



Management's Discussion and Analysis of

# **NervGen Pharma Corp.**

(Expressed in Canadian Dollars)

For the year ended December 31, 2019

Effective Date: April 29, 2020

## **MANAGEMENT'S DISCUSSION AND ANALYSIS**

The following discussion is management's assessment and analysis of the results of operations and financial conditions of NervGen Pharma Corp. (the "Company" or "NervGen") and should be read in conjunction with the accompanying consolidated financial statements and related notes thereto for the year ended December 31, 2019.

All financial information in this Management's Discussion and Analysis ("MD&A") has been prepared in accordance with International Financial Reporting Standards ("IFRS") and all dollar amounts are expressed in Canadian dollars unless otherwise indicated.

### **FORWARD-LOOKING STATEMENTS**

This MD&A includes certain statements that are "forward-looking information" within the meaning of applicable Canadian securities legislation (collectively, the "forward-looking statements"). Forward-looking statements include statements that may relate to our plans, objectives, goals, strategies, future events, future revenue or performance, capital expenditures, financing and other information that is not historical information. These statements appear in a number of different places in this MD&A and can often be identified by words such as "anticipates", "estimates", "projects", "expects", "intends", "believes", "plans", "will", "could", "may", or their negatives or other comparable words. Such forward-looking statements are necessarily based on estimates and involve known and unknown risks, uncertainties and other factors that may cause actual results, performance or achievements to be materially different from any future results, performance or achievements that may be expressed or implied by such forward-looking statements.

Forward-looking statements in this MD&A, include, but are not limited to, statements relating to:

- requirements for, and the ability to obtain, future funding on favourable terms or at all;
- business strategy;
- expected future loss and accumulated deficit levels;
- projected financial position and estimated cash burn rate;
- expectations about the timing of achieving milestones and the cost of our development programs;
- estimates of the size and characteristics of the potential markets for the Company's products;
- observations and expectations regarding the effectiveness of its lead compound NVG-291 and the potential benefits to patients;
- plans to use NVG-291 in our clinical development programs;
- the impact of the COVID-19 pandemic on our operations;
- expectations about the timing with respect to commencement of clinical trials;
- expectations about the timing with respect to preclinical studies;
- expectations about the Company's products' safety and efficacy;
- expectations regarding our ability to arrange for the manufacturing of our products and technologies;
- expectations regarding the cost, progress and successful and timely completion of the various stages of the regulatory approval process;
- ability to secure strategic partnerships with larger pharmaceutical and biotechnology companies;
- strategy to acquire and develop new products and technologies and to enhance the safety and efficacy of existing products and technologies;
- plans to market, sell and distribute our products and technologies;
- expectations regarding the acceptance of our products and technologies by the market;
- expectations regarding the use of our products and technologies in treating diseases and medical disorders;
- ability to retain and access appropriate staff, management, and expert advisers;
- expectations with respect to existing and future contractual obligations, corporate alliances and licensing transactions with third parties,
- and the receipt and timing of any payments to be made by the Company or to the Company in respect of such arrangements, and
- strategy and ability with respect to the protection of our intellectual property.

Such statements reflect our current views with respect to future events and are subject to risks and uncertainties and are necessarily based upon a number of estimates and assumptions that, while considered reasonable by us, are inherently subject to significant medical, scientific, business, economic, competitive, political and social uncertainties and

contingencies. Many factors could cause our actual results, performance or achievements to be materially different from any future results, performance, or achievements that may be expressed or implied by such forward-looking statements.

In making the forward-looking statements included in this MD&A, we have made various material assumptions, including but not limited to:

- our ability to obtain financing on acceptable terms;
- additional sources of funding, including grants and funding from partners;
- our ability to attract and retain skilled staff;
- favourable general business and economic conditions;
- the COVID-19 pandemic not having a material impact on our operations;
- our future research and development plans proceeding substantially as currently envisioned;
- our ability to obtain positive results from our research and development activities, including clinical trials;
- future expenditures to be incurred by the Company;
- research and development and operating costs;
- our ability to find partners in the pharmaceutical industry;
- the products and technology offered by our competitors;
- the impact of competition on the Company;
- our ability to identify a product candidate;
- our ability to obtain regulatory and other approvals to commence a clinical trial involving future product candidates;
- our ability to successfully out-license or sell our future products, if any, and in-license and develop new products;
- our ability to attract and retain skilled staff;
- our ability to protect patents and proprietary rights; and
- expected research and development tax credits.

In evaluating forward-looking statements, current and prospective shareholders should specifically consider the risk factors and uncertainties set forth under the heading "Risks Factors" in our Annual Information Form for the year ended December 31, 2019 (the "AIF"). Certain risks and uncertainties that could cause such actual events or results expressed or implied by such forward-looking statements and information to differ materially from any future events or results expressed or implied by such statements and information include, but are not limited to, the risks and uncertainties related to the fact that:

- we have no sources of product revenue and will not be able to maintain operations and research and development without significant additional funding;
- Worldwide pandemics, such as the recent outbreak of the novel coronavirus COVID-19, may adversely impact multiple aspects of our business;
- we are highly dependent upon certain key personnel and their loss could adversely affect our ability to achieve our business objectives;
- if we breach any of the agreements under which we license rights to product candidates or technology from third parties, we can lose license rights that are important to our business;
- preclinical and clinical drug development involves a lengthy and expensive process with an uncertain outcome, and results of earlier studies and trials may not be predictive of future trial results and our product candidates may not have favourable results in later trials or in the commercial setting;
- if we are unable to enroll subjects in clinical trials, we will be unable to complete these trials on a timely basis;
- significant disruption in availability of key components for ongoing preclinical and clinical studies could considerably delay completion of potential clinical trials, product testing and regulatory approval of potential product candidates;
- if our competitors develop and market products that are more effective than our existing product candidates or any products that we may develop, or obtain marketing approval before we do, our products may be rendered obsolete or uncompetitive;
- we rely on and will continue to rely on third parties to plan, conduct and monitor preclinical studies and clinical trials, and their failure to perform as required could cause substantial harm to our business;
- we rely on contract manufacturers over whom we have limited control and if we are unable to secure our drug supplies from our contract manufacturers, it may result in delays in preclinical and clinical drug development timelines;
- our future success is dependent primarily on the regulatory approval of a single product;
- our drug candidates are in preclinical development and, as a result, we cannot predict whether we will be able to profitably commercialize our products;

