Sona Nanotech Inc.
Management Discussion and Analysis
Year Ended October 31, 2019

This Management Discussion and Analysis ("MD&A") provides a review of the performance of Sona Nanotech Inc. ("Sona" or the "Company") and should be read in conjunction with the audited annual consolidated financial statements (the "Financial Statements") of Sona for the years ended October 31, 2019 and 2018, which have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB").

The information presented in this MD&A is as of February 28, 2020. The reporting currency and functional currency for Sona is the Canadian dollar. All of the financial information presented herein is expressed in Canadian dollars, unless otherwise stated. This MD&A contains "forward-looking statements" that are subject to risk factors set out in a cautionary note contained herein. The reader is cautioned not to place undue reliance on forward-looking statements.

FORWARD-LOOKING STATEMENTS AND INFORMATION

This MD&A contains "forward-looking information", as such term is defined in applicable Canadian securities legislation. Forward-looking information is necessarily based on a number of estimates and assumptions that are inherently subject to significant business, economic and competitive uncertainties and contingencies. All statements other than statements which are reporting results as well as statements of historical fact set forth or incorporated herein by reference, are forward looking information that may involve a number of known and unknown risks, uncertainties and other factors, many of which are beyond Sona's ability to control or predict. Forward-looking information can be identified by the use of words such as "may", "should", "expects", "plans", "anticipates", "believes", "estimates", "predicts", "intends", "continue", or the negative of such terms, or other comparable terminology.

This information includes, but is not limited to, comments regarding:

- the development plans for the Company's gold nanoparticle products and associated services;
- the Company's business strategy;
- the Company's strategy for protecting its intellectual property;
- the Company's ability to obtain necessary funding on favorable terms or at all;
- the Company's plan and ability to secure revenues;
- the risk of competitors entering the market;
- the Company's ability to hire and retain skilled staff;
- the ability to obtain financing to fund future expenditure and capital requirements; and
- the impact of adoption of new accounting standards.

Although Sona believes that the plans, intentions and expectations reflected in this forward-looking information are reasonable, Sona cannot be certain that these plans, intentions or expectations will be achieved. Actual results, performance or achievements could differ materially from those contemplated, expressed or implied by the forward-looking information contained in this report. Disclosure of important factors that could cause actual results to differ materially from Sona's plans, intentions or expectations is included in this report under the heading *Risk Factors*.

Forward-looking information inherently involves risks and uncertainties that could cause actual results to differ materially from the forward-looking information. Factors that could cause or contribute to such differences include, but are not limited to, unexpected changes in business and economic conditions, including the global financial and capital markets; changes in interest and currency exchange rates; changes in operating revenues and costs; political or economic instability, either globally or in the countries in which Sona operates; local and community impacts and issues; labour disputes; environmental costs and risks; competitive factors; availability of external financing at reasonable rates or at all; and the other risk factors discussed in this MD&A under the heading *Risk Factors*. Many of these factors are beyond Sona's ability to control or predict. These factors are not intended to represent a complete list of the general or specific factors that may affect Sona. Sona may note additional factors elsewhere in this MD&A. All forward-looking statements and information speak only as of the date made. All subsequent written and oral forward-looking statements attributable to Sona, or persons acting on Sona's behalf, are expressly qualified in their entirety by these cautionary statements. Readers are cautioned not to put undue reliance on forward-looking information due to the inherent uncertainty therein. Sona disclaims any intent or obligation to update publicly any forward-looking statements, whether as a result of new information, future events or results or otherwise.

COMPANY OVERVIEW

Sona Nanotech Inc., (the "Company" or "Sona") and Sona Nanotech Ltd. ("Sona Nanotech"), a private company involved in the nanotechnology Life Sciences industry, entered into a definitive agreement dated March 22, 2018 to amalgamate the two companies to form Sona Nanotech Inc. The boards of directors of the Company and Sona Nanotech each unanimously approved the terms of the Amalgamation. Refer to note 3, *Transaction with Sona Nanotech Ltd,* in the audited consolidated financial statements for details. The Company's corporate office is located at 1969 Upper Water Street, Suite 2001, Halifax, N.S., Canada, B3J 3R7. The research and development office is located at 1 Research Drive, Bay 2, Dartmouth, N.S., Canada, B2Y 4M9. The registered office of Sona is located at Suite 1750, 1185 West Georgia Street, Vancouver, B.C., Canada, V6E 4E6.

The Company's Board of Directors, upon approval by written consents of a majority of the minority shareholders of the predecessor company, Stockport Exploration Inc., made the decision to voluntarily delist from the TSX Venture Exchange ("TSXV") and list on the Canadian Securities Exchange ("CSE"). The Company received conditional listing approval from the CSE on July 27, 2018 subject to the completion of the transaction with Sona. The Company's common shares were voluntarily delisted from the TSXV on August 7, 2018. The amalgamation of its predecessor companies, Stockport Exploration Inc. and Sona Nanotech Ltd., to form "Sona Nanotech Inc." as a federally amalgamated corporation was completed, with shareholder approval, effective August 8, 2018. The Company completed a private placement of its common shares at $0.25 per share to raise gross proceeds of $2,000,000, by the issuance of 8,000,000 common shares. The Company submitted its final listing application to the CSE on September 28, 2018 and commenced trading on October 4, 2018 under the trading symbol "SONA".

Transaction with Sona Nanotech Ltd.

Under the terms of the Amalgamation Agreement (the "Agreement") dated August 8, 2018, the shareholders of the Company received one common share of the amalgamated company for every four shares of the Company held and the shareholders of Sona Nanotech received one common share for every 1.5802 shares of Sona Nanotech held (collectively referred to as the "Transaction"). Upon completion of the Transaction, the Company changed its name to Sona Nanotech Inc. and the shareholders of the Sona Nanotech received a total of 22,036,216 common shares and the shareholders of the Company received a total of 22,163,247 common shares based on the amalgamation ratios.

In substance, the Transaction involves Sona Nanotech shareholders obtaining control of the Company. As the Company does not meet the definition of a business prior to the Transaction, the Transaction is outside the scope of IFRS 3, *Business Combinations*. The Transaction has therefore been accounted for under IFRS 2, *Share-based payment.* Under this basis of accounting, the consolidated financial statements of the combined entity will represent the continuation of Sona Nanotech by which Sona Nanotech acquired the net assets and listing status of the Company as of August 8, 2018. Accordingly, the Transaction will be considered a reverse takeover transaction ("RTO") with Sona Nanotech acquiring the Company.

The excess of the estimated fair value of the equity instruments that Sona Nanotech is deemed to have issued to acquire the Company, plus the transaction costs and the estimated fair value of the Company's net liabilities (collectively the "Consideration"), will be recorded as a charge to the listing fee expense as a cost of obtaining the Company status as a Reporting Issuer. See note 3, *Transaction with Sona Nanotech Ltd.*, of the audited consolidated financial statements for further details.

The Company adopted a financial year end of October 31st as a result of the closing of the Transaction.

Operational overview
In the last quarter of 2017, Darren Rowles was appointed as President and CEO of the Company. A commercially-minded scientist, Mr. Rowles joined Sona with 14 years experience in the diagnostic and nanoparticle industry. He previously worked for one of the leading providers of technologies to the global diagnostics market, where he specialized in product manufacturing and development in the area of noble metal nanoparticles and lateral flow diagnostics. During his time there, he helped grow nanoparticle sales from $200,000 to $5.5 million with $4 million profit and introduced more than 15 new products to market. Mr. Rowles is a key opinion leader at industry seminars and conferences and acts as an Advisory Board Member to the World Gold Council.

Sona is the manufacturer of the Gemini™ and Omni™ Gold Nanorod ("GNR") product lines. Sona is the world's first company to develop the ability to synthesize high volumes of gold nanorods without the use of the cytotoxin, cetyltrimethylammonium bromide ("CTAB"). GNR products are ideally suited for in-vitro Diagnostics ("IVD") test products including lateral flow assays, enzyme-linked immunosorbent assays ("ELISA"), flow through assays and lab analyzers. In addition, Sona's gold nanorods have potential to be incorporated into disruptive emerging medical applications including targeted drug delivery, photothermal therapy and cell imaging.

In late 2018, the Company completed the relocation of its laboratory facilities to Halifax, NS as it seeks to capitalize on recent business success and further expand its business in the diagnostics market. Following this period of recent growth, the Company agreed to a three-year lease with Innovacorp for space at the Technology Innovation Centre on Research Drive.

