MICROBIX BIOSYSTEMS INC.

ANNUAL INFORMATION FORM

For the financial year ended September 30, 2012

December 28, 2012


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", "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; FDA marketing application process; 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. On April 1, 2009, Microbix Barbados Limited was incorporated in the Barbados and on June 9, 2010, Crucible International Biotechnologies Corp. was incorporated in Ontario. Both wholly owned subsidiaries were formed for future purposes related to the

influenza vaccine business. At September 30, 2012, neither subsidiary had any business activity.

## General Development of the Business

Microbix Biosystems Inc. (TSX: MBX), is a biotechnology company with a Virology Products business, that is also engaged in commercializing a pipeline that includes VIRUSMAX™ (virus yield enhancement technology), LumiSort (sperm sexing technology) and the thrombolytic drug, Kinlytic® (urokinase for injection). The pipeline is funded primarily with income earned from the Virology Products business, run out of our owned and operated headquarters facility at 265 Watline Avenue in Missisauga. The Virology Products business generates sales of cell culture based infectious disease products, licenses cell culture based technologies, and engages in contract development work in microbiology. The development of pipeline technologies is supported by technical expertise from the Virology business. The Company makes annual investments in the Virology business to improve manufacturing processes and develop new products. Additional funding for research and development, when required, is sourced from equity and/or debt.

### *Three Year History*

Microbix developed expertise in manufacturing Urokinase over a number of years which included collaborations with three companies, as has previously been reported. In 2008, Microbix completed the acquisition of the US FDA approved Abbokinase NDA, rebranded Kinlytic®, making Microbix the only global source of low-molecular-weight cell culture derived Urokinase.

In August 2012, the Company reached an agreement with Zydus Cadila, a global pharmaceutical manufacturer with headquarters in Ahmedabad, India, licensing all its rights and expertise relating to Kinlytic®. Zydus Cadila became responsible for all further investments, including regulatory, product development, manufacturing and marketing. Zydus Cadila will transfer manufacturing to its own biologics facility, which permits Microbix to avoid major manufacturing scale-up and validation costs. Microbix will also receive significant royalties on all sales of Kinlytic®, plus a multi-million dollar milestone payment upon Zydus Cadila's achievement of $100 million in annual sales.

Egg based manufacturing processes are the major source of licensed influenza vaccine in the world and expected to remain a key source of the vaccine supply in the future. The company's egg-based influenza manufacturing technology, VIRUSMAX, is the subject of patents that have been granted in a broad geographic region. The performance of the technology was demonstrated by an independent laboratory, and published in the journal Vaccine in May 2007.

Microbix' influenza vaccine manufacturing technology has evolved to include detailed plans for the construction of manufacturing facilities, and Microbix is consequently well positioned for the creation of new vaccine manufacturing ventures in markets where

demand warrants. Over the past year, discussions regarding the location and financing of a new manufacturing venture have progressed, and the Company expects to reach agreements in Fiscal 2013.

Since entry into the animal reproduction market, the development of the Company's semen sexing technology, LumiSort, has progressed significantly with the filing of patent applications covering new cell sorting technologies, and with engineering validation studies providing proof of concept for the LumiSort design. The product for animal reproduction technology offers a near term opportunity for producers to improve and expand selection of sex for animal reproduction in dairy and beef cattle, and swine. Semen sexing has the potential to a large market without regulatory barriers to entry.

Microbix has undertaken to prosecute its intellectual property portfolio in countries worldwide where significant livestock industries exist. The company is progressing on its plan to finance the construction and testing of the method and instrument, and has signed term sheet agreements with companies in the artificial insemination industry representing over 40% of semen sales globally.

Microbix' core business has continued to establish a profitable business in Virology Products as our market share in diagnostic microbiology biologicals increased. Revenue from this business is used to support the Company's development activities for its large market product pipeline.

The Virology Products business continues to grow year-over-year. In fiscal 2012, revenues were $6,669,789 ($6,228,292– 2011), an increase of 7.1%. The Company recorded a loss in fiscal 2012 of $2,636,800 ($2,566,094 loss in 2011), due to ongoing investment in the development pipeline.