- we will be subject to extensive government regulation that may increase the cost and uncertainty associated with gaining final regulatory approval of our product candidates;
- our products may become subject to unfavourable pricing regulations, third-party coverage and reimbursement practices or healthcare reform initiatives, thereby having an adverse effect on our business;
- negative results from clinical trials or studies or others and adverse safety events involving the targets of our products may have an adverse impact on future commercialization efforts;
- we face the risk of product liability claims, which could exceed our insurance coverage and produce recalls, each of which could deplete cash resources;
- we may not achieve our publicly announced milestones according to schedule, or at all;
- changes in government regulations, although beyond our control, could have an adverse effect on our business;
- our discovery and development processes involve use of hazardous and radioactive materials which may result in potential environmental exposure;
- if we are unable to successfully develop companion diagnostics or biomarkers for our therapeutic product candidates, or experience significant delays in doing so, we may not achieve marketing approval or realize the full commercial potential of our therapeutic product candidates;
- significant disruption in availability of key components for ongoing preclinical and clinical studies could considerably delay completion of potential clinical trials, product testing and regulatory approval of potential product candidates;
- our competitors could develop alternative methods for targeting the protein tyrosine phosphatase sigma ("PTP $\sigma$ ") receptor;
- our products or technologies may need to be used in connection with third-party technologies or products;
- we could be adversely impacted by unauthorized actions or the distribution of inaccurate information;
- our success depends upon our ability to protect our intellectual property and our proprietary technology;
- our potential involvement in intellectual property litigation could negatively affect our business;
- our reliance on third parties requires us to share our trade secrets, which increases the possibility that a competitor will discover them;
- product liability claims are an inherent risk of our business and, moving forward, if our clinical trial and product liability insurance prove inadequate, product liability claims may harm our business;
- we will have significant additional future capital needs and there is uncertainty as to our ability to raise additional funding;
- Company shareholders may experience significant dilution from future sales of its securities;
- the price of our common shares has experienced volatility and may be subject to fluctuation in the future based on market conditions;
- we may pursue other business opportunities in order to develop our business and/or products;
- generally, a litigation risk exists for any company that may compromise its ability to conduct the Company's business;
- our success depends on its ability to effectively manage its growth;
- we are likely a "passive foreign investment company," which may have adverse United States ("U.S.") federal income tax consequences for U.S. shareholders;
- it may be difficult for non-Canadian investors to obtain and enforce judgments against us because of our Canadian incorporation and presence;
- significant disruptions of information technology systems or security breaches could adversely affect the Company's business;
- we have never paid dividends on our common shares and we do not anticipate paying any dividends in the foreseeable future.

If one or more of these risks or uncertainties or a risk that is not currently known to us materialize, or if our underlying assumptions prove to be incorrect, actual results may vary significantly from those expressed or implied by forward-looking statements. The forward-looking statements represent our views as of the date of this MD&A. While we may elect to update these forward-looking statements in the future, we have no current intention to do so except as to the extent required by applicable securities law. Investors are cautioned that forward-looking statements are not guarantees of future performance and are inherently uncertain. Accordingly, investors are cautioned not to put undue reliance on forward-looking statements. We advise you that these cautionary remarks expressly qualify in their entirety all forward-looking statements attributable to us or persons acting on our behalf.

## **COMPANY OVERVIEW**

NervGen is a publicly traded company incorporated on January 19, 2017 as 1104403 B.C. Ltd. under the *Business Corporations Act* (British Columbia). The name was changed to NervGen Pharma Corp. on November 15, 2017. The corporate office of the Company is Suite 1703, 595 Burrard Street, Vancouver, BC, V7X 1J1, Canada.

On June 25, 2018, the Company entered into an exclusive worldwide licensing agreement to research, develop and commercialize a patented technology with the potential to bring new therapies for spinal cord injury and other conditions associated with nerve damage. The technology was developed in the laboratory of Dr. Jerry Silver, a leading spinal cord injury and regenerative medicine researcher at Case Western Reserve University. Dr. Silver's research has identified PTP $\sigma$  as a key neural receptor which inhibits nerve regeneration through regions of scarring in spinal cord injury and other medical conditions. Targeted treatment against PTP $\sigma$  with an agent known as intracellular sigma peptide ("ISP") promoted regeneration of damaged nerves and functional improvement in animal models for various medical conditions. A series of receptor antagonists that can be delivered systemically have been identified, including an analogue of ISP, NVG-291, that is structurally similar but slightly different in composition.

We have conducted initial preclinical development of NVG-291 and subsequent to the year ended December 31, 2019, filed an Investigational New Drug ("IND") application with the United States Food and Drug Administration (the "FDA"). Upon review of the comments received from the FDA, we have decided to delay the initiation of its Phase 1 clinical study from the first quarter of 2020 to the fourth quarter of 2020 in order to obtain additional preclinical data required by the FDA. Although we believe it would have been possible to initiate the Phase 1 clinical study in Q2 2020 on a restricted basis, we have decided to delay the start of the study in order to provide additional information in our IND application to allow for a broader scope of the Phase 1 clinical study. Subject to successful completion of the Phase 1 study in healthy volunteers, the company intends to initiate an adaptive design Phase 2 study in spinal cord injury patients which is expected to be initiated in the second half of 2021.

In addition, we plan to commence a Phase 2 clinical trial in multiple sclerosis ("MS") patients in the second half of 2021 and have also initiated a preclinical research and development program to determine if NVG-291 could have a positive effect on Alzheimer's disease. These objectives replace and supersede those described in the "Description and General Development of the Business" section of our Short Form Base Shelf Prospectus dated January 2, 2020. All clinical development plans are subject to additional funding.

These three indications represent a significant market opportunity due to the high cost burden to the health care system and the dramatic impact on quality of life. We are also identifying additional therapeutic candidates for other medical conditions involving nerve damage.

