



MICROBIX BIOSYSTEMS INC.
ANNUAL INFORMATION FORM

For the financial year ended September 30, 2020

As at December 18, 2020

Forward Looking Information

This Annual Information Form contains forward-looking statements and information, which involve various risks and uncertainties. There can be no assurance the statements will prove to be accurate and actual results and future events may differ materially. See “Forward Looking Information”.

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Forward Looking Statements

This Annual Information Form contains certain forward-looking statements and information relating to the Company including, but not limited to, the Company's operations, anticipated financial performance, business prospects and strategies. Forward-looking information typically contains statements with words such as "anticipate", "could", "expect", "seek", "may", "will", "intend" "believe", "plan" or similar words or expressions suggesting future outcomes.

All statements, other than statements of historical fact, included in this Annual Information Form are forward-looking statements that involve various risks and uncertainties, both known and unknown. There can be no assurance that such statements will prove to be accurate, and actual results and future events could differ materially from those anticipated in such statements.

By its nature, the Company's forward-looking statements and information involves numerous assumptions, inherent risks and uncertainties, including but not limited to the following factors: changes in business strategies; general global economic and business conditions; the effects of competition and pricing pressures; industry overcapacity; shifts in market demand; changes in laws and regulation changes; uncertainties of litigation; patent registration; the regulatory marketing application processes; labour disputes; timing of completion of projects; currency and interest rate fluctuations; availability of financing, either equity or debt; conducting business in foreign jurisdictions and applicability of foreign laws; results of research and development; commercialization of technologies and procedures and technological changes.

The Company undertakes no obligation to update publicly or otherwise revise forward-looking information, whether as a result of new information, future event or otherwise, except as required by applicable law.

Corporate Structure

Name, Address and Incorporation

Microbix Biosystems Inc. ("Microbix", the "Company", "us", "we", or "our") was amalgamated under the laws of the Province of Ontario by articles of amalgamation dated October 1, 1990. The predecessor companies of Microbix were Animal Health Laboratories Inc., a private company incorporated on October 3, 1978 under the laws of the Province of Ontario which changed its name to Microbix Biosystems Inc. on May 4, 1984, and Autocrown Corporation Limited, a public company amalgamated under the laws of the Province of Ontario on April 27, 1980.

The registered office and principal place of business of the Company is located at 265 Watline Avenue, Mississauga, Ontario. The Company also maintains a second site at 235 Watline Avenue, Mississauga, Ontario.

Intercorporate Relationships

On December 14, 2012, the wholly owned subsidiary Crucible Biotechnologies Limited was incorporated in Ontario for future purposes, and later applied to an influenza vaccine business opportunity. During fiscal 2020 there was no business activity in this subsidiary.

General Development of the Business

Business Overview

Microbix Biosystems Inc. specializes in developing biological and technology solutions for human health and well-being. It manufactures a wide range of critical biological materials for the global diagnostics industry in three categories, (1) antigens as ingredients for making infectious disease tests (Tests) and (2) as quality assessment products (QAPs™) for helping control Test accuracy, and (3) viral transport media (VTM) to enable patient-sampling for Tests.

In the context of Microbix's business, antigens are purified and inactivated bacteria and viruses, which are used in the immunoassay format of medical tests to assess exposure to, or immunity from, those pathogens.

In turn, QAPs are inactivated and stabilized samples of a pathogen or analogue that are created to resemble patient samples in order to support one or more of (i) the proficiency testing of clinical labs, (ii) test development, instrument validation and technician training, or (iii) the quality management of patient tests by clinical laboratories.

VTM consists of vials of media that stabilize the organisms in patient-samples until such time as they can be tested for disease by laboratory-based instruments. A widespread current use of VTM is for molecular diagnostics (e.g., RT-PCR) testing for the SARS-CoV-2 virus.

Microbix's antigens and QAPs are sold to more than 100 customers worldwide, primarily to multinational diagnostics companies and laboratory accreditation organizations. Its fiscal 2020 revenues of \$10.5 million were largely from these two product lines. Microbix's VTM project was begun in the Spring of Calendar 2020, was announced subsequent to the September 30 fiscal year-end and sales of this product line are targeted to begin in 2021. Microbix employs over 70 highly skilled employees.

The company also applies its biological expertise to develop other innovative and proprietary technologies and products, currently its Kinlytic® Urokinase for injection, a thrombolytic biologic drug used to treat blood clots.

Three-Year History (October 1, 2017 through September 30, 2020)

Over the past three years, Microbix has been working to advance both its revenue-oriented antigens and quality assessment products businesses (collectively, the "Revenue Businesses" and to increase the value of its pre-revenue development projects, such as Kinlytic® urokinase for injection (Kinlytic).

Over first two years of the period, Microbix's total sales grew satisfactorily, to \$13.5 million for fiscal 2019, up from \$10.5 million in fiscal 2017. Such growth was driven by expanding sales and

production efforts by Microbix and as a result growing demand from its customers. A key contributor to sales growth was the distribution agreement that was signed in January 2017, which is focussed on sales to Asian markets. As will be described later in this document, Microbix's management believes that demand for such products is increasing and has therefore taken steps to modernize and de-bottleneck its production to meet that growth.

The foregoing growth trend was disrupted by the COVID-19 pandemic, with total sales falling to \$10.5 million in fiscal 2020, and with that drop-off in sales believed due to the pandemic interrupting the normal usage of non-respiratory diagnostic tests. Microbix believes that antigen sales will recover to their pre-pandemic growth trajectory once the pandemic has ebbed.

An important advancement made by Microbix in the antigens segment of its Revenue Businesses has been the development and validation of bioreactor-based antigen production. Starting with its highest-selling product, the Company has developed and validated a process to move production away from the traditional roller-bottle cultures to a more efficient method that uses state-of-the-art bioreactors. Management believes that the move to bioreactors has expanded its capacity, reduced per-unit costs, improved in-process controls and, is enhancing product quality.

The bioreactor process development became commercial with the September 2017 announcement of the first full-scale shipment of antigen produced in bioreactors to a customer. In November 2017, Microbix announced plans to increase its bioreactor capacity by 500%, with that increased capacity becoming fully available in May, 2018. After many incremental external delays, Microbix was able to confirm the conversion of its largest customer to bioreactor-made product in August, 2019, with the conversion process completed in Q3 fiscal 2020. Microbix expects that it will derive margin benefits from this conversion in fiscal 2021 and beyond, alongside the benefits of other concurrent actions it has taken to improve broader antigens production efficiency.

The adoption of new technology for antigen production is expected to enable Microbix to meet growth in demand without the need to expand its facilities or payroll – Making it well-positioned to benefit from the adoption of immunoassay testing for infectious diseases in new markets, such as China and other Asia-Pacific nations. Microbix's Asia-Pacific distributor advises it that Microbix antigens have been incorporated into dozens of new tests seeking Chinese FDA approval, providing sales growth opportunities that appear considerable.

Over 15% of Microbix's sales (and growing) are now being realized by way of using its inactivated pathogen samples or analogues as quality assessment products, broadly branded as QAPs™. Microbix has long sold such products to laboratory accreditation agencies for use in their proficiency testing programs – generally as unbranded “white-label” product.

In January 2018, Microbix added a second QAPs product line to its offerings, the PROCEEDx™ line of products. PROCEEDx products are offered for use in research, test development validation/verification of instruments, troubleshooting, and operator training (collectively designated Research Use Only (“RUO”) applications). Several diagnostic test and instrument

makers (Dx OEMs) are now purchasing PROCEEDx-brand RUO QAPs to include with newly-purchased instruments to qualify the instruments for clinical use.

In December 2018, Microbix attained an important new quality certification, ISO 13485, which opened an additional potential market for QAPs – namely sales to clinical laboratories. ISO 13485 is the certification required to produce regulated “IVD” medical devices and is required in order to sell QAPs to support the real-time workflow-accuracy of patient testing in clinical labs. Microbix completed its first IVD registration/licensing files for such products over the summer of 2019 and received its first European Union “CE mark” and United States FDA registrations in September, 2019.

Across fiscal 2020, Microbix built-out a network of five (5) formal distribution partners, providing for exclusive or non-exclusive distribution access to over 30 countries, including in Australia, Canada, the European Union, Scandinavia, the United Kingdom, and the United States. Microbix also completed the development of several new products, including QAPs to support COVID-19 molecular-tests, COVID-19 antigen-tests, and, subsequent to the fiscal year-end, for molecular-tests for *Mycoplasma genitalium* (“Mgen,” a sexually-transmitted infection). As of September 30, 2020, Microbix had eight (8) IVD registered QAPs in the EU and US jurisdictions, four for COVID-related molecular-test and four for Human Papilloma Virus (HPV) molecular-tests. As of today, Microbix has a total of ten (10) IVD registered QAPs.

