



## **Management's Report on Financial Position and Operating Results**

**For the three months ended March 31, 2014**

## LETTER TO SHAREHOLDERS

Dear Fellow Shareholder,

2014 is off to a promising start for Immunovaccine as we have achieved milestones with two prominent partners: the Dana-Farber Cancer Institute and the U.S. National Institutes of Health (NIH). Our association with these research organizations offers, in our view, validation for our DepoVax™ adjuvanting technology platform and the various cancer and infectious disease vaccine candidates it has enabled.

Our work with Dana-Farber on a new cancer vaccine for HPV-related cervical and head and neck cancers represents the first time that academic researchers have selected DepoVax™ to combine with their own antigen to create a novel vaccine candidate. Dana-Farber's choice of our delivery technology suggests that academia is beginning to see our immune boosting technology as a key component of effective cancer immunotherapy.

To fund this work, Dana-Farber received a \$1.2 million grant from Stand Up To Cancer and the Farrah Fawcett Foundation for a Phase I clinical study. We believe that the decision to award Dana-Farber this sought-after grant was in part influenced by the strong immune responses that were elicited with DepoVax™ in our Phase I clinical trial of DPX-Survivac, as well as our experience in combining DepoVax™ with immune modulating agents such as cyclophosphamide.

Dana-Farber's work with this new HPV-related cancer vaccine holds the potential of further strengthening our growing portfolio of novel vaccines in the oncology field.

In another development for our ongoing cancer immunotherapy programs, we announced that we will be presenting new positive clinical data for DPX-Survivac at the upcoming 2014 American Society of Clinical Oncology ("ASCO") Annual Meeting. These results are from a Phase I/Ib clinical study in ovarian cancer patients completed earlier this year. The results demonstrate promising early evidence of clinical activity for DPX-Survivac, including one patient whose tumor shrunk by more than 30% following treatment. We are looking forward to presenting these findings to the cancer research community next week.

In parallel with our cancer vaccine efforts, we continue to make progress on the development of a single-dose, fast-acting anthrax vaccine. This project has been underway for more than a year with our collaborators at NIH's National Institute of Allergy and Infectious Disease (NIAID) division.

Recently completed anthrax challenge studies in rabbits demonstrated that DepoVax™ is capable of producing rapid protection against anthrax with just one dose containing low volumes of antigen. This outcome fits the desired profile for a next-generation anthrax vaccine. Based on these results, we are currently in discussions with NIAID regarding the best path for further advancing this program with the goal of delivering the industry's first single-dose, rapid-response anthrax vaccine.

We are pleased with the continued progress seen in both our cancer and infectious disease vaccine programs and remain focused on the diligent and strategic advancement of our pipeline.

Here is a summary of our key developments during the first quarter of 2014 and subsequent to the quarter end:

### ***Cancer***

- DepoVax Platform – DepoVax™ was selected by the Dana-Farber Cancer Institute as the underlying adjuvanting technology for a new cancer vaccine that will be evaluated in a study in patients with cervical and head and neck cancer. Dana-Farber has been awarded a three-year, \$1.2 million research grant from Stand Up To Cancer (SU2C) and the Farrah Fawcett Foundation to fund a Phase I clinical trial of the group’s peptide cancer antigen formulated in DepoVax™ in patients with HPV-related cervical and head and neck cancers.

- Cancer Vaccines – New positive clinical data on the Company’s cancer vaccine candidate, DPX-Survivac, will be presented as a poster at the 2014 American Society of Clinical Oncology (“ASCO”) Annual Meeting in Chicago, IL from May 30 to June 3. Results presented from the Phase I/Ib clinical study demonstrate promising early evidence of clinical activity for DPX-Survivac in ovarian cancer patients, including one patient who experienced a partial response (PR). The PR, defined as a shrinking of tumor size by at least 30%, using Response Evaluation Criteria In Solid Tumors (RECIST 1.1), was accompanied by reduction in levels of a commonly used ovarian cancer biomarker (CA125) and a significant increase in vaccine-induced immune responses.

Additionally, positive data from clinical and preclinical vaccine studies, including DPX-Survivac, were presented at the American Association for Cancer Research (AACR) 2014 Annual Meeting. Results demonstrated that metronomic cyclophosphamide (mCPA), an immune modulating agent, enhanced the immunogenicity of DepoVax™-based vaccines in preclinical cancer models consistent with previously reported Phase I data showing a similar enhancement of DPX-Survivac in patients. Importantly, the animal studies demonstrated the combination therapy’s ability to eliminate advanced tumors that could not be treated with vaccine or mCPA alone. The addition of anti-PD-1 checkpoint inhibitor to the DepoVax™ vaccine/mCPA combination resulted in further enhanced anti-tumor activity, which allowed the treatment of more advanced tumors. The effective tumor regressions that were observed could not be achieved without the use of vaccine or the use of anti-PD-1.

### ***Infectious Diseases***

- Anthrax – Immunovaccine announced positive results from anthrax challenge studies showing that rabbits administered a vaccine containing mutant recombinant Protective Antigen (mrPA) formulated in DepoVax™ were protected against a lethal anthrax challenge at a range of antigen doses. All animals vaccinated with a single dose of mrPA - DepoVax™ containing as little as one third of a microgram of antigen were protected from anthrax infection. Four out of five animals vaccinated with mrPA - DepoVax™ containing one tenth of a microgram of antigen were also protected. These findings indicated that DepoVax™ can rapidly produce protection against anthrax with single doses of very little antigen.

**Leadership**

Immunovaccine appointed Dr. Llew Keltner to its board of directors as part of its ongoing efforts to strengthen the leadership of the Company.

Thank you for your continuing support.

Handwritten signature of Albert Scardino in black ink.

Albert Scardino  
Executive Chairman

Handwritten signature of Marc Mansour in blue ink.

Marc Mansour  
Chief Operating Officer

## **MANAGEMENT DISCUSSION AND ANALYSIS (“MD&A”)**

The following analysis provides a review of the audited annual consolidated results of operations, financial condition and cash flows for the three months ended March 31, 2014 (“Q1 Fiscal 2014”), with information compared to the three months ended March 31, 2013 (“Q1 Fiscal 2013”), for Immunovaccine Inc. (“Immunovaccine”, “IMV” or the “Corporation”). This analysis should also be read in conjunction with the information contained in the audited consolidated financial statements and related notes for the year ended December 31, 2013 and the year ended December 31, 2012.

The Corporation prepares its audited annual consolidated financial statements in accordance International Financial Reporting Standards (“IFRS”) as issued by the International Accounting Standards Board (“IASB”).

Additional information regarding the business of the Corporation, including the Corporation’s Annual Information Form, is available on SEDAR at [www.sedar.com](http://www.sedar.com).

Amounts presented in this MD&A are approximate and have been rounded to the nearest thousand except for per share data. All amounts are presented in Canadian dollars.

Statistical information and other data relating to the pharmaceutical and biotechnology industry included in this MD&A are derived from recognized industry reports published by industry analysts, industry associations and/or independent consulting and data compilation organizations. Market data and industry forecasts used throughout this MD&A were obtained from various publicly available sources. Although the Corporation believes that these independent sources are generally reliable, the accuracy and completeness of the information from such sources are not guaranteed and have not been independently verified.

## **FORWARD-LOOKING STATEMENTS**

Certain statements in this MD&A may constitute “forward-looking” statements which involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Corporation, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. When used in this MD&A, such statements use such words as “will”, “may”, “could”, “intends”, “potential”, “plans”, “believes”, “expects”, “projects”, “estimates”, “anticipates”, “continue”, “potential”, “predicts” or “should” and other similar terminology. These statements reflect current expectations regarding future events and operating performance and speak only as of the date of this MD&A. Forward looking statements include, among others:

- statements with respect to the sufficiency of the Corporation’s financial resources to support activities;
- potential sources of funding;
- the Corporation’s ability to obtain necessary funding on favorable terms or at all;
- the Corporation’s expected expenditures and accumulated deficit level;
- the Corporation’s expected outcomes from ongoing research and research collaborations;
- the Corporation’s business strategy;
- the Corporation’s exploration of opportunities to maximize shareholder value as part of the ordinary course of its business through collaborations, strategic partnerships and other transactions with third parties, which may or may not include plans for merger and acquisitions activities;
- the Corporation’s plans for the research and development of certain product candidates;
- the Corporation’s strategy for protecting its intellectual property;
- the Corporation’s ability to identify licensable products or research suitable for licensing and commercialization;
- the Corporation’s ability to obtain licences on commercially reasonable terms;
- the Corporation’s plans for generating revenue; and
- the Corporation’s plans for future clinical trials.