## **ACHIEVEMENTS & HIGHLIGHTS**

The following are the achievements and highlights for the year ending December 31, 2019 through to the date hereof:

- On March 13, 2019, we completed an initial public offering ("IPO") of our common shares ("Common Shares") and listed as a Tier 2 company on the TSX Venture Exchange ("TSX-V") under trading symbol "NGEN". The IPO consisted of the issuance of 10,000,000 Common Shares at a price of \$1.00 per share for gross proceeds of \$10,000,000. The Company's Common Shares commenced trading on the TSX-V on March 15, 2019.
- On April 1, 2019, we appointed Amy Franke as Vice President, Clinical Operations.
- On April 24, 2019, we announced the issuance by the U.S. Patent and Trademark Office of two new patents protecting the development and commercialization of PTP $\sigma$  targeted therapies for heart diseases and injury, and for root avulsion involving injuries into the peripheral nerve system.
- On May 1, 2019, we closed a non-brokered private placement which consisted of the issuance of 350,000 shares at a price of \$1.00 per share and 300,000 shares at a price of \$1.30 per share for gross proceeds of \$740,000.
- On May 3, 2019, we initiated trading of our shares on the U.S. over-the counter market, OTCQB®, under trading symbol "NGENF" and were subsequently uplisted to the OTCQX® on June 10, 2019.
- On May 30, 2019, we appointed Dr. Denis Bosc, PhD, as our Vice President, Chemistry, Manufacturing and Control ("CMC").

- On May 30, 2019, we engaged Paul Brennan, to advise us on strategy and business development.
- On June 26, 2019, we announced that in addition to applying our proprietary platform drug technology to spinal cord injury, we are also initiating a program for MS, another debilitating nerve damage related condition impacting millions of patients worldwide.
- On October 28, 2019, we announced the initiation of a research and development initiative to determine if our technology could be effective as a treatment for Alzheimer's disease.
- On November 21, 2019, we issued 1,500,000 Common Shares to our drug manufacturing partner, CSBio. The Common Shares were issued at a fair value of US\$1.00 (CA\$1.3231 equivalent) per share for a fair value of US\$1,500,000. This share issuance reflects the initial deposit of a US\$3,000,000 order from CSBio for NVG-291 to be used for our clinical development programs. No cash proceeds were raised from the transaction.
- On November 27, 2019, we announced the appointment of Paul Brennan, as our President & CEO, replacing Dr. Ernest Wong who will continue to formally support the Company as a consultant. Mr. Brennan was also appointed as a member of, and Dr. Wong resigned from our Board of Directors (the "Board of Directors").
- On November 27, 2019, we announced the appointment of Lloyd Mackenzie in the newly created position of Chief Operating Officer.
- On February 24, 2020, we announced the appointment of William (Bill) Adams, as our CFO, replacing Robert Pilz who will continue to formally support the Company as a consultant.
- On February 26, 2020, we provided an update to our technology development plans for our lead product NVG-291 as described in the "Company Overview" section of this Management Discussion and Analysis.
- On April 6, 2020, we provided an update on our business in response to the COVID-19 global crisis. and announced (i) the reduction or suspension of certain consulting contracts unless directly related to development programs or financing (ii) the departure of Denis Bosc from his position as Vice President, CMC (iii) a temporary reduction in compensation for certain executive officers and non-executive staff in exchange for a one time grant of stock options and (iv) working notice terminations for certain non-executive staff. We also reiterated our technology development plans for our lead product NVG-291 as described in the "Company Overview" section subject to the further impact of the COVID-19 pandemic on its suppliers' operations, FDA review and financing.

## SELECTED FINANCIAL INFORMATION

	2019 \$	2018 \$	2017 \$
Research and development expenses	<b>6,447,211</b>	780,401	-
General and administration expenses	<b>3,417,223</b>	578,082	11,813
Net loss	<b>(9,765,607)</b>	(1,358,483)	(11,813)
Basic and diluted loss per share	<b>(0.38)</b>	(0.17)	(5,907)
Total assets	<b>6,765,469</b>	3,097,387	83,249
Total liabilities	<b>923,949</b>	583,106	95,062

As of the date of this MD&A, the Company has not earned revenue other than income from interest earned on our cash balances.

The increase in net loss for the year ended December 31, 2019 is a result of increased research and development expenses incurred in the current year related to the preclinical development and manufacture of our lead compound NVG-291 and associated consulting as we prepare for conducting a Phase 1 clinical trial for NVG-291. Administratively, we incurred increased legal and consulting fees associated with listing on the TSX-V exchange and OTCQX, as well as non-cash stock-based compensation expenses for which there was minimal comparable expense in the previous year. General and administrative expenses also increased in the current year as a result of expanding operations, employees and consultants necessary to transition from a preclinical private company to a public company with expanded clinical operations following execution of our license agreement with Case Western Reserve University on June 25, 2018.

## RESULTS OF OPERATIONS FOR THE YEAR ENDED DECEMBER 31, 2019

### Research and Development Expenses

	Year Ended December 31, 2019	Year Ended December 31, 2018
	\$	\$
Chemistry, manufacturing and controls	3,178,925	296,929
Preclinical development	1,432,613	160,329
Salaries and benefits	916,598	179,259
Stock-based compensation	374,596	7,681
Other research and development	281,269	19,049
Licensing & patent legal fees	153,859	117,154
Clinical	73,168	-
Regulatory	36,183	-
	<b>6,447,211</b>	<b>780,401</b>

The increase of \$5,666,810 in research and development expenses in 2019 as compared to 2018 is attributable to the following factors:

- An increase of \$2,881,996 for chemistry, manufacturing and control work, drug formulation development and non-GMP and GMP manufacturing costs of NVG-291 required for both preclinical and clinical testing, as well as related consulting.
- An increase of \$1,272,284 for preclinical development, including IND enabling pharmacology and toxicology studies and analytical development, as well as associated consulting fees required to facilitate FDA IND submission and approval for clinical trials. Several translational research studies were also initiated.
- An increase of \$737,339 relating to employee salaries, bonuses and benefits. We continue to add employees with the expertise required to leverage the broad potential application of our technology, including Amy Franke as Vice President, Clinical Operations on April 1, 2019, Denis Bosc, Vice President, Chemistry, Manufacturing and Control on June 1, 2019 and Lloyd Mackenzie, Chief Operating Officer on November 26, 2019.
- An increase of \$366,915 in stock-based compensation pertaining to option grants to employees and consultants, and the timing of the related vesting.
- An increase of \$145,036 for travel to conferences as well as conference registration fees and subscriptions to stay abreast of science relevant to the development of our technology and to increase industry awareness of the Company and its technology, particularly with potential technology development and business partners.
- An increase of \$117,184 for the engagement of industry experts in strategic and advisory meetings for evaluating the application of our technology for MS, spinal cord and peripheral nerve injury indications.
- An increase of \$36,705 for patent related costs as we continue to expand and extend our patent portfolio.
- An increase of \$73,168 for clinical consulting for the development of our plans for Phase I studies, additional cohorts of spinal cord patients and Phase 2 clinical studies for MS.
- An increase of \$36,183 for regulatory activities, in particular, preparation of the IND information package to the FDA.

### General and Administrative Expenses

	Year Ended December 31, 2019	Year Ended December 31, 2018
	\$	\$
Legal, professional and finance	1,466,665	368,772
Stock-based compensation	919,091	30,266
Salaries and benefits	528,283	133,944
Other general and administrative	324,231	(31,256)
Facilities and operations	140,733	56,593
Amortization of intangible asset	38,221	19,763
	<b>3,417,223</b>	<b>578,082</b>

The increase of \$2,839,141 in general and administrative expenses in 2019 as compared to 2018 is attributable to the following factors:

- An increase of \$714,465 pertaining to increased corporate communications, market making, public and investor relations activities, with the engagement of specialist consultants and other related advisors as well as business development activities with the engagement of Mr. Paul Brennan as a consultant prior to him becoming our President and CEO and other related advisors.
- An increase of \$354,147 in corporate legal and professional fees relating to corporate structuring, execution of equity financings, and costs associated with listing on the TSX-V and OTCQX.
- Non-cash stock-based compensation expense increased by \$888,825 pertaining to option grants to employees and consultants, and the timing of the related vesting.
- An increase of \$394,339 in employee compensation as additional administrative staff was added to support additional operating activities and the requirements of a publicly listed Company including Paul Brennan as President and Chief Executive Officer on November 26, 2019.
- An increase of \$136,141 for travel related to corporate and investor relations activities.
- An increase of \$309,557 in office expenses, including bank charges, IT support, licenses, subscriptions, office computers and supplies and the effect of foreign exchange on US cash, accounts payable and vendor deposits.
- An increase of \$31,608 related to director and officer liability insurance.
- An increase of \$10,060 in rent related to office space and general insurance.

## SUMMARY OF QUARTERLY FINANCIAL RESULTS

	Dec. 31 2019	Sep. 30 2019	Jun. 30 2019	Mar. 31 2019	Dec. 31 2018	Sep. 30 2018	Jun. 30 2018	Mar. 31 2018
	\$	\$	\$	\$	\$	\$	\$	\$
Research & development	1,790,702	1,656,737	883,920	2,115,852	487,198	285,240	7,963	-
General & administration	1,115,208	708,778	685,519	907,718	280,770	230,301	56,387	10,624
Net loss	(2,887,710)	(2,331,301)	(1,525,050)	(3,021,547)	(767,969)	(515,541)	(64,350)	(10,624)
Basic & diluted loss per share	(0.10)	(0.08)	(0.06)	(0.16)	(0.04)	(0.04)	(0.04)	(5.312)
Total assets	6,765,469	7,060,117	8,946,160	9,757,009	3,097,387	3,724,565	1,232,790	83,320
Total liabilities	923,949	573,545	327,267	474,346	583,106	470,776	366,778	105,759

Research and development expenses were higher in the current year quarters compared with the same quarters in the prior year, due to late stage preclinical work including toxicology, pharmacology and efficacy studies required to initiate planned human clinical studies, associated consulting fees and the addition of key employees. In particular, research and development expenses were significantly higher in the quarter ended March 31, 2019 than other quarters due to costs related to the initiation of manufacturing NVG-291 and September 30, 2019 and December 31, 2019, due to toxicology studies and manufacturing of NVG-291. General and administrative expenses are higher in the current year quarters compared with the same quarters in the prior year due to legal and accounting fees, administrative activities related to establishing operations, developing staff, processes and infrastructure, as well as stock-based compensation expenses. General and administrative expenses for the quarter ended March 31, 2019 were also higher than other quarters due to financing and listing fees associated with our IPO on the TSX-V and for the quarter ended December 31, 2019 related to the commission of a market survey, and costs related to the transition from Ernest Wong to Paul Brennan in the role of President and Chief Executive Officer.

## RESULTS OF OPERATIONS FOR THE THREE MONTHS ENDED DECEMBER 31, 2019

### Research and Development Expenses

	Three Months Ended December 31, 2019	Three Months Ended December 31, 2018
	\$	\$
Chemistry, manufacturing and controls	936,055	227,281
Preclinical development	350,550	46,808
Salaries and benefits	291,099	108,698
Stock-based compensation	92,489	5,760
Licensing & patent legal fees	40,869	80,612
Other research and development	38,124	18,039
Regulatory	24,168	-
Clinical	17,348	-
	<b>1,790,702</b>	<b>487,198</b>

The increase of \$1,303,504 in research and development expenses in the three months ended December 31, 2019 as compared to the same period in 2018 is attributable to the following factors:

- An increase of \$708,774 for chemistry, manufacturing and control work, drug substance production, fill finish and storage, as well as related consulting.
- An increase of \$303,742 for preclinical development, particularly toxicology and efficacy studies, as well as associated consulting fees required to facilitate our FDA IND submission for approval to begin clinical trials.
- An increase of \$182,401 relating to employee salaries, bonuses and benefits. The Company continued to add employees with the expertise required to leverage the broad potential application of the Company's technology, including Amy Franke as Vice President, Clinical Operations on April 1, 2019, Denis Bosc, Vice President, Chemistry, Manufacturing and Control on June 1, 2019 and Lloyd Mackenzie, Chief Operating Officer on November 26, 2019.
- An increase of \$86,728 in stock-based compensation pertaining to option grants to employees and consultants, and the timing of the related vesting.
- An increase of \$26,648 for travel to conferences as well as conference registration fees and subscriptions to stay abreast of science relevant to the development of our technology and increase industry awareness of the Company and our technology, particularly with potential technology development and business partners.
- A decrease of \$6,563 for the engagement of industry experts in strategic and advisory meetings relating to the timing of meetings.
- An increase of \$17,348 for clinical consulting in developing the plans for Phase I studies, additional cohorts of spinal cord patients and Phase 2 clinical studies planned for MS.
- A decrease of \$39,743 for patent related costs due to timing.
- An increase of \$24,168 for regulatory activities, in particular preparation of the IND submission for the FDA.