Microbix raised capital in the fourth quarter fiscal 2009 $752,275.65 by private placement resulting in the issue of 2,149,359 Units at a price of $0.35 per unit. The investors comprised a syndicated group of biotech investors. The financing was non-brokered. A total of 2,149,359 Units, each Unit comprised of one common share in the capital of Microbix Biosystems Inc. and a common share purchase warrant, have been issued. Each whole warrant will entitle the holder to purchase one additional common share at an exercise price of $0.55 with an eighteen month expiration date. In connection with the private placement, Microbix issued 300,000 warrants as a finders' fee. Each warrant entitles the holder to purchase one common share at a price of $0.35 for a period of 18 months. The Company has used the proceeds of the private placement for general corporate purposes. The Unit shares and warrants and the finders warrants are subject to hold period of four months and one day.

On February 12, 2010 Microbix raised gross proceeds of $1,300,000 by way of a private placement on the issue of 3,714,286 common shares priced at $0.35 per share. In connection with this private placement, Microbix issued 211,000 finder's warrants. Each warrant entitles the holder to subscribe for one common share at $0.37 for a period of 18 months.

On September 9, 2010 Microbix raised gross proceeds of $752,276 by way of a private placement on the issue of 2,149,359 units. Each unit was priced at $0.35 and consisted of one common shares and one common share purchase warrant. Each warrant entitles the holder to subscribe for one common share at $0.55 for a period of 18 months.

On December 6, 2010 Microbix raised gross proceeds of $600,250 by way of a private placement on the issue of 1,715,000 units. Each unit was priced at $0.35 and consisted of one common shares and one common share purchase warrant. Each warrant entitles the holder to subscribe for one common share at $0.55 for a period of 18 months. A total of 115,000 finder's warrants were issued. Each finder's warrant entitles the holder to purchase 1 common share at $0.37 for 18 months.

On March 31, 2011 the first tranche of a private placement offering of 400,000 units at a price of $0.35 per unit for gross proceeds of $140,000. Each unit consists of one common share of Microbix and one-half common share purchase warrant. Each Warrant entitles the holder to purchase one additional common share at an exercise price of $0.45 for a period of 24 months. Commission of 7% or $9,800 was paid and a total of 28,000 finder's warrants were issued with an exercise price of $0.45 for a period of 24 months. Securities issued are subject to a hold period of four months plus a day. Each finder's warrant entitles the holder to purchase one common share at $0.45 and has one-half common share purchase warrant. The expiry date of the warrants was subsequently changed to April 19, 2013 to match the second tranche terms.

On April 19, 2011 the second tranche of a private placement offering of 1,650,000 units at a price of $0.35 per unit for gross proceeds of $575,500. Each unit consists of one common share of Microbix and one-half common share purchase warrant. Each Warrant entitles the holder to purchase one additional common share at an exercise price of $0.45 for a period of 24 months. Commission of $24,500 was paid and 70,000 finder's warrants were issued each finder's warrant entitles the holder to purchase a Unit at a price of $0.42 for a period of 24 months. Securities issued are subject to a hold period of four months plus a day.

On June 14, 2011, 1,237,000 options were issued to employees of the Company. The options have a three year vesting period, with a five year term and an exercise price of $0.36 per common share.

On July 6, 2011, the first tranche of a private placement offering of 600,000 units at a price of $0.35 per unit for a gross proceeds of $210,000. Each unit consists of one common share of Microbix and one-half common share purchase warrant. Each Warrant entitles the holder to purchase one additional common share at an exercise price of $0.45 for a period of 24 months. Securities issued are subject to a hold period of four months plus a day.

On August 3, 2011, the second tranche of a private placement offering of 1,026,452 units at a price of $0.35 per unit for gross proceeds of $359,258.00. Each unit consists of one

common share of Microbix and one-half common share purchase warrant. Each warrant entitles the holder to purchase one additional common share at an exercise price of $0.45 for a period of 24 months. Securities issued are subject to a hold period of four months plus a day.

On December 5, 2011, Microbix closed its previously announced public offering of Units. A total of 2,241,158 Units were sold at a price of $0.20 per Unit, for gross proceeds of $448,231. Each Unit consisted of: one common share in the share capital of Microbix; one half of one common share purchase warrant entitling the holder to purchase one additional Common Share with an exercise price of $0.25 for a period of five years from the date of closing; and one common share purchase warrant entitling the holder to purchase one additional Common Share with an exercise price of $0.24 for a period of three years after the date of closing of the offering.