Microbix intends to continue to develop and launch a series of well-targeted QAPs under its PROCEEDx and REDx Controls branding that are innovative, value-added, proprietary, and targeted to multi-million dollar market opportunities. Several such products are already in development, including additional QAPs to assist with public health responses to the pandemic (e.g., QAPs for COVID-19 antigen tests, as disclosed on 20 October). Sales are expected to be realized via a combination of direct customer service by Microbix and via Microbix’s disclosed regional distribution partners, Alpha-Tec Systems, Inc., Diagnostic International Distribution S.p.A., Labquality Oy, The Medical Supply Company of Ireland, and R-Biopharm AG. Sales of QAPs for the fiscal year ended September 30, 2020 were \$1.5 million, up by 41% from fiscal 2019 and comprising 15% of Microbix’s total f2020 sales. Microbix management expects growth in QAPs sales to continue across fiscal 2021, driven by greater buyer adoption of existing QAPs SKUs and the introduction of new QAPs SKUs.

VTM, the third element of Microbix’s Revenue Businesses, is not yet generating sales but is expected to begin selling in fiscal Q2, 2020 (the quarter ending March 31, 2020). VTM is essential for conducting lab-based molecular testing and it is proving challenging for public health authorities to reliably secure adequate amounts of high-quality supplies. Accordingly, Microbix identified this need and offered to help fulfill it for the Province of Ontario. Accordingly, and as announced on October 13, 2020, Microbix has been provided with a provincial “Ontario Together Fund” grant of \$1.45 million to advance to commercial-scale VTM production. Such production of VTM began in December, 2020 with first product shipments targeted for the first calendar quarter of 2021. If successful with regards to volume and pricing, VTM should become an important third source of revenues for Microbix in fiscal 2021

A non-revenue generating project of Microbix's must also be mentioned as, subject to partnering, it could add significant value. Specifically, Microbix has long been interested in the market potential for a human protein drug known as urokinase. A low molecular weight form of urokinase, Kinlytic® urokinase for injection, has had a history of clinical use in U.S. and Canadian patients — successfully treating a number of disorders relating to blood clots. After first exploring the market-introduction of a generic (i.e., biosimilar) version of the original drug, Microbix ultimately acquired all rights to the original drug in 2008. Since that time, Microbix has been pursuing means to re-launch the drug into North American markets, following the dating expiry of the last lot of originator-manufactured product in 2009.

After its acquisition of the product, Microbix was focused on identifying partners to fund the construction of a new manufacturing site capable of supporting the re-launch of Kinlytic for a number of its prior clinical indications, such as pulmonary embolism, deep vein thrombosis, stroke, heart attack, and clearance of clots from implanted catheters. The funds needed for the construction and qualification of that scale of facility, coupled with the cost of human trials to revalidate the process, would have been on the order of US\$100 million. Finding a source for such funding understandably proved to be difficult, regardless of attractive project economics.

More recently, Microbix has refocused on a specific clinical indication previously approved by FDA, which has reduced the manufacturing and clinical trial budgets to a fraction of those for the complete range of prior indications and may therefore make the project more appealing to prospective partners. Microbix has determined that an investment of US\$20 million over a period of three years should enable the re-introduction of Kinlytic for a clinical indication where it could achieve annual North American sales of over US\$200 million. The Company reasons that such economics should be attractive to potential partners that are able to provide the needed investment.

Additionally, Microbix conducted a formal consultation with FDA about such plans in April 2017 and received guidance that it believes to be confirmatory and supportive. Since its FDA meeting, Microbix focused on defining the budgets and timelines for the more focused project, with those validated by way of obtaining quotations from third parties for all critical elements of the project. Microbix reasoned that having quotations from qualified contractors would provide the project greater credibility than could be obtained from its internal estimates.

In 2018, Microbix has made further progress with regards to Kinlytic. After receiving all third-party contractor information, it sought-out and engaged an experienced drug licensing agent, with its agreement announced in April, 2018. At the end of calendar 2018, Microbix completed a due diligence “data room” in support of the project. During 2019 and 2020, the agent has undertaken outreaches to potential development partners and a series of such parties have signed confidentiality agreements with Microbix as a predicate to conducting their evaluations.

An alliance partner for returning Kinlytic to the market has to have interest in the project, sufficient capital, a U.S.-based and hospital-directed sales force, comfort with biological drugs, and an appropriate timeline for receiving its return on capital. Such parties do exist, and

Microbix remains optimistic that an acceptable development alliance will be struck to return Kinlytic to the United States market and that its shareholders will benefit from that work.

However, it is management's opinion that the COVID-19 pandemic has increased the difficulty of securing a partnering agreement to obtain the required re-development funding. This is for two reasons: (i) the pandemic has disrupted the business of the hospital-oriented product companies that are the logical partners for this asset (due to fewer normal-course procedures being done) and thereby constrained the new product budgets of such companies, and (ii) ongoing restrictions on physical travel (i.e., closed borders, quarantines, etc.) are making it more difficult to advance negotiations, conclude partnerships, and manage off-site manufacturing or clinical trial work.

Accordingly, Microbix cannot represent a precise timeline for securing a funding partner to advance the re-development of Kinlytic to sBLA filing and renewed commercial sales. As a consequence, management is required to follow International Financial Reporting Standards (IFRS) and fully impair the book value of this asset, incurring a non-cash charge to earnings and reducing the carried value of Kinlytic to zero on Microbix's financial statements. Even though this asset has been written down, management intends to continue efforts to partner this asset and return the drug to the United States market for its catheter-clearance sub-indication.

Financial Matters

Financial matters over the past three years are also noteworthy. Historically, growth in sales and resulting margins was more than offset by accelerating spending on pre-revenue development projects. Such spending necessitated periodic private placement financings to fund the large sums needed to advance those projects. That approach changed in 2017, as the decision was taken to focus upon the growth of Microbix's antigens and QAPs businesses. However, further funding was still needed to provide working capital, complete the antigen-related bioreactor project, and to make needed improvements to the manufacturing facility. A private placement was therefore undertaken on October 18, 2017 and October 26, 2017, when the Company completed a private placement offering of an aggregate of 11,666,633 units for total gross proceeds of \$3,499,990, and net proceeds of \$3,137,283 after share issuance costs of \$362,707.

On July 29, 2019, the Company signed an agreement with Federal Economic Development Agency for Southern Ontario ('FedDev') to provide a repayable government contribution where the Federal Development Agency has agreed to contribute funding for 30% of the Business Scale-up and Productivity Project expenditures made by the Company, up to \$2,752,500 over the next four years. The Company is required to submit eligible expenses on a quarterly basis to receive the interest-free contributions. These matching funds will be utilized to support the ongoing growth of our Antigen and QAPs business. Repayment of the contribution does not begin until December 15, 2024.

On January 30, 2020, the Company completed a private placement offering of an aggregate of 11,800,000 units for total gross proceeds of \$2,360,000, net proceeds of \$2,150,159 after share

issuance costs of \$209,241. These funds were raised to meet the Company's commitment from the agreement with FedDev, help fund growth initiatives, and bolster working capital.

Presently, cash flow from operations, along with credit facilities, appears adequate to support baseline funding requirements for our antigens and QAPs business. However, as we expand and accelerate new projects such as VTM and additional QAPs, incremental funding may be deemed advisable or required.

Another important financial matter was addressed in December 2016, with the arrangement of a secured revolving credit facility jointly provided by the Toronto-Dominion Bank and Export Development Canada. This credit facility has been employed to assist the growth of the company's revenue businesses, providing additional working capital and financial flexibility. This credit facility provides for a maximum of \$2 million, credited largely against inventories.

The credit facility required for the subordination of Microbix's outstanding \$7.0 million of debentures, a concession that was provided following the renegotiation of certain terms of those instruments, most notably the conversion prices of the convertible debenture portion. Similarly, an amendment to the terms of a \$500,000 non-convertible debenture was recorded in April 2017, with its term extended by five years to April 30, 2022. Non-cash charges to earnings totaling \$2,457,014 were recorded in Q1 and Q3 of fiscal 2017 to reflect the changes to the terms of these debentures and the warrants associated with them.

At the end of fiscal 2020, the Company also determined that the deferred tax asset balance of \$1,568,237 was to be written down due to the heightened business uncertainties related to the COVID-19 pandemic.