Forward-looking statements involve significant risks and uncertainties, should not be read as guarantees of future performance or results, and will not necessarily be accurate indications of whether or not such results will be achieved. A number of factors could cause actual results to differ materially from the results discussed in the

forward-looking statements, including, but not limited to, the factors discussed under “Risk Factors”. Although the forward-looking statements contained in this MD&A are based upon what management of the Corporation believes are reasonable assumptions, the Corporation cannot assure investors that actual results will be consistent with these forward-looking statements and should not be unduly relied upon by investors.

Actual results and developments are likely to differ, and may differ materially, from those expressed or implied by the forward-looking statements contained in this MD&A. Such statements are based on a number of assumptions which may prove to be incorrect, including, but not limited to, assumptions about:

- obtaining additional funding on reasonable terms when necessary;
- positive results of pre-clinical and clinical tests;
- the Corporation’s ability to successfully develop existing and new products;
- the Corporation’s ability to attract and retain skilled staff;
- the products and technology offered by the Corporation’s competitors;
- general business and economic conditions;
- the Corporation’s ability to protect patents and proprietary rights;
- the Corporation’s ability to manufacture its products and to meet demand; and
- regulatory approvals.

These statements reflect management’s current beliefs and are based on information currently available to management. The information contained herein is dated as of May 28, 2014; the date of the Board’s approval of the MD&A and the Q1 Fiscal 2014 audited annual consolidated financial statements. A more detailed assessment of the risks that could cause actual results to materially differ from current expectations is contained in the section entitled “Risk Assessment” of this MD&A.

## **CORPORATION OVERVIEW**

Immunovaccine is a clinical stage biopharmaceutical company that discovers and develops activators of the immune system to treat cancer and infectious diseases. Immunovaccine has built a proprietary product platform that is used to create highly immunogenic vaccines. The Corporation’s proprietary DepoVax™ adjuvanting/delivery platform is believed to produce a strong, high-quality immune response that has a specific and sustained immune effect, and enables the Corporation to pursue vaccine candidates in cancer, infectious diseases and potentially other vaccine applications. The DepoVax™ platform is being used in multiple vaccine candidates, including two cancer vaccine candidates that are in or have completed Phase 1 clinical trials. One of the Corporation’s cancer vaccine candidates is expected to enter large, randomized Phase 2 trials in 2014. The Corporation has research collaborations with several research organizations, including the National Institutes of Health (“NIH”) in the U.S. The Corporation has licensed the delivery technology to Zoetis, formerly the animal health division of Pfizer, Inc. (“Pfizer”), for the development of vaccines for livestock. The common shares of the Corporation are listed on the TSX Venture Exchange (“TSX-V”) under the symbol “IMV”.

Based in Halifax, Nova Scotia, the Corporation had 23 full-time and part-time employees and three part-time consultants as at March 31, 2014. Being involved in a scientific and technical business, the Corporation requires staff with significant education, training and scientific knowledge that cannot be recruited or replaced easily. As a result, the Corporation recruits talented expertise locally, nationally and internationally. The business of the Corporation requires personnel with specialized skills and knowledge in the fields of basic and applied immunology, chemistry, formulation research and analytical chemistry method development. The Corporation has trained scientists with broad experience in these fields including six employees holding PhD degrees and seven holding MSc or MBA degrees. In addition to the core team, the Corporation has also assembled a Scientific Advisory Board (“SAB”) of experienced and internationally recognized scientific advisors to assist management in dealing with industry-related issues and how these issues may affect the Corporation’s scientific research and product development.

## **BUSINESS STRATEGY**

### *Operating Strategy*

The DepoVax™ vaccine delivery platform drives the operating strategy for the Corporation. All of the Corporation's vaccines in human and animal health utilize this adjuvanting platform to improve their effectiveness against cancer and infectious diseases.

The Corporation has two clinical-stage cancer vaccines: DPX-Survivac; and DPX-0907. Immunovaccine believes the principles behind a successful therapeutic cancer vaccine should include a targeted antigen and an effective adjuvanting and vaccine delivery technology, combined with a complementary therapeutic strategy. Antigens used in both DPX-Survivac and DPX-0907 are believed to specifically target tumor cells without harming normal, healthy cells. These antigens are combined with the Corporation's DepoVax™ platform in an effort to optimize the presentation of these antigens to the immune system, potentially resulting in an enhanced immune response. To be successful against cancer, the Corporation believes the vaccine must be administered in the right therapeutic setting, soon after a tumor has been identified and treated by surgery, chemotherapy and/ or other therapies that reduce tumor bulk. Immunovaccine also believes that the effect of the vaccine may be enhanced if an immune modulator is used simultaneously to prevent a patient's immune system from overriding the positive response to the vaccine.

Using the same DepoVax™ adjuvanting platform and working with commercial and academic partners, the Corporation is also developing vaccines for infectious diseases, including a bio-defense vaccine that may protect against anthrax and a respiratory syncytial virus ("RSV") vaccine. The Corporation engages in research collaborations which may lead to additional vaccine products. Pre-clinical studies have indicated that the platform may allow the development of enhanced vaccines for a wide range of cancer and infectious diseases by potentially generating a stronger and more durable immune response more quickly than is possible with existing delivery methods. For vaccines that are unusually non-immunogenic, the platform may significantly reduce the number of immunizations required. The Corporation's goal is to advance additional vaccines that show promising results into human clinical trials.

### *Financing and Partnering Strategy*

Immunovaccine relies on equity financing and non-dilutive private and public partnerships to fund its development programs. Applying this strategy, the Corporation has obtained more than \$15 million in government funding, including interest-free loans and government grants. The Corporation completed a \$4.2 million equity private placement in November 2013 and obtained a \$5 million secured loan from the Province of Nova Scotia in August 2013, available in four equal installments based on the Corporation meeting certain milestones, three of which have been met to date. The Corporation received the first installment of \$1.25 million on August 9, 2013.

While having used its own resources to initially bring its two cancer vaccines to human clinical trials, the Corporation is involved in various partnerships and collaborations to accelerate the development of its DepoVax™-based products. The Corporation announced the collaboration with Canada's NCIC Clinical Trials Group ("NCIC CTG"), an organization supported by the Canadian Cancer Society, in which NCIC CTG will sponsor and conduct a Phase II study of the Corporation's lead cancer vaccine, DPX-Survivac. The Corporation is currently in discussions with potential partners and may seek a co-development partnership arrangement to fund the balance of NCIC CTG-sponsored clinical trial costs. DPX-Survivac will also be tested in a fully funded investigator-initiated Phase II study in glioblastoma patients in Italy. Other programs include a clinical research collaboration with the Busto Arsizio Hospital in Italy to test DPX-0907 in ovarian and breast cancer patients, a research partnership with the NIH for vaccines against bio-terrorism threats, as well as other collaborations. The goal of these types of partnerships is to produce pre-clinical and clinical data that will lead to licensing agreements, either to allow the use of the Corporation's DepoVax™ platform by others or to acquire antigens for use in new vaccines using DepoVax™. Immunovaccine has also developed a commercial relationship with Zoetis, formerly the animal health division of Pfizer, which has licensed the Corporation's delivery technology platform to develop vaccines for livestock.

The Corporation intends to be opportunistic in the development of its products by exploring a variety of possible avenues, including co-development through potential collaborations, strategic partnerships or other transactions with

third parties, and merger and acquisitions opportunities. The Corporation intends to seek additional equity and non-dilutive funding and partnerships to advance the development of the vaccine candidates.

## **PLATFORM AND PRODUCTS IN DEVELOPMENT**

### *DepoVax™ Vaccine Enhancement Platform*

DepoVax™ is a lipid depot-based vaccine delivery and enhancement platform that is believed to be easy to use, chemically stable and has the flexibility to incorporate a variety of antigens. The DepoVax™ platform forms the basis of Immunovaccine's therapeutic cancer and infectious diseases vaccine candidates.

