid for income taxes	$ 4	$ 3
Noncash transactions from investing and financing activities:		
Acquisition of property and equipment, net of refundable credits in other current assets and liabilities	$ 167	$ 147

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

1. Basis of Presentation

The accompanying unaudited interim condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("U.S.") ("GAAP") and, in the opinion of management, reflect all adjustments, consisting of normal recurring adjustments, needed to fairly present the financial results of Surmodics, Inc. and subsidiaries ("Surmodics" or the "Company") for the periods presented. These financial statements include amounts that are based on management's best estimates and judgments. These estimates may be adjusted as more information becomes available, and any adjustment could be significant. The impact of any change in estimates is included in the determination of net income (loss) in the period in which the change in estimate is identified. The results of operations for the three months ended December 31, 2019 are not necessarily indicative of the results that may be expected for the entire 2020 fiscal year.

In accordance with the rules and regulations of the U.S. Securities and Exchange Commission ("SEC"), the Company has omitted footnote disclosures that would substantially duplicate the disclosures contained in the audited consolidated financial statements of the Company. These unaudited condensed consolidated financial statements should be read together with the audited consolidated financial statements for the fiscal year ended September 30, 2019, and footnotes thereto included in the Company's Annual Report on Form 10-K as filed with the SEC on December 3, 2019.

New Accounting Pronouncements

Recently Adopted

In February 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") ASU 2016-02, *Leases* (*"ASC Topic 842"*). The update maintains two classifications of leases: finance leases, which replace capital leases, and operating leases. Lessees recognize a right-of-use asset and a lease liability on the consolidated balance sheets for those leases previously classified as operating leases under the previous guidance. The liability is equal to the present value of lease payments, while the asset is based on the liability, subject to adjustment, such as for direct costs.

Effective October 1, 2019, the Company adopted the new lease accounting standard using the optional transition method which allowed us to continue to apply the guidance under the lease standard in effect at the time in the comparative periods presented. In addition, the Company elected the package of practical expedients, including opting not to reassess whether any existing contracts contain a lease, historical lease classification as operating or finance leases, or initial direct costs. The Company has also elected the practical expedient to not separate the lease and non-lease components for all classes of underlying assets. The Company elected the short-term lease recognition exemption for all leases that qualified and has accordingly excluded short-term leases from the recognition of right-of-use assets and lease liabilities.

As a result of adoption of Accounting Standards Codification ("ASC") Topic 842, we recorded operating lease right-of-use assets and corresponding operating lease liabilities of approximately $1.7 million and $2.9 million, respectively, as of October 1, 2019 with no impact on retained earnings. In addition, deferred rent liabilities related to escalating rent payments and tenant incentives totaling approximately $1.2 million were eliminated upon adoption, as these items are netted against right-of-use assets. The condensed consolidated balance sheets for reporting periods beginning on or after October 1, 2019 are presented under the new guidance, while prior period amounts are not adjusted and continue to be reported in accordance with previous guidance.

Not Yet Adopted

In June 2016, the FASB issued ASU No 2016-13, *Financial Instruments – Credit Losses, Measurement of Credit Losses on Financial Statements*. This ASU requires a financial asset (or a group of financial assets) measured at an amortized cost basis to be presented at the net amount expected to be collected. The allowance for credit losses is a valuation account that is deducted from the amortized cost basis of the financial asset(s) to present the net carrying value at the amount expected to be collected on the financial asset. The accounting standard will be effective for the Company beginning in the first quarter of fiscal 2021 (October 1, 2020). Early adoption is permitted and the guidance will be applied using a modified retrospective approach. The Company is currently evaluating the impact that the adoption of this standard will have on the Company's results of operations, cash flows and financial position.

No other new accounting pronouncement issued or effective has had, or is expected to have, a material impact on the Company's condensed consolidated financial statements.

2. Revenue

The following table presents our revenues disaggregated by product classification and by operating segment, excluding sales taxes collected and remitted to governmental authorities (in thousands, unaudited).

(Dollars in thousands)	Three Months Ended December 31, 2019	2018
Medical Device		
Product sales	$ 5,023	$ 4,778
Royalties	8,898	7,685
Research, development and other	2,234	2,384
License fees	1,249	2,411
Total Revenue - Medical Device	17,404	17,258
IVD		
Product sales	4,952	4,973
Other	260	10
Total Revenue - IVD	5,212	4,983
Total Revenue	$ 22,616	$ 22,241

Contract Assets, Deferred Revenue and Remaining Performance Obligations

Contract asset balances consist of estimated sales-based royalties earned but not collected at each balance sheet date and are subject to timing fluctuations at the end of a given period. The Company's deferred revenue, or contract liability, is primarily related to the upfront and milestone payments received pursuant to the collaborative license and commercialization agreement with Abbott (the "Abbott Agreement") for the Company's SurVeil™ drug-coated balloon product ("*SurVeil* DCB") discussed in Note 3.

As of December 31, 2019, the estimated revenue expected to be recognized in future periods related to performance obligations that are unsatisfied for executed contracts with an original duration of one year or more totaled approximately $15.8 million. These remaining performance obligations relate to the Abbott Agreement (Note 3), exclude contingent milestone payments under the Abbott Agreement, and are expected to be recognized over the next six years as services, principally the TRANSCEND study, are completed.

3. Collaborative Arrangement

Under the Abbott Agreement, Abbott will have exclusive worldwide commercialization rights for the *SurVeil* DCB to treat the superficial femoral artery, which is currently being evaluated in a U.S. pivotal clinical trial. Separately, Abbott also received options to negotiate agreements for Surmodics' below-the-knee and arteriovenous ("AV") fistula DCB products, which are currently in pre-clinical development and a first-in human clinical study, respectively. Surmodics is responsible for conducting all necessary clinical trials and other activities required to achieve U.S. and European Union regulatory clearances for the *SurVeil* DCB, including completion of the ongoing TRANSCEND clinical trial. Abbott and Surmodics participate on a joint development committee charged with providing guidance on the Company's clinical and regulatory activities with regard to the *SurVeil* product.

To account for the Abbott Agreement, the Company applied the guidance in ASC Topic 808 (Collaborative Arrangements) as the parties are active participants and are exposed to significant risks and rewards dependent on commercial success of the collaborative activity.

The Company has received a $25 million upfront fee as well as a $10 million milestone under the Abbott Agreement and may receive up to $56 million of additional payments upon achievement of various clinical and regulatory milestones. For the three months ended December 2019 and 2018, the Company recognized revenue totaling $1.3 million and $2.4 million, respectively, from the Abbott arrangement, all of which was previously included in deferred revenue. As of December 31, 2019 and September 30, 2019, deferred revenue from the upfront and milestone payments received of $15.8 million and $17.1 million, respectively, is recorded in the condensed consolidated balance sheets. Upon the commercialization of the *SurVeil* DCB, Surmodics will be responsible for the manufacture and supply of clinical and commercial quantities of the product. Revenue from these product sales, including a per-unit transfer price and a share of net profits resulting from third-party sales by Abbott, will be recognized if and when these products are shipped and control is transferred to the customer.

4. Fair Value Measurements

The accounting guidance on fair value measurements defines fair value, establishes a framework for measuring fair value under GAAP, and expands disclosures about fair value measurements. The guidance is applicable for all financial assets and financial liabilities and for all nonfinancial assets and nonfinancial liabilities recognized or disclosed at fair value in the financial statements on a recurring basis (at least annually). Fair value is defined as the exchange price that would be received from selling an asset or paid to transfer a liability (an exit price) in an orderly transaction between market participants at the measurement date. When determining the fair value measurements for assets and liabilities required or permitted to be recorded at fair value, the Company considers the principal or most advantageous market in which it would transact and also considers assumptions that market participants would use when pricing the asset or liability, such as inherent risk, transfer restrictions and risk of nonperformance.

Fair Value Hierarchy

Accounting guidance on fair value measurements requires that assets and liabilities carried at fair value be classified and disclosed in one of the following three categories:

Level 1 — Quoted (unadjusted) prices in active markets for identical assets or liabilities.

The Company did not have any Level 1 assets as of December 31, 2019 and September 30, 2019.

Level 2 — Observable inputs other than quoted prices included in Level 1, such as quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the asset or liability.

The Company’s Level 2 assets as of December 31, 2019 and September 30, 2019 consisted of money market funds, commercial paper instruments and corporate bonds.

Level 3 — Unobservable inputs to the valuation methodology that are supported by little or no market activity and that are significant to the measurement of the fair value of the assets or liabilities. Level 3 assets and liabilities include those whose fair value measurements are determined using pricing models, discounted cash flow methodologies or similar valuation techniques, as well as significant management judgment or estimation.

The Level 3 liability as of September 30, 2019 consisted of contingent consideration obligations related to the fiscal 2016 acquisition of NorMedix, Inc. (“NorMedix”). Consideration owed to the sellers of NorMedix from revenue and value-creating milestones achieved through September 30, 2019 totaling $3.2 million was paid during the three months ended December 31, 2019, with $0.6 million and $2.6 million classified as cash flows used in operating and financing activities, respectively, on the condensed consolidated statements of cash flows.

In valuing Level 3 assets and liabilities, the Company is required to maximize the use of quoted market prices and minimize the use of unobservable inputs.

Assets and Liabilities Measured at Fair Value on a Recurring Basis

In instances where the inputs used to measure fair value fall into different levels of the fair value hierarchy, the fair value measurement has been determined based on the lowest level input that is significant to the fair value measurement in its entirety. The Company’s assessment of the significance of a particular item to the fair value measurement in its entirety requires judgment, including the consideration of inputs specific to the asset or liability.

The following table presents information about the Company's assets measured at fair value on a recurring basis as of December 31, 2019:

(Dollars in thousands)	Quoted Prices in Active Markets for Identical Instruments (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total Fair Value as of December 31, 2019
Assets				
Cash equivalents	$ —	$ 6,286	$ —	$ 6,286
Available-for-sale securities	—	39,256	—	39,256
Total assets	$ —	$ 45,542	$ —	$ 45,542

The following table presents information about the Company's assets and liabilities measured at fair value on a recurring basis as of September 30, 2019:

(Dollars in thousands)	Quoted Prices in Active Markets for Identical Instruments (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total Fair Value as of September 30, 2019
Assets				
Cash equivalents	$ —	$ 24,375	$ —	$ 24,375
Available-for-sale securities	—	24,931	—	$ 24,931
Total assets	$ —	$ 49,306	$ —	$ 49,306
Liabilities				
Contingent consideration	$ —	$ —	$ (3,200)	$ (3,200)
Total liabilities	$ —	$ —	$ (3,200)	$ (3,200)

Changes in the contingent consideration liabilities measured at fair value using Level 3 inputs were as follows :

	Three Months Ended December 31,	
(Dollars in thousands)	2019	2018
Beginning balance	$ 3,200	$ 14,466
Additions	—	—
Fair value adjustments	—	(149)
Settlements	(3,200)	(10,979)
Interest accretion	—	114
Foreign currency translation loss (gain)	—	(126)
Ending balance	$ —	$ 3,326

There were no transfers of assets or liabilities between amounts measured using Level 1, Level 2, or Level 3 fair value measurements in fiscal 2020 and fiscal 2019.

Valuation Techniques

The valuation techniques used to measure the fair value of assets are as follows:

Cash equivalents — These assets are classified as Level 2 and are carried at historical cost which is a reasonable estimate of fair value because of the relatively short time between origination of the instrument and its expected realization.