BUSINESS OBJECTIVE

Sona Powered Rapid Test Development Program
Sona's primary objective will be the development and production of its own lateral flow tests utilizing Sona's unique gold nanotechnology as the core reagent to help drive better performance from the outset and minimize time to market. This next generation of assays will be easy to interpret, provide both qualitative and quantitative outputs with greater sensitivity and specificity and will be coupled with a data management system to collect, store, manage, track and share the associated test data to all stakeholders through app and cloud services.

Sona's enhanced products will also empower healthcare professionals and individuals to make better diagnostics decisions and take more control of their own health.

Sona's initial focus will be on the development of tests for emerging infectious diseases in humans and animals as well as novel and emerging areas of biomarker discovery that can be translatable into immunoassay formats.

Sona's approach to market entry involves direct selling to test buyers/consumers as well as targeting companies that have established and ubiquitous distribution network in place for sales of lateral flow assays.

Rapid Screening Test for Coronavirus
Sona is deploying its proprietary nanotechnology in the development of a rapid screening test for the current coronavirus, "Covid-19". Sona is developing a quick-response lateral flow test to screen patients for the Covid-19 virus. There is currently no lateral flow test specific to the Covid-19 strain of the coronavirus, which was first detected in Wuhan, Hubei Province, China and continues to spread across the globe. Sona will integrate its proprietary nanorod technology into a disposable lateral flow test platform (similar to pregnancy tests that can be administered without skilled technicians or additional laboratory equipment) for use as a screening tool to help triage individuals.

Currently, the majority of testing completed for the Covid-19 virus utilizes molecular based technology ("PCR"), a testing platform that typically costs more than $200 per test, frequently takes 2-4 hours to produce results, and requires specialized laboratory equipment and skilled technicians to operate. In comparison, lateral flow assays provide results between 5-15 minutes, are anticipated to cost less than $50 and can be administered by a layperson.

Sona has secured an agreement with The Native Antigen Company ("Native") to supply biologics for its Covid-19 Coronavirus rapid screening test. Native, based in Oxford, UK, is a leading supplier of native and recombinant viral and bacterial antigens, antibodies and immunoassays, alongside custom and contract services. Their infectious disease reagents are widely adopted by pharmaceutical, in-vitro diagnostics and vaccine manufacturers, as well as leading edge academic groups focusing on cutting edge research. Native is one of the first recognized suppliers to release biological materials for use in diagnostic tests specific to the Covid-19 strain of the coronavirus.

Antigens specific to this strain of Coronavirus have been produced at Native's Oxford facility using their proprietary mammalian, VirtuE expression system. This system can introduce protein folding and post-translational modifications to recombinant proteins, which are essential for full biological and antigenic activity. The Covid-19 strain differs from existing coronavirus strains such as SARS or MERS, due to the spike, membrane and envelope proteins present on the surface of the virus. Consequently, current commercial sources of biological materials associated with SARS and MERS would not be ideal for use in a diagnostic or screening test. They would not be specific to Covid-19, and would therefore result in poor overall test performance and a high likelihood of mis-diagnosed patients.

When complete, the Sona Covid-19 rapid screening test could be ideal for use in a variety of scenarios, such as:

- An in-home test and monitoring
- To identify if patients require further testing or treatment in a clinical setting
- To verify if patients are ready for release from quarantine
- To screen individuals prior to entering closed public venues such as cruise ships and airplanes

Sona has also established a partnership with medical technology company Bond Digital Health (“Bond”) to add data capture and analysis to its Covid-19 rapid screening test. Bond, based in Cardiff, UK, offers the only known proprietary digital data capture and analysis services specifically for lateral flow devices. Bond's data platform offers industry leading data security and is fully compliant with all relevant regulations, making Bond a key partner for this project.

This data partnership will allow test result data to be collected through either a reader system or mobile app before being securely stored in the cloud. The data can be accessed and analyzed on an analytics dashboard, providing feedback on:

- The total number of tests administered
- Positive and negative results
- Geolocation of where tests are administered
- Demographic information of patients (when input)

When fully deployed, the captured data could ultimately allow the spread of the outbreak to be monitored, with increasing or decreasing trends mapped in real time.

Activity will continue with third party companies looking at generating their own next generation of assays and are keen to integrate Sona’s nanotechnology into their new and existing tests. By utilizing Sona’s gold nanorods in their existing products, firms will be able to transform their platforms by incorporating modern diagnostic techniques with broad applications across multiple diagnostic segments, ranging from human health conditions, antimicrobial resistance, animal health, and infectious diseases.

Other Technical Partnerships

Sona is also actively pursuing third party companies interested in applying Sona’s gold nanorod technology to their established platforms to enhance the commercial potential of their product lines. Throughout 2018 and 2019, the focus of the Company was to establish technical partnerships to enhance Sona’s offering to the lateral flow market, create a distribution network that will service the Life Science and nanotechnology markets with Sona’s products, establish a new research and development (“R&D”) facility that allows the Company to grow and serve the highly regulated markets that Sona operates within.

In October 2018, the Company entered an agreement with Expedeon Ltd ("Expedeon"), a global biotech company, for the supply of Sona's unique gold nanorods for integration into Expedeon's product range. Expedeon has exclusive rights to promote and market the nanorods to life science researchers and diagnostic companies around the world through its extensive distribution network and strong direct sales channels. Expedeon will invest in R&D to incorporate Sona's technology into its comprehensive product range coupled with its own proprietary technologies.

On August 6, 2019, the Company entered a commercial agreement with Expedeon to address limitations in development of complex, multiplex point-of-care ("POC") lateral flow assay ("LFA") diagnostic tests. Under the terms of the agreement, Expedeon will provide gold nanoparticle, bioconjugation technologies and expertise and the Company will offer its LFA development services, leading to immediate and ongoing revenue generation. The collaboration will enable the rapid development of more complex/multiplex immunoassays into LFAs, from proof of principle, through scale-up and transfer to manufacturing and will further expose Sona to Expedeon's global customer base.

The Company also entered a collaboration with Soma BioScience ("Soma") to produce new diagnostic tests. Under the terms of the agreement Sona and Soma will work collaboratively in two projects, one to improve performance in a test in Soma's current product range and one to improve performance in a new test Soma plans to bring to market.

The Company signed a co-marketing agreement with Bond, a UK-based digital healthcare company. The agreement will open up a new source of customers and collaborators for the Company. The Company also engaged the services of Trevor Keel, a leading expert in gold and nanotechnology, to help develop its business proposition in Europe. Mr. Keel has a wide network of contacts to develop new business opportunities, collaborations and projects in the lateral flow market utilizing Sona's range of unique gold nanorods.

Transaction with Antler Gold Inc. to transfer Resource Properties
In addition, Sona entered an agreement pursuant to which Antler Gold Inc. ("Antler") acquired from Sona a 100% interest in certain mineral claims comprising the Crescent Lake/KM61 molybdenum-copper-silver project located in Armstrong, Ontario (the "Property"). Under the agreement, Antler acquired the Property (the "Property Acquisition") in consideration of the assumption of all liabilities of Sona associated with the Property and the future payment to Sona of contingent consideration if Antler disposes of the Property to a third party, or enters into an agreement or arrangement with a third party to otherwise monetize the Property by way of joint venture, option or other form of transaction (a "Future Transaction"). The amount of the contingent consideration payable to Sona will be equal to 50% of the consideration received by Antler in the Future Transaction (net of Antler's aggregate expenses related to the marketing, selling, upkeep and maintenance of the Property incurred between the acquisition of the Property and the date of such Future Transaction), to a maximum of $3,000,000. Antler has also purchased two subsidiaries of Sona, 6321593 Canada Inc. and Minera Zapoteca, S.A. de C.V., that own technical and physical data on historical mineral interests in Mexico, and associated offsetting intercompany accounts, for a purchase price of $1.00. The assets and third-party liabilities are nominal for both subsidiaries. The purchase of these subsidiaries was completed during the year ended October 31, 2019.