The DepoVax™ platform is a combination of antigens, plus adjuvant (immune enhancers) formulated in liposomes and then suspended in oil. With the ability to retain the active components in the oil phase, the DepoVax™ platform creates a long-lasting "depot effect" that prolongs the exposure of vaccine ingredients to immune cells at the site of vaccination.

This unique formulation is expected to provide extended chemical stability. DepoVax™-based products are lyophilized and stored in a dry format, which provides the added benefit of an extended shelf life. The DepoVax™ formulation is designed to be easy to re-suspend and administer.

The Corporation believes one of the significant advantages of the DepoVax™ platform is its versatility. The DepoVax™ platform can be combined with a variety of antigens, including recombinant proteins, synthetic peptides and nucleic acids, viruses and a wide range of adjuvants, which provides the flexibility to develop many different vaccine products using a single platform.

DepoVax™-formulated vaccines have shown an ability to induce rapid and robust immune responses that may protect against disease agents with as little as one dose. The potential single-dose capability is a key factor for developing rapid response vaccines for pandemics and disease outbreaks.

The Corporation believes the ability of DepoVax™ to induce robust cellular immune responses makes the platform uniquely suitable for therapeutic cancer vaccines, which are designed to specifically target tumor cells and to help patients remain in remission and combat the dissemination of micro-metastases. DepoVax™ can induce antigen-specific "poly-functional" cellular responses, which are postulated to be required for effective tumor control.

### *DPX-Survivac*

DPX-Survivac uses survivin-based antigens licensed from Merck KGaA, on a world-wide exclusive basis, and formulated in the DepoVax™ vaccine delivery platform. Survivin is a major tumor-associated antigen over-expressed in several cancers including ovarian cancer cells, making it a viable target for immunotherapy. DepoVax™ delivers the survivin-based antigens in a lipid depot-based format designed to generate a strong and prolonged immune response.

Survivin is essential for the survival of cancer cells and is an inhibitor of cancer cell death, known as apoptosis. The presence of survivin in cancer cells is believed to make them susceptible to a survivin-specific vaccine. The Corporation's survivin-based vaccine candidate, DPX-Survivac, aims to train the immune system to recognize and kill survivin-containing cancer cells, with the intent to provide a clinical benefit to patients in the form of delaying cancer progression and/or increasing overall survival. The National Cancer Institute in the USA has recognized survivin as a promising antigen for cancer treatment based on its specificity, over-expression in cancer cells and immunogenicity potential.

The Corporation believes DPX-Survivac could have broad commercial potential as a therapeutic cancer vaccine because it may be applicable for the treatment of multiple solid tumors and hematological cancers, including ovarian, glioblastoma, prostate, breast, pancreatic, multiple myeloma, B-cell lymphoma, and melanoma. The Corporation intends to proceed with pre-clinical testing of DPX-Survivac in a broader range of cancer indications to evaluate additional opportunities.



Immunovaccine has completed a Phase I clinical trial of DPX-Survivac, conducted at six clinical sites in the US and Canada. In addition, the Corporation has received clearance for both the Phase I clinical trial and a randomized Phase II trial by both the US Food and Drug Administration (“FDA”) and Health Canada. The Phase I trial was an open-label clinical trial designed to evaluate sequentially the safety of two DPX-Survivac dosing regimens in 18 patients. This Phase I clinical trial was to establish the safety and immunogenicity of DPX-Survivac in patients with advanced ovarian cancer.

The Corporation released interim results in October 2012, January 2013 and further detailed positive results in June 2013 on the Phase I clinical trial. The analysis, which now includes all 18 patients enrolled in the study, confirmed previously reported results and uncovered new findings. 12 of the 18 patients received the DPX-Survivac combination therapy demonstrated antigen-specific immune responses and they were measured by at least one of the study’s three immune monitoring assays (ELISpot, tetramer analysis and multiparametric intracellular cell staining). In 11 of 12 patients, the immune responses were confirmed by two assays (five patients) or three assays (six patients) performed. These immune responses were established with one or two vaccinations and further increased or maintained with follow-up booster vaccinations. Importantly, polyfunctional CD8 responses were reported, indicating the activation of high quality CD8 T cells, and the responses were maintained with booster vaccinations. The activation and maintenance of these specific immune cells is of particular interest in immunotherapy since CD8 T cells are implicated in identifying cancer cells, infiltrating tumors and killing cancer targets.

In the Phase I clinical trial, DPX-Survivac was deemed well-tolerated with no significant systemic adverse events reported in any patients recruited in this study. Reported adverse events were primarily related to grade 1-2 injection site reactions, which were experienced by the majority of patients after repeated vaccinations. Those patients presenting the strongest immune responses were more likely to exhibit more pronounced injection site reactions. Grade 3 injection site ulcerations, which were an expected adverse event with this vaccine, were experienced by three patients during the trial. Upon a six month follow-up for the majority of patients, a trend of delayed progression was observed in patients who had strong immune responses to DPX-Survivac. The trend of delayed cancer progression, which was not statistically significant, may be attributed to the therapy or may be attributed to other unrelated factors.

The Corporation announced that Canada’s NCIC CTG, an organization supported by the Canadian Cancer Society, will sponsor and conduct a randomized Phase II study of Immunovaccine’s cancer vaccine, DPX-Survivac, in patients with advanced ovarian cancer. The NCIC CTG is a Canadian-based academic clinical trials cooperative group conducting large multi-center clinical trials across Canada and internationally. The study is designed to assess whether IMV’s vaccine therapy can delay or prevent cancer recurrence.

The Phase II trial will be a randomized, blinded, placebo-controlled study with DPX-Survivac in combination with low dose oral cyclophosphamide as an immune modulator. The study is expected to enroll approximately 250 patients with ovarian cancer at an estimated 20 clinical centers.

Patients in the trial will have undergone surgery and standard post-operative chemotherapy. Patients will be randomized to two groups, one receiving the combination vaccine therapy and another receiving a placebo vaccine and cyclophosphamide. Immune responses and disease-related biomarkers including CA125 will be measured for correlative analyses. The results may guide further development of DPX-Survivac.

The agreement between NCIC CTG and Immunovaccine will provide a framework for the NCIC CTG to sponsor the randomized Phase II trial and assume responsibility for conducting the trial in accordance with good clinical practice, in a significantly more capital efficient manner than if the trial was conducted by the Corporation as a sponsor. The Corporation is currently in discussions with potential partners and may seek a co-development partnership arrangement to fund the balance of NCIC CTG-sponsored clinical trial costs and other co-development opportunities for DPX-Survivac. The trial is expected to get underway in 2014.

A Phase Ib trial is currently underway to optimize and confirm the dose and schedule of vaccinations that will be employed in the randomized Phase II trial to be sponsored by the NCIC CTG. A patient with stable disease enrolled in the Phase Ib experienced a partial response (PR) following vaccination. The PR, defined as a shrinking of tumor size by at least 30%, using Response Evaluation Criteria In Solid Tumors (RECIST 1.1), was accompanied by reduction in levels of a commonly used ovarian cancer biomarker (CA125) and a significant increase in vaccine-

induced immune responses. The durable clinical response highlights the therapeutic potential of DPX-Survivac in ovarian cancer patients.

The Corporation also announced it has signed an agreement with Professor Marianna Nuti, Ph.D., Department of Experimental Medicine at the University of Rome, to conduct an investigator-led trial on DPX-Survivac in patients with glioblastoma. This multicenter study based in Rome will be conducted in collaboration with neurosurgeons and oncologists coordinated by Professor Maurizio Salvati, M.D. The randomized, placebo-controlled study is expected to enroll up to 50 patients with newly diagnosed brain tumors that have been maximally resected. Testing DPX-Survivac in glioblastoma patients is expected to be initiated in 2014.

Immunovaccine recently highlighted results demonstrating that metronomic cyclophosphamide (mCPA), an immune modulating agent, enhanced the immunogenicity of DepoVax™-based vaccines in preclinical cancer models consistent with previously reported Phase I data showing a similar enhancement of DPX-Survivac in patients. Importantly, the animal studies demonstrated the combination therapy's ability to eliminate advanced tumors that could not be treated with vaccine or mCPA alone. Tumors exposed to the combination therapy specifically exhibited an increase in T cell activation markers, suggesting increased immune-mediated anti-tumor activity at the tumor site with the vaccine/mCPA therapy and further supporting the use of the combination therapy in clinical trials. The Corporation is pursuing co-development opportunities for combination therapies with DPX-Survivac and other compounds such as anti-PD1 in a variety of indications.