Share Capital Transactions over the 3-year period

On October 18, 2017 and October 26, 2017, the Company completed a private placement offering of an aggregate of 11,666,633 units for total gross proceeds of \$3,499,990, net proceeds of \$3,137,283 after share issuance costs of \$362,707. Each unit consists of one common share of Microbix and one half of a common share purchase warrant. Each whole warrant entitles the holder to purchase one additional common share at an exercise price of \$0.36 for three years. The financing was brokered. Cash commissions of \$226,729 were paid and an aggregate of 755,764 Broker's Warrants were issued in the private placement offering. Each Broker's Warrant entitled the holder to purchase one unit at a price of \$0.335 for a period of two years. All securities issued under the private placement were subject to a hold period that expired four months and one day from the date of closing.

At Microbix's annual general meeting of March 28, 2018, two further share capital transactions were approved by shareholders. The first related to amending the terms of warrants held by a director – changing their price and term in lieu of providing additional stock options that would have otherwise been granted. The second related to changing its stock option plan to a 10% rolling plan from one that provided a fixed number of options. A detailed description of each matter is provided in the Management Information Circular dated February 9, 2018.

In April 2018, the Company issued 200,000 shares at a price of \$0.275 as partial compensation for a consulting agreement.

On February 21, 2019, the Company issued 1,920,000 options to employees and directors of the Company. The options vest after three years, with a five-year term and an exercise price of \$0.23 per common share.

In April 2019, the Company issued 150,000 options at an exercise price of \$0.25 as partial compensation for a consulting agreement. These options vest over a one year period and have a five year term. In April 2019, the Company issued 100,000 options at an exercise price of \$0.25 to an employee. These options vest over a one year period and have a five year term.

On January 30, 2020, the Company completed a private placement offering of an aggregate of 11,800,000 units for total gross proceeds of \$2,360,000, net proceeds of \$2,150,159 after share issuance costs of \$209,241. Each unit consists of one common share of Microbix and one common share purchase warrant. Each whole warrant entitles the holder to purchase one additional common share at an exercise price of \$0.36 for five years. Fair value of the common share purchase warrants was determined to be \$ 1,205,892. Gross proceeds were allocated to common shares and common share purchase warrants in the amount of \$ 1,611,450 and \$748,550 respectively. The financing was non-brokered. Cash commissions of \$104,300 were paid and an aggregate of 521,500 Broker's Warrants were issued in the private placement offering. Fair value of the broker warrants was determined to be \$42,476 using the Black-Scholes option pricing model. The volatility of the stock for the Black-Scholes options pricing model was based on 5-year historic volatility of the Company's stock price on the Toronto Stock Exchange (69%) and the risk free rate of interest of 1.38% is based upon the Government of Canada benchmark bond yields - 3 to 5 year at the date of the award of the Broker's warrants and a five year term. Management believes that the historic stock volatility provides a fair and appropriate basis of estimate for the expected future volatility of the stock. Each Broker's Warrant entitles the holder to purchase one common share at a price of \$0.36 for a period of five years. All securities issued under the private placement will be subject to a holding period, expiring four months and one day from the date of closing.

On February 25, 2020, the Company issued 2,200,000 options to employees and directors of the Company. The options vest after three years, with a five-year term and an exercise price of \$0.215 per common share.

On August 21, 2020, the Company issued 150,000 options at an exercise price of \$0.28 as partial compensation for a consulting agreement. These options vest over a one year period and have a five year term.

Microbix intends to continue to use its stock option plan on an annual basis, as part of its compensation programs to incentivize and retain its board of directors, executives and managers.

Significant Acquisitions

Microbix has not made any significant acquisitions over the past three fiscal years. Over the history of the Company, it has made three material acquisitions:

1. The purchase of a building as the site for expanded production of its antigen products, which was completed in 2008.
2. The acquisition of Kinlytic® urokinase for injection, the only FDA-approved Urokinase product in the US, in 2008.
3. The acquisition of rights to the precursor technology to LumiSort™ cell-sorting technology in 2005.

Business of the Company

General

Microbix Biosystems Inc. (Microbix or the Company) (TSX: MBX, OTCQB: MBXBF) specializes in developing biological and technology solutions for human health and well-being. It manufactures a wide range of critical biological materials for the global diagnostics industry in two current sales-generating categories, (1) antigens and (2) quality assessment products (QAPs™).

In the context of Microbix's business, antigens are purified and inactivated bacteria and viruses, which are used in the immunoassay format of medical tests to assess exposure to, or immunity from, those pathogens. QAPs are inactivated and stabilized samples of a pathogen (or an analogue with similar properties), that are created to resemble patient samples in order to support one or more of (i) the proficiency testing of clinical labs, (ii) test development, instrument validation and technician training, or (iii) the quality management of patient tests by clinical laboratories. Microbix's antigens and QAPs are sold to more than 100 customers worldwide, primarily to multinational diagnostics companies and laboratory accreditation organizations.

Microbix has also applied its biological expertise and infrastructure to create proprietary new products or technologies. Currently it has two; (1) VTM (viral transport media) for the Province of Ontario, and (2) Kinlytic® urokinase, a biologic thrombolytic drug (used to dissolve blood clots).

Antigens Business

An antigen is defined as a substance foreign to the (human) body that evokes an immune response and binds a product of the immune response (e.g., with an antibody). As relates to Microbix, an antigen is best considered a preparation of concentrated, purified, intact and inactivated bacteria, parasites, or viruses (or purified fractions of such organisms), that is used as a key ingredient in diagnostic tests that establish the presence or extent of human antibodies to that bacteria, parasite, or virus.

Such “immunoassay” medical tests are used to determine whether patients have been exposed to a disease organism (e.g., to bacteria causing a respiratory illness such as pneumonia) or to measure pre-existing exposure or immunity to a disease by establishing the presence of circulating antibodies to it (e.g., a pregnant woman's immunity to a virus that could harm her baby *in-utero*). Immunoassays to establish exposure to disease or resistance to it are a mainstay of medical testing in North America, Europe and other regions of the economically-developed world.

Microbix’s business of producing high quality antigens is the result of three decades of experience in the field, including strain selection, safe, reliable and efficient organism culture at scale, purification, and methods of inactivation. As a result of Microbix’s expertise, its products have received widespread and longstanding customer acceptance, with continuing growth in demand. Microbix’s current catalogue of antigens covers over 30 bacterial and viral pathogens that are implicated in maternal, pediatric, childhood, respiratory, sexually-transmitted and insect-borne diseases.

Microbix is a leading supplier of natural pathogen-derived antigens to many multinational producers of immunoassays, with over 100 customers principally located in the United States and Europe. Two customers, with whom Microbix has contracts, account for 44% of fiscal 2020 annual antigen sales, and the top five customers account for approximately 61% of sales.

| Pathogen | Antigen products | Available Controls |
|---|------------------|--------------------|
| Respiratory Disease Testing | | |
| Adenovirus | ✓ | ✓ |
| Chlamydomphila pneumoniae | ✓ | ✓ |
| Cytomegalovirus | ✓ | |
| Influenza A H1N1 | ✓ | ✓ |
| Influenza A H3N2 | ✓ | |
| Influenza B | ✓ | ✓ |
| Parainfluenza type 3 | ✓ | ✓ |
| Respiratory Syncytial Virus | ✓ | ✓ |
| SARS-CoV-2 (MDx) | | ✓ |
| SARS-CoV-2 (Antigen) | | ✓ |
| Sexually Transmitted Disease Testing | | |
| Chlamydia trachomatis | ✓ | ✓ |
| Neisseria gonorrhoea | | ✓ |
| Trichomonas vaginalis | | ✓ |
| Human Papilloma Virus (multiple strains) | | ✓ |
| Mycoplasma genitalium | | ✓ |
| Vaccine Immunity Testing | | |
| Measles | ✓ | |
| Mumps | ✓ | |
| Rubella | ✓ | |
| Varicella zoster | ✓ | |
| ToRCH Pregnancy Immunity Testing | | |
| Cytomegalovirus | ✓ | |
| Herpes Simplex type 1 (HSV1) | ✓ | ✓ |
| Herpes Simplex type 2 (HSV2) | ✓ | ✓ |
| Rubella | ✓ | |
| Toxoplasma Gondii | ✓ | |
| Tropical Disease and Other Testing | | |
| Dengue type 1 | ✓ | |
| Epstein Barr Virus | ✓ | |
| Hepatitis A Virus | ✓ | |
| Shigella (toxin) | | ✓ |
| Cryptosporidium parvum | | ✓ |
| Giardia lamblia | | ✓ |

TABLE 1: Antigens and Control Products (e.g. Proficiency Testing) available from Microbix

Due to a multi-month production cycle, customers under contract typically order product well in advance of targeted delivery dates, with Microbix maintaining a backlog of open purchase orders. To improve its management of working capital in the face of growing demand, Microbix has been moving to partial sales deposits upon the order of product by contract customers,

with such deposits being accounted for as “deferred revenues” and totaling \$1,497,358 at September 30, 2020.