Debt and Note Payable Settlement for Shares
On July 16, 2019, the Company arranged a debt settlement of $799,953 in amounts owed to certain non-arm's length creditors, previously included in accounts payable to related parties in the consolidated financial statements of Sona (the "Debts"). The Debts were settled in full by the issuance to these creditors of an aggregate of 3,199,812 common shares at a deemed price of $0.25 per share. The Company also arranged a debt conversion of $137,093 in debt owed to an arm's length creditor as shown in the consolidated financial statements of Sona (the "Convertible Debt"). The Convertible Debt was settled in full based on its conversion price of $0.158 per share resulting in the issuance of 867,677 common shares to the debt holder. All of these shares will be subject to resale restrictions prohibiting resale for a period of four months and a day from their date of issue.

Subsequent to the end of the year, the Company repaid its Convertible Notes and the accrued interest on its Convertible Notes through the issuance of common shares. 2,520,270 common shares were issued at the Conversion Price of $0.20 per share to repay the total Convertible Notes and accrued interest of $504,054 as at the date of conversion. Of the common shares issued, 1,665,942 common shares were issued to related parties of the Company with a value of $333,188.

SELECTED ANNUAL FINANCIAL INFORMATION

	Year ended October 31, 2019	**Year ended October 31, 2018**	**Year ended October 31, 2017**
	$	**$**	**$**
Expenses	**(1,737,884)**	(1,182,427)	(536,223)
Other income (expenses)	**(782,825)**	(4,013,906)	85,446
Net loss	**(2,520,709)**	(5,196,333)	(450,777)
Loss per common share	**(0.05)**	(0.19)	(0.03)
Cash dividends per common share	**-**	-	-
Total assets	**859,211**	3,177,580	336,145
Current liabilities	**1,214,835**	2,435,322	962,024
Long-term liabilities	**666,819**	543,184	172,246
Shareholders' equity	**(1,022,443)**	199,074	(798,125)

SELECTED QUARTERLY FINANCIAL INFORMATION

The following table sets out selected financial information and highlights for the last eight quarters:

	Oct 31, 2019	Jul 31, 2019	Apr 30, 2019	Jan 31, 2019	**Oct 31, 2018**	Jul 31, 2018	Apr 30, 2018	Jan 31, 2018
	$	$	$	$	**$**	$	$	$
Expenses								
Salaries and employee benefits	**125,827**	130,817	137,248	135,009	**117,205**	92,671	65,842	67,531
Professional and consulting fees	**91,158**	91,554	90,171	103,620	**84,396**	82,963	66,320	32,590
Management services	**57,000**	57,000	57,000	57,000	**58,000**	54,000	54,000	54,000
Research and development	**8,236**	14,122	26,048	3,490	**41,443**	49,104	43,596	1,962
Share-based compensation	**55,147**	82,744	93,907	10,098	**–**	–	–	–
Securities and regulatory	**12,458**	16,290	9,394	9,938	**26,806**	–	–	–
Other administrative	**84,229**	73,328	55.409	49,642	**59,967**	47,114	60,212	22,705
	(434,055)	(465,855)	(469,177)	(368,797)	**(387,817)**	(325,852)	(289,970)	(178,788)
Other income (expenses)								
Repayable government loans fair value adjustment	**75,534**	14,236	50,419	53,889	**40,945**	37,038	37,398	47,950
Scientific research tax credits	**7,010**	49,816	18,000	7,000	**45,000**	–	1,627	–
Interest expense	**(11,153)**	(13,154)	(13,790)	(14,153)	**(14,245)**	(3,000)	(3,092)	(3,427)
Accreted interest	**(24,517)**	(17,903)	(26,656)	(24,254)	**(18,443)**	(15,000)	(11,144)	(7,232)
Loss on debt settlement	–	(80,000)	–	–	**–**	–	–	–
Listing expense	–	–	–	–	**(4,045,228)**	–	–	–
Fair value adjustment on convertible debentures	–	–	–	–	**(103,053)**	–	–	–
Loss on disposal of resource properties	–	(833,149)	–	–	**–**	–	–	–
	46,874	(880,154)	27,973	22,482	**(4,095,024)**	19,038	24,789	37,291
Net loss for the quarter	**(387,181)**	(1,346,009)	(441,204)	(346,315)	**(4,482,841)**	(306,814)	(265,181)	(141,497)
Loss per share – basic & diluted	**($0.01)**	($0.02)	($0.01)	($0.01)	**($0.01)**	($0.01)	($0.01)	($0.01)

Results of Operations for the years ended October 31, 2019 and 2018

The Company reported a net loss for the year ended October 31, 2019 of $2,520,709, or $0.05 per share, as compared to a net loss of $5,196,333, or $0.19 per share, for the year ended October 31, 2018. During the current year, a loss on disposal of resource properties of $833,149, or $0.02 per share, was recorded as a result of the agreements the Company entered with Antler Gold Inc. ("Antler"). Under the agreements Antler acquired the Company's two subsidiaries (6321593 Canada Inc. and Minera Zapoteca, S.A. de C.V.), resource properties, technical data and related liabilities for nominal consideration. See note 4, *Transaction with Antler Gold Inc.*, of the audited consolidated financial statements for further details. During the year ended October 31, 2018, the Company recorded a fair value adjustment expense on its convertible debentures of $103,053 and a listing expense of $4,045,228. The convertible debentures were settled during the prior year, therefore there is no comparative expense for the year ended October 31, 2019. The Company's Transaction with Sona Nanotech Ltd. was completed in the year ended October 31, 2018 and resulted in the listing expense. See below for further details.

Expenses
During the current year, the Company incurred expenses of $1,737,884, an increase of $555,457 from the $1,182,427 incurred in the comparable year. The increase results from the significant increase in business activities including an increase of salaries and employee benefits of $185,652 due to the hiring of additional employees which increased salaries and employee benefits combined with less government funding received for salaries from the Industrial Research Assistance Program ("IRAP"). The Company incurred an additional $110,234 in professional and consulting fees due to the engagement of additional consultants and additional audit and tax fees associated with its increased business activities. For the year ended October 31, 2019, management service fees of $228,000 (2018 – $220,000) relate to consulting services provided by Numus Financial Inc.

Research and development costs decreased from $136,105 in 2018 to $51,896 in 2019 with the Company's increased focus on business activities with its partners. During the current year, the Company also incurred securities and regulatory fees of $48,080 associated with operating as a public company, an increase of $21,274 over the prior year.

During the current year, overall general and administrative expenses increased by $72,610 primarily resulting from rent and related costs, which increased $32,454 with the new lab facilities and office space rental since the last quarter of 2018, increased depreciation expense of $23,296 due the additions to property and equipment, and other administrative expenses increasing by $12,882 due to additional costs associated with increased business activities and the set up of the new lab facility. Sales and marketing increased $7,471 due to marketing initiatives undertaken during the current year. The increase was offset by a decrease in travel costs of $3,491 due to a decrease in travel costs associated with the relocation of the CEO in 2018.

During the current year, the Company granted 1,410,000 stock options, with an exercise price of $0.35 to Directors, Officers, employees and consultants of the Company. The fair value of the stock options of $360,601 was estimated at the grant date using the Black-Scholes option pricing model. This resulting fair value at the date of grant of the options has been assessed at $0.256 per option. The assumptions used in the option pricing model include a volatility rate of 142%, an expected life of five years based on the contractual term of the options, a risk-free rate of 1% with no expected dividend yield. The Company is amortizing the fair value of its stock options, over the corresponding vesting period of 25% every six months. As a result, share-based compensation of $241,896 has been recorded for the year ended October 31, 2019.

Other income and expenses
During the current year, the Company recorded $194,078 (2018 - $163,331) of other income relating to the fair value adjustment on the repayable government loans (the "ACOA loans") that relate to eligible costs incurred and claimed during the period. The value recorded in other income results from the difference between the face value of the ACOA loans and the fair value of the ACOA loans. The fair value of the loans is determined using the present value of the projected repayment of the loan, based on a 3 - 5% royalty on the estimated gross product revenues.

During the current year, the Company recorded $81,826 (2018 - $46,627) of other income relating to an estimate of scientific research tax credits ("SR&ED"). The Company also recorded $60,330 (2018 - $42,819) of accreted interest on the ACOA loans and $33,000 (2018 - $9,000) of accreted interest on the convertible notes acquired as a result of the Transaction in 2018. The accretion expenses will be recognized over the term of the debt and ultimately the debt will be accreted to its original face value. The Company also incurred increased interest expense of $52,250 (2018 - $23,764) due to the inclusion of interest on the convertible notes and debt acquired with the Transaction. The Company also incurred a loss on debt settlement of $80,000 (2018 - $nil) due to the settlement of convertible debt with a carrying amount of $137,093 based on its conversion price of $0.158 per share and issuance of 867,677 common shares to the debt holder.