#### *DPX-0907*

DPX-0907 combines the Corporation's DepoVax™ delivery technology with seven HLA-A2-restricted cancer-specific antigens licensed from Immunotope. The vaccine is designed to stimulate an immune response specific to cancer antigens that are believed to be involved in critical tumor cell processes. The seven peptide antigens in DPX-0907 are believed to be present on the surface of breast, ovarian and prostate cancer cells. In pre-clinical studies, the seven antigens could not be found on the surface of normal cells, and therefore, DPX-0907 is expected to kill tumor cells without harming normal, healthy cells.

The Corporation has completed a Phase I clinical trial of DPX-0907 and the results of the trial were released in June 2011, with more detailed results published in the *Journal of Translational Medicine* in August 2012. The Phase I trial was conducted at five centers in the US. In this open-label, dose-escalating trial, patients received three injections (0.25 mL or 1 mL doses) of the active immune therapy DPX-0907, three weeks apart.

The Phase I trial met the primary objective of safety with overall results demonstrating that DPX-0907 is generally well-tolerated by all patients and is considered safe at both dose levels. There were no vaccine-related serious adverse events reported. Final safety was assessed in 11 patients in the 0.25 mL dose group and 11 patients in the 1.0 mL dose group.

The secondary objective was to assess whether administration of DPX-0907 could generate an immune response specific to the seven cancer antigens. Immunovaccine performed a detailed analysis of patients' blood samples that showed cell-mediated immunity (CMI) to vaccine targets in all three breast cancer patients, 5 of 6 ovarian cancer patients, and 3 of 9 prostate cancer patients. Both dose levels produced a targeted immune response in vaccinated patients. The immunogenicity results were based on an analysis of 9 evaluable patients in the 0.25 mL dose group and 9 evaluable patients in the 1 mL dose group.

This study also demonstrated a key association between the achievement of immune responses during the study and the patients' level of disease. The breast and ovarian cancer patients who responded well to prior therapies responded favorably, with the majority of these patients (8 out of 9) producing the desired immunity. In contrast, the majority of prostate cancer patients who had more advanced disease and were less responsive to prior therapies exhibited a lower immune response rate.

The Corporation signed an Investigator-Initiated Study Agreement for the ongoing evaluation of its DPX-0907 cancer vaccine at the Busto Arsizio Hospital in Milan, Italy. Marco Bregni, M.D., head of the Oncology Unit of the Hospital of Busto Arsizio, will serve as the principal investigator for the Phase I/II DPX-0907 clinical trial in patients with breast and ovarian cancer. Immunovaccine expects the Phase I/II study to be initiated in 2014.

The Corporation is also exploring other opportunities for commercialization of DPX-0907 and is considering investigator funded trials, as announced, or partnership opportunities at various stages of clinical development, including at the Phase I and Phase II clinical trial stages.

### *Infectious Diseases*

The Corporation's business strategy includes leveraging the DepoVax™ platform within infectious and other diseases. The DepoVax™-adjuvanting platform has the potential to generate a rapid and robust immune response, often in a single dose. The unique vaccine enhancement and single-dose capability could prove to be beneficial in targeting difficult infectious and other disease candidates. Immunovaccine has conducted multiple proof of concept studies for DepoVax™ platform-based infectious diseases vaccines, including pandemic influenza, anthrax, pertussis, and hepatitis B vaccines.

The Corporation is performing pre-clinical research activities for a vaccine targeting respiratory syncytial virus ("RSV"), which is the second leading cause of respiratory illness in infants, the elderly and the immunosuppressed. Currently, there is no vaccine available for this virus and Immunovaccine is seeking to develop a novel vaccine formulation to be used in the elderly and healthy adults, including women of child-bearing age. The novel RSV antigen being evaluated in DepoVax™ is based on the short hydrophobic protein present on the surface of the RSV virion. This vaccine has a unique mechanism of action, in that the resultant antibodies bind to and destroy infected cells rather than directly bind and neutralize free virus. The Corporation is currently testing the immunogenicity and efficacy in appropriate RSV challenge models such as mice. The goal is to produce the pre-clinical data required to support a future potential IND filing leading to a Phase I clinical trial in Canada. Immunovaccine recently had a meeting with Health Canada to evaluate the requirements for filing a clinical trial application (CTA). Dr. Joanne Langley, professor of pediatrics and community health and epidemiology at Dalhousie Medical School and a recent recipient of the CIHR-GSK Chair in Pediatric Vaccinology, will be the principal investigator for a Phase I study to be conducted in Halifax, Canada.

### *Bio-terrorism*

The Corporation entered into a research collaboration to advance the development of next generation bio-defense vaccines against various biological agents. These novel vaccine candidates are being evaluated as part of a study funded by the NIH that was initiated in the first quarter of 2012.

The Corporation announced positive results from this immunogenicity study in January and July 2013. Study findings suggested that the DepoVax™-based vaccines provided a more rapid and long-lasting immune response as compared to the licensed anthrax vaccine BioThrax™ with fewer doses. The study, which was conducted under the National Institute of Allergy and Infectious Diseases' ("NIAID") Preclinical Services Program, was designed to test multiple DepoVax™-formulated anthrax vaccines in non-human primates and rabbits, specifically examining immunogenicity and safety after either one or two doses of the vaccine. Study investigators compared the DepoVax™-based vaccines to BioThrax™, the only commercially available anthrax vaccine. BioThrax™ requires at least two doses to produce immune responses in animal models.

Preliminary findings from the immunogenicity studies include:

- A single dose of DepoVax™-formulated anthrax vaccine produced sustained toxin-neutralizing antibody ("TNA") titers detected in six of ten animals, starting between day 21 and 49. Animals receiving one dose of Biothrax had no detectable TNA titers.
- When a second dose of the DepoVax™-formulated vaccine was delivered, there was a significant increase in anthrax TNAs in all immunized animals within one week of the booster administration.
- Vaccination with the DepoVax™-formulated vaccines resulted in no visible injection site reactions. Detailed microscopic examination showed robust immune cell infiltration to the site of vaccination. There was no evidence of systemic or local safety issues.

The Corporation announced additional positive results from challenge studies in non-human primates and rabbits in September 2013. These studies showed that all animals that were administered a vaccine containing recombinant protective antigen (PA) formulated in DepoVax were protected against a lethal anthrax challenge.

Key study findings include:

- A single dose of DepoVax™ containing five micrograms of recombinant PA protected rabbits exposed to a lethal anthrax dose.
- In rabbit studies, DepoVax™ formulated vaccines began producing detectable and potentially protective toxin neutralizing antibodies in as little as 14 days, with maximal protective antibody levels achieved within 28 days following a single vaccination. The titers were sustained for at least 70 days at which time a lethal anthrax challenge was performed.
- In rabbit studies, neutralizing antibodies rose further in animals receiving a second dose of the DepoVax™ recombinant PA vaccine.
- In non-human primate studies, two doses containing recombinant PA formulated in DepoVax™ triggered sustained toxin neutralizing antibodies sufficient to protect them from lethal anthrax challenge. A single dose response was not evaluated in this model.

The Corporation announced additional positive results from challenge studies in rabbits after a single vaccination in April 2014. The studies showed that animals administered a vaccine containing rPA formulated in DepoVax were protected against a lethal anthrax challenge at a range of antigen doses. All animals vaccinated with a single dose of DPX-rPA containing as little as one third of a microgram of antigen were protected from anthrax infection. Four out of five animals vaccinated with DPX-rPA containing one tenth of a microgram of antigen were also protected. Further studies will be designed to continue to evaluate the potential of DepoVax-based vaccines to offer rapid protection with a single dose. An additional study examining single dose capacity of these vaccines has been initiated in non-human primates. The Corporation expects results from these studies in the third quarter of 2014.

Data generated from these research studies is expected to facilitate access to various funding mechanisms and support the clinical development of DepoVax™-based vaccine candidates.