Available-for-sale securities — Fair market values for these assets are based on quoted vendor prices and broker pricing in active markets underlying the securities where all significant inputs are observable. To ensure the accuracy of quoted vendor prices and broker pricing, the Company performs regular reviews of investment returns to industry benchmarks and sample tests of individual securities to validate quoted vendor prices with other available market data.

5. Investments

Investments consisted principally of commercial paper and corporate bond securities and are classified as available-for-sale as of December 31, 2019 and September 30, 2019. These available-for-sale securities are reported at fair value with unrealized gains and losses, net of tax, excluded from the condensed consolidated statements of operations and reported in the condensed consolidated statements of comprehensive income as well as a separate component of stockholders' equity in the condensed consolidated balance sheets, except for other-than-temporary impairments, which are reported as a charge to current earnings as they occur. A loss would be recognized when there is an other-than-temporary impairment in the fair value of any individual security classified as available-for-sale, with the associated net unrealized loss reclassified out of accumulated other comprehensive income with a corresponding adjustment to other income. This adjustment would result in a new cost basis for the investment. Interest earned on debt securities, including amortization of premiums and accretion of discounts, is included in investment income, net within other income. Realized gains and losses from the sales of debt securities, which are included in other income, are determined using the specific identification method. Investment purchases are accounted for on the date the trade is executed, which may not be the same as the date the transaction is cash settled.

The amortized cost, unrealized holding gains and losses, and fair value of available-for-sale securities were as follows:

	December 31, 2019			
(Dollars in thousands)	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Commercial paper and corporate bonds	$ 39,251	$ 5	$ —	$ 39,256
Total	$ 39,251	$ 5	$ —	$ 39,256

	September 30, 2019			
(Dollars in thousands)	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Commercial paper and corporate bonds	$ 24,918	$ 13	$ —	$ 24,931
Total	$ 24,918	$ 13	$ —	$ 24,931

6. Inventories

Inventories are principally stated at the lower of cost or market using the specific identification method and include direct labor, materials and overhead, with cost of product sales determined on a first-in, first-out basis. Inventories consisted of the following components:

(Dollars in thousands)	December 31, 2019	September 30, 2019
Raw materials	$ 2,409	$ 2,034
Work-in process	1,349	892
Finished products	1,193	1,575
Total	$ 4,951	$ 4,501

7. Other Assets

Other assets consisted of the following:

(Dollars in thousands)	December 31, 2019	September 30, 2019
ViaCyte, Inc.	$ 479	$ 479
Operating lease right-of-use assets	1,696	—
Other noncurrent assets	1,950	1,645
Other assets	$ 4,125	$ 2,124

The Company has invested a total of $5.3 million in ViaCyte, Inc. (“ViaCyte”), a privately-held California-based biotechnology firm that is developing a unique treatment for diabetes using coated islet cells, the cells that produce insulin in the human body. The balance of the investment of $0.5 million, which is net of previously recorded other-than-temporary impairments of $4.8 million, is accounted for under the cost method and represents less than a 1% ownership interest. The Company does not exert significant influence over ViaCyte’s operating or financial activities.

The carrying value of each cost method investment is reviewed quarterly for changes in circumstances or the occurrence of events that suggest the Company’s investment may not be recoverable. The fair value of cost method investments is not adjusted if there are no identified events or changes in circumstances that may have a material effect on the fair value of the investment.

Other noncurrent assets include prepaid expenses related to our ongoing clinical trials and a receivable related to refundable Irish research and development tax credits.

8. Intangible Assets

Intangible assets consist principally of acquired patents and technology, customer lists and relationships, licenses and trademarks. The Company recorded amortization expense of $0.7 million for both the three months ended December 31, 2019 and 2018.

Intangible assets consisted of the following:

	December 31, 2019			
(Dollars in thousands)	Weighted Average Original Life (Years)	Gross Carrying Amount	Accumulated Amortization	Net
Definite-lived intangible assets:				
Customer lists and relationships	8.9	$ 17,684	$ (11,177)	$ 6,507
Developed technology	11.5	$ 9,562	$ (3,453)	$ 6,109
Non-compete	5.0	$ 230	$ (207)	$ 23
Patents and other	16.5	$ 2,321	$ (1,755)	$ 566
Subtotal		29,797	(16,592)	13,205
Unamortized intangible assets:				
Trademarks and trade names		580	—	580
Total		$ 30,377	$ (16,592)	$ 13,785

	September 30, 2019			
(Dollars in thousands)	Weighted Average Original Life (Years)	Gross Carrying Amount	Accumulated Amortization	Net
Definite-lived intangible assets:				
Customer lists and relationships	8.9	$ 17,374	$ (10,661)	$ 6,713
Developed technology	11.5	9,490	(3,196)	6,294
Non-compete	5.0	230	(196)	34
Patents and other	16.5	2,321	(1,716)	605
Subtotal		29,415	(15,769)	13,646
Unamortized intangible assets:				
Trademarks and trade names		580	—	580
Total		$ 29,995	$ (15,769)	$ 14,226

Based on the intangible assets in service as of December 31, 2019, estimated amortization expense for the remainder of fiscal 2020 and each of the next five fiscal years is as follows *(in thousands)*:

Remainder of 2020	$ 1,799
2021	2,319
2022	2,279
2023	1,668
2024	1,610
2025	1,553

Future amortization amounts presented above are estimates. Actual future amortization expense may be different as a result of future acquisitions, impairments, changes in amortization periods, foreign currency translation rates, or other factors.

9. Goodwill

Goodwill represents the excess of the cost of an acquired entity over the fair value assigned to the assets purchased and liabilities assumed in connection with a business acquisition. Goodwill is not amortized but is subject, at a minimum, to annual tests for impairment in accordance with accounting guidance for goodwill. The carrying amount of goodwill is evaluated annually, and between annual evaluations if events occur or circumstances change indicating that the carrying amount of goodwill may be impaired.

Goodwill as of December 31, 2019 and September 30, 2019 totaled $26.5 million and $26.2 million, respectively. Goodwill in the Medical Device reporting unit represents the gross value from the fiscal 2016 acquisitions of Creagh Medical Limited ("Creagh Medical") and NorMedix. Goodwill in the In Vitro Diagnostics reporting unit represents the gross value from the acquisition of BioFX Laboratories, Inc. ("BioFX") in fiscal 2007.

Goodwill was not impaired in either reporting unit based on the outcome of the fiscal 2019 annual impairment test, and there have been no events or circumstances that have occurred in the first three months of fiscal 2020 to indicate that goodwill has been impaired.

Changes in the carrying amount of goodwill by segment were as follows:

(Dollars in thousands)	In Vitro Diagnostics	Medical Device	Total
Balance as of September 30, 2019	$ 8,010	$ 18,161	$ 26,171
Currency translation adjustment	—	375	375
Balance as of December 31, 2019	$ 8,010	$ 18,536	$ 26,546

10. Accrued Liabilities

Accrued liabilities consisted of the following:

(Dollars in thousands)	December 31, 2019	September 30, 2019
Accrued professional fees	$ 257	$ 434
Accrued clinical study expense	1,438	2,163
Accrued purchases	1,150	679
Acquisition of in process research and development	1,167	989
Current portion of lease liability	472	—
Deferred rent	—	130
Other	394	395
Total	$ 4,878	$ 4,790

11. Stock-based Compensation

The Company has stock-based compensation plans under which it grants stock options, restricted stock awards, performance share awards, restricted stock units and deferred stock units. Accounting guidance requires all share-based payments to be recognized as an operating expense, based on their fair values, over the requisite service period.

The Company's stock-based compensation expenses were allocated to the following expense categories:

(Dollars in thousands)	Three Months Ended December 31, 2019	2018
Product costs	$ 33	$ 32
Research and development	262	213
Selling, general and administrative	1,098	986
Total	$ 1,393	$ 1,231

As of December 31, 2019, approximately $10.5 million of total unrecognized compensation costs related to non-vested awards is expected to be recognized over a weighted average period of approximately 2.7 years.

Stock Option Awards

The Company uses the Black-Scholes option pricing model to determine the weighted average grant date fair value of stock options granted. The weighted average per share fair values of stock options granted during the three months ended December 31, 2019 and 2018 were $14.38 and $18.30, respectively.

	Three Months Ended December 31, 2019	2018
Risk-free interest rates	1.6%	2.9%
Expected life (years)	4.6	4.5
Expected volatility	37.8%	33.2%
Dividend yield	0.0%	0.0%

The risk-free interest rate assumption was based on the U.S. Treasury's rates for U.S. Treasury zero-coupon bonds with maturities similar to those of the expected term of the awards. The expected life of options granted was determined based on the Company's experience. Expected volatility was based on the Company's stock price movement over a period approximating the expected term. Based on management's judgment, dividend yields were expected to be 0.0% for the expected life of the options. The Company also estimated forfeitures of options granted, which were based on historical experience.

Non-qualified stock options are granted at fair market value on the date of grant. Non-qualified stock options expire in seven years upon termination of employment or service as a Board member. With respect to members of our Board, non-qualified stock options generally become exercisable on a pro-rata basis within the one-year period following the date of grant. With respect to our employees, non-qualified stock options generally become exercisable with respect to 25% of the shares on each of the first four anniversaries following the grant date. The stock-based compensation table above includes stock option expenses recognized related to these awards, which totaled $0.6 million and $0.5 million for the three months ended December 31, 2019 and 2018.

The total pre-tax intrinsic value of options exercised during the three months ended December 31, 2019 and 2018 was $0.2 million and less than $0.1 million, respectively. The intrinsic value represents the difference between the Company's common stock fair market value on the date of exercise and the option's exercise price.

Restricted Stock Awards

The Company has entered into restricted stock agreements with certain key employees, covering the issuance of common stock ("Restricted Stock"). Under accounting guidance, these shares are considered to be non-vested shares. The Restricted Stock is released to the key employees if they are employed by the Company at the end of the vesting period. Restricted Stock vesting periods range from one to three years. During the three months ended December 31, 2019 and 2018, the Company awarded 54,694 and 42,248 Restricted Stock shares, respectively, to certain key employees and officers. Forfeiture of 4,099 and 507 Restricted Stock shares occurred during the three months ended December 31, 2019 and 2018, respectively. As of December 31, 2019 and September 30, 2019, 99,500 and 90,409 Restricted Stock shares were outstanding, respectively. Compensation expense has been recognized for the estimated fair value of the common shares, net of estimated forfeitures, and is being charged to operating expenses over the vesting term. The stock-based compensation expense table includes Restricted Stock expenses recognized related to these awards, which totaled $0.5 million and $0.4 million for the three months ended December 31, 2019 and 2018, respectively.

Performance Share Awards

The Company has entered into performance share agreements with certain key employees covering the issuance of common stock ("Performance Shares"). Performance Shares vest upon the achievement of all or a portion of certain performance objectives (which may include financial or project objectives), which must be achieved during the performance period. The Organization and Compensation Committee of the Board of Directors (the "Committee") approves the performance objectives used for our executive compensation programs, which objectives were cumulative revenue and cumulative earnings before interest, income taxes, depreciation and amortization ("EBITDA") for the three-year performance periods for awards granted in fiscal 2017 (2017 – 2019). The fiscal 2017 awards also included performance objectives related to achievement of the Company's strategic initiatives. Awards granted in fiscal 2017 were finalized in the three months ended December 31, 2019 and resulted in the issuance of 67,653 shares, with a value of $2.8 million, based on the performance objectives relative to actual results achieved during the performance period. The per share compensation cost for each award was fixed on the grant date. The stock-based compensation expense table includes Performance Shares expense recognized related to these awards, which totaled $0.2 million for the three months ended December 31, 2018. Performance Shares expense recognized in the three months ended December 31, 2019 was insignificant as all Performances Shares were vested as of September 30, 2019.