Results of Operations for the three-months ended October 31, 2019 and 2018

The Company reported a net loss for the three-months ended October 31, 2019 of $387,181, or $0.01 per share, as compared to a net loss of $4,482,841, or $0.25 per share, for the three-months ended October 31, 2018. The change was primarily due to the listing expense resulting from the Transaction in 2018 of $4,045,228, as well as the fair value adjustment on the Company's convertible debentures of $103,053 during the comparable period.

Expenses

During the quarter ended October 31, 2019, the Company incurred expenses of $434,055, an increase of $46,238 from the $387,817 incurred in the comparable quarter. The increase results from the significant increase in business activities including an increase of salaries and employee benefits of $8,622 due to the hiring of additional employees as well as less government funding received from IRAP for salaries. For the current quarter, management service fees of $57,000 (2018 – $58,000) relate to consulting services provided by Numus Financial Inc.

Overall professional fees and research and development costs decreased compared to the prior year quarter as the Company was incurring legal and consulting costs as a result of the Transaction in 2018, Securities and regulatory fees of $12,458 during the current quarter represented a decrease of $14,348 from the comparable quarter due to costs associated with the initial listing of the Company in 2018.

During the quarter ended October 31, 2019, general and administrative expenses increased by $24,262 primarily resulting from rent and related costs increasing by $7,796 with the new lab facilities and office space rental., increased depreciation expense of $6,818 due the additions to property and equipment, increased travel costs of $3,766, and increased sales and marketing of $15,394 due to increased attendance at trade shows and marketing initiatives during the current quarter. Other administrative expenses decreased by $9,492 due to the set up of the new lab facility and the relocation of the CEO in 2018.

The Company is amortizing the fair value of its stock options, over the corresponding vesting period of 25% every six months. The assumptions associated with the estimation of the fair value of stock options, using the Black-Scholes option pricing model, are outlined above. As a result, share-based compensation of $55,147 has been recorded for the current quarter.

Other income and expenses

During the current quarter, the Company recorded $7,010 (2018 - $45,000) of other income relating to an estimate of SR&ED. The comparable quarter amount represents the accrual of SR&ED for all of fiscal 2018. The Company also recorded $75,534 (2018 - $40,945) of other income relating to the fair value adjustment on the ACOA loans due to changes in the estimated projected repayments of the loans. The Company recorded $18,517 (2018 - $9,443) of accreted interest on the ACOA loans and $6,000 (2018 - $9,000) of accreted interest on the convertible notes acquired as a result of the Transaction in 2018. The accretion expenses will be recognized over the term of the debt and ultimately the debt will be accreted to its original face value. The Company also incurred interest expense of $11,153 (2018 - $14,246) due to the inclusion of interest on the convertible notes and debt acquired with the Transaction.

Listing expense

During the three-months ended October 31, 2018, the Company recorded a listing expense of $4,045,228. The listing expense is comprised of the fair value of the common shares, options, warrants of the Company deemed to be issued to the former equity holders of the Company. It also contains the Transaction costs and the net liabilities of the Company at the date of the amalgamation. The listing fee expense is summarized as follows:

Net liabilities acquired:	$
Cash	(644,781)
Other current assets	(19,213)
Resource properties	(939,299)
Accounts payable and accrued liabilities	1,411,800
Accrued Transaction costs	131,500
Convertible notes	295,000
Convertible debentures	125,705
Net liabilities acquired	360,712
Equities instruments deemed to be issued:	
Common shares	3,501,793
Warrants	6,822
Options	102,966
Convertible debentures	72,935
	4,045,228

Company has estimated the fair value of the equity instruments deemed to be issued as a result of the Transaction. The fair value of the 22,163,247 post consolidation common shares amounted to $3,501,793, based on the Sona Nanotech private placement financing of $0.158 per share post consolidation. The fair value of the 299,000 post-consolidation warrants, exercisable at $0.40 per share for three months, amounted to $6,822. The fair value of the 912,500 post-consolidation options, exercisable at various prices ranging from $0.20 to $0.28 per option, amounted to $102,966. The fair value of these equity instruments were estimated using the Black-Scholes option pricing model applying a market price of $0.158 per share, exercise price as noted above, a risk free rate of 1%, an expected volatility of 202% and an expected dividend yield of 0%.

The fair value of the convertible debentures exchangeable at $2.00 per share amounted to $72,934 based on the Sona Nanotech private placement financing of $0.158 per share post consolidation. The Company also recorded a fair value adjustment on convertible debentures based on the settlement of this liability through the issuance of common shares on the maturity date. The fair value of the shares issued was deemed to be $301,693 based on the price of $0.24 per share as at October 31, 2018 with $103,053 recorded as a fair value adjustment expense in 2018.

LIQUIDITY AND CAPITAL RESOURCES

Sona's liquidity depends on existing cash reserves, supplemented as necessary by government loans and grants, and equity and/or debt financings. As of October 31, 2019, Sona had cash of $580,656 compared to $1,803,549 as at October 31, 2018. The negative working capital balance at October 31, 2019 was $596,793 as compared to the negative working capital balance of $335,236 at October 31, 2018. The decrease in working capital is primarily due to the operating costs incurred through the normal course of operations, offset by the settlement of debt through the issuance of common shares.

During the year ended October 31, 2019, Sona used net cash of $1,362,799 to fund operating activities. In addition, Sona raised net funds through cash received as a result of financing activities of $298,633 during the year from the net proceeds from long-term debt of $257,383 and the exercise of stock options for proceeds of $41,250. Investing activities included additions to property and equipment, and a nominal amount of resource property additions prior to the sale of the resource properties, resulting in cash outflow from investing activities of $158,727 for the year ended October 31, 2019.

Sona's business to date has been the research and development of its gold nanoparticle products. Sona has and continues to rely primarily on funding through the form of repayable government loans and debt, non-repayable government grants and proceeds from the issuance of common shares.

Liquidity risk is the risk that the Company will not meet its financial obligations as they become due. The Company has a planning and budgeting process to monitor operating cash requirements, including amounts projected for capital expenditures, which are adjusted as input variables change. These variables include, but are not limited to, the ability of the Company to generate revenue from current and prospective customers, general and administrative requirements of the Company and the availability of capital markets and government funding. As these variables change, it may necessitate the need for the Company to issue equity or obtain debt financing.

The Company is currently pursuing financing alternatives. However, there can be no assurance that additional future financings will be available on acceptable terms or at all. If the Company is unable to obtain additional financing when required, the Company may have to substantially reduce or eliminate planned expenditures. Sona expects to record losses until such time as it further develops its gold nanorod products and secures customers. See the *Risk Factors* section of this MD&A and note 2, *Basis of presentation and going concern,* of the audited consolidated financial statements for the year ended October 31, 2019 for additional details.

COMMITMENTS AND CONTINGENCIES

The Company has an employment agreement with the Chief Executive Officer ("CEO") which provide that, should a change in control event occur, as defined in the employment agreements, the CEO will receive lump sum payments equal to six months of his then current base salary during the first two years of employment and 12 months of his then current base salary following the two year anniversary of the agreement.

OFF-BALANCE SHEET ARRANGEMENTS

Sona has no off-balance sheet arrangements such as guarantee contracts, contingent interest in assets transferred to an entity, derivative instruments obligations or any obligations that trigger financing, liquidity, market or credit risk to Sona.

OUTSTANDING SHARE INFORMATION

The Company has authorized an unlimited number of common shares without par value. As of October 31, 2019, the Company had 57,730,258 common shares outstanding. As of February 28, 2020, the Company had 60,250,528 common shares outstanding with the increase due to the conversion of the Company's Notes payable to common shares subsequent to year end.

As of October 31, 2019 and February 28, 2020, the Company has 1,897,500 stock options outstanding at an average exercise price of $0.31 per common share with varying expiry dates.

As of October 31, 2019 and February 28, 2020, there were 596,250 common share purchase warrants outstanding with an exercise price of $0.25 per common share and an expiry date of September 28, 2020.