#### *Licensing opportunities*

While the Corporation is now focused on developing a pipeline of cancer immunotherapies as well as vaccines for infectious diseases and bioterrorism applications, it is also pursuing opportunities to license the Corporation's platform technology to other parties interested in creating enhanced vaccines on an application by application basis. In 2008, the Corporation signed a license agreement with Zoetis, formerly the animal health division of Pfizer, which represented the Corporation's first milestone in validating the DepoVax™ platform technology. The Corporation has multiple licensing agreements with Zoetis for the use of the Corporation's delivery technology in cattle and other livestock vaccine applications. These license agreements include upfront signing fees, milestone payments and royalties from future vaccine sales.

Immunovaccine intends to pursue additional licensing and revenue opportunities to help fund the research and development of its vaccine candidates.

## **MARKET OVERVIEW**

### *Therapeutic cancer vaccines*

Cancer is considered one of the most widespread and prevalent diseases globally. According to the US Centers for Disease Control and Prevention ("CDC"), 12.7 million individuals become victims of cancer and 7.6 million individuals die from the disease annually. Conventional cancer treatment involves surgery to remove the tumor when possible, as well as chemotherapy and radiation. Chemotherapies are widely used despite their associated toxicities because they interfere with the ability of cancer cells to grow and spread. Tumors often develop resistance to chemotherapies however, limiting their efficacy in preventing tumor recurrence. Despite recent advances, independent sources note a high unmet medical need in cancer therapy noting the median survival rate remains poor.

Cancer immunotherapies, including therapeutic cancer vaccines, may potentially provide a new and effective treatment option.

A better understanding of cancer immunology has led to novel strategies for the therapy of cancer that are based on activating the immune system. Initially, the approval by the US FDA of Dendreon's Provenge® for prostate cancer and Bristol-Myers Squibb's ("Bristol-Myers") Yervoy™ (ipilimumab) for melanoma resulted in increased attention and support for immunotherapy and cancer vaccine companies. More recently, the reported clinical results achieved with other immunotherapies from Merck, Bristol-Myers and Roche, including monoclonal antibody therapies targeting PD-1, led to increased interest in this class of therapeutics from the medical community. Because of the significant potential of immune based therapies, pharmaceutical companies have recently acquired a number of experimental cancer immunotherapy products, with some being in preclinical development. These transactions have served as transformational events for a number of companies, including Amplimmune, Compugen, Immunocore, and Okairos AG.

It is generally recognized that cancer vaccines are best administered after surgery and chemotherapy when tumor burden is low. The goal is to train the body's immune system to target and kill remaining cancer cells and maintain patients in remission. Cancer vaccines have potential to be used in combination with chemotherapy, radiation and/or surgery to significantly improve outcomes for cancer patients. Cancer vaccines may also become an important component of novel combination immunotherapies which may offer synergistic benefits. The Corporation believes that cancer vaccines will become part of a multi-pronged approach for the treatment of cancer. Recently, the pharmaceutical industry has recognized the therapeutic potential of cancer vaccines. Pharmaceutical companies with active cancer vaccine programs in various stages of development (pre-clinical to Phase III) include Roche, Merck KGaA, Pfizer, and GlaxoSmithKline ("GSK").

The global market for cancer vaccines, including both prophylactic and therapeutic vaccines, was USD\$1.6 billion in 2010, and forecasted to reach USD\$7.1 billion by 2018. While the majority of this reflects sales of prophylactic vaccines, the area of therapeutic cancer vaccines is projected by some industry analysts to experience significant growth. Major pharmaceutical players, such as GSK and Merck KGaA, have therapeutic cancer vaccines currently advancing in Phase III clinical trials.

### *Infectious Diseases*

Vaccines are credited with saving millions of lives since their introduction into medical practice and the healthcare system. The reduction in morbidity and mortality caused by many infectious diseases world-wide can be directly correlated to currently available vaccines. According to data from the U.S. Centers for Disease Control and Prevention (CDC), 10 infectious diseases have been at least 90% eradicated in the United States thanks to vaccines.

However, during the past decade, diseases thought to be under control or retreating, such as plague, diphtheria, yellow fever, dengue, meningitis, influenza and malaria, have re-emerged. While the effort to control these known infectious diseases continues, more than 30 emerging diseases have been identified in humans for the first time over the past two decades.

There is an increased awareness of the impact of current and emerging infectious diseases. Demand for newer treatments and vaccines is growing globally. Decision Resources reports that the world-wide market for vaccines against infectious diseases more than doubled between 2005 and 2011. The global market for infectious diseases treatment was valued at USD\$90.4 billion in 2009, and predicted by BCC Research to grow to USD\$96.8 billion by 2017.

Many infectious diseases lack effective prophylactic vaccines, and the industry faces a variety of challenges in vaccine design and production. Adjuvants and delivery methods are viewed as key technologies for the success of future vaccines. Efforts to decrease treatment duration and develop single-dose vaccines are a strong focus at the research level to improve patient compliance and decrease monitoring of therapy by the healthcare provider. Better diagnostics are being sought for many infectious diseases. This advance could result in additional market expansion by increasing the number of patients identified for vaccine treatment. The Corporation believes this current market landscape offers significant commercial opportunities for both its technology platform and vaccines.

Pharmaceutical companies dominating this infectious diseases vaccine market include Sanofi Pasteur, GSK, Novartis, Merck and Johnson & Johnson. Additionally, government and non-profit institutions play a significant role in infectious diseases vaccine development in both industrialized and developing markets. Support for infectious diseases vaccine development and commercialization is available to companies through government and non-profit funding and granting mechanisms.

### *Respiratory Syncytial Virus (“RSV”)*

RSV is a respiratory virus that infects the lungs and breathing passages. It can be severe in infants, the elderly, and patients with compromised immune systems. RSV is the single most common cause of severe respiratory illness in infants under the age of one and is more often being recognized as an important cause of respiratory illness in older adults. Globally, it is estimated that 64 million cases of RSV infection occur annually, with 160,000 deaths.

In North America, RSV is the most frequent cause of hospitalization in the first two years of life. Specifically in Canada, RSV-associated lower respiratory tract illness (LRTI) in young children accounts for over 12,000 hospitalizations annually in up to 2% of the birth cohort. In Canadian adults, 2 to 3% of all respiratory admissions annually can be attributed to RSV infection.

There is currently no vaccine available for the prevention of RSV. The only product available today to help protect against severe RSV disease is Synagis, a monthly injection given during peak RSV season and indicated only for specific groups of infants at high risk. No cost-effective, feasible, effective treatment has been found which alters the natural history of RSV infection. Systematic meta-analyses of inhaled bronchodilators, glucocorticoids, antibiotics, inhaled heliox, nebulized deoxyribonuclease and epinephrine do not demonstrate any significant clinical benefit. The mainstay of care for most patients remains supportive.

The World Health Organization (WHO) has designated RSV as a high-priority target for vaccine development. RSV is a significant problem in the elderly, particularly if they reside in a long-term care facility or participate in other senior day-care programs. RSV attack rates in nursing homes in the USA are approximately 5 to 10% per year with a 2 to 8% case fatality rate, amounting to approximately 10,000 deaths per year among persons greater than 64 years of age. Among elderly persons followed for 3 consecutive winters, RSV infection accounted for 10.6% of hospitalizations for pneumonia, 11.4% of hospitalizations for obstructive pulmonary disease, 5.4% for congestive heart failure and 7.2% for asthma.

### *Bio-defense*

According to the US Center for Bio-security’s review of the US government’s federal budget for fiscal 2012, funds for civilian bio-defense total USD\$6.4 billion. Of that total, USD\$5.8 billion (90%) is budgeted for programs that have both bio-defense and non bio-defense goals and applications, and USD\$637.6 million (10%) is budgeted for programs that have objectives solely related to bio-defense.

US government-funding programs for civilian bio-defense are intended to address a range of scientific, public health, healthcare, national security, and international security issues in addition to bio-defense. Programs with both bio-defense and non bio-defense goals and applications include those that fund basic scientific research in infectious diseases pathogenesis and immunology, programs to improve planning and operations related to public health preparedness, and programs to improve preparedness and response for a range of other disasters.

An example of programs with both bio-defense and non bio-defense goals includes NIAID Bio-defense Research Program, which, in addition to funding pre-clinical and clinical research toward bio-defense countermeasures, funds basic infectious diseases pathogenesis and immunology research with implications for a multitude of other diseases. Immunovaccine’s platform technology and products have application to many of these programs.