The fair values of the Performance Shares, at target, were $1.2 million for awards granted in fiscal 2017. There have been no Performance Share awards granted subsequent to fiscal 2017.

1999 Employee Stock Purchase Plan

Under the amended 1999 Employee Stock Purchase Plan ("Stock Purchase Plan"), the Company is authorized to issue up to 600,000 shares of common stock. All full-time and part-time U.S. employees can choose to have up to 10% of their annual compensation withheld, with a limit of $25,000, to purchase the Company's common stock at purchase prices defined within the provisions of the Stock Purchase Plan. As of December 31, 2019 and September 30, 2019, there was less than $0.1 million of employee contributions included in accrued liabilities in the condensed consolidated balance sheets. Stock compensation expense recognized related to the Stock Purchase Plan for the three months ended December 31, 2019 and 2018 totaled less than $0.1 million in each respective period. The stock-based compensation table includes the Stock Purchase Plan expenses.

Restricted Stock and Deferred Stock Units

During the three months ended December 31, 2019 and 2018, the Company awarded 8,032 and 6,206 restricted stock units ("RSUs"), respectively, to non-employee directors and certain key employees in foreign jurisdictions. RSU awards are not considered issued or outstanding common stock of the Company until they vest. As of December 31, 2019 and September 30, 2019, outstanding, unvested RSUs totaled 62,113 and 62,242, respectively. Compensation expense has been recognized for the estimated fair value of the common shares and is being charged to operating expenses over the vesting term. The estimated fair value of the RSUs was calculated based on the closing market price of Surmodics' common stock on the grant date. The stock-based compensation table includes RSU expenses recognized related to these awards, which totaled $0.2 million and $0.1 million for the three months ended December 31, 2019 and 2018, respectively.

Directors may elect to receive their annual fees for services to the Board in deferred stock units ("DSUs"). Directors may elect this option quarterly. During the three months ended December 31, 2019 and 2018, 823 and 751 units, respectively, were issued with a total fair value of less than $0.1 million in each period. As of December 31, 2019 and September 30, 2018, outstanding, fully vested DSUs totaled 30,552 and 29,729, respectively. Stock-based compensation expense related to DSU awards totaled less than $0.1 million for both the three months ended December 31, 2019 and 2018.

12. Net Income Per Share Data

Basic net income per common share is calculated by dividing net income by the weighted average number of common shares outstanding during the period. Diluted net income per common share is computed by dividing net income by the weighted average number of common and dilutive common equivalent shares outstanding during the period. The Company's potentially dilutive common shares are those that result from dilutive common stock options, non-vested stock relating to restricted stock awards, restricted stock units and deferred stock units, as well as performance shares in years prior to fiscal 2020. Options to purchase shares of common stock as well as unvested restricted stock and performance stock units are considered to be potentially dilutive common shares.

The calculation of weighted average diluted shares outstanding excludes outstanding stock options associated with the right to purchase 0.1 million shares of common stock for both the three months ended December 31, 2019 and 2018, as their inclusion would have had an antidilutive effect on diluted net income per share for those periods.

The following table sets forth the denominator for the computation of basic and diluted net income per share (*in thousands*):

	Three Months Ended December 31,	
	2019	2018
Net income available to common shareholders	$ 148	$ 1,310
Basic weighted average shares outstanding	13,469	13,367
Dilutive effect of outstanding stock options, non-vested restricted stock, restricted stock units, deferred stock units and performance shares	300	460
Diluted weighted average shares outstanding	13,769	13,827

The Company's Board of Directors has authorized the repurchase of up to $25.3 million of the Company's outstanding common stock. This authorization does not have an expiration date.

13. Income Taxes

For interim income tax reporting, the Company estimates its annual effective tax rate and applies it to year-to-date pretax (loss) income, excluding unusual or infrequently occurring discrete items. Tax jurisdictions with losses for which tax benefits cannot be realized are excluded. The Company recorded income tax benefit of $0.3 million and $0.2 million for the three months ended December 31, 2019 and 2018, respectively.

The effective income tax rate for the three months ended December 31, 2019 and 2018 differs from the U.S. federal statutory tax rate of 21% primarily due to the favorable impacts of the U.S. federal research and development tax credits in both periods, as well as stock award activity in the three-month period and operating results of our Irish subsidiary, where tax benefit is offset by a valuation allowance. The effective income tax rate for the three months ended December 31, 2019 and 2018 was impacted by discrete tax benefits of $0.2 million and $0.5 million, respectively, related to share awards vested, expired, cancelled and exercised during the periods.

The total amount of unrecognized tax benefits, excluding interest and penalties that, if recognized, would affect the effective tax rate is $2.7 million and $2.1 million as of December 31, 2019 and September 30, 2019, respectively. Interest and penalties related to unrecognized tax benefits are recorded in the income tax (benefit) provision.

The Company files income tax returns, including returns for its subsidiaries, in the U.S. federal jurisdiction and in various state jurisdictions as well as several non-U.S. jurisdictions. Uncertain tax positions are related to tax years that remain subject to examination. U.S. income tax returns for years prior to fiscal 2015 are no longer subject to examination by federal tax authorities. For tax returns for state and local jurisdictions, the Company is no longer subject to examination for tax years generally before fiscal 2009. For tax returns for non-U.S. jurisdictions, the Company is no longer subject to income tax examination for years prior to 2014. Additionally, the Company has been indemnified of liability for any taxes relating to Creagh Medical and NorMedix for periods prior to their respective acquisition dates, pursuant to the terms of the related share purchase agreements. As of December 31, 2019 and September 30, 2019, there were no undistributed earnings in foreign subsidiaries.

14. Segment Information

The Company's management evaluates performance and allocates resources based on reported results for two reportable segments, as follows: (1) the Medical Device unit, which designs, develops and manufactures interventional medical devices, primarily for the peripheral vascular market; surface modification coating technologies to improve access, deliverability, and predictable deployment of medical devices; as well as drug-delivery coating technologies to provide site-specific drug-delivery from the surface of a medical device, with end markets that include coronary, peripheral, neuro-vascular and urology, among others, and (2) the In Vitro Diagnostics unit, which consists of component products and technologies for diagnostic test kits and biomedical research applications, with products that include protein stabilization reagents, substrates, antigens and surface coatings.

Segment revenue, operating (loss) income, and depreciation and amortization, were as follows:

(Dollars in thousands)	Three Months Ended December 31, 2019	2018
Revenue:		
Medical Device	$ 17,404	$ 17,258
In Vitro Diagnostics	5,212	4,983
Total revenue	$ 22,616	$ 22,241
Operating (loss) income:		
Medical Device	$ (423)	$ 357
In Vitro Diagnostics	2,599	2,455
Total segment operating income	2,176	2,812
Corporate	(2,442)	(2,100)
Total operating (loss) income	$ (266)	$ 712
Depreciation and amortization:		
Medical Device	$ 1,455	$ 1,388
In Vitro Diagnostics	110	116
Corporate	239	252
Total depreciation and amortization	$ 1,804	$ 1,756

The Corporate category includes expenses that are not fully allocated to Medical Device and In Vitro Diagnostics segments. These Corporate costs are related to functions, such as executive management, corporate accounting, legal, human resources and Board of Directors. Corporate may also include expenses which are not specific to a segment and thus not allocated to the operating segments.

Asset information by operating segment is not presented because the Company does not provide its chief operating decision maker assets by operating segment, as the data is not readily available or significant to the decision-making process.

15. Leases

The Company leases facilities for research, office, manufacturing and warehousing. The Company determines whether a contract is a lease or contains a lease at inception date. Upon commencement, the Company recognizes a right-of-use asset and lease liability based on the net present value of the future minimum lease payments over the lease term at the commencement date. The unamortized balance of leasehold improvement incentives in the form of tenant allowances represents the primary difference between the balance of the right-of-use assets and operating lease liabilities. As the Company’s leases typically do not provide an implicit rate, the Company’s lease liabilities are measured on a discounted basis using the Company's incremental borrowing rate. Lease terms used in the recognition of right-of-use assets and lease liabilities include only options to extend the lease that are reasonably certain to be exercised. The condensed consolidated balance sheets do not include recognized assets or liabilities for leases that, at the commencement date, have a term of twelve months or less and do not include an option to purchase the underlying asset that is reasonably certain to be exercised. The Company recognizes such leases in the condensed consolidated statements of income on a straight-line basis over the lease term.

The Company’s leases include one or more options to renew and extend the lease term at the Company’s discretion. These renewal options are not included in our right-of-use assets and lease liabilities as they are not reasonably certain of exercise. We regularly evaluate the renewal options and when they are reasonably certain of exercise, we include the renewal period in our lease term.

The Company's operating lease cost for the three months ended December 31, 2019 was $0.1 million. Cash paid for operating lease liabilities approximated operating lease cost for the three months ended December 31, 2019.

Operating lease right-of-use assets and operating lease liabilities were as follows:

(Dollars in thousands)	December 31, 2019
Right-of-use assets	
Other assets	$ 1,696
Operating lease liabilities:	
Other accrued liabilities	$ 472
Other long-term liabilities	2,394
Total operating lease liabilities	$ 2,866

As of December 31, 2019, operating lease maturities for the remainder of fiscal 2020 and each of the next five fiscal years are as follows *(in thousands)*:

Remainder of 2020	$ 376
2021	538
2022	536
2023	547
2024	558
2025	570
Thereafter	1,965
Total expected operating lease payments	5,090
Less: Imputed interest	(2,224)
Total operating lease liabilities	$ 2,866

As of December 31, 2019, the weighted average remaining lease term for operating leases was 8.2 years and the weighted average discount rate used to determine operating lease liabilities was 4.6%.

16. Commitments and Contingencies

Litigation. From time to time, the Company may become involved in various legal actions involving its operations, products and technologies, including intellectual property and employment disputes. The outcomes of these legal actions are not within the Company's complete control and may not be known for prolonged periods of time. In some actions, the claimants seek damages as well as other relief, including injunctions barring the sale of products that are the subject of the lawsuit, which if granted, could require significant expenditures or result in lost revenue. The Company records a liability in the condensed consolidated financial statements for these actions when a loss is known or considered probable and the amount can be reasonably estimated. If the reasonable estimate of a known or probable loss is a range, and no amount within the range is a better estimate, the minimum amount of the range is accrued. If a loss is possible but not known or probable, and can be reasonably estimated, the estimated loss or range of loss is disclosed. In most cases, significant judgment is required to estimate the amount and timing of a loss to be recorded.

InnoCore Technologies BV. In March 2006, the Company entered into a license agreement whereby the Company obtained an exclusive license to a drug delivery coating for licensed products within the vascular field which included peripheral, coronary and neurovascular biodurable stent products. The license requires an annual minimum payment of 200,000 euros (equivalent to $224,000 using a euro to US dollar exchange rate of $1.1215 to the Euro as of December 31, 2019) until the last patent expires, which is currently estimated to be September 2027. The total minimum future payments associated with this license are approximately $1.8 million as of December 31, 2019. The license is currently utilized by one of the Company's drug delivery customers.