RELATED PARTY TRANSACTIONS

During the year ended October 31, 2019, the Company incurred costs for service fees from a related party, Numus Financial Inc. ("Numus"), a company controlled by significant shareholders, including one Director of Sona, in the amount of $228,000 (year ended October 31, 2018 – $220,000), controller services of $30,000 (2018 - $nil), and incurred rent and administrative costs from Numus in the amount of $30,603 (2018 – $3,412). On July 16, 2019, $153,000 of the outstanding amounts owing to Numus were settled through the issuance of shares of the Company. As at October 31, 2019, the amount owing to Numus was $218,550 (October 31, 2018 – $410,940).

As outlined in the Services Agreement between Numus and the Company, dated October 31, 2018, if the Services Agreement is cancelled by the Company, a break fee of eighteen months of remuneration, being $342,000, will be payable to Numus, in addition to the service fees applicable for the 90 day notice period. If the Financial Controller services are cancelled by the Company, a break fee of six months of remuneration, being $15,000, will be payable to Numus, in addition to the Financial Controller services fee applicable for the 90 day notice period. If the Office Services are cancelled by the Company with six months' notice to Numus, a break fee of six months of remuneration, being $15,300, will be payable to Numus.

In addition, Numus shall have a first right of refusal to act as an advisor on a Sona transaction for a fee of 1.25% of the value of the transaction and Numus, or its subsidiary, shall have a first right of refusal to act as an agent on all financings conducted by Sona.

During the year ended October 31, 2018, Numus Capital Corp. ("Numus Capital"), an exempt market dealer and a wholly owned subsidiary of Numus, assisted the Company with private placement financings completed by the Company. The Company incurred finders' fees of 8%, or $35,200, and 7.5%, or $149,063, from Numus Capital, for total finders fees of $184,263, during the year ended October 31, 2018. There were no finders fees incurred during the year ended October 31, 2019.

As a result of the Transaction described in Note 3 of the consolidated financial statements, the Company acquired convertible notes (the "Notes") of $295,000 with accrued interest of $146,255. Certain directors and significant shareholders of the Company contributed $195,000 towards the Notes financing. During the year ended October 31, 2019, the Company accrued $29,250 of related party interest (year ended October 31, 2018 - $7,373). As at October 31, 2019, accrued interest on the Notes in the amount of $133,300 was payable to related parties (October 31, 2018 – $104,050). The Notes and accrued interest were converted to common shares of the Company subsequent to year end, resulting in the issuance of 2,520,270 common shares, of which 1,665,942 were issued to related parties with a value of $333,188.

As at November 1, 2017, the Company had a loan outstanding from Brigus Capital Inc. ("Brigus"), a company controlled by a significant shareholder and director of Sona. As of September 19, 2018, the loan was transferred to Blue Ridge, a non-related third party. Prior to the transfer, the Company accrued interest of $10,634 during the year ended October 31, 2018. During the year ended October 31, 2018, Brigus earned $1,130 in consulting fees. On July 16, 2019, $268,203 of the outstanding amount owing to Brigus was settled through the issuance of shares. As at October 31, 2019, the amount owing to Brigus was $nil (October 31, 2018 – $224,091).

On July 16, 2019, $30,000 of the outstanding amounts owing to Randall Consulting Inc. ("RCI"), a company controlled by an officer of Sona, were settled through the issuance of shares. As at October 31, 2019, the amount owing to RCI was $43,646 (October 31, 2018 - $132,000).

RISKS AND UNCERTAINTIES

Sona has a limited operating history and its future profitability is uncertain.
Sona has a limited operating history and its business is subject to all of the risks inherent in the establishment of a new business enterprise. The Company's likelihood of success must be considered in light of the problems, expenses, difficulties, complications and delays frequently encountered in connection with establishing a new life science company.

Sona has a history of losses and may never achieve or sustain profitability.
Sona has incurred substantial losses since its inception, and it may not achieve profitability in the foreseeable future, if at all. Sona expects to incur net losses and negative cash flows due in part to increasing research and development expenses, marketing expenses and hiring additional personnel. As a result, Sona will need to generate significant revenues in order to achieve and maintain profitability. Sona may not be able to generate these revenues or achieve profitability in the future. Even if Sona does achieve profitability, it may not be able to sustain or increase profitability.

Sona needs to raise additional capital to operate its business.
Sona is an early life science company focused on product development and commercialization and has generated only limited product revenues to date. For the foreseeable future, Sona will have to fund all of its operations and capital expenditures primarily from the net proceeds of future offerings, government grants, government loans and financing through the issuance of securities. Sona's actual capital requirements will depend on many factors. If Sona experiences unanticipated cash requirements, it may need to seek additional sources of financing, which may not be available on favorable terms, if at all. If Sona does not succeed in raising additional funds on acceptable terms, it may be forced to discontinue product development and/or commercialization, reduce or forego sales and marketing efforts and attractive business opportunities or discontinue operations.

Sona has limited access to the capital markets, and, even if it can raise additional funding, it may be required to do so on terms that are dilutive to shareholders.
Sona has limited access to the capital markets to raise capital. The capital markets have been unpredictable in the recent past for other life science companies and unprofitable companies such as Sona. In addition, it is generally difficult for early commercial-stage companies to raise capital. The amount of capital that a company such as Sona is able to raise often depends on variables that are beyond its control. As a result, Sona may not be able to secure financing on terms attractive to it, or at all. If Sona is able to consummate a financing arrangement, the amount raised may not be sufficient to meet its future needs. If adequate funds are not available on acceptable terms, or at all, Sona's business, results of operations, financial condition and its continued viability may be materially adversely affected.

Raising additional capital may cause dilution to existing shareholders, restrict operations or require the Company to relinquish rights to its products.
Until such time, if ever, as the Company can generate substantial product revenues, the Company expects to finance the cash needs through a combination of equity offerings, debt financings, government or other third-party funding, marketing and distribution arrangements and other collaborations, strategic alliances and licensing arrangements. Currently, the Company does not have any committed external source of funds. The Company will require substantial funding to complete the ongoing and planned research and development activities and to fund operating expenses and other activities. To the extent that the Company raises additional capital through the sale of equity or convertible debt securities, the shareholders ownership interest will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the shareholders rights as a stockholder. Debt financing, if available, may involve agreements that include covenants limiting or restricting the Company's ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. If the Company raises additional funds through government or other third-party funding, marketing and distribution arrangements or other collaborations, strategic alliances or licensing arrangements with third parties, the Company may have to relinquish valuable rights to its products, future revenue streams, research programs or to grant licenses on terms that may not be favorable.

The Company's reliance on government funding adds uncertainty to the Company's research and commercialization efforts of its government-funded product candidates.
The Company has received significant funding from government organizations. There is no assurance the Company will continue to apply for and/or be awarded government funding in the future. If the Company is unable to obtain additional government funding, it will have to either obtain funds through raising additional capital or arrangements with strategic partners or others, if available, that may require the Company to relinquish material rights to certain technologies or potential markets. There is no certainty that financing will be available in amounts the Company requires to pursue the planned activities or on acceptable terms, if at all.

Unexpected events may materially harm Sona's ability to align incurred expenses with recognized revenues.
Sona incurs operating expenses based upon anticipated revenue trends. Since a high percentage of these expenses may be relatively fixed, a delay in recognizing revenues from transactions related to these expenses (such a delay may be due to the factors described elsewhere in this risk factor section or it may be due to other factors) could cause significant variations in operating results from quarter to quarter, and such a delay could materially reduce operating income. If these expenses are not subsequently matched by revenues, Sona's business, financial condition, or results of operations could be materially and adversely affected.

Sona must continue to manage its internal resources during periods of company growth or its operating results could be adversely affected.
Sona's growth, coupled with the rapid evolution of its markets, may place, significant strains on Sona's administrative and operational resources and increased demands on its internal systems, procedures and controls. Sona's administrative infrastructure, systems, procedures and controls may not adequately support its operations. In addition, Sona's management may not be able to achieve the rapid, effective execution of the product and business initiatives necessary to successfully implement Sona's operational and competitive strategy. If Sona is unable to manage growth effectively, its operating results will likely suffer which may, in turn, adversely affect its business.

Sona may fail to achieve its financial forecasts due to inaccurate sales forecasts or other factors.
Sona's revenues are difficult to forecast, and, as a result its quarterly operating results can fluctuate substantially. Sona's sales forecasts are only an estimate and may be an unreliable predictor of actual sales activity, both in a particular quarter and over a longer period of time. Many factors may affect actual sales activity, such as weakened economic conditions, which may cause Sona's potential customers to reduce, delay, or eliminate their planned expenditure on Sona's product; and potential collaborative partners to delay, reduce or eliminate their collaboration with Sona. If actual sales activity differs from Sona's forecasts, then Sona may have planned its activities and budgeted incorrectly, and this may adversely affect its business, operating results and financial condition.