A recent report by GBI Research states that as the potential threat of biological terrorist attacks continue to command the attention of governments around the globe, anthrax and smallpox remain amongst the most researched diseases in the bio-defense industry.

## *Animal Health Market*

According to industry sources, the world animal health market, defined as a sector spanning veterinary pharmaceuticals, biologics and medicated feed additives, was approximately USD\$20 billion in 2008. The animal vaccine market subdivided into livestock, companion animal and other smaller segments including equine, poultry and aquatic, makes up approximately 20% of the total animal health market. Europe is the leading market for veterinary vaccines followed closely by North America. Asia-Pacific is the fastest growing market for veterinary vaccines.

The world-wide livestock vaccine market is comprised primarily of cattle and swine vaccines, along with, to a lesser extent, vaccines for sheep, poultry and other food animals. There are only a few players in the animal vaccine market including Zoetis, Boehringer Ingelheim, Merial, Merck Animal Health, Novartis and AgriLabs. The majority of today's vaccines for the livestock market require a booster administration, which increases the handling. Therefore, a vaccine that requires fewer doses (one dose, in some cases) for efficacy could be a significant innovation and have the potential to replace existing products.

## **RECENT AND ANNUAL DEVELOPMENTS**

### *Key developments and achievements*

- On May 20, 2014, the Corporation announced that new positive clinical data on the Corporation's lead cancer vaccine candidate, DPX-Survivac, will be presented as a poster at the 2014 ASCO Annual Meeting in Chicago, IL from May 30 to June 3. Results presented from the Phase I/Ib clinical study demonstrate promising early evidence of clinical activity for DPX-Survivac in ovarian cancer patients, including one patient who experienced a partial response (PR). The PR, defined as a shrinking of tumor size by at least 30%, using Response Evaluation Criteria In Solid Tumors (RECIST 1.1), was accompanied by reduction in levels of a commonly used ovarian cancer biomarker (CA125) and a significant increase in vaccine-induced immune responses.
- On April 8, 2014, the Corporation announced that its DepoVax™ adjuvanting technology will underlie the design of a new cancer vaccine trial that will be conducted by the Dana-Farber Cancer Institute to treat cervical and head and neck cancer. In a competitive process, Dana-Farber has been awarded a research grant of \$1.2 million for clinical evaluation of its cancer vaccine. The grant from Stand Up To Cancer (SU2C) and the Farrah Fawcett Foundation was awarded to a team of Dana-Farber researchers in a ceremony at the 2014 American Association for Cancer Research (AACR) annual meeting. The three-year grant will be used to fund a Phase I clinical trial of the group's peptide cancer antigen formulated in DepoVax™ in patients with HPV-related cervical and head and neck cancers.
- On April 7, 2014, the Corporation presented positive data from clinical and preclinical vaccine studies, including DPX-Survivac, the Corporation's lead therapeutic cancer vaccine, at the American Association for Cancer Research (AACR) 2014 Annual Meeting. In a poster presentation, Immunovaccine highlighted results demonstrating that metronomic cyclophosphamide (mCPA), an immune modulating agent, enhanced the immunogenicity of DepoVax™-based vaccines in preclinical cancer models consistent with previously reported Phase I data showing a similar enhancement of DPX-Survivac in patients. Importantly, the animal studies demonstrated the combination therapy's ability to eliminate advanced tumors that could not be treated with vaccine or mCPA alone. Tumors exposed to the combination therapy specifically exhibited an increase in T cell activation markers, suggesting increased immune-mediated anti-tumor activity at the tumor site with the vaccine/mCPA therapy and further supporting the use of the combination therapy in clinical trials.
- On April 1, 2014, the Corporation announced positive results from anthrax challenge studies in rabbits using Pfenex's mutant recombinant Protective Antigen (mrPA) formulated with Immunovaccine's DepoVax™ delivery system. The studies showed that animals administered a vaccine containing mrPA formulated in DepoVax were protected against a lethal anthrax challenge at a range of antigen doses.

- On January 20, 2014, the Corporation appointed Llew Keltner, M.D., Ph.D. to its board of directors. Dr. Keltner, a consultant to IMV since early 2013, serves as chairman of Raptor Pharmaceuticals Corp (NASDAQ: RPTP), a commercial stage biotechnology company based in California.
- On January 17, 2014, the Corporation granted 1,731,500 stock options to employees, consultants, officers and directors, pursuant to terms and conditions of the Corporation's stock option plan. Employees and consultants were granted an aggregate of 457,500 options and officers and directors were granted an aggregate of 1,274,000 options. The options were granted at an exercise price of \$0.74. The options for the employees, consultants and directors will vest in three equal tranches at 6, 12, and 18 months from date of grant and the options for the officers will vest in three equal tranches, the first on the date of grant and the others on the first and second anniversary of the date of grant. All options are set to expire five years from the date of grant.

## SUMMARY OF QUARTERLY RESULTS

The following consolidated quarterly data was drawn from the audited annual consolidated financial statements and the unaudited interim condensed consolidated financial statements. All values discussed below are rounded to the nearest thousand. The information is reported on an IFRS basis.

Quarter Ended In	Total Revenue \$	Total Expenses \$	Loss \$	Basic and Diluted Loss Per Share \$
Q1 - March 31, 2014	-	1,943,000	(1,943,000)	(0.02)
Q4 - December 31, 2013	-	1,318,000	(1,370,000)	(0.02)
Q3 - September 30, 2013*	-	1,041,000	(1,041,000)	(0.02)
Q2 - June 30, 2013	-	965,000	(965,000)	(0.01)
Q1 - March 31, 2013	-	1,585,000	(1,585,000)	(0.02)
Q4 - December 31, 2012	-	1,712,000	(1,712,000)	(0.03)
Q3 - September 30, 2012	-	1,728,000	(1,701,000)	(0.03)
Q2 - June 30, 2012	-	1,583,000	(1,583,000)	(0.02)
Q1 - March 31, 2012	-	1,404,000	(1,404,000)	(0.03)

\* Under IFRS, the \$1,250,000 low-bearing interest government loan from the Province of Nova Scotia received in August 2013 must be initially valued at fair value and the difference between the fair value of the loans and the contribution received must be treated as government assistance. The loan was originally recorded at book value and subsequently adjusted at year end.

### Results for the three months ended March 31, 2014 (“Q1 Fiscal 2014”), compared to the three months ended March 31, 2013 (“Q1 Fiscal 2013”).

#### Net loss and comprehensive loss

The net loss and comprehensive loss of \$1,943,000 for Q1 Fiscal 2014 was \$358,000 higher than the net loss and comprehensive loss for Q1 Fiscal 2013. This relates mainly to the \$185,000 increase in research and development costs, an increase of \$77,000 in business development expenses, an increase of \$70,000 in general and administrative expenses and a \$26,000 increase to accreted interest and adjustments.

#### Operating expenses

Overall operating expenses increased by \$358,000 (23%) during Q1 Fiscal 2014 compared to Q1 Fiscal 2013. Explanations of the nature of costs incurred, along with explanations of changes in those costs are discussed below.

#### *Research and development expenses*

R&D expenses include salaries and benefits, expenses associated with the Phase I clinical trial of DPX-Survivac, pre-clinical research on RSV, consulting fees paid to various independent contractors who possess specific expertise required by the Corporation, the cost of animal care facilities, lab supplies, peptides and other chemicals, rental of lab facilities, insurance, as well as other minor R&D related expenses. These R&D costs are offset by government loans and assistance and by investment tax credits received in relation to the R&D expenses incurred.



The Corporation's R&D efforts and related expenses for Q1 Fiscal 2014 included costs surrounding the Corporation's Phase I clinical trial of DPX-Survivac and costs related to the Corporation's ongoing R&D activities associated with the investigation, analysis and evaluation of other potential vaccine candidates and technologies.