### **General and Administrative Expenses**

	<b>Three Months Ended December 31, 2019</b>	Three Months Ended December 31, 2018
	\$	\$
Legal, professional and finance	491,324	186,862
Other general and administrative	211,044	(49,512)
Stock-based compensation	187,650	22,700
Salaries and benefits	169,129	79,932
Facilities and operations	46,505	31,245
Amortization of intangible asset	9,556	9,543
	<b>1,115,208</b>	<b>280,770</b>

The increase of \$834,438 in general and administrative expenses in the three months ended December 31, 2019 as compared to the same period in 2018 is attributable to the following factors:

- An increase of \$249,986 pertaining to increased corporate communications, market making, public and investor relations activities, with the engagement of specialist consultants and other related advisors as well as business development activities with the engagement of Mr. Paul Brennan as a consultant prior to him becoming our President and CEO and other related advisors.
- An increase of \$242,940 in office expenses, including bank charges, IT support, licenses, subscriptions, office computers and supplies and the effect of foreign exchange on US cash, accounts payable and vendor deposits.
- Non-cash stock-based compensation expense increased by \$164,950 pertaining to option grants to employees and consultants, and the timing of the related vesting.
- An increase of \$89,197 in employee compensation as additional administrative staff were added to support additional operating activities and the requirements of a publicly listed Company including Paul Brennan as President and Chief Executive Officer on November 26, 2019.
- An increase of \$43,352 for travel related to corporate and investor relations activities.
- An increase of \$33,054 in corporate legal and professional fees relating to corporate structuring, execution of equity financings, and costs associated with listing on the TSX-V and OTCQX.
- An increase of \$9,083 related to director and officer liability insurance.
- An increase of \$1,876 in rent related to office space and general insurance.

### **USE OF PROCEEDS**

In the year ended December 31, 2019, the Company received total gross proceeds of \$10,000,000 from its IPO completed on March 13, 2019. The following table sets out a comparison of how the Company intended to use the proceeds from the IPO, other than working capital based on its disclosure, against how the Company actually has used the proceeds to December 31, 2019.

Purpose	Intended 12 Month Use of Proceeds	Actual Use of Proceeds to December 31, 2019
	\$	\$
Preclinical development of the technology	5,202,000	4,403,608
Clinical development of the technology	1,680,000	1,669,007
General and administrative expenses	1,358,000	2,459,911

Amounts exclude non-cash amortization and stock-based compensation expenses.

Total preclinical and clinical development expenses for the year ended 2019, accounting for some costs being incurred in the first quarter of 2020 are projected to be materially as intended while general and administrative expenses have exceeded the original forecast as a result of earlier than planned business development activities, strategic consulting and higher than planned activities to expand awareness of the Company in the industry and investment community. Unallocated working capital was sufficient to fund variances and total funds, net of agent's and offering costs, were sufficient, to materially execute our plan as described in our IPO documents with business objectives accomplished as follows:(1) development of NVG-291 involving completing outsourced preclinical animal studies was completed as planned however, comments from the US FDA in relation to our IND filing which as completed and filed in February 2020, has resulted in our choosing to conduct expanded preclinical studies to broaden the scope of planned Phase 1 clinical trials; (2) the manufacture of non-GMP and GMP batches of NVG-291 and beginning stability studies was accomplished as planned.

Our current business objectives for 2020 onwards are as follows: (1) complete expanded outsourced preclinical studies on NVG-291 to support a comprehensive Phase 1 clinical trial, contracting the additional manufacture of required non-GMP and GMP batches of NVG-291 and ongoing stability studies; (2) submit an updated IND application with the FDA and (3) initiate a Phase 1 study on healthy humans planned to start in the fourth quarter of 2020. Following successful completion of the Phase 1 study, we intend to progress directly in spinal cord patients with an "adaptive design" Phase 2 efficacy study expected to be initiated in the second half of 2021, and a Phase 2 efficacy study in MS patients also planned to be initiated in the second half of 2021. In addition, we have initiated a preclinical research and development program to determine if our technology could have a positive effect on Alzheimer's disease. These objectives replace and supersede the objectives as described in the "Description and General Development of the Business" section of the Company's Short Form Base Shelf Prospectus dated January 2, 2020

## LIQUIDITY AND CAPITAL RESOURCES

Since inception, we have devoted our resources to evaluating and securing intellectual property rights and licenses related to the PTP $\sigma$  technology licensed from Case Western Reserve University ("CWRU") on June 25, 2018, conducting discovery research, manufacturing drug supplies, initiating preclinical studies, and providing administrative support to research and development activities, which has resulted in an accumulated deficit of \$11,135,903 as of December 31, 2019. With current income only consisting of interest earned on excess cash, in the amount of \$98,827 for the year ended December 31, 2019, losses are expected to continue while our research and development programs are advanced.

We do not earn any revenue from our drug candidates and therefore we are considered to be in the research and development stage. As required, we will continue to finance our operations through the sale of equity and will pursue non-dilutive funding sources available to the Company in the future. The continuation of our research and development activities and the commercialization of NVG-291 and other compounds is dependent upon our ability to successfully finance through equity financing, grant and other non-dilutive financing and possibly revenues from strategic partners. We have no current sources of significant revenues from strategic partners.