Clinical Trials. The Company has engaged clinical trial clinical research organization ("CRO") consultants to assist with the administration of its ongoing clinical trials. The Company has executed separate contracts with two CROs for services rendered in connection with the TRANSCEND pivotal clinical trial for the *SurVeil* DCB, including pass-through expenses paid by the CROs, of up to $26 million in the aggregate. As of December 31, 2019, an estimated $11.9 million remains to be paid on these contracts, which may vary depending on actual pass-through expenses incurred to execute the trial. The Company estimates that the total cost of the TRANSCEND clinical trial will be in the range of $35 million to $40 million from inception to completion. In the event the Company were to terminate any trial, it may incur certain financial penalties which would become payable to the CRO for costs to wind down the terminated trial.

Asset Acquisitions. In July 2019, the Company acquired certain intellectual property assets supporting ongoing development of the Company's medical device pipeline. As a result of this acquisition, the Company made an upfront, nonrefundable payment of $0.8 million. In addition, the Company is obligated to pay up to $1.3 million of additional consideration upon achievement of certain strategic milestones within a contingency period ending in 2022, of which $0.2 million is guaranteed to be paid in fiscal 2021.

In May 2018, the Company acquired certain intellectual property assets of Embolitech, LLC (the "Embolitech Transaction"). As part of the Embolitech Transaction, the Company paid the sellers $5.0 million during fiscal 2018. Additionally, the Company is obligated to pay $3.5 million in several installments beginning in fiscal 2020 and ending in fiscal 2024. These payments may be accelerated upon the occurrence of certain sales and regulatory milestones. An additional $2.0 million payment is contingent upon the achievement of certain regulatory milestones within a contingency period ending in 2033.

As of December 31, 2019, $1.2 million and $2.1 million, respectively, is included in other accrued and other long-term liabilities on the condensed consolidated balance sheets related to the Embolitech Transaction. As of September 30, 2019, $1.0 million and $2.1 million is included in other accrued liabilities and other long-term liabilities, respectively, on the consolidated balance sheets related to the Embolitech Transaction.

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

The following discussion and analysis provides information management believes is useful in understanding the operating results, cash flows and financial condition of Surmodics, Inc. and subsidiaries (referred to as "Surmodics," the "Company," "we," "us," "our" and other like terms). The discussion should be read in conjunction with both the unaudited condensed consolidated financial statements and related notes included in this Form 10-Q and our audited consolidated financial statements and related notes and Management's Discussion and Analysis of Financial Condition and Results of Operations, each included in our Annual Report on Form 10-K for the fiscal year ended September 30, 2019. This discussion contains various "Forward-Looking Statements" within the meaning of the Private Securities Litigation Reform Act of 1995. We refer readers to the statement entitled "Forward-Looking Statements" located at the end of this Item 2.

Overview

Surmodics is a leading provider of medical device and *in vitro* diagnostic technologies to the healthcare industry, with the mission of improving the detection and treatment of disease. Our revenue performance continues to be driven by growth in our Medical Device and In Vitro Diagnostics ("IVD") product offerings. We remain committed to developing medical device products and platforms leveraging the technologies and manufacturing capabilities in our Medical Device business unit for the treatment of peripheral arterial disease ("PAD") and other vascular diseases. Our primary focus has been the continued development of our drug-coated balloon ("DCB") platform, our radial access device platform, and our thrombectomy device platform.

Product Development

Our business model for our whole-product solutions strategy is to design, develop and manufacture highly differentiated products that incorporate our proprietary catheter, balloon, thrombectomy and/or surface modification coating technologies to improve patient outcomes and reduce procedure costs, while maintaining patient safety. We are focused on developing devices that consider the needs of various care settings ranging from hospitals to alternate care facilities, in order to provide improved care and address unmet needs in the treatment of PAD and other vascular diseases. Our strategy has been built on our investment in proprietary device technologies, as well as state-of-the-art medical device design, development and manufacturing capabilities. Over the past several years, we have made investments to enhance our clinical and regulatory capabilities, and in fiscal 2020, we intend to make additional investments to obtain clinical data, reduce the time from product development to commercialization, and drive clinician engagement with our products after approval to optimize adoption.

Below is a brief summary of our pipeline of medical device products under development and recently commercialized, grouped by product family.

Drug-coated balloons

- **SurVeil™ DCB** – paclitaxel-coated DCB to treat PAD in the superficial femoral artery. In fiscal 2018, we entered into an agreement with Abbott that provided Abbott with exclusive worldwide commercialization rights to *SurVeil*. The *SurVeil DCB* TRANSCEND clinical study was fully enrolled in the fourth quarter of fiscal year 2019. In fiscal 2019, we submitted all required modules to the European Notified Body for the Conformité Européenne Mark ("CE Mark") approval prerequisite for commercialization in the European Union. In our first quarter fiscal 2020, due to an ongoing regulatory matter concerning the long-term mortality signal from paclitaxel-coated devices, the European Notified Body temporarily paused CE Mark review of all paclitaxel-coated devices. We are in ongoing communications with the European Notified Body and remain confident in the capability of our devices and the quality of the data that supports its regulatory approval.
- **Avess™ DCB** – paclitaxel-coated DCB for the treatment of arteriovenous ("AV") fistulae commonly associated with hemodialysis. We commenced and completed enrollment in a first-in-human clinical study of our *Avess* DCB in fiscal 2019 and expect to receive safety and efficacy data in fiscal 2020 to support a potential application for a pivotal trial.
- **Sundance™ DCB** – sirolimus-coated DCB for the treatment of below-the-knee PAD. In fiscal 2019, we froze the design of our *Sundance* DCB and submitted an application for a first in-human study of this device. We expect to commence this study in fiscal 2020.

Radial access

- **Sublime™ radial access platform** – access and therapeutic devices designed to provide access to and treat the peripheral vasculature via the radial (wrist) artery. In fiscal 2019, we received FDA clearance for our *Sublime* guide sheath, which enables the delivery of lower extremity interventions from the radial artery. In fiscal 2020, we expect to continue to develop and pursue clearance for other radial access devices, including our Sublime radial-access .014" percutaneous transluminal angioplasty ("PTA") balloon catheter.

Thrombectomy

- **Pounce™ thrombectomy platform** – mechanical thrombectomy device designed to remove difficult, organized blood clots with potential applications for multiple vascular indications. Our goal is to expand our thrombectomy platform to include devices designed to treat deep vein thrombosis, as well as stroke and pulmonary embolism. In fiscal 2020, we expect to receive FDA 510(k) clearance for our first indication, treatment of clots in the peripheral arteries.

Specialty catheters

- ***Telemark*™** – coronary/peripheral support microcatheter. In fiscal 2019, we executed an agreement with Medtronic to distribute our *Telemark* microcatheter in the U.S. and Europe. Fulfillment of initial orders of *Telemark* commenced in the first quarter of fiscal 2020.
- **.014" and .018" low-profile PTA balloon dilation catheters** – specialty PTA balloon catheters for difficult-to-treat lesions. In fiscal 2019, we executed a worldwide distribution agreement with a leading, multi-national medical device company. We anticipate commercial sales to commence in fiscal 2020.

For more information regarding our product development and commercialization strategy, see Part I, Item 1 of our Annual Report on Form 10-K for the fiscal year ended September 30, 2019.

Photolink™ Fourth-Generation Patents

Our fourth-generation *PhotoLink* hydrophilic technology is protected by a family of patents that expired in the first quarter of fiscal 2020 in all countries where patent coverage existed for this technology. The Medical Device business royalty revenue associated with our fourth-generation hydrophilic coating technology was approximately 21% of our fiscal 2019 revenue. Of the license agreements using our early-generation technologies, most continue to generate royalty revenue, at a reduced royalty rate, beyond patent expiration. The remainder of our royalty revenues are derived from our other coatings that are protected by a number of patents that extend to at least fiscal 2035.

Critical Accounting Policies and Significant Estimates

Critical accounting policies are those policies that require the application of management's most challenging, subjective or complex judgment, often as a result of the need to make estimates about the effect of matters that are inherently uncertain and may change in subsequent periods. Critical accounting policies involve judgments and uncertainties that are sufficiently likely to result in materially different results under different assumptions and conditions. For the three months ended December 31, 2019, there were no significant changes in our critical accounting policies. For a detailed description of our other critical accounting policies and significant estimates, see Management's Discussion and Analysis of Financial Condition and Results of Operations under Item 7 in our Annual Report on Form 10-K for the fiscal year ended September 30, 2019.

Results of Operations

Three Months Ended December 31, 2019 and 2018

Revenue. Revenue for the first quarter of fiscal 2020 was $22.6 million, an increase of $0.4 million, or 1.7%, as compared with the first quarter of fiscal 2019. The following is a summary of each operating segment's revenue.

	Three Months Ended December 31,		
(Dollars in thousands)	2019	2018	% Change
Revenue			
Medical Device	$ 17,404	$ 17,258	0.8%
In Vitro Diagnostics	5,212	4,983	4.6%
Total Revenue	$ 22,616	$ 22,241	1.7%

Medical Device. Medical Device revenue was $17.4 million in the first quarter of fiscal 2020 and was essentially flat as compared with the first quarter of fiscal 2019. Product sales increased 5.1%, or $0.2 million, for the first quarter of fiscal 2020 as compared with the prior-year quarter, with growth in coatings reagents partially offset by weakness in legacy balloon catheter products. Research, development and other revenue was level with the prior year period. Royalties and license fee revenue was essentially flat as compared with the prior-year first quarter. Impacting royalty revenue in the first quarter of fiscal 2020 was a $0.7 million one-

time catchup payment for previously under-reported hydrophilic coating royalty revenue, as well as growth in royalties from our hydrophilic coatings customers. These increases were offset by a $1.1 million planned decrease in license fee revenue from the Abbott Agreement due to reduced TRANSCEND clinical trial spending subsequent to full trial enrollment in the fourth quarter of fiscal 2019. As expected, the aforementioned patent expiration for our fourth-generation hydrophilic coating had an insignificant revenue impact in the first quarter of fiscal 2020. For the full fiscal 2020, the revenue impact of this expiration is expected to range from $5.0 to $5.5 million.

In Vitro Diagnostics. In Vitro Diagnostics revenue increased 4.6% to $5.2 million in the first quarter of fiscal 2020 as compared with $5.0 million for the first quarter of fiscal 2019, primarily due to growth in sales of our microarray slides.

Major costs and expenses as a percentage of total revenue were as follows:

	Three Months Ended December 31,			
	2019		2018	
(Dollars in thousands)	**Amount**	**% Total Revenue**	**Amount**	**% Total Revenue**
Product costs	$ 3,203	14%	$ 3,523	16%
Research and development	12,142	54	11,486	52
Selling, general and administrative	6,943	31	5,949	27
Acquired intangible asset amortization	594	3	606	3

Product costs. Product gross margin (defined as product sales less related product costs) was 67.9% and 63.9% of product sales for the first quarter of fiscal 2020 and 2019, respectively. Current-quarter product gross margin was favorably impacted by product mix in our Medical Device business.