Research and development expenses consist of the following:

	Q1 Fiscal 2014	Q1 Fiscal 2013
	\$	\$
General research and development expenses	575,000	281,000
DPX-Survivac preclinical and clinical expenses	264,000	483,000
Stock-based compensation	270,000	48,000
Depreciation of equipment and amortization of intangible	23,000	27,000
Government loans and assistance	(152,000)	(41,000)
Investment tax credits	(67,000)	(70,000)
<b>Total</b>	<b>913,000</b>	<b>728,000</b>

The largest component of R&D expense for Q1 Fiscal 2014 was the preclinical work performed on the Corporation's RSV infectious disease program. As the DPX-Survivac Phase I clinical trial is nearing completion, the Corporation's resources were centered on supporting pre-clinical studies in infectious diseases and supporting the preparation of the Phase I/II clinical trials in Italy. The government loans and assistance recorded in Q1 Fiscal 2014 consists mainly of non-repayable government grants for the RSV pre-clinical studies.

#### *General and administrative expenses*

General and administrative expenses of \$684,000 represented 35% of total expenses for Q1 Fiscal 2014 compared to \$614,000 (39% of total expenses) for Q4 Fiscal 2013, an overall increase of \$70,000 (11%).

G&A expenses include salaries and benefits, directors' fees, legal fees, audit and taxation cost, consulting fees, travel, rental of office facilities, insurance, regulatory fees, stock-based compensation, depreciation of equipment and other minor office expenses.

General and administrative expenses consist of the following:

	Q1 Fiscal 2014	Q1 Fiscal 2013
	\$	\$
General and administrative expenses, excluding salaries	494,000	426,000
Salaries and benefits	55,000	173,000
Stock-based compensation	133,000	13,000
Depreciation of equipment	2,000	2,000
<b>Total</b>	<b>684,000</b>	<b>614,000</b>

G&A expenses, excluding salaries, increased by \$68,000 due mainly to the increase in legal fees of \$46,000 and audit fees of \$44,000 due to the Corporation evaluating strategic financing options, an increase in foreign exchange of \$14,000 and an increase in interest charges of \$12,000 due to the interest on the loan from the Province of Nova Scotia, offset by a decrease of \$39,000 in consulting fees and a decrease of \$13,000 in travel expenses. Salary and benefits expense decreased by \$118,000 due to the departure of the former Chief Executive Officer on August 31, 2013. The stock-based compensation expense increased by \$120,000 due to timing of stock option grants.

#### *Business development expenses*

The Corporation's business development activities increased in Q1 Fiscal 2014 by \$78,000, compared to Q1 Fiscal 2013, to a total of \$299,000. This is due mainly to the increase in consulting fees of \$96,000, in relation to a business development consultant hired to assist with potential partnering activities. This increase is offset by a decrease in investor relations activity of \$13,000 and marketing and communication activities of \$4,000.

## CASH FLOWS, LIQUIDITY AND CAPITAL RESOURCES

At March 31, 2014, the Corporation had cash and cash equivalents of \$2,047,000 and working capital of \$1,936,000, compared to \$3,536,000 and \$3,317,000, respectively at December 31, 2013.

Since the Corporation's inception, the Corporation's operations have been financed through the issuance of shares, debt, revenue from animal health licenses, interest income on funds available for investment, government assistance and tax credits.

During the three months ended March 31, 2014, cash of \$1,579,000 was used in operating activities. This included the reported net loss of \$1,943,000 prior to being decreased for non-cash amortization, non-cash depreciation, non-cash accretion of long-term debt, non-cash stock-based compensation, and fair value adjustment to long-term debt. The Corporation had a net use of cash of \$110,000 as a result of non-cash changes in working capital balances.

Sources of cash raised through financing activities were \$112,000 and \$5,000 through the exercise of stock options and warrants, respectively. Use of cash through financing activities was \$15,000 in repayment of long-term debt.

During the three months ended March 31, 2014, the Corporation purchased \$13,000 worth of equipment for ongoing research and operating activities.

The Corporation aims to maintain adequate cash and cash resources to support the planned activities which include the completion of the Phase 1b DPX-Survivac clinical trial program, other research and development activities, business development efforts, administration costs and intellectual property maintenance and expansion. At March 31, 2014, the Corporation had approximately \$5.4 million of existing and identified potential sources of cash including:

- cash and equivalents of \$2.0 million;
- amounts receivable and investment tax credits receivable of \$0.9 million; and
- second and third disbursement of the loan from the Province of Nova Scotia of \$2.5 million.

For Q1 Fiscal 2014, the Corporation's quarterly "cash burn rate" (defined as net loss for the period adjusted for non-cash transactions including amortization, depreciation, accretion of long-term debt, and stock-based compensation) was approximately \$1.5 million. The Corporation forecasts the cash burn rate to be between \$1.3 million to \$1.4 million per quarter over the next twelve months, as it concludes the Phase 1b clinical trial for DPX-Survivac and pre-clinical studies on RSV.

It is common for early-stage biotechnology companies to require additional funding to further develop product-candidates until successful commercialization of at least one product candidate. Immunovaccine's product candidates are still in the early-development stage of the product cycle and therefore are not generating revenue to fund operations. The Corporation continuously monitors its liquidity position, the status of its development programs, including those of its partners, cash forecasts for completing various stages of development, the potential to license or co-develop each vaccine candidate, and continues to actively pursue alternatives to raise capital, including the sale of its equity securities, debt and non-dilutive funding.

While the Corporation has secured the \$5,000,000 loan from the Province of Nova Scotia and has met the milestones to be able to draw down on the second and third disbursements, management believes that its cash and cash resources may not be sufficient to fund operations for the next twelve months unless significant reduction of Corporation's discretionary expenditures are made and further financing is obtained. Although the addition of the loan with the current existing and identified sources of cash appears to provide the Corporation with sufficient funding for the next twelve months, the Corporation must meet certain milestones to draw down on the loan and there is no certainty that the Corporation will be able to do so. The ability of the Corporation to continue as a going concern is dependent upon meeting the required milestones of the loan, and/or raising additional financing through equity and non-dilutive funding and partnerships. There can be no assurance that the Corporation will have sufficient capital to fund its ongoing operations, develop or commercialize any products without future financings. There can be no assurance that additional financing will be available on acceptable terms or at all. The Corporation is currently pursuing financing alternatives that may include equity, debt, and non-dilutive financing alternatives

including co-development through potential collaborations, strategic partnerships or other transactions with third parties, that may or may not include merger and acquisitions activities. If the Corporation is unable to obtain additional financing when required, the Corporation may have to substantially reduce or eliminate planned expenditures or the Corporation may be unable to continue operations. These uncertainties cast doubt as to the ability of the Corporation to meet its obligations as they come due and, accordingly, the appropriateness of the use of accounting principles applicable to a going concern.

## **RELATED PARTY TRANSACTIONS**

During the three months ended March 31, 2014, the Corporation was charged \$106,000 (three months ended March 31, 2013 - \$nil) for business development consulting fees by a non-executive director.

## **DISCLOSURE CONTROLS AND PROCEDURES AND INTERNAL CONTROLS OVER FINANCIAL REPORTING**

Disclosure controls and procedures (“DC&P”) are intended to provide reasonable assurance that material information is gathered and reported to senior management to permit timely decisions regarding public disclosure. Internal controls over financial reporting (“ICFR”) are intended to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with Canadian generally accepted accounting principles.

“Venture Issuers” as defined in National Instrument 52-109 – Certification of Disclosure in Issuers’ Annual and Interim Filings (“NI 52-109”) are not required to provide representations in their annual and interim filings relating to the establishment and maintenance of DC&P and ICFR, as defined in NI 52-109. In particular, the certifying officers do not make any representations relating to the establishment and maintenance of: (a) controls and other procedures designed to provide reasonable assurance that information required to be disclosed by the issuer in its annual filings, interim filings or other reports filed or submitted under securities legislation is recorded, processed, summarized and reported within the time periods specified in securities legislation; and (b) processes to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with the issuer’s generally accepted accounting principles (IFRS).

## **SIGNIFICANT ESTIMATES**

The audited annual consolidated financial statements as at March 31, 2014 have been prepared in accordance with IFRS. Significant accounting estimates used in preparing the unaudited interim condensed consolidated financial statements include the initial fair valuation of long-term debt, the calculation of the carrying amount of long-term debt, the scientific research and experimental development (“SRED”) tax credits receivable, the fair value allocation of consideration for multiple element revenue arrangements, non-cash stock-based compensation expense, amortization and depreciation of intangibles and property and equipment, allocation of proceeds between common shares and warrants, and accrued liabilities.