On March 13, 2019, we completed our IPO and listed our Common Shares for trading on the TSX-V. The IPO consisted of the issuance of 10,000,000 Common Shares of the Company at a price of \$1.00 per share for gross proceeds of \$10,000,000. On May 1, 2019 we completed an additional non-brokered private placement of 650,000 Common Shares for additional gross proceeds of \$740,000.

We have forecasted that we will have sufficient working capital to operate for the ensuing 12 months, but we will require additional capital to meet our announced goals over the same period. While we have been successful in the past in obtaining financing, there can be no assurance that we will be able to obtain adequate financing, or that such financing will be available on terms acceptable to us, to meet future operational needs which may result in the delay, reduction, or discontinuation of ongoing development programs.

The initiation of a Phase 1 clinical study, and proof of concept Phase 2 studies to evaluate NVG-291's effectiveness in humans is subject to substantial additional funding. The Phase 2 clinical trial program is also subject to the successful completion of the Phase 1 clinical study on healthy volunteers. The duration and cost of clinical trials can range significantly depending on a variety of factors including rate of enrollment, the country in which trials are conducted and the specific trial protocol which we will investigate and decide upon during the course of 2020.

The following table presents a summary of our cash flows for the years ended December 31, 2019 and 2018:

	<b>Year Ended December 31, 2019</b>	<b>Year Ended December 31, 2018</b>
	\$	\$
Net cash provided by (used in):		
Operating activities	(8,093,960)	(1,040,079)
Investing activities	-	(126,815)
Financing activities	9,839,209	3,591,468
Effect of exchange rates changes on cash	(113,406)	49,766
Net increase in cash	1,631,843	2,474,340

#### Cash used in operating activities:

Our cash used from operating activities for the years ended December 31, 2019 and 2018 was \$8,093,960 and \$1,040,079, respectively. Our uses of cash for operating activities for both years primarily consisted of salaries and wages for our employees, fees paid in connection with preclinical and clinical studies, drug manufacturing costs, and professional fees.

#### Cash from investing activities:

Our cash used by investing activities for the year ended December 31, 2018 was \$126,815 and consisted of payments to acquire intangible asset.

#### Cash from financing activities:

Our cash flow from financing activities for the years ended December 31, 2019 and 2018 was \$9,839,209 and \$3,591,468, respectively. During the year ended December 31, 2019, funds were raised from an IPO in March 2019, consisting of the issuance of 10,000,000 Common Shares and a private placement in May 2019 consisting of the issuance of 650,000 Common Shares. During the year ended December 31, 2018, funds were raised from the issuance of 16,599,998 Common shares for cash proceeds of \$3,591,468 and settlement of amounts due to related parties of \$86,032.

## **CASH POSITION**

Working capital at December 31, 2019 was \$5,331,912 (December 31, 2018: \$2,100,682). Our working capital requirements are dependent on our ability to raise capital by selling additional equity or from proceeds from the exercise of stock options, by obtaining business development revenue such as milestone payments from licensing agreements, or by obtaining credit facilities. We can also manage our spending by delaying certain development activities however such actions may not allow us to meet our stated corporate goals. No assurance can be given that any additional funding or revenue will be available or that, if additional funding is available, it can be obtained on terms favorable to the Company.

At December 31, 2019, we had a cash balance of \$4,106,183 compared to \$2,474,340 at December 31, 2018. The funds expended during the year ended December 31, 2019, of \$8,207,366 (net of working capital changes and effects of foreign exchange), were used to fund operating development expenditures as we added important individuals to our management team and advanced our lead product NVG-291 towards clinical trials. Consultants and key opinion leaders were also engaged to further develop our PTP $\sigma$  technologies. Manufacturing and quality processes were advanced and a significant amount of NVG-291 was manufactured to conduct necessary preclinical toxicology, pharmacology and efficacy studies required to initiate planned human clinical studies. We also retained additional expertise to provide market making, public relations and investor relations services to increase awareness of the Company within the industry and to potential investors.

We invest cash in excess of current operational requirements in highly rated and liquid instruments.

We do not expect to generate positive cash flow from operations for the foreseeable future due to additional expenses involved in commercializing our PTP $\sigma$  technologies, including expenses related to drug discovery, preclinical testing, NervGen Pharma Corp. Annual MDA

clinical trials, chemistry, manufacturing and controls, regulatory activities and operating expenses associated with supporting these activities. It is expected that negative cash flow from operations will continue until such time, if ever, that we receive regulatory approval to commercialize any of our products under development and/or royalty or milestone revenue from any such products should they exceed our expenses.

## **CONTRACTUAL OBLIGATIONS**

We enter into research, development and license agreements in the ordinary course of business where we receive research services and rights to proprietary technologies. Milestone and royalty payments that may become due under various agreements are dependent on, among other factors, clinical trials, regulatory approvals and ultimately the successful development of a new drug, the outcome and timing of which is uncertain. The frequency and value of the agreements entered have increased in the year ended December 31, 2019 as we executed our business plan. We expect that these commitments will continue to increase in value.

Under the exclusive worldwide licensing agreement with CWRU to research, develop and commercialize patented technologies, we have commitments to pay various annual license fees, patent costs, milestone payments and royalties on revenues, contingent on the achievement of certain development and regulatory milestones. We cannot reasonably estimate future royalties which may be due upon the regulatory approval of products derived from licensed technologies.

Other than as disclosed below, we do not have any contractual obligations relating to long-term debt obligations, capital (finance) lease obligations, operating lease obligations, purchase obligations or other long-term liabilities reflected on our balance sheet as at December 31, 2019:

<b>Anticipated Commitments</b>	<b>Under 1 Year</b>	<b>1-3 years</b>	<b>4-5 years</b>	<b>Total</b>
	\$	\$	\$	\$
Patent licensing costs, minimum annual royalties per license agreements	45,556	585,720	1,952,400	2,583,676
Purchase obligations	2,914,763	-	-	2,914,763

We have agreed to reimburse certain past expenses incurred by CWRU in stages over a period of three years, subject to an acceleration clause, in addition to advance minimum royalty payments escalating over time. During the year ended December 31, 2019, the acceleration clause had been met upon the successful completion of our IPO, resulting in full payment of the past expenses totaling \$176,696.