Research and development (R&D) expenses. R&D expenses increased $0.7 million to 54% of revenue in the first quarter of fiscal 2020, as compared with 52% of revenue for the same prior-year period. This increase is due to investment in our medical device pipeline, with personnel investments in quality, technical, regulatory, and proprietary product development. Partially offsetting these increases was planned lower TRANSCEND clinical trial spending with the progression from active enrollment in fiscal 2019 to patient follow up in fiscal 2020. For the full fiscal 2020, R&D expenses are anticipated to be the mid-to-high fifties as a percent of revenue.

Selling, general and administrative (SG&A) expenses. SG&A expenses increased $1.0 million to 31% of revenue in the first quarter of fiscal 2020, as compared with 27% of revenue for the same prior-year period. Contributing to the increase in SG&A expense during the quarter were increased investments to support product pipeline development and preparation for product market evaluations. For the full fiscal 2020, SG&A expenses are expected to be in the low-to-mid thirties as a percent of revenue.

Acquired intangible asset amortization. As part of our fiscal 2016 acquisitions in our Medical Device business, we acquired certain intangible assets which are being amortized over periods ranging from 4 to 14 years. In addition, we own certain intangible assets related to the BioFx acquisition in fiscal 2007. We recognized $0.6 million in amortization expense related to these acquisitions in the three months ended December 31, 2019 and 2018.

Other income. Major classifications of other income are as follows:

	Three Months Ended December 31,	
(Dollars in thousands)	**2019**	**2018**
Investment income, net	$ 250	$ 316
Interest expense	(40)	(37)
Foreign exchange (loss) gain	(47)	136
Other	1	7
Other income	$ 164	$ 422

Other income decreased to $0.2 million the first quarter of fiscal 2020, compared to $0.4 million in the same prior-year period, due to a decline in investment income commensurate with lower current-year interest rates, as well as fluctuations in U.S. dollar to Euro foreign currency gains (losses).

Income tax provision. The income tax benefit was $0.3 million and $0.2 million for three months ended December 31, 2019 and 2018, respectively. Discrete tax benefit from excess tax benefits realized from share awards vested, expired, cancelled and exercised of $0.2 million and $0.5 million were recognized in the first quarter of fiscal 2020 and 2019, respectively. The Company's effective tax rate reflects the impact of state income taxes, permanent tax items and discrete tax benefits, as well as operating results in Ireland, where tax expense or benefit is offset by a valuation allowance. The tax benefits recognized in the three months ended December 31, 2019 and 2018 reflect expected full-year pre-tax operating results, impacted by our estimated U.S. federal R&D tax credit and by excess tax benefits related to stock-based compensation due to equity award exercise activity.

Segment Operating Results

Operating results for each of our reportable segments were as follows:

	Three Months Ended December 31,		
(Dollars in thousands)	**2019**	**2018**	**% Change**
Operating (loss) income:			
Medical Device	$ (423)	$ 357	(218)%
In Vitro Diagnostics	2,599	2,455	6%
Total segment operating income	2,176	2,812	
Corporate	(2,442)	(2,100)	16%
Total operating (loss) income	$ (266)	$ 712	(137)%

Medical Device. In the first quarter of fiscal 2020, our Medical Device business incurred an operating loss of $0.4 million, as compared with operating income of $0.4 million in the prior-year quarter. Operating expenses, excluding product costs, increased $1.3 million in the current year as we continue to invest in development of our medical device pipeline and related sales and marketing infrastructure, including additional headcount, to support our whole-products solutions strategy. This was partially offset by an increase in product gross margins to 66.1% for the first quarter of fiscal 2020, as compared with 57.3% in the prior-year quarter, due to favorable current-quarter product mix.

In Vitro Diagnostics. Operating income was $2.6 million in the first quarter of fiscal 2020, as compared with $2.5 million in the prior-year quarter. Operating income as a percentage of revenue was 49.9% and 49.3% in the first quarter of fiscal 2020 and 2019, respectively. Product gross margins were essentially flat at 69.7% for the first quarter of fiscal 2020, as compared with 70.2% in the prior-year quarter.

Corporate. The Corporate category includes expenses for administrative corporate functions, such as executive, corporate accounting, legal, human resources and Board of Directors related fees and expenses, which have not been fully allocated to the Medical Device and In Vitro Diagnostics segments. Corporate also includes expenses, such as litigation, which are not specific to a segment and thus not allocated to our operating segments.

Liquidity and Capital Resources

As of December 31, 2019, we had working capital of $59.3 million, a decrease of $1.9 million from September 30, 2019. Working capital is defined by us as current assets minus current liabilities. Cash and cash equivalents and available-for-sale investments totaled $48.3 million as of December 31, 2019, a decrease of $7.0 million from $55.3 million as of September 30, 2019. This change was primarily driven by the $3.2 million contingent consideration payment related to the NorMedix acquisition, $2.6 million payments of accrued compensation liabilities, and $2.0 million cash payments for taxes related to net share settlement of equity awards.

The Company's investment policy excludes ownership of collateralized mortgage obligations, mortgage-backed derivatives and other derivative securities without prior written approval of the Board of Directors. Our investments primarily consist of money market, corporate bond and commercial paper securities. Our investment policy requires that no more than 5% of investments be held in any one credit or issue, excluding U.S. government and government agency obligations. The primary investment objective of the portfolio is to provide for the safety of principal and appropriate liquidity while generating an above-benchmark ("Barclays Short Treasury 1-3 Month Index") total rate of return on a pre-tax basis. Management plans to continue to direct its investment advisors to manage the Company's securities investments primarily for the safety of principal for the foreseeable future as it continues to assess other investment opportunities and uses of its cash and securities investments, including those described below.

The following table is a summary of cash provided by (used in) operating, investing, and financing activities, the effect of exchange rate changes on cash and cash equivalents, and the net change in cash and cash equivalents:

(Dollars in thousands)	**Three Months Ended December 31,**	
	2019	**2018**
Cash (used in) provided by:		
Operating activities	(909)	(5,405)
Investing activities	(16,004)	7,843
Financing activities	(4,465)	(11,689)
Effect of exchange rates on changes in cash and cash equivalents	23	(15)
Net change in cash and cash equivalents	$ (21,355)	$ (9,266)

Operating Activities. We used cash in operating activities of approximately $0.9 million and $5.4 million and reported net income was $0.1 million and $1.3 million during the first quarter of fiscal 2020 and 2019, respectively. Net changes in operating assets and liabilities reduced cash flows from operating activities by $3.5 million and $8.0 million during the first quarter of fiscal 2020 and 2019, respectively. Significant changes in operating assets and liabilities affecting cash flows during these periods included:

- Cash provided by accounts receivable totaled $1.7 million in the first quarter of fiscal 2020, as compared with cash used of $0.8 million in the same prior-year period, due to timing fluctuations impacting accounts receivable balances which were favorable to cash flow in the current quarter and unfavorable in the prior-year quarter.
- Cash used by deferred revenue was $1.3 million and $2.4 million in the first quarter of fiscal 2020 and 2019, respectively. This change is entirely related to the timing of recognition of revenue from Abbott in each respective period.

Additionally, the portion of acquisition-related contingent consideration payments classified as reduction of cash flows from operations was $0.6 million and $2.0 million in the first quarter of fiscal 2020 and 2019, respectively, as it related to accretion expense, which increased these obligations from the acquisition date through settlement.

Investing Activities. We used cash in investing activities of $16.0 million in the first quarter of fiscal 2020, as compared with cash provided by investing activities of $7.8 million in the prior-year quarter. In the first quarter of fiscal 2020 and 2019, we used $14.3 million and received $9.9 million, respectively, for purchases of available-for-sale debt securities, net of maturities of other investments. We invested $1.7 million and $2.1 million in property and equipment in the first quarter of fiscal 2020 and 2019, respectively.

Financing Activities. We used cash in financing activities of $4.5 million and $11.7 million in the first quarter of fiscal 2020 and 2019, respectively. Contingent consideration payments totaled $3.2 million in the first quarter of fiscal 2020 related to the Normedix acquisition, with $0.6 million and $2.6 million classified as cash used by operating and financing activities, respectively. In the first quarter of fiscal 2019, we paid contingent consideration of $11.1 million related to the Creagh Medical acquisition, with $2.0 million and $9.1 million classified as cash used by operating and financing activities, respectively. In the first quarter of fiscal 2020 and 2019, we paid $2.0 million and $2.7 million, respectively, to purchase common stock to pay employee taxes resulting from the exercise of stock options and vesting of other stock awards.

We believe that our existing cash, and cash equivalents and investments, which totaled $48.3 million as of December 31, 2019, together with cash flow from operations, will provide liquidity sufficient to meet our cash needs and fund our operations and planned capital expenditures for the next twelve months. There can be no assurance, however, that our business will continue to generate cash flows at current levels, and disruptions in financial markets may negatively impact our ability to access capital in a timely manner and on attractive terms.

Customer Concentrations

We have agreements with a diverse base of customers and certain customers have multiple products using our technology. Abbott and Medtronic plc ("Medtronic") are our largest customers, comprising 19% and 14%, respectively, of our consolidated revenue for fiscal 2019. These same customers each comprised 12% and 18% of our consolidated revenue for the first quarter of fiscal 2020, respectively. Abbott has several separately licensed products, including the *SurVeil* license, which generate royalty revenue for Surmodics, none of which represented more than 5% of total revenue for the first three months of fiscal 2020. Medtronic has several separately licensed products that generate royalty revenue for Surmodics, none of which represented more than 3% of our total revenue. No other individual customer constitutes more than 10% of Surmodics' total fiscal 2020 to date or fiscal 2019 revenue.

Share Purchase Activity

Our Board of Directors has authorized the repurchase of up to an additional $25.3 million of the Company's outstanding stock in open-market purchases, privately negotiated transactions, block trades, accelerated share repurchase transactions, tender offers or by any combination of such methods. The authorization has no fixed expiration date.

Off-Balance Sheet Arrangements

As of December 31, 2019 and September 30, 2019, we did not have any off-balance sheet arrangements that have, or are reasonably likely to have, a current or future effect on our financial condition, changes in financial condition, revenue or expenses, results of operations, liquidity, capital expenditures or capital resources that is material to investors.

Forward-Looking Statements

This Quarterly Report on Form 10-Q, including "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Item 2, contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements include, but are not limited to, expectations concerning our growth strategy, including our ability to sign new license agreements, bring new products to market and broaden our hydrophilic coatings royalty revenue, the impact of patent expirations on our hydrophilic coatings royalty revenue, product development programs, various milestone achievements, research and development plans and expenses, including the estimated cost associated with the TRANSCEND clinical trial, future cash flow and sources of funding, short-term requirements, future property and equipment investment levels, the impact of potential lawsuits or claims, the impact of Abbott, Medtronic, as well as other significant customers, including new diagnostic kit customers, our ability to recognize the expected benefits of our acquisitions and the Company's strategy to transform to a provider of whole-product solutions, the timing, impact and success of the clinical evaluation of the *SurVeil* DCB, and our expectations related to our income tax expense for fiscal 2020. Without limiting the foregoing, words or phrases such as "anticipate," "believe," "could," "estimate," "expect," "forecast," "intend," "may," "plan," "possible," "project," "will" and similar terminology, generally identify forward-looking statements. Forward-looking statements may also represent challenging goals for us. These statements, which represent the Company's expectations or beliefs concerning various future events, are based on current expectations that involve a number of risks and uncertainties that could cause actual results to differ materially from those of such forward-looking statements. We caution that undue reliance should not be placed on such forward-looking statements, which speak only as of the date made. Some of the factors which could cause results to differ from those expressed in any forward-looking statement are set forth under "Risk Factors" in Part I, Item 1A of our Annual Report on Form 10-K for the fiscal year ended September 30, 2019. We disclaim any intent or obligation to update publicly these forward-looking statements, whether because of new information, future events or otherwise.