The Company may expend its limited resources to pursue a particular product and fail to capitalize on products that may be more profitable or for which there is a greater likelihood of success.
Because the Company has limited financial and managerial resources, the Company focuses on research and development of its product lines. As a result, the Company may forego or delay pursuit of opportunities with other products that later prove to have greater commercial potential. The Company's resource allocation decisions may cause the Company to fail to capitalize on viable commercial products or profitable market opportunities. The Company's spending on current and future research and development on its products for specific indications may not yield any commercially viable products.

The Company's future success depends on its ability to retain its key executives and to attract, retain and motivate qualified personnel.
The Company is highly dependent on its executive officers. Although the Company has formal employment agreements with each of its executive officers, these agreements do not prevent the Company's executives from terminating their employment with the Company at any time. The loss of the services of any of these persons could impede the achievement of the Company's research, development and commercialization objectives.
Recruiting and retaining qualified scientific, sales and marketing personnel will also be critical to the Company's success. The Company may not be able to attract and retain these personnel on acceptable terms given the competition among numerous life science companies for similar personnel. In addition, the Company relies on consultants and advisors, to assist it in formulating its research and development and commercialization strategy. The Company's consultants and advisors may be employed by employers other than the Company and may have commitments under consulting or advisory contracts with other entities that may limit their availability to the Company.

If the Company is unable to protect the confidentiality of its trade secrets, the Company's business and competitive position would be harmed.
In addition to seeking patents for some of the Company's products, it also relies on trade secrets, including unpatented know-how, technology and other proprietary information, to maintain its competitive position. The Company seeks to protect these trade secrets, in part, by entering into non-disclosure and confidentiality agreements with internal and external parties who have access to them. Despite these efforts, any of these parties may breach the agreements and disclose the Company's proprietary information, including its trade secrets, and the Company may not be able to obtain adequate remedies for such breaches. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, courts in certain jurisdictions are less willing or unwilling to protect trade secrets. If any of the Company's trade secrets were to be lawfully obtained or independently developed by a competitor, it

would have no right to prevent them from using that information to compete with the Company and its competitive position would be harmed.

Sona's investment in its current research and development efforts may not provide a sufficient, timely return.
The development of Sona’s gold nanorod particles is a costly, complex and time-consuming process and the investment in Sona's product development often involves a long wait until a return is achieved on such an investment. Sona is making, and will continue to make, significant investments in product research and development. Investments in new equipment, technology and processes are inherently speculative. Commercial success depends on many factors, including the products and services developed through Sona's research and development efforts, sufficient support from its strategic partners and effective distribution and marketing. These expenditures may adversely affect Sona's operating results if they are not offset by revenue increases. Sona believes that it must continue to dedicate a significant amount of resources to its research and development efforts in order to maintain its competitive position. However, significant revenues from the products may not be achieved for a number of years, if at all. Moreover, the gold nanorod products may not be profitable, and even if they are profitable, operating margins for the gold nanorod products may not be as high as projected.

The Company expects to expand its development and sales and marketing capabilities, and as a result, the Company may encounter difficulties in managing its growth, which could disrupt the Company’s operations.
The Company expects to experience significant growth in the number of its employees and the scope of its operations, particularly in the areas of development and sales and marketing. To manage the Company’s anticipated future growth, it must continue to implement and improve its managerial, operational and financial systems, expand its facilities and continue to recruit and train additional qualified personnel. Due to the Company’s limited financial resources, the Company may not be able to effectively manage the expansion of its operations or recruit and train additional qualified personnel. The physical expansion of the Company’s operations may lead to significant costs and may divert its management and business development resources. Any inability to manage growth could delay the execution of the Company’s business plans or disrupt the Company’s operations.

Third parties may initiate legal proceedings alleging that the Company is infringing their intellectual property rights, the outcome of which would be uncertain and could have a material adverse effect on the success of the Company’s business.
The Company’s commercial success depends upon its ability and the ability of its collaborators to develop, manufacture, market and sell its product and use its proprietary products without infringing the proprietary rights of third parties. The Company may become party to, or threatened with, future adversarial proceedings or litigation regarding intellectual property rights with respect to its products and technology, including interference proceedings before the Canadian and/or U.S. Patent and Trademark Office or other similar regulatory authorities. Third parties may assert infringement claims against the Company based on existing patents or patents that may be granted in the future. If the Company is found to infringe a third party’s intellectual property rights, it could be required to obtain a license from such third party to continue developing and marketing its products and technology. However, the Company may not be able to obtain any required license on commercially reasonable terms or at all. Even if the Company was able to obtain a license, it could be non-exclusive, thereby giving its competitors access to the same products licensed to the Company. The Company could be forced, including by court order, to cease commercializing the infringing technology or product. In addition, the Company could be found liable for monetary damages. A finding of infringement could prevent the Company from commercializing its products or force the Company to cease some of its business operations, which could materially harm the Company’s business. Claims that the Company has misappropriated the confidential information or trade secrets of third parties could have a similar negative impact on its business.

If the Company is unable to establish sales and marketing capabilities or enter into agreements with third parties to sell and market its product, the Company may not be successful in commercializing its product.
The Company does not have a sales or marketing infrastructure in place. To achieve commercial success for any of its product that would be approved in the future, the Company must either develop a sales and marketing organization or outsource these functions to third parties. If the Company does not establish sales and marketing capabilities successfully, either on its own or in collaboration with third parties, it will not be successful in commercializing its product candidates.

If the Company is unable to obtain and maintain patent protection for its products, or if the scope of the patent protection obtained is not sufficiently broad, the Company's competitors could develop and commercialize products similar or identical to that of the Company's, and its ability to successfully commercialize its products may be adversely affected.

The Company's success depends in large part on its ability to obtain and maintain patent protection with respect to its proprietary products. This patent application process is expensive and time-consuming, and the Company may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. It is also possible that the Company will fail to identify patentable aspects of its research and development output before it is too late to obtain patent protection.

The patent position of life science companies generally is highly uncertain, involves complex legal and factual questions and has in recent years been the subject of much litigation. As a result, the issuance, scope, validity, enforceability and commercial value of the Company's patent rights are highly uncertain. The Company's future patent applications may not result in patents being issued which protect its products or which effectively prevent others from commercializing competitive products. Changes in either the patent laws or interpretation of the patent laws may diminish the value of the Company's patents or narrow the scope of its patent protection.

The laws of foreign countries may not protect the Company's rights to the same extent as the laws of Canada and the United States. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in Canada and the United States and other jurisdictions are typically not published until 18 months after filing, or in some cases not at all. Therefore, the Company cannot be certain that it was the first to make the inventions claimed in its owned patents or pending patent applications.

Even if the Company's owned and licensed patent applications issue as patents, they may not issue in a form that will provide the Company with any meaningful protection, prevent competitors from competing with the Company or otherwise provide the Company with any competitive advantage. The Company's competitors may be able to circumvent its owned or licensed patents by developing similar or alternative technologies or products in a non-infringing manner. The issuance of a patent is not conclusive as to its scope, validity or enforceability, and the Company's owned and licensed patents may be challenged in the courts or patent offices in Canada, the United States and abroad. Such challenges may result in patent claims being narrowed, invalidated or held unenforceable, which could limit the Company's ability to or stop or prevent the Company from stopping others from using or commercializing similar or identical technology and products, or limit the duration of the patent protection of its technology and products. Given the amount of time required for the development, testing and regulatory review of new products, patents protecting such products might expire before or shortly after such products are commercialized. As a result, the Company's owned and licensed patent portfolio may not provide it with sufficient rights to exclude others from commercializing products similar or identical to the Company's.

Intellectual property litigation could cause the Company to spend substantial resources and distract its personnel from their normal responsibilities.

Even if resolved in the Company's favor, litigation or other legal proceedings relating to intellectual property claims may cause the Company to incur significant expenses and could distract the Company's technical and management personnel from their normal responsibilities. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments and if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of the Company's common shares. Such litigation or proceedings could substantially increase the Company's operating losses and reduce the resources available for research and development activities. The Company may not have sufficient financial or other resources to adequately conduct such litigation or proceedings. Some of the Company's competitors may be able to sustain the costs of such litigation or proceedings more effectively than it can because of their greater financial resources. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on the Company's ability to compete in the marketplace.