We utilize temporary office space with terms of less than one year.

## **OFF-BALANCE SHEET ARRANGEMENTS**

We have no material undisclosed off-balance sheet arrangements that have, or are reasonably likely to have, a current or future effect on our results of operations, financial condition, revenues or expenses, liquidity, capital expenditures or capital resources that is material to investors.

## **TRANSACTIONS WITH RELATED PARTIES**

Key management personnel, consisting of the Company's officers (Executive Chairman, President and Chief Executive Officer, Chief Financial Officer, Chief Operating Officer, Vice President, Clinical Operations, Vice President, Chemistry Manufacturing and Controls) and directors, received the following compensation for the following periods:

	<b>3 Months Ended December 31, 2019</b>	<b>3 Months Ended December 31, 2018</b>	<b>Year Ended December 31, 2019</b>	<b>Year Ended December 31, 2018</b>
	\$	\$	\$	\$
Stock-based compensation	147,046	16,939	763,767	22,586
Wages and consulting	402,600	127,762	1,260,365	269,727
Rent. <sup>(1)</sup>	1,500	1,975	6,000	2,625
	<b>551,146</b>	<b>146,676</b>	<b>2,030,132</b>	<b>294,938</b>

(1) Brian E. Bayley, a director of the Company, is a director and president of our landlord, Earlston Management Corp.

As at December 30, 2019, we had amounts owing to related parties of \$172,389 (December 31, 2018: \$58,074). Of this total, \$526 pertained to rent, \$4,473 for expense reimbursements, and \$166,890 for bonuses (earned but unpaid and included in the table above). \$31,500 pertaining to consulting fees to related parties was included in prepaid expenses as at December 31, 2019.

## **NEW STANDARDS, AMENDMENTS AND INTERPRETATIONS ADOPTED DURING FISCAL 2019**

We have adopted new accounting standard IFRS 16 - Leases, effective for our annual period beginning January 1, 2019. The adoption of IFRS 16 did not result in any changes to our financial statements.

IFRS 16 sets out the principles for the recognition, measurement, presentation and disclosure of leases and requires lessees to account for all leases under a single on-balance sheet model, with certain exemptions. The standard includes two recognition exemptions for lessees – leases of “low-value” assets and short-term leases with a lease term of 12 months or less. At the commencement date of a lease, a lessee will recognize a liability to make lease payments and an asset representing the right to use the underlying asset during the lease term. Lessees will be required to separately recognize the interest expense on the lease liability and the depreciation expense on the right-of-use asset. Lessees are also required to remeasure the lease liability upon the occurrence of certain events such as a change in lease term. The lessee will generally recognize the amount of the remeasurement of the lease liability as an adjustment to the right-of-use asset.

## **CRITICAL ACCOUNTING POLICIES AND ESTIMATES**

Accounting policies are described in note 2 of the audited financial statements for the year ended December 31, 2019.

Estimates and assumptions are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. The determination of estimates requires the exercise of judgement based on various assumptions and other factors such as historical experience and current and expected economic conditions. Actual results could differ from those estimates. Significant assumptions about the future and other sources of estimation uncertainty that we have made at the statement of financial position date, that could result in a material adjustment to the carrying amounts of assets and liabilities include:

### Fair value of financial instruments

Where the fair value of financial assets and financial liabilities recorded in the consolidated statements of financial position cannot be derived from active markets, they are determined using valuation techniques including discounted cash flow models. The inputs to these models are taken from observable markets where possible, but where this is not feasible, a degree of judgment is required in establishing fair values.

The judgments include considerations of inputs such as liquidity risk, credit risk and volatility. Significant management judgment is necessary. Changes in assumptions about these factors could affect the reported fair value of financial instruments.

### Share-based payments and compensation

We apply estimates with respect to the valuation of shares issued for non-cash consideration. Shares are valued at the fair value of the equity instruments granted at the date we receive the goods or services.

We measure the cost of equity-settled transactions with employees by reference to the fair value of the equity instruments at the date at which they are granted. Estimating fair value for share-based payment transactions requires determining the most appropriate valuation model, which is dependent on the terms and conditions of the grant. This estimate also requires determining the most appropriate inputs to the valuation model including the fair value of the underlying Common Shares, the expected life of the share option, volatility, risk free interest rate and dividend yield and making assumptions about them. The fair value of the underlying Common Shares is assessed as the most recent market price per Common Share.

### Deferred taxes

The determination of deferred income tax assets or liabilities requires subjective assumptions regarding future income tax rates and the likelihood of utilizing tax carryforwards. Changes in these assumptions could materially affect the recorded amounts, and therefore do not necessarily provide certainty as to their recorded values.

## FINANCIAL INSTRUMENTS

### (a) Fair value

Financial instruments are classified into one of the following categories: fair value through profit or loss ("FVTPL"); fair value through other comprehensive income ("FVOCI"); or amortized cost. The carrying values of our financial instruments are classified into the following categories:

Financial Instrument	Category	December 31, 2019	December 31, 2018
		\$	\$
Cash	FVTPL	4,106,183	2,474,340
Accounts receivable	Amortized cost	122,502	25,843
Deposits	Amortized cost	1,952,400	-
Accounts payable and accrued liabilities	Amortized cost	751,560	390,802
Due to related parties	Amortized cost	172,389	58,074
License fee payable	Amortized cost	-	134,230

Our financial instruments, recorded at fair value, require disclosure about how the fair value was determined based on significant levels of inputs described in the following hierarchy:

Level 1 - Quoted prices are available in active markets for identical assets or liabilities as of the reporting date. Active markets are those in which transactions occur in sufficient frequency and value to provide pricing information on an ongoing basis.

Level 2 - Pricing inputs are other than quoted prices in active markets included in Level 1. Prices in Level 2 are either directly or indirectly observable as of the reporting date. Level 2 valuations are based on inputs including quoted forward prices for commodities, time value and volatility factors, which can be substantially observed or corroborated in the marketplace.

Level 3 - Valuations in this level are those with inputs for the asset or liability that are not based on observable market data.