Although it is not possible to create a comprehensive list of all factors that may cause actual results to differ from our forward-looking statements, such factors include, among others:

- our reliance on a small number of significant customers, including our largest customers, Abbott and Medtronic, which causes our financial results and stock price to be subject to factors affecting those significant customers and their products, the timing of market introduction of their or competing products, product safety or efficacy concerns and intellectual property litigation could adversely affect our growth strategy and the royalty revenue we derive;
- clinical and regulatory developments relating to the evaluation of risks associated with paclitaxel-coated products, which developments may adversely impact our ability to complete our TRANSCEND clinical trial on any particular time frame, obtain marketing approval (or the timing of any such approval) for our *SurVeil* DCB and other paclitaxel-coated products, to treat PAD in the femoral and/or popliteal arteries;

- our ability to successfully develop, obtain regulatory approval for, and commercialize our *SurVeil* DCB product, including our reliance on clinical research organizations to manage the TRANSCEND clinical trial and uncertainty related to the impacts of any clinical research relative to drug-coated balloons, including our Avess™ DCB, other DCB products and other catheter and balloon-based products, which will impact our ability to receive additional milestone payments under our agreement with Abbott;
- general economic conditions which are beyond our control, such as the impact of recession, customer mergers and acquisitions, business investment and changes in consumer confidence;
- a decrease in our available cash or failure to generate cash flows from operations could impact short-term liquidity requirements and expected capital and other expenditures;
- the difficulties and uncertainties associated with the lengthy and costly new product development and foreign and domestic regulatory approval processes, such as delays, difficulties or failures in achieving acceptable clinical results or obtaining foreign or FDA marketing clearances or approvals, which may result in lost market opportunities, failure to bring new products to market or postpone or preclude product commercialization by licensees or ourselves;
- the development of new products or technologies by competitors, technological obsolescence and other changes in competitive factors;
- our ability to perform successfully with respect to certain product development activities, the related R&D expense impact and governmental and regulatory compliance activities which we have not previously undertaken in any significant manner;
- our ability to successfully convert our customers from the fourth generation of our PhotoLink® hydrophilic technology protected by a family of patents which expired in the first quarter of fiscal 2020 (in the U.S.) to one of our advanced generation technologies or extend the royalty-bearing term of the customer license agreements, and to offset any decline in revenue from customers that we are unable to convert;
- our ability to identify and execute new acquisition opportunities as well as the process of integrating acquired businesses poses numerous risks, including an inability to integrate acquired operations, personnel, technology, information systems, and internal control systems and products; a lack of understanding of tax, legal and cultural differences; diversion of management's attention; difficulties and uncertainties in transitioning the customers or other business relationships from the acquired entity to us; the loss of key employees of acquired companies;
- other factors described in "Risk Factors" and other sections of our Annual Report on Form 10-K for the fiscal year ended September 30, 2019, which you are encouraged to read carefully.

Many of these factors are outside the control and knowledge of us, and could result in increased volatility in period-to-period results. Investors are advised not to place undue reliance upon our forward-looking statements and to consult any further disclosures by us on this subject in our filings with the SEC.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

Our investment policy requires investments with high credit quality issuers and limits the amount of credit exposure to any one issuer. Our investments consist principally of interest-bearing corporate debt securities with varying maturity dates, which are less than one year. Because of the credit criteria of our investment policies, the primary market risk associated with these investments is interest rate risk. We do not use derivative financial instruments to manage interest rate risk or to speculate on future changes in interest rates. As of December 31, 2019, we held $39.3 million in available-for-sale debt securities, all with maturity dates of less than one year, therefore interest rate fluctuations would have an insignificant impact on our results of operations or cash flows. Our policy also allows the Company to hold a substantial portion of funds in cash and cash equivalents, which are defined as financial instruments with original maturities of three months or less and may include money market instruments, certificates of deposit, repurchase agreements, corporate bonds and commercial paper instruments.

Management believes that a reasonable change in raw material prices would not have a material impact on future earnings or cash flows because the Company’s inventory exposure is not material.

We are exposed to increasing Euro currency risk with respect to our manufacturing operations in Ireland. In a period where the U.S. dollar is strengthening or weakening as compared with the Euro, our revenue and expenses denominated in Euro currency are translated into U.S. dollars at a lower or higher value than they would be in an otherwise constant currency exchange rate environment. All sales transactions are denominated in U.S. dollars or Euros. We generate royalty revenue from the sale of customer products in foreign jurisdictions. Royalties generated in foreign jurisdictions by customers are converted and paid in U.S. dollars per contractual terms. Substantially all of our purchasing transactions are denominated in U.S. Dollars or Euros. To date, we have not entered into any foreign currency forward exchange contracts or other derivative financial instruments to hedge the effects of adverse fluctuations in foreign currency exchange.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

The Company maintains disclosure controls and procedures as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). The Company’s management, under the supervision and with the participation of the Company’s Chief Executive Officer and Chief Financial Officer, referred to collectively herein as the Certifying Officers, carried out an evaluation of the effectiveness of the design and operation of the Company’s disclosure controls and procedures as of December 31, 2019. Based on that evaluation, the Company’s Certifying Officers concluded that, as of the end of the period covered by this report, the Company’s disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act) were effective to ensure that information required to be disclosed by the Company in reports that it files under the Exchange Act is recorded, processed, summarized and reported within the time period specified in the Securities and Exchange Commission rules and forms, and to ensure that information required to be disclosed by the Company in the reports the Company files or submits under the Exchange Act is accumulated and communicated to the Company’s management, including its Certifying Officers, as appropriate, to allow timely decisions regarding required disclosures.

Changes in Internal Controls over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) during the three months ended December 31, 2019 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II — OTHER INFORMATION

Item 1. Legal Proceedings

From time to time, the Company has been involved in various legal actions involving its operations, products and technologies, including intellectual property and employment disputes.

Item 1A. Risk Factors

In our Annual Report on Form 10-K for the fiscal year ended September 30, 2019, filed with the SEC on December 3, 2019, we identify under “Part 1, Item 1A. Risk Factors.” important factors which could affect our financial performance and could cause our actual results for future periods to differ materially from our anticipated results or other expectations, including those expressed in any forward-looking statements made in this Quarterly Report on Form 10-Q.

There have been no material changes in our risk factors subsequent to the filing of our Annual Report on Form 10-K for the fiscal year ended September 30, 2019.

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

(c) Issuer Purchases of Equity Securities

The Company did not purchase any of its common stock during the three months ended December 31, 2019. As of December 31, 2019, the Company had an aggregate of $25.3 million available for future common stock repurchases under an authorization approved by the Board of Directors for up to $20.0 million on November 6, 2015, all of which is remaining, and an authorization approved by the Board of Directors on November 5, 2014 of which $5.3 million is remaining. These authorizations for share repurchases do not have a fixed expiration date.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

Not Applicable.

Item 5. Other Information

None.

Item 6. Exhibits

EXHIBIT INDEX

Exhibit	Description
2.1	Share Purchase Agreement by and among Surmodics, Inc. and the shareholders of Creagh Medical Ltd. dated as of November 20, 2015 — incorporated by reference to Exhibit 2.1 to the Company's 8-K filed on November 27, 2015, SEC File No. 0-23837.
2.2	Put and Call Option Agreement by and among Surmodics, Inc. and the shareholders of Creagh Medical Ltd. dated as of November 20, 2015 — incorporated by reference to Exhibit 2.2 to the Company's 8-K filed on November 27, 2015, SEC File No. 0-23837.
2.3	Stock Purchase Agreement, dated January 8, 2016, by and among Surmodics, Inc. and the shareholders of NorMedix, Inc. and Gregg Sutton as Seller's Agent — incorporated by reference to Exhibit 2.1 to the Company's Form 8-K filed on January 13, 2016, SEC File No. 0-23837.
3.1	Restated Articles of Incorporation, as amended — incorporated by reference to Exhibit 3.1 of the Company's Quarterly Report on Form 10-Q filed on July 29, 2016, SEC File No. 0-23837.
3.2	Restated Bylaws of Surmodics, Inc., as amended December 18, 2015 — incorporated by reference to Exhibit 3.2 of the Company's Current Report on Form 8-K filed on December 23, 2015, SEC File No. 0-23837.
10.1 *	Form of Change of Control Agreement with Executive Officers.
31.1*	Certification of Chief Executive Officer pursuant to 18 U.S.C. Sec. 1350 as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of Chief Financial Officer pursuant to 18 U.S.C. Sec. 1350 as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1*	Certification of Chief Executive Officer pursuant to 18 U.S.C. Sec. 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2*	Certification of Chief Financial Officer pursuant to 18 U.S.C. Sec. 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101*	Financial statements from the Quarterly Report on Form 10-Q for Surmodics, Inc. for the quarterly period ended December 31, 2019, filed on February 7, 2020, formatted in Extensible Business Reporting Language (XBRL): (I) Condensed Consolidated Balance Sheets, (ii) Condensed Consolidated Statements of Operations, (iii) Condensed Consolidated Statements of Comprehensive Income, (iv) Condensed Consolidated Statements of Stockholders' Equity, (v) Condensed Consolidated Statements of Cash Flows, and (vi) Notes to Condensed Consolidated Financial Statements.

* Filed herewith

SIGNATURES

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

February 7, 2020

Surmodics, Inc.

By: /s/ Timothy J. Arens
Timothy J. Arens
Vice President of Finance and Chief Financial Officer

(duly authorized signatory and principal financial officer)

FORM OF CHANGE OF CONTROL AGREEMENT

Parties: Surmodics, Inc. ("Company")
9924 West 74th Street
Eden Prairie, MN 55344-3523

_____
("Executive")

Date: _____

RECITALS:

1. Executive currently serves as the _____ of the Company, and Executive has extensive knowledge and experience relating to the Company's business.

2. The parties recognize that a "Change of Control" may materially change or diminish Executive's responsibilities and substantially frustrate Executive's commitment to the Company.

3. The parties further recognize that it is in the best interests of the Company and its stockholders to provide certain benefits payable upon a "Change of Control Termination" to encourage Executive to continue in his position in the event of a Change of Control.

4. The parties further desire to provide certain benefits payable upon a termination of Executive's employment following a Change of Control.

5. The parties further recognize that it is in the best interests of the Company to protect confidential, proprietary, and trade secret information of the Company, to prevent unfair competition by former executives of the Company following separation of their employment with the Company, and to secure cooperation from former executives with respect to matters related to their employment with the Company.

AGREEMENTS:

1. **Term of Agreement**. Except as otherwise provided herein, this Agreement shall commence on the date executed by the parties and shall continue in effect until the twelve-month anniversary of the date on which a Change of Control occurs. Notwithstanding the foregoing, if at any time during the term of this Agreement and prior to a Change of Control, Executive's employment with the Company terminates for any reason or no reason, or if Executive no longer serves as an executive officer of the Company, this Agreement shall immediately terminate, and Executive shall not be entitled to any of the compensation and benefits described in this Agreement. Any rights and obligations accruing before the termination or expiration of this Agreement shall survive to the extent necessary to enforce such rights and obligations.