Until the advent of the COVID-19 pandemic, growth in demand for its antigen products had been accelerating as a number of diagnostic protocols for infectious diseases important to public health gain adoption in the Asia-Pacific region. Microbix’s distribution agreement for the Asia-Pacific region, as previously discussed in the Three-Year History section, positions it to capture this growth.



Microbix’s expertise in large-scale roller bottle cultures remains a mainstay of its production process even as bioreactor culture ramps up for a key product.

Based on projections from its customers, management expects that sales of antigens will continue to grow once the COVID-19 pandemic ebbs. This should provide Microbix benefits due to it having increased its capacity to make antigen using bioreactors, reallocating its traditional (e.g., roller-bottle) antigen production space, and improving its in-process controls and downstream production capacity and methods. It is still intended that these steps increase the revenue potential of current facilities while also improving margins. As a result of these efforts, management expects to grow antigen sales and improve profitability. See the preceding discussion in the Three-Year History section of this document for further bioreactor information.

Quality Assessment Products

Immunoassays using natural pathogen-derived antigens are not the only means of diagnosing diseases. In some cases, antigens can be made synthetically for immunoassays — generally where a single antigen is highly abundant and conserved within a pathogen species. In other instances, medical tests can look for the genetic material of a pathogen to identify disease — using a class of techniques called nucleic-acid amplification (e.g., PCR, polymerase chain reaction-based amplification of DNA), with tests based on such techniques broadly dubbed “molecular diagnostics.” There can be advantages to using synthetic antigens or molecular diagnostics, but for certain vital applications such as assessing maternal immunity, natural antigens such as those made by Microbix are not readily substituted.

To capture growth opportunities beyond the natural antigens market, Microbix has begun exploiting its expertise for an emerging new class of products that assist diagnostics industry participants with meeting quality objectives or requirements — broadly characterized as

quality assessment products and broadly branded as QAPs™. At present, such products comprise approximately 15% of annual sales, with that proportion expected to increase.

Microbix's quality assessment products consist of samples of pure, intact and inactivated pathogen samples (or analogues) that may also include human cells or nucleic acids (and negative "mock" samples) that are used to establish whether or not an immunoassay or molecular test is being performed properly. Such QAPs samples may be used to establish test operator/lab proficiency (as either "white label" product or under the PTDX™ line), whether a test or testing instrument is functioning properly (PROCEEDx™ and PROCEEDx™FLOQ® lines), or as part of a formal laboratory quality management system (REDx™ and REDx™FLOQ® lines). For all such usage, it is vital that the sample be like that of a real pathogen that is inactivated, stable over time, and consistent. Microbix's expertise is well-suited for the creation of such products, with longstanding success in growing and inactivating pathogens in relation to its antigens business line.

The manufacture of Microbix's quality assessment products is done according to the requirements of the ISO 13485 quality management system standard (Europe) and 21CFR part 820 (United States). Microbix was certified as compliant with the 13485 standard in December of 2018. The Company's first REDx Control products, the "REDx HPV family of controls" are unassayed (not quantitatively certified) controls intended for clinical laboratories to evaluate molecular-testing workflow performance with nucleic acid assays that detect Human Papillomaviruses (HPV) and the SARS-CoV-2 virus that causes COVID-19 disease. The REDx HPV family of controls received EU "CE mark" and U.S. FDA registrations Europe in September 2019, while Microbix registered its REDx COVID-19 products across the spring of 2020.

Microbix already has a selection of QAPs for the proficiency sub-set of applications (its PTDX line) which represented approximately 10% of its fiscal 2020 sales. Additions to its catalogue of offerings and the creation of the PROCEEDx and REDx product lines increased QAPs sales by another 5% of total sales for fiscal 2020 and are expected to continue growing. Management believes these moves will enable it to realize the full scope of opportunities for quality assessment product (QAPs) sales. Microbix's current catalogue of QAPs is set out in Table 1.

Development Projects

Microbix has two active development projects that have not generated revenues from product sales over the last three years. They are VTM (newly-undertaken in fiscal 2020) and Kinlytic® urokinase (Kinlytic).

A third development project, LumiSort™, is wholly inactive and was written-off in 2018. In 2018, Microbix assessed that its LumiSort project could not be advanced in a timely or satisfactory manner in large part due to intellectual property litigation between the largest companies in that field and into which Microbix could not risk getting entangled. Consequently, the book value of LumiSort was written down to zero in fiscal 2018.

LumiSort technology evolved from a precursor technology that Microbix acquired in 2005 and involves a wholesale reinvention of established cell selection and sorting methods (*i.e.*, of a series of techniques called “flow-cytometry”).

With LumiSort, Microbix endeavored to remove all of the limitations of conventional flow-cytometry. Inventions relating to LumiSort have been detailed in prior company disclosures and resulted in the development of robust patent families that are now fully-issued in a growing list of countries. For the time being, Microbix has maintained these patents.

Of the active development projects, Kinlytic is by far the more capital-intensive, requiring material additional investment to complete its commercialization – in amounts much greater than can be supported from the near-term free cash flow realizable from the Revenue Businesses. Accordingly, in 2017, management determined that full realization of the value of this asset would best be accomplished by partnering the project, as opposed to funding it with company resources.

Partnering efforts are ongoing in relation to Kinlytic, however in Q4 of 2020, Microbix has written-off the carried value of this asset as a result of the heightened difficulty of achieving a funded partnership for this asset caused by the COVID-19 pandemic. The drivers for this assessment are detailed earlier in this document, so discussion in this section will focus upon the nature of this project asset.

Kinlytic® urokinase

Kinlytic® urokinase for injection is an FDA-approved biologic drug that has a long history of successfully clearing blood clots in a variety of conditions — including pulmonary embolism, deep vein thrombosis, stroke, heart attack and in implanted catheters. The drug is a natural human protein that acts by activating another human protein called plasminogen, converting plasminogen to the active form plasmin that in turn dissolves the protein fibrin which forms much of the structural substance of a blood clot. It is through this mechanism that the drug dissolves clots.

Kinlytic is a low molecular weight form of urokinase, a protein naturally excreted by human kidney cells and that was developed into a drug by a major international drug company in the 1970s. Peak annual U.S. sales were estimated to be US\$275 million in 1998, principally for its two FDA-approved indications of treating pulmonary embolism and catheter-based clots. An estimated 4 million patients have been treated over the commercial history of the drug, with an excellent record of safety and efficacy.

The drug is produced by propagating small seeding quantities of donated human kidney cells into greater numbers of urokinase-excreting cells using roller-bottle cultures. Mammalian cell culture in roller-bottles is a process that has been successfully practiced by Microbix for many years, as such methods are used for the production of the host cells for its viral antigen products. It is that closely-related expertise that led Microbix to first pursue the introduction of a “biosimilar” to the original product and later, after the drug’s innovator faced regulatory

missteps, a corporate restructuring and asset divestments, to purchase all rights to the original drug in 2008.

The acquisition of all rights to the product included its U.S. “NDA” regulatory approval (now an active “BLA”), all manufacturing process information and regulatory files, along with a substantial amount of finished product inventory and raw material to produce new drug. However, the transaction did not include facilities for manufacturing, which meant that no new product could be made without a new and fully-validated manufacturing site. The purchased product inventory reached its expiration in 2009 and no Kinlytic has been available for treating patients since that time.



Microbix's Kinlytic Urokinase for injection

The need for a clot-busting drug in the U.S. has since been fulfilled by a single product, another protein-based drug called tissue Plasminogen Activator (tPA). tPA is produced by culturing of genetically-engineered (recombinant) cells from the ovaries of Chinese hamsters (CHO cells). The drug was approved for sale in the U.S. in 1996 and it has had an effective monopoly there since Kinlytic became unavailable in 2009. U.S. sales of tPA are currently estimated at over US\$1.2 billion per year, growing by approximately 10% per year via a combination of modest unit volume growth and more substantive annual price increases.

From 2008 until 2017, Microbix pursued financial partners to fund its construction of a manufacturing facility of sufficient scale to enable the reintroduction of Kinlytic urokinase for its prior systemic applications,

such as pulmonary embolism. This project would have required a large production facility, one or more large Phase III clinical trials to re-establish the clinical efficacy of the product and a process for regularly obtaining human kidney cell donations.