Cash is measured at fair value using level one as the basis for measurement in the fair value hierarchy. The recorded amounts for accounts receivable, prepaids and deposits, accounts payable and accrued liabilities and due to related parties, approximate their fair value due to their short-term nature.

### (b) Financial risk management

Our risk exposures and the impact on our consolidated financial instruments are summarized below. Our Board of Directors has the overall responsibility for the oversight of these risks and reviews our policies on an ongoing basis to ensure that these risks are appropriately managed.

#### i. Liquidity Risk

Liquidity risk is the risk that we will not have the resources to meet our obligations as they fall due. We manage this risk by closely monitoring cash forecasts and managing resources to ensure that we will have sufficient liquidity to meet our obligations. All of our financial liabilities are classified as current and are anticipated to mature within the next ninety days. We are exposed to liquidity risk.

#### ii. Credit Risk

Credit risk is the risk of our potential loss if a counterparty to a financial instrument fails to meet its contractual obligations. Our credit risk is primarily attributable to our liquid financial assets, including cash, deposits and accounts receivables. We limit our exposure to credit risk in our cash by only holding our cash with high-credit quality financial institutions in business and/or savings accounts.

#### iii. Market Risk

Market risk is the risk of loss that may arise from changes in market factors such as interest rates, foreign exchange rates, and equity prices. These fluctuations may be significant.

(a) Interest Rate Risk: We have determined that we are not exposed to any significant interest rate risks.

- (b) **Foreign Currency Risk:** We have identified our functional currency as the Canadian dollar. Transactions are transacted in Canadian dollars and in U.S. dollars. Fluctuations in the U.S. dollar exchange rate could have a significant impact on our results going forward. Without hedging, assuming all other variables remain constant, a 10% depreciation or appreciation of the Canadian dollar against the U.S. dollar would result in an increase or decrease in loss and comprehensive loss for the year ended December 31, 2019 of \$336,000 (December 31, 2018: \$61,000).

In the near-term, we mitigate overall currency risk through advance purchases of U.S. dollars to pay forecasted U.S. denominated expenses. In the long-term, we are exposed to net currency risk from employee costs as well as the purchase of goods and services in the United States.

Balances in U.S. dollars are as follows:

	December 31, 2019 (\$ U.S.)	December 31, 2018 (\$ U.S.)
Cash	3,059,250	814,638
Accounts payable and accrued liabilities	(475,885)	(367,211)
	<b>2,583,365</b>	<b>447,427</b>

### **(c) Managing capital**

Our objectives, when managing capital, are to safeguard cash as well as maintain financial liquidity and flexibility in order to preserve our ability to meet financial obligations and deploy capital to grow our businesses.

Our financial strategy is designed to maintain a flexible capital structure consistent with the objectives stated above and to respond to business growth opportunities and changes in economic conditions. In order to maintain or adjust our capital structure, we may issue shares or issue debt (secured, unsecured, convertible and/or other types of available debt instruments).

There were no changes to our capital management policy during the year. We are not subject to any externally imposed capital requirements.

## **DISCLOSURE OF OUTSTANDING SHARE DATA**

The following details the share capital structure as of the date of this MD&A:

	Common Shares Issued and Outstanding	Agent Compensation Options	Common Share Purchase Options
Balance December 31, 2019	29,351,659	700,000	3,190,000
<b>Balance April 29, 2020</b>	<b>29,465,659</b>	<b>700,000</b>	<b>4,446,000</b>

## **MANAGEMENT'S RESPONSIBILITY FOR THE FINANCIAL STATEMENTS**

The Company's certifying officers, based on their knowledge, having exercised reasonable diligence, are also responsible to ensure that these filings do not contain any untrue statement of materials fact or omit to state a material fact required to be stated or that is necessary to make a statement not misleading in light of the circumstances under which it was made, with respect to the period covered by these filings, and these financial statements together with the other financial information included in these filings. The Board of Directors approved the Financial Statements and MD&A and ensures that management has discharged its financial responsibilities.

## **RISKS AND UNCERTAINTIES**

An investment in the Common Shares of NervGen involves a high degree of risk and should be considered speculative. An investment in the Common Shares should only be undertaken by those persons who can afford the total loss of their investment. Investors should carefully consider the risks and uncertainties set forth under the heading "Risk Factors" found in the Company's AIF filed in SEDAR ([www.sedar.com](http://www.sedar.com)), as well as other information described elsewhere in this MD&A. Additional risks and uncertainties not presently known to us or that we believe to be immaterial may also adversely affect our business. If any such risks occur, our business, financial condition and results of operations could be seriously harmed

and you could lose all or part of your investment. Further, if we fail to meet the expectations of the public market in any given period, the market price of our Common Shares could decline. We operate in a highly competitive environment that involves significant risks and uncertainties, some of which are outside of our control.

## **SUBSEQUENT EVENTS**

Subsequent to December 31, 2019, the following events occurred:

- 104,000 compensation options were exercised by agents in the Company's IPO at a price of \$1.00 for gross proceeds of \$104,000.
- 10,000 stock options issued to a consultant were exercised at a price of \$1.00 for gross proceeds of \$10,000.
- We announced the appointment of William (Bill) Adams, as our CFO, replacing Robert Pilz who will continue to formally support the Company as a consultant.
- We announced an update to our development program as described in the "Company Overview" section of this Management Discussion and Analysis.
- We provided an update on our business in response to the COVID-19 global crisis. and announced (i) the reduction or suspension of certain consulting contracts unless directly related to development programs or financing (ii) the departure of Denis Bosc from his position as Vice President, CMC (iii) a temporary reduction in compensation for certain executive officers and non-executive staff in exchange for a one time grant of stock options and (iv) working notice terminations for certain non-executive staff. We also reiterated its technology development plans for its lead product NVG-291 as described in the "Company Overview" section subject to the further impact of the COVID-19 pandemic on its suppliers' operations, FDA review and financing.

## **OTHER INFORMATION**

Additional information relating to the Company is available for viewing on the Company's website at [www.nervgen.com](http://www.nervgen.com) and under the Company's profile on SEDAR at [www.sedar.com](http://www.sedar.com).