2. **"Change of Control**." For purposes of this Agreement, "Change of Control" shall mean any one or more of the following events occurring after the date of this Agreement:

(a) The purchase or other acquisition by any one person, or more than one person acting as a group, of stock of the Company that, together with stock held by such person or group, constitutes more than 50% of the total combined value or total combined voting power of all classes of stock issued by the Company; provided, however, that if any one person or more than one person acting as a group is considered to own more than 50% of the total combined value or total combined voting power of such stock, the acquisition of additional stock by the same person or persons shall not be considered a Change of Control;

(b) A merger or consolidation to which the Company is a party if the individuals and entities who were shareholders of the Company immediately prior to the effective date of such merger or consolidation have, immediately following the effective date of such merger or consolidation, beneficial ownership (as defined in Rule 13d-3 under the Securities Exchange Act of 1934) of less than fifty percent (50%) of the total combined voting power of all classes of securities issued by the surviving entity for the election of directors of the surviving corporation;

(c) Any one person, or more than one person acting as a group, acquires or has acquired during the twelve (12) month period ending on the date of the most recent acquisition by such person or persons, direct or indirect beneficial ownership (as defined in Rule 13d-3 under the Securities Exchange Act of 1934) of stock of the Company constituting thirty-five percent (35%) or more of the total combined voting power of all classes of stock issued by the Company;

(d) The purchase or other acquisition by any one person, or more than one person acting as a group, of substantially all of the total gross value of the assets of the Company during the twelve-month period ending on the date of the most recent purchase or other acquisition by such person or persons. For purposes of this Section 2(d), "gross value" means the value of the assets of the Company or the value of the assets being disposed of, as the case may be, determined without regard to any liabilities associated with such assets;

(e) A change in the composition of the Board of the Company at any time during any consecutive twelve (12) month period such that the "Continuity Directors" cease for any reason to constitute at least a fifty percent (50%) majority of the Board. For purposes of this event, "Continuity Directors" means those members of the Board who either:

(1) were directors at the beginning of such consecutive twelve (12) month period; or

(2) were elected by, or on the nomination or recommendation of, at least a two-thirds (2/3) majority of the then-existing Board of Directors.

In all cases, the determination of whether a Change of Control has occurred shall be made in accordance with the Internal Revenue Code of 1986, as amended (the "Code"), Section 409A and the regulations, notices and other guidance of general applicability issued thereunder.

3. "**Change of Control Termination."** For purposes of this Agreement, "Change of Control Termination" shall mean any of the following events occurring upon or within twelve (12) months after a Change of Control:

(a) The termination of Executive's employment by the Company for any reason, with or without cause, except for termination resulting from conduct by Executive constituting (i) a felony involving moral turpitude under either federal law or the law of the state of the Company's incorporation, or (ii) Executive's willful failure to fulfill his employment duties with the Company; provided, however, that for purposes of this clause (ii), an act or failure to act by Executive shall not be "willful" unless it is done, or omitted to be done, in bad faith and without any reasonable belief that Executive's action or omission was in the best interests of the Company; or

(b) The termination of employment with the Company by Executive for "Good Reason." Such termination shall be accomplished by, and effective upon, Executive giving written notice to the Company of his decision to terminate. "Good Reason" shall mean a good faith determination by Executive, in Executive's sole and absolute judgment, that any one or more of the following events has occurred, at any time during the term of this Agreement or after a Change of Control; provided, however, that such event shall not constitute Good Reason if Executive has expressly consented to such event in writing or if Executive fails to provide written notice of his decision to terminate, which notice describes the event giving rise to the resignation, within ninety (90) days of the occurrence of such event and the Company has not cured the event within thirty (30) days after receiving such notice from Executive.

(1) A material change in Executive's duties, responsibilities, or authority, or any removal of Executive from or any failure to re-elect Executive to any position which has the effect of materially diminishing Executive's duties, responsibility or authority;

(2) A material reduction, in the aggregate, by the Company in Executive's base salary (as increased from time to time), variable pay opportunities (including short and long-term cash incentives and equity-based compensation), or the employee benefits to which Executive is entitled to participate in irrespective of any standard waiting periods with respect to the same, unless such material reduction is generally applicable to all executive officers of the Company;

(3) A requirement imposed by the Company on Executive that results in Executive being based at a location that is outside of a fifty (50) mile radius of Executive's prior job location; or

(4) Any material breach by the Company of any employment agreement between Executive and the Company.

Termination for "Good Reason" shall not include Executive's death or a termination for any reason other than one of the events specified in clauses (1) through (4) above.

For purposes of Section 4 of this Agreement only, with respect to the timing of payments thereunder, "Change of Control Termination" shall mean the date of Executive's "separation from service" with the Company within the meaning of Section 409A(a)(2)(A)(i) of the Code (with "Company" for purposes of this paragraph to include any business entity that is treated as a single employer with the Company under the rules of Section 414(b) and (c) of the Code).

4. **Compensation and Benefits**. Upon a termination of Executive's employment for any reason, Executive shall be entitled to receive all salary and other compensation earned by Executive through the date of such termination at the rate in effect immediately prior to such termination, and all other amounts to which Executive may be entitled to receive under any compensation plan maintained by the Company, subject to any distribution requirements contained in such compensation plans. In addition, subject to the conditions and limitations contained in this Agreement, upon a Change of Control Termination, Executive shall be entitled to all of the following compensation and benefits:

(a) Within five (5) business days after a Change of Control Termination, the Company shall pay to Executive a severance payment equal to two (2) times the sum of (i) Executive's base salary as of the date of the Change of Control Termination, and (ii) an amount equal to Executive's target short-term incentive opportunity for the year in which the Change of Control Termination occurs;

(b) The Company shall continue to provide Executive, at the Company's expense, with coverage under its life, health, or dental benefit plans at a level comparable to the benefits which Executive was receiving or entitled to receive immediately prior to the Change of Control Termination or, if greater, at a level comparable to the benefits which Executive was receiving immediately prior to the event which constituted Good Reason. Such coverage shall continue for eighteen (18) months following such Change of Control Termination or, if earlier, until Executive is eligible to be covered for such benefits through his employment with another employer or continuation coverage under Section 4980B (COBRA) otherwise ends;

(c) All outstanding Options or Stock Appreciation Rights shall become immediately exercisable, and the risks of forfeiture on any outstanding Restricted Stock Awards or Restricted Stock Unit Awards shall immediately lapse. For purposes of this Agreement, "Option," "Stock Appreciation Rights," "Restricted Stock Awards" and "Restricted Stock Unit Awards" shall have the meaning set forth in the SurModics, Inc. 2009 Equity Incentive Plan, or any successor plan; and

(d) All shares or units subject to all outstanding Performance Awards shall become immediately vested and payable at the target performance objectives set forth in said Performance Awards. For purposes of this Agreement, "Performance Awards" and "Performance Period" shall have the meaning set forth in the SurModics, Inc. 2009 Equity Incentive Plan, or any successor plan.

The parties intend that the payment described in Section 4(a) shall be excluded from deferred compensation as a "short-term deferral" under Treas. Reg. § 1.409A-1(b)(4). The parties intend that the continuation of health and dental benefits described in Section 4(b) shall be excluded from deferred compensation pursuant to the medical benefits exception for separation pay plans under Treas. Reg. § 1.409A-1(b)(9)(v)(B).

The parties intend that the continuation of life insurance benefits described in Section 4(b) shall be excluded from deferred compensation as separation pay due to an involuntary separation from service under Treas. Reg. § 1.409A-1(b)(9)(iii), and the amounts payable for such continuation of life insurance coverage shall not exceed two times the lesser of (x) Executive's annualized compensation based on the annual rate of pay for services to the Company for the calendar year prior to the calendar year in which the Change of Control Termination occurs (adjusted for any increase during the year that was expected to continue indefinitely if Executive had not separated from service) or (y) the compensation limit under Section 401(a)(17) of the Code for the year in which the Change of Control Termination occurs. Further, in no event shall the benefits described in Section 4(b) extend beyond December 31st of the second calendar year following the calendar year in which the Change of Control Termination occurs.

Notwithstanding the foregoing, if any of the payments described in Section 4 above are subject to the requirements of Code Section 409A and the Company determines that Executive is a "specified employee" as defined in Code Section 409A as of the date of the Change of Control Termination, such payments shall not be paid or commence earlier than the date that is six months after the Change of Control Termination, but shall be paid or commence during the calendar year following the year in which the Change of Control Termination occurs and within 30 days of the earliest possible date permitted under Code Section 409A.

5. **Limitation on Change of Control Payments.** This Section 5 applies only in the event the Company determines that this Agreement is subject to the limitations of Code Section 280G, or any successor provision, and the regulations issued thereunder. The intent of this Section 5 is to reduce any Change of Control Benefits, as defined below, that would otherwise be characterized as a "parachute payment" as defined in Code Section 280G and be subject to an additional excise tax under Code Section 4999 by the minimum amount necessary to avoid characterization as a parachute payment and avoid the imposition of the excise tax, but only if doing so would provide a more favorable net after-tax result to the Executive than if the Change in Control Benefits were not reduced and the Executive were subject to the excise tax.

(a) In the event the Change of Control Benefits payable to Executive would collectively constitute a "parachute payment" as defined in Code Section 280G, and if the "net after-tax amount" of such parachute payment to Executive is less than what the net after-tax amount to Executive would be if the Change of Control Benefits otherwise constituting the parachute payment were limited to the maximum "parachute value" of Change of Control Benefits that Executive could receive without giving rise to any liability for any excise tax imposed by Section 4999 of the Code (the "Excise Tax"), then the Change of Control Benefits otherwise constituting the parachute payment shall be reduced so that the parachute value of all Change of Control Benefits, in the aggregate, will equal the maximum parachute value of all Change of Control Benefits that Executive can receive without any Change of Control Benefits being subject to the Excise Tax. Should such a reduction in Change of Control Benefits be required, Executive shall be entitled, subject to the following sentence, to designate those Change of Control Benefits under this Agreement or the other arrangements that will be reduced or eliminated so as to achieve the specified reduction in Change of Control Benefits to Executive and avoid characterization of such Change of Control Benefits as a parachute payment. The Company will provide Executive with all information reasonably requested by Executive to permit Executive to make such designation. To the extent that Executive's ability to make such a designation would cause any of the Change of Control Benefits to become subject to any additional tax under Code Section 409A, or if Executive fails to make such a designation within ten business days of receiving the requested information from the Company, then the Company shall achieve the necessary reduction in the Change of Control Benefits by reducing them in the following order: (a) reduction of cash payments payable under this Agreement; (b) reduction of other payments and benefits to be provided to Executive; (c) cancellation or reduction of accelerated vesting of equity-based awards that are subject to performance-based vesting conditions; and (d) cancellation or reduction of accelerated vesting of equity-based awards that are subject only to service-based vesting conditions. If the acceleration of the vesting of Executive's equity-based awards is to be cancelled or reduced, such acceleration of vesting shall be reduced or cancelled in the reverse order of the date of grant.

(b) For purposes of this Section 5, a "net after-tax amount" shall be determined by taking into account all applicable income, excise and employment taxes, whether imposed at the federal, state or local level, including the Excise Tax, and the "parachute value" of the Change of Control Benefits means the present value as of the date of the Change of Control for purposes of Code Section 280G of the portion of such Change of Control Benefits that constitutes a parachute payment under Code Section 280G(b)(2).