Management has calculated the fair value of the interest-free government loans based on the forecast of the Corporation’s future revenue, discounted at an appropriate discount rate. The estimates and assumptions used in the valuation model were based on current information available to management and a degree of management’s judgment. A change in management’s assumptions used to forecast future revenue or a change in the discount rate could have a significant impact on the fair value of these interest-free government loans. Management has estimated the SRED receivable based on its assessment of tax credits receivable on eligible expenditures incurred during the period and its experience with claims filed with and collected from the Canada Revenue Agency. Management has analyzed the amounts receivable listing for potentially uncollectible amounts and has allowed for all balances which collection is doubtful. Management has made estimates regarding when stock options might be exercised and stock price volatility in calculating non-cash stock based compensation. The timing for exercise of options is out of the Corporation’s control and will depend on a variety of factors including the market value of the Corporation’s shares and the financial objectives of the stock-based instrument holders. Management has made estimates about the expected useful lives of long-lived assets, and the expected residual values of the assets. Management has determined the allocation of proceeds between common shares and warrants based on the relative values of the

shares and warrants issued. Through knowledge of the Corporation's activities in the year ended December 31, 2013, management has estimated the amount of accrued liabilities to be recorded.

## **OUTSTANDING SECURITIES**

The number of issued and outstanding common shares of the Corporation on May 28, 2014 is 79,550,642. The number of outstanding stock options on May 28, 2014 is 5,217,835. The outstanding stock options have a weighted average exercise price of \$0.71 per share and a weighted average remaining term of 3.04 years. The number of outstanding warrants on May 28, 2014 is 31,325. The outstanding warrants have a weighted average exercise price of \$0.40 per share and a weighted average remaining term of 1.04 years.

## **INTELLECTUAL PROPERTY RIGHTS**

The Corporation strives to protect its intellectual property in established, as well as emerging, markets around the world. The Corporation's intellectual property portfolio for its vaccine platform technology includes five patent families, the first of which contains five patents issued in four jurisdictions (US, Europe, Japan and Australia) and two pending patent applications in the US and Canada. The four other families collectively contain 33 pending patent applications in eleven jurisdictions. US Patent 6,793,923, issued in 2004, contains claims to the Corporation's platform, covering "any antigen, any adjuvant in any liposome and any oil". An additional patent application for a DepoVax™ formulation was submitted in 2012. The Corporation's platform name, DepoVax™, is protected by trademarks registered in the US, Canada and Europe.

Additional granted patents include:

- Europe patent 1,333,858, patent granted February 8, 2006;
- Japan patent 2002-540757, patent granted August 1, 2008;
- Australia patent, 202214861, patent granted January 11, 2007;
- Australia patent, 2006301891, patent granted December 20, 2012; and
- Chinese Patent No. ZL 2006 8 0036783.2, patent granted September 18, 2013.

Since 2008, Immunovaccine has filed five patent cooperation treaty (PCT) applications relating to the VacciMax® and DepoVax™ technologies, some or all of which have now been filed in the US, Europe, Japan, Canada, Australia, China, India, Brazil, Israel, Hong Kong and Singapore. These PCT applications cover specific DepoVax™ compositions with broad utility for infectious diseases and cancer applications or a Survivin vaccine. If allowed, these patent applications may extend patent protection for some or all DepoVax™-based vaccines approximately up to the year 2033.

The licensing agreement between the Corporation and Immunotope for the seven antigens included in the DPX-0907 vaccine candidate stipulates that the Corporation will assume the cost of prosecuting and maintaining patent applications and issued patents relating to the peptide antigens under license. These antigens are protected by two issued patents in the US and pending patent applications in the US and Europe. A European patent application was recently refused by the European Patent Office. An appeal is underway and the outcome for this particular application in Europe remains uncertain. Additional divisional applications have been filed in Europe. The DPX-0907 vaccine candidate remains protected by granted patents and patent applications (Canada, US, Europe, Japan, Australia, China, India, Brazil, Israel, Hong Kong and Singapore) relating to the core vaccine delivery platform, as well as US patents (7,083,789 and allowed application 11/426,16) and patent applications in the US and Europe relating to the seven peptide antigens.

## **FINANCIAL INSTRUMENTS**

Financial assets and liabilities are recognized when the Corporation becomes a party to the contractual provisions of the instrument. Financial assets are no longer recognized when the rights to receive cash flows from the assets have expired or have been transferred and the Corporation has transferred substantially all risks and rewards of ownership.

Financial assets and liabilities are offset and the net amount is reported in the statements of financial position when there is a legally enforceable right to offset the recognized amounts and there is an intention to settle on a net basis, or realize the asset and settle the liability simultaneously.

The Corporation recognizes financial instruments based on their classification. Depending on the financial instruments' classification, changes in subsequent measurements are recognized in net loss or other comprehensive loss.

The Corporation has implemented the following classifications:

- Cash and cash equivalents and amounts receivable are classified as loans and receivables. After their initial fair value measurement, they are measured at amortized cost using the effective interest method; and
- Accounts payable and accrued liabilities, amounts due to directors and long-term debt are classified as other financial liabilities. After their initial fair value measurement, they are measured at amortized cost using the effective interest method.

## **RISK ASSESSMENT**

The Corporation's activities are subject to certain risk factors and uncertainties that generally affect development-stage biotechnology companies. Management defines risk as the evaluation of the probability that an event might happen in the future that could negatively affect the financial condition, results of operation or perspectives of the Corporation. The success of the Corporation will depend, without limitation, on its ability to:

- achieve or maintain profitability after incurring significant losses since inception and expect to incur losses for the foreseeable future;
- obtain substantial funding when needed before being forced to delay, reduce, terminate or eliminate product development programs;
- raise additional capital on reasonable terms without causing significant dilution to existing shareholders, restrict operations or require the Corporation to relinquish rights to its technologies or product candidates;
- obtain positive results of clinical trials, including clinical trials on DPX-Survivac and DPX-0907, as the Corporation depends heavily on their success;
- demonstrate safety and efficacy with its product candidates to the satisfaction of the FDA or similar regulatory authorities outside the United States, so that it does not have to incur additional costs or experience delays in completing the development and commercialization of its products;
- achieve development goals and meet set time frames, including enrollment of patients in clinical trials;
- obtain positive results of clinical trials without serious adverse or inappropriate side effects;
- obtain market acceptance of its product by physicians, patients, healthcare payors and others in the medical community for commercial success;
- establish sales and marketing capabilities or enter into agreements with third parties to sell and market its product candidates;
- discover, develop or commercialize its products before its competition does;
- commercialize any products under favourable pricing regulations, third-party reimbursement practices or healthcare reform initiatives;
- continue research and commercialization of its product candidates without relying on government funding;
- market products without product liability lawsuits;
- market the product candidate that has the greater likelihood of success and profitability;
- establish collaborations with third parties, including with third parties for the development and commercialization of its product candidates;
- satisfactorily collaborate with third parties for the conduct of its clinical trials;
- secure the raw ingredients, intermediate drug substances and specialized equipment necessary for the production of its product candidates;
- commercially manufacture its products;

- preserve its intellectual property rights and comply with its obligations under its intellectual property licenses with third parties;
- successfully protect its intellectual property against competition infringement and/or protect itself against third party allegations of the Corporation infringing on their intellectual property;
- protect its trade secrets and intellectual property without spending substantial resources or distracting key personnel from their normal responsibilities;
- obtain regulatory approval of product pipeline, including regulatory approval in international jurisdictions;
- comply with environmental, health and safety laws and regulations;
- market its product without restrictions or problems with its product after its approved;
- develop legitimate relationships with its customers and third-party payors;
- obtain market approval and commercialize its product candidates with recently enacted and future legislation;
- retain key executives and attract, retain and motivate qualified personnel;
- establish or maintain strategic collaborations with third parties; and
- manage its growth as it expands its development, regulatory, manufacturing and sales and marketing capabilities.

The risks identified above do not include all possible risks as there may be other risks of which management is currently unaware. The above risks and other general risks and uncertainties relating to the Corporation and its activities are more fully described in the Annual Information Form of the Corporation for the year ended December 31, 2013, under the heading “Risk Factors and Uncertainties”.

#### **OFF BALANCE SHEET ARRANGEMENTS**

The Corporation was not party to any off balance sheet arrangements as of March 31, 2014.