The economics of the product fully-justified such investment, but a high overall project cost, likely totalling US\$100 million or more, limited the list of potential partners. One such partner was secured in August of 2012, but shifting strategic priorities of the partner firm led to the project being returned to Microbix in December of 2013. Since that time, Microbix has not secured a partner to fund a full product re-introduction.

More recently, Microbix has refined its thinking around the project. The continuing monopoly for clot-busting drugs in the U.S. market has expanded the market for each clinical sub-indication to the point where it is attractive to re-introduce Kinlytic® urokinase for a single such

sub-indication — clearance of blood clots from implanted catheters. Given Microbix's status as holder of the original NDA/BLA, such a focused indication reduces the overall project cost and complexity – by reducing the scale of manufacturing requirements, the cost, risk and duration of clinical trial work, and eliminating the need for a regular source of cell donations.

In fact, when it was available, Kinlytic urokinase (under its prior brand name of Abbokinase®) was the standard of care for the clearance of blocked biomedical catheters, including catheters placed deep within the body (central venous catheters or CVCs). Millions of such venous catheters are used annually in the US for indications such as oncology, infection, nutrition and dialysis, and use of these devices has continued to grow. These types of catheters often become blocked through the deposition of blood clots inside the catheter lumen (catheter occlusion). This results in the inability to remove blood for sampling and/or the inability to infuse medications through the catheter into the body.

Specifically, catheter-related thrombosis occurs in approximately 1.5 million patients per year, indicating a high incidence of clotting given the estimated 7 to 8 million annual catheter placements. Replacement of clot-occluded catheters can cost approximately \$7,000 per patient and brings the risk of serious complications such as catheter-related bloodstream infections and catheter-related thrombosis. Both of those complications entail considerable personal and healthcare costs.

Microbix undertook to consult with the U.S. FDA in April 2017 about the refined manufacturing, clinical and regulatory plans for the re-introduction of the product into the U.S. market for the indication of clearing blood clots from catheters. Management believes that the formal feedback received from FDA was supportive, clarifies important questions about Kinlytic's return to market and greatly de-risks the project.

Following the FDA consultation, Microbix has obtained third-party quotations for the key elements of its re-introduction plan. The result of this process has been to develop an overall project cost to the filing of a supplemental BLA (sBLA) of under US\$20 million on the basis of full out-sourcing to qualified third-parties. With annual revenue potential for the targeted sub-indication estimated at over US\$200 million, the economics of the project appear very compelling for partners capable of committing US\$20 million over a three-year term.

Across fiscal 2018, Microbix perfected its detailed development plans for returning Kinlytic to the U.S. market for its catheter-clearance indication. This work has included non-confidential outreach presentations and an extensive electronic “data room” of confidential materials to support the due diligence investigations of prospective development partners. This work was completed to management's satisfaction subsequent to the fiscal 2018 year-end.

The U.S. agent engaged by Microbix has assisted in the editing and organization of partnering materials. During fiscal 2019 and 2020, the agent has been leading the program of outreaches to prospective partners, with the goal of securing an optimal agreement with an appropriately-resourced party. Many initial approaches have now been conducted and parties have entered-into, and continue to enter into, confidential discussions. The objective is for an agreement beneficial to Microbix to be concluded, although no assurances of success can be offered.

Summary of the Business of the Company

To summarize, management believes that the outlook for Microbix's antigens and controls business is positive and that increased sales, margins and profits are likely from those operations. In turn, Microbix is continuing to work toward a successful partnering of Kinlytic.

Risks and Uncertainties

The Company has exposure to credit risk, liquidity risk and market risk. The Company's Board of Directors has the overall responsibility for the oversight of these risks and reviews the Company's policies on an ongoing basis to ensure that these risks are appropriately managed, including through the use of financial instruments where appropriate. Further discussion of the management of such risks is included in note 20 to the audited consolidated financial statements for the year ended September 30, 2020.

COVID-19 Pandemic

As previously discussed, the Company's business may be negatively impacted by the COVID-19 pandemic, which has created, and continues to create, significant societal and economic disruptions. The changing and rapidly-evolving effects of the COVID-19 pandemic – the duration, extent and severity of which are currently unknown – on investors, businesses, the economy, government bodies, society and the financial markets could, among other things, add volatility to the global stock markets and change interest rate environments. The COVID-19 pandemic and measures to prevent its spread may negatively impact the Company, its customers, counterparties, employees, third-party service providers and other stakeholders, as applicable, in a number of ways, including, but not limited to, by: (i) adversely affecting the business operations of the Company, including the Company's planned sales and marketing processes for its approved products; (ii) disrupting the Company's supply chain, including the manufacture and/or delivery of its products to its customers and distributors on which the Company relies; (iii) adversely affecting local, national or international economies and employment levels; (iv) causing business interruptions, including as a result of steps taken by the Company in compliance with government recommendations and orders, such as requiring employee to work remotely, which may cause strain on such existing resources as information technology systems, and suspension of all non-essential travel; (v) disrupting public and private infrastructure, including communications and financial services, which could disrupt the Company's normal business operations; (vi) disrupting health care delivery. At this point, the extent to which the COVID-19 pandemic will or may impact the Company is uncertain and these factors are beyond the Company's control; however, any of these events, in isolation or in combination, could have a material adverse effect on the Company's business, results of operations and financial condition and the market price of the Company's securities.

The Company is exposed to business risks, both known and unknown, which may or may not affect its operations. Management works continuously to mitigate unacceptable risk, while still allowing the business to grow and prosper. These risk factors include the following:

A significant portion of antigens and QAPs sales are dependent on key clients, open borders, international transportation systems, and access to raw materials.

A significant share of the Company's sales are to a few key customers globally. These products contributed a significant share of the revenues. The loss of a key customer, or restrictions on export, import, or international transportation of its products, raw materials or insufficient marketing resources, could materially impact revenue and profitability.

Environmental, safety and other regulatory

Microbix's research and manufacturing operations involves potentially hazardous materials. The Company takes extensive precautions to appropriately manage these materials as regulated by the applicable environmental and safety authorities. Changes in environmental and safety legislation may limit the Company's activities or increase costs. An environmental accident could adversely impact its operations. Microbix's antigen products are considered a production ingredient and not directly regulated by governments in Canada or other jurisdictions. Commercialization of certain quality assessment products require approval of regulatory agencies such as the FDA, in which case Microbix will not receive revenue until regulatory approval is obtained.

Re-Launch of Kinlytic® urokinase

Microbix's goal is to re-launch this biologic clot-buster drug into the United States market. The Company has consulted with the United States FDA about the viability of its re-launch plans and secured quotations for major project tasks from third-party service providers to independently validate budgets and timelines. Outreach has been undertaken to secure project funding from development partners on the basis of the resulting re-launch plans. There is no assurance the Company will be successful in this endeavour and the COVID-19 pandemic has increased the challenges associated with partnering this project.

Quality Assessment Products in development

The Company has multiple quality assessment products under development, with the goal of building its sales of this category of product. There is no assurance that these development activities will result in the completion of new commercial products. If the Company is unable to develop and commercialize products, it will be unable to recover its related product development investments.

Product commercialization requires strategic relationships

To commercialize large market products in development, Microbix may need to establish strategic partnerships, joint ventures or licensing relationships with pharmaceutical, biotechnology or animal genetics companies. It is possible the Company may be unable to negotiate mutually acceptable terms.

Operating and capital requirements

Microbix seeks to earn a profit on the sale of its existing products, which is a major source of funding for its new product development activities. The Company believes that cash generated from operations is sufficient to meet normal operating and capital requirements. However, the Company may need to raise additional funds, from time to time for several reasons including, to expand production capacity, to advance its current new product development programs, to support various collaboration initiatives with third parties, to underwrite the cost of filing, prosecuting and enforcing patents and other intellectual property rights, to invest in acquisitions, new technologies and new market developments. Additional financing may not be available, and even if available, may not be offered on acceptable terms.

Future success may depend on successfully commercializing new products or technologies

In the nearer term, Microbix must maintain and grow its existing product sales. To survive and prosper over the longer term, Microbix may need to commercialize new products or technologies. Such work is inherently uncertain and there is no guarantee that Microbix will be successful with its efforts.