Foreign currency and exchange rate risk.

Sona currently reports its results in the Canadian dollar. Fluctuations in the exchange rates between the European Euro, United States dollar and Canadian dollar may have a material adverse effect on the business, financial condition and operating results of the Company. To date, Sona has not engaged in exchange rate hedging activities and may not do so in the foreseeable future.

Sona's operating results could be adversely affected by any weakening of economic conditions.
Sona's overall performance depends in part on worldwide economic conditions. Certain economies have experienced periods of downturn as a result of a multitude of factors, including, but not limited to, turmoil in the credit and financial markets, concerns regarding the stability and viability of major financial institutions, declines in gross domestic product, increases in unemployment and volatility in commodity prices and worldwide stock markets, and excessive government debt. The severity and length of time that a downturn in economic and financial market conditions may persist, as well as the timing, strength and sustainability of any recovery, are unknown and are beyond Sona's control. Moreover, any instability in the global economy affects countries in different ways, at different times and with varying severity, which makes the impact to Sona's business complex and unpredictable. In addition, deterioration of the global credit markets could adversely impact Sona's ability to complete licensing transactions and services transactions, including maintenance and support renewals. Any of these events, as well as a general weakening of, or declining corporate confidence in, the global economy, or a curtailment in government or corporate spending could delay or decrease Sona's projected revenues, and therefore have a material adverse effect on its business, operating results and financial condition.

Sona may become involved in litigation that may materially adversely affect it.
From time to time in the ordinary course of Sona's business, it may become involved in various legal proceedings, including commercial, product liability, employment, class action and other litigation and claims, as well as governmental and other regulatory investigations and proceedings. Such matters can be time-consuming, divert management's attention and resources and cause Sona to incur significant expenses. Furthermore, because litigation is inherently unpredictable, the results of any such actions may have a material adverse effect on Sona's business, operating results or financial condition.

Stress in the global financial system may adversely affect Sona's finances and operations in ways that may be hard to predict or to defend against.
Financial developments seemingly unrelated to Sona or to its industry may adversely affect Sona over the course of time. For example, material increases in any applicable interest rate benchmarks may increase the debt payment costs for Sona's credit facilities. Credit contraction in financial markets may hurt its ability to access credit in the event that Sona identifies an acquisition opportunity or require significant access to credit for other reasons. A reduction in credit, combined with reduced economic activity, may adversely affect businesses and industries that collectively constitute a significant portion of Sona's customer base and/or potential collaborative partners. As a result, these customers and/or collaborative partners may need to reduce their purchases of Sona’s product and/or collaboration agreements with Sona, or Sona may experience greater difficulty in receiving payment for the products that these customers purchase from it. Any of these events, or any other events caused by turmoil in world financial markets, may have a material adverse effect on Sona's business, operating results, and financial condition.

Cyber security incidents and privacy breaches could result in important remediation costs, increased cyber security costs, litigation and reputational harm.
Cyber security incidents can result from deliberate attacks or unintentional events. Cyber-attacks and security breaches could include unauthorized attempts to access, disable, improperly modify or degrade the Company’s information, systems and networks, the introduction of computer viruses and other malicious codes and fraudulent “phishing” emails that seek to misappropriate data and information or install malware onto users’ computers. Cyber-attacks in particular vary in technique and sources, are persistent, frequently change and are increasingly more targeted and difficult to detect and prevent against.

Disruptions due to cyber security incidents could adversely affect the Company’s business. In particular, a cyber security incident could result in the loss or corruption of data from the Company’s research and development activities, which may cause significant delays to some or all of the Company’s research and development. Also, the Company’s trade secrets, including unpatented know-how and other proprietary information could be disclosed to competitors further to a breach, which would harm the Company’s business and competitive position.

If the Company is unable to protect the confidentiality of its trade secrets, the Company's business and competitive position would be harmed.

Impact of laws.
Sona operates offices in Canada and plans to offer its products in Canada, the United States, Europe and eventually in other countries. Sona is and will be subject to a variety of laws in Canada, the United States and abroad, including laws regarding consumer protection, privacy, intellectual property, taxation and content suitability, distribution and antitrust, that are continuously evolving and developing. The scope, enforcement and interpretation of the laws that are or may be applicable to Sona are often uncertain and may be conflicting, particularly laws outside of Canada and the United States. It is also likely that as business grows and evolves to a greater number of countries, Sona will become subject to laws and regulations in additional jurisdictions. Compliance with applicable laws or regulations could be very difficult or liability could arise under these laws or regulations due to amendments to or evolving interpretation and enforcement of such laws and regulations. As a result, Sona could be directly harmed, and may be forced to implement new measures to reduce the exposure to this liability. This may require substantial resources to be expended or a modification of its products and services, which would harm the business, financial condition and results of operations of Sona.

INTERNAL CONTROLS OVER FINANCIAL REPORTING

Disclosure Controls and Procedures

Disclosure controls and procedures have been designed by the Company to ensure that financial information disclosed by the Company in the MD&A and in the audited consolidated financial statements of the Company is properly recorded, processed, summarized and reported to its officers and the Board of Directors. The Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO") believe such controls and procedures as at October 31, 2019 are effective in providing reasonable assurance that material items requiring disclosure are identified and reported in a timely manner.

Internal Control Over Financial Reporting

The Company's management, with the participation of its CEO and CFO, has designed, established and is maintaining a system of internal control over financial reporting. Under the supervision of the CFO, as at October 31, 2019, the Company's internal control over financial reporting is a process designed to provide reasonable assurance that the financial information prepared by the Company for external purposes is reliable and has been recorded, processed and reported in an accurate and timely manner and in accordance with IFRS. The Company's controls include policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of consolidated financial statements in accordance with IFRS; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the audited consolidated financial statements.

There were no changes in the Company's internal control over financial reporting during the year ended October 31, 2019 that materially affected or are reasonably likely to materially affect the Company's internal control over financial reporting.

The Company's management, including the CEO and CFO, believe that any disclosure controls and procedures or internal controls over financial reporting, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, they cannot provide absolute assurance that all control issues and instances of fraud, if any, within the Company have been prevented or detected. These inherent limitations include the realities that judgments in decision-making can be faulty and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by unauthorized override of the control. The design of any systems of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Accordingly, because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

SIGNIFICANT ACCOUNTING POLICIES

The Company's significant accounting policies are disclosed in note 5, *Summary of Significant Accounting Policies*, of the audited annual consolidated financial statements for the year ended October 31, 2019. Sona has identified certain accounting policies that it believes are most critical in understanding the judgments that are involved in producing the consolidated financial statements and the estimates made that could impact results of the operations, which are discussed below.

Government assistance
Non-repayable government assistance is recorded in the period earned as other income or netted against expenses. During the year ended October 31, 2019, the Company recorded $nil (2018 – $72,052) of non-repayable government grants as an offset against consulting and wages. Repayable government loans are recorded initially at fair value, with the difference between book value and fair value recorded as other income. During the year ended October 31, 2019, the Company recorded $194,078 as other income (2018 – $163,331). At October 31, 2019, $nil (2018 – $76,172) of government assistance, including government loans, is included in amounts receivable.

Financial instrument
Financial assets and financial liabilities are recognized when the Company becomes a party to the contractual provisions of a financial instrument. Financial assets and financial liabilities are initially measured at fair value. Financial assets are classified into one of the following specified categories: amortized cost, fair value through profit or loss ("FVTPL") or fair value through other comprehensive income ("FVOCI"). Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities (other than financial assets and financial liabilities classified as FVTPL) are added to, or deducted from, the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities classified as FVTPL are recognized immediately in the audited statement of loss and comprehensive loss.

The Company's financial instruments are classified and subsequently measured as follows:

Financial instrument	**IAS 39**	**IFRS 9**
Cash	Loans and receivables	Amortized cost
Amounts receivable	Loans and receivables	Amortized cost
Marketable securities	Available-for sale	FVOCI
Accounts payable	Other financial liabilities	Amortized cost
Long-term debt	Other financial liabilities	Amortized cost
Convertible notes and interest	Other financial liabilities	Amortized cost

Financial Assets
Subsequent to initial recognition, financial assets classified as loans and receivables are measured at amortized cost using the effective interest method.