(c) For purposes of this Section 5, "Change of Control Benefits" shall mean any payment, benefit or transfer of property in the nature of compensation paid to or for the benefit of Executive under any arrangement which is considered contingent on a Change of Control for purposes of Code Section 280G, including, without limitation, any and all of the Company's salary, incentive payments, restricted stock, stock option, equity-based compensation or benefit plans, programs or other arrangements, and shall include benefits payable under this Agreement.

(d) For clarity, the Company shall have no obligation to provide any "tax gross-up" payment related to the Excise Tax in the event the Change of Control Benefits that would otherwise be characterized as a parachute payment are not reduced as set forth in Section 5(a) above and Executive is subject to the Excise Tax.

6. **Withholding Taxes**. The Company shall be entitled to deduct from all payments or benefits provided for under this Agreement any federal, state or local income and employment-related taxes required by law to be withheld with respect to such payments or benefits.

7. **Post-Termination Obligations and Conditions.**

(a) In the event of termination of Executive's employment, the sole obligation of the Company under this Agreement will be its obligation to make the payments called for by Sections 4 and 5 hereof, as the case may be, and the Company will have no other obligation to Executive or to Executive's beneficiary or estate.

(b) Notwithstanding the foregoing provisions of Section 4, the Company will not be obligated to make any payments to Executive under Sections 4(a) through 4(d) unless: (i) Executive has signed a release of claims in favor of the Company and its affiliates and related entities, and their directors, officers, insurers, employees and agents, provided such release shall not require Executive to release claims Executive may have for indemnification from the Company or rights of Executive under this Agreement; (ii) all applicable rescission periods provided by law for releases of claims shall have expired and Executive shall have signed and not rescinded the release of claims; and (iii) Executive is in strict compliance with the terms of this Agreement as of the dates of such payments.

(c) Immediately upon termination of Executive's employment with the Company for any reason, Executive will resign all positions then held as a director or officer of the Company and of any affiliated entity of the Company.

(d) Upon termination of Executive's employment with the Company, Executive shall promptly deliver to the Company any and all Company records and any and all Company property in Executive's possession or under Executive's control, including, without limitation, manuals, books, blank forms, documents, letters, memoranda, notes, notebooks, reports, printouts, computer disks, computer tapes, source codes, data, tables or calculations and all copies thereof, documents that in whole or in part contain any trade secrets or confidential, proprietary or other secret information of the Company and all copies thereof, and keys, access cards, access codes, passwords, credit cards, personal computers, telephones, and other electronic equipment belonging to the Company.

(e) Following termination of Executive's employment with the Company for any reason, Executive will, upon reasonable request of the Company or its designee, cooperate with the Company in connection with the transition of Executive's duties and responsibilities for the Company; consult with the Company regarding business matters that Executive was directly and substantially involved with while employed by the Company; and be reasonably available, with or without subpoena, to be interviewed, review documents or things, give depositions, testify, or engage in other reasonable activities in connection with any litigation or investigation, with respect to matters that Executive then has or may have knowledge of by virtue of Executive's employment by or service to the Company or any related entity; provided, however, that: (i) the Company shall not unreasonably request such cooperation of Executive; (ii) the Company shall reimburse Executive or pay directly any reasonable expenses actually incurred in connection with such cooperation and assistance by Executive; and (iii) Executive shall not be required to assist or cooperate with the Company to the extent such assistance or cooperation would prevent Executive from performing, or would materially interfere with Executive's performance of, the duties or responsibilities of his then-current occupation.

(f) Executive will not at any time disparage, defame, or besmirch the reputation, character, image, products, or services of the Company or any of its affiliates, or the reputation or character of any of its current or former directors, officers, employees, or agents; provided that nothing in this Section 7(f) is intended to prevent or interfere with Executive making any required or reasonable communications with, or providing information to, any governmental, law enforcement, or stock exchange agency or representative, or in connection with any governmental investigation, court, administrative or arbitration proceeding.

(g) The Company will direct its executive officers to not at any time disparage, defame, or besmirch the reputation, character or image of Executive; provided that nothing in this Section 7(g) is intended to prevent or interfere with the Company or its executive officers from making any required or reasonable communications with, or providing information to, any governmental, law enforcement, or stock exchange agency or representative, or in connection with any governmental investigation, court, administrative or arbitration proceeding.

8. **Successors and Assigns**. This Agreement shall inure to the benefit of and shall be enforceable by Executive, his heirs and the personal representative of his estate, and shall be binding upon and inure to the benefit of the Company and its successors and assigns. The Company will require the transferee of any sale of all or substantially all of the business and assets of the Company or the survivor of any merger, consolidation or other transaction expressly to agree to honor this Agreement in the same manner and to the same extent that the Company would be required to perform this Agreement if no such event had taken place. Failure of the Company to obtain such agreement before the effective date of such event shall be a material breach of this Agreement within the meaning of Section 3(b)(4) of this Agreement.

9. **Notices.** For the purpose of this Agreement, notices and all other communications provided for in the Agreement shall be in writing and shall be deemed to have been duly given when delivered or mailed by United States certified or registered mail, return receipt requested, postage prepaid, addressed to the respective addresses set forth on the first page of this Agreement or to such other address as either party may have furnished to the other in writing in accordance herewith, except that notice of change of address shall be effective only upon receipt. All notices to the Company shall be directed to the attention of the Board of Directors of the Company.

10. **Captions**. The headings or captions set forth in this Agreement are for convenience only and shall not affect the meaning or interpretation of this Agreement.

11. **Governing Law**. The validity, interpretation, construction and performance of this Agreement shall be governed by the laws of the State of Minnesota.

12. **Construction**. Wherever possible, each term and provision of this Agreement shall be interpreted in such manner as to be effective and valid under applicable law. If any term or provision of this Agreement is invalid or unenforceable under applicable law, (a) the remaining terms and provisions shall be unimpaired, and (b) the invalid or unenforceable term or provision shall be deemed replaced by a term or provision that is valid and enforceable and that comes closest to expressing the intention of the unenforceable term or provision.

13. **Amendment; Waivers**. This Agreement may not be modified, amended, waived or discharged in any manner except by an instrument in writing signed by both parties hereto. The waiver by either party of compliance with any provision of this Agreement by the other party shall not operate or be construed as a waiver of any other provision of this Agreement, or of any subsequent breach by such party of a provision of this Agreement.

14. **Section 409A**. This Agreement is intended to satisfy, or be exempt from, the requirements of Section 409A(a)(2), (3) and (4) of the Code, including current and future guidance and regulations interpreting such provisions, and should be interpreted accordingly.

15. **Non-Competition, Invention, Non-Disclosure Agreement**. Executive acknowledges and agrees that Executive shall continue to comply with the terms of Executive's Non-Competition, Invention, Non-Disclosure Agreement with the Company, dated August 5, 2005 (the "Non-Competition Agreement"), a copy of which has been provided to Executive with this Agreement. Executive specifically acknowledges that the consideration Executive received in exchange for signing the Non-Competition Agreement was adequate. Executive further acknowledges that the Company would not enter into this Agreement without having the protections it has under the Non-Competition Agreement and therefore the consideration Executive is receiving in exchange for signing this Agreement constitutes additional consideration that the Company is providing in exchange for Executive agreeing to remain bound by the obligations under the Non-Competition Agreement.

16. **Entire Agreement**. This Agreement sets forth Executive's sole and exclusive remedy with respect to severance benefits payable to Executive upon a Change of Control Termination, and except for the Non-Competition Agreement supersedes all prior or contemporaneous negotiations, commitments, agreements (written or oral) and writings between the Company and Executive with respect to the subject matter hereof, including but not limited to any negotiations, commitments, agreements or writings relating to any severance benefits payable to Executive, and constitutes the entire agreement and understanding between the parties hereto. All such other negotiations, commitments, agreements and writings will have no further force or effect, and the parties to any such other negotiation, commitment, agreement or writing will have no further rights or obligations thereunder.

17. **Counterparts**. This Agreement may be executed in several counterparts, each of which shall be deemed to be an original but all of which together shall constitute one and the same instrument.

18. **Arbitration**. Any dispute arising out of or relating to this Agreement or the alleged breach of it, or the making of this Agreement, including claims of fraud in the inducement, shall be discussed between the disputing parties in a good faith effort to arrive at a mutual settlement of any such controversy. If, notwithstanding, such dispute cannot be resolved, such dispute shall be settled by binding arbitration. Judgment upon the award rendered by the arbitrator may be entered in any court having jurisdiction thereof. The arbitrator shall be a retired state or federal judge or an attorney who has practiced securities or business litigation for at least 10 years. If the parties cannot agree on an arbitrator within 20 days, any party may request that the chief judge of the District Court for Hennepin County, Minnesota, select an arbitrator. Arbitration will be conducted pursuant to the provisions of this Agreement, and the commercial arbitration rules of the American Arbitration Association, unless such rules are inconsistent with the provisions of this Agreement. Limited civil discovery shall be permitted for the production of documents and taking of depositions. Unresolved discovery disputes may be brought to the attention of the arbitrator who may dispose of such dispute. The arbitrator shall have the authority to award any remedy or relief that a court of this state could order or grant; provided, however, that punitive or exemplary damages shall not be awarded. Unless otherwise ordered by the arbitrator, the parties shall share equally in the payment of the fees and expenses of the arbitrator. The arbitrator may award to the prevailing party, if any, as determined by the arbitrator, all of the prevailing party's costs and fees, including the arbitrator's fees, and expenses, and the prevailing party's travel expenses, out-of-pocket expenses and reasonable attorneys' fees. Unless otherwise agreed by the parties, the place of any arbitration proceedings shall be Hennepin County, Minnesota.

EXHIBIT 31.1

CERTIFICATION PURSUANT TO SECTION 302
OF THE SARBANES-OXLEY ACT OF 2002

I, Gary R. Maharaj, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Surmodics, 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(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and we 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.

Dated: February 7, 2020

Signature: /s/ Gary R. Maharaj
Gary R. Maharaj
President and
Chief Executive Officer

EXHIBIT 31.2

CERTIFICATION PURSUANT TO SECTION 302
OF THE SARBANES-OXLEY ACT OF 2002

I, Timothy J. Arens, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Surmodics, 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(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and we 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.

Dated: February 7, 2020

Signature: /s/ Timothy J. Arens
Timothy J. Arens
Vice President of Finance and Chief Financial Officer

EXHIBIT 32.1

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

In connection with the Quarterly Report of Surmodics, Inc. (the "Company") on Form 10-Q for the quarter ended December 31, 2019, as filed with the Securities and Exchange Commission (the "Report"), I, Gary R. Maharaj, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that:

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

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

Dated: February 7, 2020

Signature: /s/ Gary R. Maharaj
Gary R. Maharaj
President and
Chief Executive Officer

EXHIBIT 32.2

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

In connection with the Quarterly Report of Surmodics, Inc. (the "Company") on Form 10-Q for the quarter ended December 31, 2019, as filed with the Securities and Exchange Commission (the "Report"), I, Timothy J. Arens, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that:

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

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

Dated: February 7, 2020

Signature: /s/ Timothy J. Arens
Timothy J. Arens
Vice President of Finance and Chief Financial Officer