Failure to obtain and protect intellectual property could adversely affect business

Microbix's future success depends, in part, on its ability to obtain patents, or licenses to patents, maintain trade secret protection and enforce its rights against others. The Company's intellectual property includes trade secrets and know-how that may not be protected by patents. There is no assurance that the Company will be able to protect its trade know-how. To help protect its intellectual property, the Company requires employees, consultants, advisors and collaborators to enter into confidentiality agreements. However, these agreements may not adequately protect trade secrets, know-how or other proprietary information in the event of any unauthorized use or disclosure. Protection of intellectual property may also entail prosecuting claims against others who the Company believes are infringing its rights or securing its freedom to operate relative to the rights of other parties. Involvement in intellectual property litigation could result in significant costs, adversely affecting the development of products or sales of the challenged product, or intellectual property, and divert the efforts of its scientific and management personnel, whether or not such litigation is resolved in the Company's favour.

Microbix will continue to face significant competition

Competition from life sciences companies, and academic and research institutions is significant. Many competitors have substantially greater resources and general capabilities in the areas of scientific and product development, legal review, manufacturing, sales and marketing, and financial support than Microbix. While the Company continues to expand its technological, commercial, legal and financial capabilities in order to remain competitive, Microbix's competitors may also be making significant investments in all of these areas, which could make it more difficult for Microbix to commercialize its products and technologies

Financial Risk Management

The primary risks that affect the Company are set out below and the risks have not changed during the reporting periods. The list does not cover all risks to the Company, nor is there an assurance that the strategy of management to mitigate the risks is sufficient to eliminate the risk.

Risks arising from financial instruments and risk management

The Company's activities expose it to a variety of financial risks: market risk (including foreign exchange risk), credit risk and liquidity risk. The Company's overall risk management program focuses on the unpredictability of financial markets and seeks to minimize potential adverse effects on the Company's financial performance.

Risk management is the responsibility of the corporate finance function. Material risks are monitored and are regularly discussed with the Audit Committee of the Board of Directors.

Credit risk

The Company's cash is held in accounts or short-term interest bearing accounts at one of the major Canadian chartered banks. Management perceives the credit risk to be low. Typically the outstanding accounts receivable balance is relatively concentrated with a few large customers representing the majority of the value. As at September 30, 2020, five customers accounted for 74% (September 30, 2019 - five customers accounted for 78%) of the outstanding balance. The Company has had minimal bad debts over the past several years and accordingly management has recorded an allowance of \$10,000 (September 30, 2019 - \$25,625).

Trade accounts receivable are aged as follows:

| | September 30, 2020 | September 30, 2019 |
|---------------------------|---------------------|---------------------|
| Current | \$ 1,872,928 | \$ 1,602,262 |
| 0 - 30 days past due | 1,431 | 102,962 |
| 31 - 60 days past due | 732 | 4,246 |
| 61 days and over past due | 1,918 | - |
| | <u>\$ 1,877,009</u> | <u>\$ 1,709,470</u> |

Market risk and foreign currency risk

Market risk is the risk that changes in market prices, such as foreign exchange rates, will affect the Company's income or the value of its financial instruments. The Company's activities that result in exposure to fluctuations in foreign currency exchange rates consist of the sale of products and services to customers invoiced in foreign currencies and the purchase of services

invoiced in foreign currencies. The Company does not use financial instruments to hedge these risks.

As at September 30 the significant balances, quoted in Canadian dollars, held in foreign currencies are:

| | U.S. Dollars | | Euros | |
|--|---------------------|-----------|--------------|---------|
| | 2020 | 2019 | 2020 | 2019 |
| Cash | \$ 15,397 | \$ 88,820 | 1,551 | 5,223 |
| Accounts receivable | 1,186,876 | 797,352 | 273,858 | 591,454 |
| Accounts payable and accrued liabilities | 150,600 | 197,551 | - | - |

The Company's revenue and expenses by foreign currency for the years ended September 30, 2020 and 2019 are as follows:

| | 2020 | 2019 |
|-----------------|------|------|
| Revenue | | |
| Euros | 34% | 45% |
| U.S. dollars | 62% | 53% |
| Expenses | | |
| U.S. dollars | 5% | 7% |

Based upon 2020 results, the impact of a 5% increase in the U.S. dollar against the Canadian dollar would result in an increase in annual U.S. dollar based revenue of approximately \$327,900 Cdn. The impact of a 5% increase in the Euro against the Canadian dollar would result in an increase in annual Euro based revenue of approximately \$180,200. Correspondingly, the impact of a 5% decrease in the U.S. dollar against the Canadian dollar would result in a loss in annual U.S. dollar based revenue of approximately \$327,900 Cdn. The impact of a 5% decrease in the Euro against the Canadian dollar would result in a loss in annual Euro-based revenue of approximately \$180,200.

Liquidity risk

Liquidity risk is the risk that the Company will encounter difficulties in meeting its financial liability obligations as they become due. The Company has a planning and budgeting process in place to help determine the funds required to support the normal operating requirements on an ongoing basis. The Company has financed its cash requirements primarily through issuance of securities, short-term borrowings, long-term debt and debentures. The Company controls liquidity risk through management of working capital, cash flows and the availability and sourcing of financing. Based on current funds available and expected cash flow from operating activities, management believes that the Company has sufficient funds available to meet its liquidity requirements for the foreseeable future. However, if cash from operating

activities is significantly lower than expected, if the Company incurs major unanticipated expenses or the Company's borrowings are called, it may be required to seek additional capital in the form of debt or equity or a combination of both. Management's current expectations with respect to future events are based on currently available information and the actual outcomes may differ materially from those current expectations.

Interest rate risk

Financial instruments that potentially subject the Company to cash flow interest rate risk are those assets and liabilities with a variable interest rate. Interest rate risk exposure is primarily on the BDC debt that has a variable rate that is pegged to the bank rate. The rate can be fixed at the Company's option, if the outlook for interest rates should move higher. The only other variable debt the Company has is the \$2,000,000 line of credit that bears interest at the bank's prime lending rate plus 2.0%. A 1% increase in the bank rate would cost the Company approximately \$30,000 per year for BDC and about \$20,000 on the line of credit usage if it were fully used throughout the fiscal year.

Business Conduct and Ethics

The Company has a Code of Business Conduct and Ethics, which governs the behaviour of board members, management and employees. The Code is posted on SEDAR and its website at www.microbix.com. Microbix is an equal opportunity employer as set out in its Human Resources Policies and Procedures.

Dividends

Microbix has never declared dividends on its common shares. Other than the generally applicable corporate law provisions respecting the declaration and payment of dividends there are no constraints or restrictions that could prevent the Company from paying dividends.

Description of Capital Structure and Market for Securities

The Company is authorized to issue an unlimited number of Common Shares without nominal or par value.

Common Shares

The holders of the Company's Common Shares are entitled to dividends as and when declared by the board of directors of the Company, to one vote per share at meetings of shareholders of the Company and, upon liquidation, to receive such assets of the Company as are distributable to the holders of the Common Shares. All of the Common Shares are fully paid and non-assessable.

Market for Securities

The Common Shares of the Company are listed for trading on the Toronto Stock Exchange (the “TSX”) under the trading symbol “MBX”. The following charts set forth the reported high and low prices and the volume of trading of the Common Shares on the TSX for the periods indicated.

Monthly Summary — Common Shares

| Date | High | Low | Volume |
|-------------|-------------|------------|---------------|
| 9/30/2020 | \$0.27 | \$0.23 | 730,691 |
| 8/31/2020 | \$0.35 | \$0.25 | 2,914,160 |
| 7/31/2020 | \$0.34 | \$0.29 | 2,438,620 |
| 6/30/2020 | \$0.35 | \$0.29 | 4,267,990 |
| 5/31/2020 | \$0.38 | \$0.27 | 4,780,150 |
| 4/30/2020 | \$0.36 | \$0.22 | 4,293,570 |
| 3/31/2020 | \$0.27 | \$0.17 | 2,921,940 |
| 2/28/2020 | \$0.25 | \$0.20 | 2,192,540 |
| 1/31/2020 | \$0.28 | \$0.21 | 2,242,760 |
| 12/31/2019 | \$0.25 | \$0.20 | 1,476,660 |
| 11/30/2019 | \$0.25 | \$0.23 | 897,330 |
| 10/31/2019 | \$0.25 | \$0.20 | 1,765,740 |

Directors and Officers

The board of directors as of September 30, 2020 consisted of seven (7) directors to be elected annually. The following table states the names of the directors, all other positions and offices with the Company held by them, their principal occupations or employments, the period or periods of service as directors of the Company and the number of voting securities of the Company beneficially owned, directly or indirectly, or over which control or direction is maintained.