Financial assets classified as FVOCI are recognized initially at fair values plus transaction costs and are subsequently carried at fair value, with changes in the fair value recorded in other comprehensive income. The fair value measurements are based on level 1 inputs, being quoted prices in active markets for identical instruments.

Impairment of financial assets at amortized cost
The Company recognizes an allowance using the ECL model on financial assets classified as amortized cost. The Company has elected to use the simplified approach for measuring ECL by using a lifetime expected loss allowance for all accounts receivable. Under this model, impairment provisions are based on credit risk characteristics and days past due. When there is no reasonable expectation of collection, financial assets classified as amortized cost are written off. Indications of credit risk arise based on failure to pay and other factors. Should objective events occur after an impairment loss is recognized, a reversal of impairment is recognized in the statement of loss and comprehensive loss.

Financial Liabilities
Financial liabilities are classified as and are measured at amortized cost subsequent to initial measurement at fair value.

Offsetting financial instruments
Financial assets and financial liabilities are offset, and the net amount reported on the statement of financial position if, and only if, there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, or to realize the asset and settle the liability simultaneously.

CRITICAL ACCOUNTING ESTIMATES

The preparation of the audited annual consolidated financial statements in conformity with IFRS requires management to make judgments and estimates that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results could differ from these estimates. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected. Information about critical accounting judgments and estimates in applying accounting policies that have the most significant impact on the amounts recognized in the audited consolidated financial statements are outlined below.

Calculation of initial fair value and carrying amount of long-term debt
The initial fair value of the Atlantic Canada Opportunities Agency ("ACOA") loans is determined by using a discounted cash flow analysis for the loans, which requires a number of assumptions. The difference between the face value and the initial fair value of the ACOA loans is recorded in the statement of loss and comprehensive loss as government assistance. The carrying amount of the ACOA loans requires management to adjust the long-term debt to reflect actual and revised estimated cash flows whenever revised cash flow estimates are made or new information related to market conditions is made available. Management recalculates the carrying amount by computing the present value of the estimated future cash flows at the original effective interest rate. Any adjustments are recognized in the statement of loss and comprehensive loss as accreted interest and adjustments after initial recognition.

The significant assumptions used in determining the discounted cash flows include estimating the amount and timing of future revenue for the Company and the discount rate. As the ACOA loans are repayable based on a percentage of gross revenue, if any, the determination of the amount and timing of future revenue significantly impacts the initial fair value of the loans, as well as the carrying value of the ACOA loans at each reporting date. The Company is researching and developing its nanorod technology products; accordingly, determination of the amount and timing of revenue, if any, requires significant judgment by management. If the Company expected no future revenues, no repayments would be required on the ACOA loans and the amounts recorded for the ACOA loans on the statement of financial position would be $nil. The discount rate determined on initial recognition of the ACOA loans is used to determine the present value of estimated future cash flows expected to be required to settle the debt. In determining the appropriate discount rates, the Company considered the interest rates of similar long-term debt arrangements, with similar terms. The ACOA loan is repayable based on a percentage of gross revenue, if any; accordingly, finding financing arrangements with similar terms is difficult and management was required to use significant judgment in determining the appropriate discount rates. Management used a discount rates ranging from 8.0% to 15.0% to discount the ACOA loan.

If the weighted average discount rate used in determining the initial fair value and the carrying value at each reporting date of all ACOA loans, with repayment terms based on future revenue, had been determined to be higher by 10% (resulting in a discount rates ranging from 8.9% to 16.5%), or lower by 10% (resulting in a discount rates ranging from 7.3% to 13.5%), the carrying value of the long-term debt at October 31, 2019 would have been an estimated $25,000 lower or $27,000 higher, respectively. If the total forecasted revenue was reduced by 10% or increased by 10%, the carrying value of the long-term debt at October 31, 2019 would have been an estimated $8,000 lower or $8,000 higher, respectively.

Share-based payments
The Company makes certain estimates and assumptions when calculating the estimated fair values of stock options granted and warrants issued. The significant assumptions used include estimates of expected volatility, expected life, expected dividend rate and expected risk-free rate of return. Changes in these assumptions may result in a material change to the expense recorded for grants of stock options and the issuance of warrants.

Deferred income taxes
The Company is periodically required to estimate the tax base of assets and liabilities. Where applicable tax laws and regulations are either unclear or subject to varying interpretations, it is possible that changes in these estimates could occur that materially affect the amounts of deferred income tax assets and liabilities recorded in the audited consolidated financial statements. Changes in deferred tax assets and liabilities generally have a direct impact on earnings in the period of changes.

Each period, the Company evaluates the likelihood of whether some portion or all of each deferred tax asset will not be realized. This evaluation is based on historic and future expected levels of taxable income, the pattern and timing of reversals of taxable temporary timing differences that give rise to deferred tax liabilities, and tax planning initiatives. Levels of future taxable income are affected by, among other things, the market price for commodities, production costs, quantities of proven and probable reserves, interest rates, and foreign currency exchange rates.

NEW ACCOUNTING STANDARDS ADOPTED DURING THE YEAR

IFRS 9, Financial Instruments (“IFRS 9”)
<u>*Description of IFRS 9*</u>
IFRS 9 replaces provisions of the IASB’s IAS 39, *Financial Instruments: Recognition and Measurement (“IAS 39”)* that relates to the recognition, classification and measurement of financial assets and financial liabilities, derecognition of financial instruments, impairment of financial assets and hedge accounting. The Company has adopted IFRS 9 using the retrospective approach from November 1, 2018.

<u>*Impact of adoption of IFRS 9*</u>
Financial liabilities that are considered modified must be accounted for by discounting the new cash flows at the original effective interest rate, resulting in an immediate impact to the Company’s net loss. Management identified one financial liability that was modified prior to January 1, 2018; however, the related gain was considered immaterial.

IFRS 9 requires the Company to use the Expected Credit Loss (“ECL”) impairment model in calculating impairment provisions which differs from the incurred credit loss model under IAS 39. The ECL model is a probability weighted estimate of credit losses. Management has determined that there is no impact on the consolidated financial statements due to this change in impairment models.

The Company determines the measurement of financial assets and liabilities at initial recognition and classifies them at amortized cost. The Company completed an assessment of its financial assets and liabilities as at November 1, 2018 and concluded that there were no changes in measurement due to the transition to IFRS 9.

Cash and accounts receivable that were classified as loans and receivables under IAS 39 are classified as financial assets measured at amortized cost under IFRS 9. There has been no impact on classification of the Company’s financial liabilities.

IFRS 15, Revenue from contracts with customers ("IFRS 15")
In May 2014, the IASB issued IFRS 15. IFRS 15 replaces IAS 18, *Revenue*; IAS 11, *Construction Contracts*; and some revenue related Interpretations. IFRS 15 establishes a new control-based revenue recognition model and provides a comprehensive framework for recognition, measurement and disclosure of revenue from contracts with customers, excluding contracts within the scope of the standards on leases, insurance contracts and financial instruments. The new standard is effective for annual periods beginning on or after January 1, 2018 and is to be applied retrospectively. Management has completed its assessment and the adaptation of IFRS 15 did not have a significant impact on the audited consolidated financial statements of the Company.

STANDARDS, INTERPRETATIONS AND AMENDMENTS TO PUBLISHED STANDARDS THAT ARE NOT YET EFFECTIVE

IFRS 16, Leases ("IFRS 16")
IFRS 16 was issued on January 13, 2016 and replaces the current guidance in IAS 17, *Leases* ("IAS 17"). IFRS 16 specifies how an IFRS reporter will recognize, measure, present and disclose leases. The standard provides a single lessee accounting model, requiring lessees to recognize assets and liabilities for all leases unless the lease term is 12 months or less or the underlying asset has a low value. Lessors continue to classify leases as operating or finance, with IFRS 16's approach to lessor accounting substantially unchanged from IAS 17. IFRS 16 is effective for annual periods beginning on or after January 1, 2019, with early adoption permitted. Management has assessed the impact of the adoption of IFRS 16 on the consolidated financial statements of the Company and determined the adoption of IFRS 16 will not have a significant impact on the Company's consolidated financial statements. The standard is effective for periods beginning on or after January 1, 2019, with early adoption permitted for entities that have adopted IFRS 15.

OTHER INFORMATION

Additional information regarding the Company is available on the Company's website at www.sonanano.com.