Following our fiscal year end, Founder and Executive Chairman William J. (Bill) Gastle retired effective October 15, 2020, Martin Marino was nominated to become the Independent Chairman of its Board of Directors, and Vaughn Embro-Pantaloney was nominated as Chairman of the Audit Committee. On December 7, 2020, the Company announced that Mr. Anthony Giovinazzo joined the Board of Directors and was also appointed as a member of the Audit Committee and the Human Resources, Compensation & Governance Committee.

| Name, Office and Principal Occupation | Director/Officer Since | No. of Voting Securities Owned, Controlled or Directed⁽¹⁾ |
|--|--|---|
| Peter Blecher Ontario, Canada Director Medical Director CPM-Centres for Pain Management | December 6, 2005 | 1,765,656 1.62% |
| Mark A. Cochran Virginia, USA Director Executive Director (Retired) Johns Hopkins Healthcare Solutions | October 1, 1990 to August 28, 2002 and since October 16, 2002 | 549,277 0.50% |
| Vaughn Embro-Pantalony ⁽²⁾⁽³⁾ Ontario, Canada Director Pharmaceutical Executive | February 6, 2007 | 1,450,037 1.33% |
| William J. Gastle ⁽³⁾ Ontario, Canada Director Executive Chairman Microbix Biosystems Inc. | October 1, 1990 | 5,433,836 5.00% |
| Cameron Groome ⁽³⁾ Ontario Canada Director President and Chief Executive Officer Microbix Biosystems Inc. | March 8, 2012 | 1,315,000 1.21% |
| Martin Marino ⁽²⁾⁽³⁾ Director Ontario Canada Pharmaceutical Executive | February 17, 2009 | 400,000 0.37% |
| Joseph D. Renner ⁽²⁾⁽³⁾ New Jersey, USA Director Pharmaceutical Executive | February 25, 2003 | 7,173,370 6.59% |
| Jim Currie Ontario, Canada Chief Financial Officer Microbix Biosystems Inc. | January 1, 2017 | 125,000 0.11% |
| Ken Hughes Ontario, Canada Chief Operating Officer Microbix Biosystems Inc. | June 3, 2019 | 260,000 0.24% |

Notes:

(1) The information as to voting securities beneficially owned, controlled or directed, not being within the knowledge of the Company, has been furnished by the respective directors and officers as of September 30, 2020

(2) Member of the Audit Committee.

(3) Member of the Human Resources, Compensation and Governance Committee.

Cease Trade Orders, Bankruptcies, Penalties or Sanctions

To the knowledge of Microbix, no director or officer of Microbix, or any shareholder holding a sufficient number of securities of Microbix to materially affect, its control, is or has been, within 10 years preceding the date of this annual information form, a director or officer of any other issuer which, while that person was acting in that capacity:

- was the subject of a cease trade or similar order, or any order that denied the relevant company access to any statutory exceptions for a period of more than 30 consecutive days;
- was subject to an event that resulted, after the director or officer ceased to be a director or officer, in the issuer being the subject of a cease trade or similar order
- or an order that denied the relevant issuer access to any exemption under securities legislation, for a period of more than 30 consecutive days; or
- or within a year of ceasing to act in that capacity became bankrupt, made a proposal under any legislation relating to the bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, manager or trustee appointed to hold its assets.

To the knowledge of the Company, no director or officer of the Company or any shareholder holding a sufficient number of securities of the Company to affect materially its control, or a personal holding company of any such persons has, within 10 years before the date of this annual information form, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or been subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver manager or trustee appointed to hold the assets of the director, officer or shareholder.

To the knowledge of Microbix, no director or officer of Microbix or any shareholder holding a sufficient number of securities of Microbix to materially affect its control, has:

- been subject to any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority; or
- been subject to any other penalties or sanctions imposed by a court or regulatory body that would be likely to be considered important to a reasonable investor making an investment decision.

Conflicts of Interest

Certain of the directors of the Corporation also serve as directors and officers of other companies involved in a wide range of industry sectors, including biotechnology; consequently, there exists the possibility for such directors to be in a conflict of interest.

Conflicts of interest will be subject to the applicable provisions of the Business Corporations Act (Ontario) and may result in a director abstaining from voting on a resolution of the board of directors which involves a conflict in order to have the matter resolved by the independent directors, or the matter may be presented to the shareholders of the Corporation for

ratification. When a conflict of interest arises, the directors of the Corporation must, in accordance with the applicable provisions of the Business Corporations Act (Ontario) act honestly and in good faith with a view to the best interests of the Corporation and must exercise the care, diligence and skill a reasonably prudent person would exercise in comparable circumstances.

Transfer Agent and Registrar

The Company's transfer agent and registrar is AST Trust Company, 1 Toronto Street, Suite 1200 | Toronto, ON M5C 2V6

Audit Committee Information

Members

The members of the Audit Committee on September 30, 2020 were Vaughn Embro-Pantalony, Martin Marino (Chair) and Joseph Renner, with Cameron Groome and Jim Currie participating in a non-voting capacity. Mr. Embro-Pantalony, Mr. Marino and Mr. Renner are considered independent. Mr. Groome is President and Chief Executive Officer and Mr. Currie is Chief Financial Officer. All members of the Audit Committee are financially literate.

Mr. Embro-Pantalony's background is financial and general management. He has a degree in economics, an MBA and he is a Fellow Chartered Professional Accountant. He also holds the designations Chartered Director and Audit Committee Certified. Professionally, he was CFO and General Manager in large companies including a large reporting issuer.

Mr. Martin Marino's background is legal and financial. He has a law degree and has been general counsel to companies in the pharmaceutical industry. He has had co-responsibility for financial statements related to large transactions. He has a thorough knowledge of the global industry in which Microbix practices its business.

Mr. Renner's background is principally as a senior executive in the pharmaceutical industry. He currently serves as Chairman of the Board of the U.S. division of an established international firm and has served as COO of other such firms, with more than 25 years of experience in the industry.

Mr. Groome's background is in the financial, human life sciences and animal health industries. He has held senior executive roles with life sciences companies, headed life sciences investment banking for a major national investment dealer and has over 25 years of experience as an equity research analyst, corporate advisor and director.

Mr. James S. (Jim) Currie most recently served as CFO of SMTC Corporation, a publicly-traded global electronic manufacturing services company. Previously, he was Vice President, Finance at MDS SCIEX, a global leader in life sciences and analytical technologies.

Subsequent to fiscal year end, Martin Marino became the Chairman of the Board and he relinquished his chair of the Audit Committee to Vaughn Embro-Pantalony. On December 7, 2020, Anthony Giovinazzo became a director and a member of the Audit Committee.

Auditors

The following table summarizes the fees billed to the Company for services provided by its external auditors, Ernst & Young LLP, Chartered Accountants for the fiscal year ended September 30, 2020:

| Fiscal Year | Audit Fees | Tax Fees | Other Fees |
|-------------|------------|----------|------------|
| 2020 | \$142,000 | \$3,500 | \$0 |

Audit Fees

Audit Fees were for professional services provided by Ernst & Young LLP, Chartered Accountants, for the audit of our annual consolidated financial statements.

Tax Fees

Tax Fees were for tax compliance, tax advice, tax review and tax planning professional services.

Audit Committee Charter

A copy of the Company's Audit Committee Charter can be found at Appendix "A".

Additional Information

Additional information relating to Microbix may be found on SEDAR at www.sedar.com. Additional information, including directors' and officers' remuneration and indebtedness, principal holders of the Company's securities and securities authorized for issuance under equity compensation plans is contained in the Company's information circular for the annual meeting held March 31, 2020 available on SEDAR at www.sedar.com. Additional information is provided in the Company's audited financial statements and Management Discussion and Analysis, both for the most recently completed financial year ended September 30, 2019 available on SEDAR at www.sedar.com.

Glossary

Antigen — A foreign substance which, when introduced into the body, stimulates the production of antibodies, which are part of the protective immune response. In general, disease-causing organisms, including viruses, fungi and bacteria, are antigens in humans. Microbix manufactures disease causing organisms and provides them in various forms for use in detecting infections and immune responses in diagnostic tests. For this reason, the disease-causing organisms manufactured by Microbix are often referred to as antigens.

Bioreactor — equipment for the growth of cells in relatively large numbers and in a small footprint, providing a high degree of control and monitoring of the nutrients, waste products, and growth environment.

Biosimilar — biologic medical product which is almost an identical copy of an original product that is manufactured by a different company.

BLA and sBLA — The Biologics License Application (BLA) or supplemental Biologics License Application (sBLA) is a request for permission to introduce, or deliver for introduction, a biologic product into the United States under applicable federal regulations.

Diagnostics — Tests used to help identify a disease or medical condition.

DNA — a molecule that carries the genetic instructions used in the growth, development, functioning and reproduction of all known living organisms and many viruses.

Drug Master File (DMF) — files submitted to the FDA by a drug's developer (a DMF Holder) that contain detailed confidential information about facilities, processes, controls, or articles used in the manufacturing, processing, packaging, and storing of a human drug or its components.

FDA — the U.S. Food and Drug Administration.

Immunoassay — a test that measures some aspect of the immune response to an antigen.

IVD – The abbreviation for *In-Vitro Diagnostic*. In this context meaning a “QAPs” product that is registered or licensed as a medical device for workflow support of infectious-disease assays evaluating patient samples.

NDA — The New Drug Application (NDA) is a request for permission to introduce, or deliver for introduction, a drug product into the United States under applicable federal regulations.

Pathogen — an organism, including a virus, fungus, or bacterium, that is capable of causing disease.

PCR — Polymerase Chain Reaction. A technology for the highly sensitive and specific detection of genetic material. PCR permits (among other things) the detection of disease-causing organisms in very small quantities. When used to diagnose disease, PCR is part of a group of related technologies referred to as Molecular Diagnostics.

RUO – The abbreviation for *Research Use Only*. In this context meaning a QAPs product that is not registered or licensed as a medical device for use with patient samples, but that can be used

by lab accreditation agencies, to help qualify instruments for use or train technicians, or to assist with assay development.

Thrombolytic — a protein or drug that is capable of breaking down a blood clot ('thrombus'), or more generally a protein such as Urokinase that is capable of initiating a process that leads to the breakdown of a blood clot. Thrombolytic drugs are used to treat conditions involving blockage of blood vessels in the lung (pulmonary embolism), heart (coronary artery thrombosis) or brain (ischemic stroke).

Urokinase — a naturally occurring protein enzyme capable of initiating the process leading to the breakdown of a blood clot by the degradation of the fibrin; an FDA approved drug owned by Microbix under the brand name Kinlytic® urokinase.

Trademarks

Trademarks used in this document are:

Kinlytic® (Microbix Biosystems Inc.)

LumiSort™ (Microbix Biosystems Inc.)

Microbix® (Microbix Biosystems Inc.)

PROCEEDx™ (Microbix Biosystems Inc.)

QAPs™ (Microbix Biosystems Inc.)

REDx™ Controls (Microbix Biosystems Inc.)

Appendix “A”

Microbix Biosystems Inc.

Audit Committee Charter

Role

The purpose of the Audit Committee of the Board of Directors (the “Board”) of Microbix Biosystems Inc. (the “Company”) is to assist the Board in fulfilling its responsibility for oversight of the quality and integrity of the accounting, auditing, and reporting practices of the Company, and such other duties as directed by the Board. The Audit Committee’s role includes a particular focus on the qualitative aspects of financial reporting to shareholders, on the Company’s processes to manage business and financial risk, and on compliance with applicable legal, ethical and regulatory requirements.

Membership

The membership of the Audit Committee shall consist of at least three directors who are (or within a reasonable period of time become) financially literate and generally knowledgeable in financial and auditing matters, including at least one member with accounting or related financial management expertise. Each member of the Audit Committee must be financially literate, that is having the ability to read and understand a set of financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of the issues that can reasonably be expected to be raised by the Company’s financial statements. Each member shall be independent, meaning that the member shall be free of any direct or indirect material relationship with the Company. A material relationship means a relationship that, in the view of the Board, could reasonably interfere with the exercise of the member’s independent judgment. The provisions and requirements of Multilateral Instrument 52-110 “Audit Committee” related to determining the independence of individuals shall apply to members of the Audit Committee. In addition, each member of the Audit Committee shall be an “unrelated director” within the meaning of the rules of the Toronto Stock Exchange (the “TSX”).

The Chair of the Audit Committee shall be appointed by the full Board.

Communications and Reporting

The Committee is expected to maintain free and open communication with the external auditors, the internal accounting staff, and the Company’s management. This communication shall include private executive sessions, at least annually, with each of these parties. The Committee chairperson shall report on Audit Committee activities to the full Board.

Authority

In discharging its oversight role, the Audit Committee is empowered to investigate any matter brought to its attention, with full power to retain outside counsel or other advisors and experts for this purpose. The Audit Committee shall be empowered to set and pay the compensation for any such advisors employed by the Audit Committee. The Audit Committee shall have the authority to communicate directly with the internal and external auditors of the Company.

Responsibilities

Oversight

The Audit Committee is directly responsible for overseeing the work of the external auditor engaged for the purpose of preparing or issuing an auditor's report or performing other audit, review or attest services for the Company, including the resolution of disagreements between management of the Company and the external auditor regarding financial reporting.

Recommend Auditor

The Audit Committee must recommend to the Board the external auditor to be nominated (subject to shareholder approval) for the purpose of preparing and issuing an auditor's report or performing other audit, review or attest services for the Company and the compensation of the external auditor.

Pre-Approve Non-Audit Services

The Audit Committee must pre-approve all non-audit services to be provided to the Company (or any of its subsidiary entities) by the Company's external auditor.

Review Financial Disclosure

The Audit Committee must review the Company's financial statements, management's discussion and analysis (MD&A) and annual and interim financial press releases before the Company publicly discloses this information.

The Audit Committee must be satisfied that adequate procedures are in place for the review of the Company's public disclosure of financial information extracted or derived from the Company's financial statements, and must periodically assess the adequacy of those procedures.

Whistle Blower Procedures

The Audit Committee must establish procedures for the receipt, retention and treatment of complaints received by the Company regarding accounting, internal accounting controls or auditing matters and the confidential, anonymous submission by employees of the Company of concerns regarding questionable accounting or auditing matters.

Reliance on Management and Auditors

The Audit Committee relies on the expertise and knowledge of management, the internal auditors, and the external auditor in carrying out its oversight responsibilities. Management of

the Company is responsible for determining the Company's financial statements are complete, accurate, and in accordance with generally accepted accounting principles. The external auditor is responsible for auditing the Company's financial statements. The Audit Committee should assure itself that the Company's internal policies, procedures and controls are adequate and are being implemented and followed.

Relationship with Auditors

The Audit Committee is also responsible for ensuring that the Company's external auditors submit on a periodic basis to the Committee a formal written statement delineating all relationships between the external auditors and the Company and actively engaging in a dialogue with the external auditors with respect to any disclosure relationships or services that may impact the objectivity and independence of the external auditors and for taking appropriate action to ensure the independence of the external auditors within the meaning of applicable Canadian law.

The Audit Committee must review and approve the Company's hiring policy regarding partners, employees and former partners and employees of the present and former external auditor of the Company.

Guidelines for Audit Committee

With respect to the exercise of its duties and responsibilities, the Audit Committee should, among other things:

- report regularly to the Board on its activities, as appropriate;
- exercise reasonable diligence in gathering and considering all material information;
- remain flexible, so that it may be in a position to best react or respond to changing circumstances or conditions;
- understand and weigh alternative courses of conduct that may be available;
- focus on weighing the benefit versus harm to the Company and its shareholders when considering alternative recommendations or courses of action;
- if the Audit Committee deems it appropriate, secure independent expert advice and understand the expert's findings and the basis for such findings, including retaining independent counsel, accountants or others to assist the Audit Committee in fulfilling its duties and responsibilities; and
- provide management and the Company's independent auditors with appropriate opportunities to meet privately with the Audit Committee.

Meetings

The Audit Committee shall meet with such frequency and at such intervals as it shall determine is necessary to carry out its duties and responsibilities. As part of its purpose to foster open communications, the Audit Committee shall meet at least annually with management and the Company's external auditors in separate executive sessions to discuss any matters that the Audit Committee or each of these groups or persons believe should be discussed privately. In addition, the Audit Committee should meet or confer with the external auditors and

management to review the Company's interim consolidated financial statements and related filings prior to their filing with the Ontario Securities Commission, or any other regulatory body. The Chairman should work with the Chief Financial Officer and management to establish the agendas for Audit Committee meetings. The Audit Committee, in its discretion, may ask members of management or others to attend its meetings (or portions thereof) and to provide pertinent information as necessary. The Audit Committee shall maintain minutes of its meetings and records relating to those meetings and the Audit Committee's activities and provide copies of such minutes to the Board to be included in the minute books of the Company.

Disclosure and Review of Charter

This Charter shall be published in the Company's annual report, information circular or annual information form of the Company as required by law. The Audit Committee should review and assess annually the adequacy of this Charter as required by the applicable rules of the TSX or applicable Canadian securities regulators.