On March 29, 2012, a private placement financing resulted in the issuance of 2,893,516 Units at a price of $0.27 per Unit for gross proceeds of $781,250. Each Unit consisted of one common share of Microbix and one common share purchase warrant. Each whole Warrant entitled the holder to purchase one additional common share at an exercise price of $0.40 for 24 months. Four insiders of the Company participated in the financing by purchasing an aggregate of 499,999 Units. The financing was non-brokered. An aggregate of 97,125 Finders Warrants were issued. Each Finders Warrant entitled the holder to purchase one Unit at a price of $0.36 per Unit for a period of 24 months. The securities issued in the private placement were subject to a hold period of four months and one day from the date of issue.

On June 29, 2012, a private placement financing resulted in the issuance of 1,806,332 Units at a price of $0.30 per Unit for gross proceeds of $541,900. Each Unit consisted of one common share of Microbix and one common share purchase warrant. Each whole Warrant entitled the holder to purchase one additional common share at an exercise price of $0.33 for 24 months. One Insider of the Company participated in the financing by purchasing an aggregate of 500,000 Units. The financing was non-brokered. A total of 193,876 Finder's Warrants were issued, and the Company paid a cash commission of $1,743. Each Finder's Warrant entitled the holder to purchase one Unit at a price of $0.33 for a period of 24 months. The securities issued in the private placement were subject to hold period of four months and one day from the date of issue.

On October 29, 2012, a private placement financing resulted in the issuance of 1,050,000 Units at a price of $0.30 per Unit for gross proceeds of $315,000 to be used for operating capital. Each Unit consisted of one common share of Microbix and one common share purchase warrant. Each whole Warrant entitled the holder to purchase one additional common share at an exercise price of $0.33 for 24 months. Two Insiders of the Company participated in the financing by purchasing an aggregate of 250,000 Units. The financing was non-brokered. A total of 192,000 Finder's Warrants were issued, and the Company paid a cash commission of $2,100 in connection with the private placement. Each Finder's Warrant entitled the holder to purchase one Unit at a price of $0.33 for a period

of 24 months. The securities issued in the private placement were subject to hold period of four months and one day from the date of issue.

## *Significant Acquisitions*

Virology Business Manufacturing Facility

Acquisition of a new building for location of the core products business manufacturing was completed in April 2008 following the equity financing in November 2007 for that purpose. The design and construction of the new facility was initiated in 2008 and manufacturing operations began in April 2009. The facility significantly increased the capacity needed to serve increased demand and has enabled growth in fiscal years since launch of operations production started.

Urokinase

Microbix completed the acquisition of the only approved LMW Urokinase product on the market in the US in late fiscal 2008. The product was on the market in the US until 2009. This major acquisition transforms Microbix into a biopharmaceutical company with this US FDA approved hospital injectable product which has been widely distributed in major centers throughout the US over a number of years. The Urokinase assets from Abbott Laboratories included the approved NDA, all intellectual property and raw materials as well as trademark, Kinlytic®. Financing for the acquisition was raised through private placement of convertible debt.

The Company is progressing with plans to commercialize the assets under the terms of our licensing agreement with Zydus Cadila. The market in 1998 was $300 million and the market potential for Urokinase in the US remains large in the opinion of Zydus' and Microbix' management. Future growth of the market is envisioned with the possibility of launching two new indications related to biomedical catheters.

# Business of the Company

## *General*

Microbix Biosystems Inc.'s mandate is research and development, and commercialization, through global marketing partners, of biological products and technologies. The Company has a pipeline of products, including Virus Manufacturing Technology, (VIRUSMAX™), semen sexing technology (LumiSort) and the thrombolytic drug Urokinase. All of these developments result from and are supported by the activities and technological expertise and revenues within the Virology Products business. The Company continues to invest in the expansion of the Virology business to increase production capacity, continuously develop improved manufacturing techniques and to research new products.

The research and development activities are funded primarily with income earned from the sale of the Company's Virology Products, licensing of cell culture based technologies, and development contracts. Additional funding, when required, is sourced from additional equity and/or debt.

## *Urokinase*

On September 23, 2008, the Company acquired the only other Low Molecular Weight (LMW) Urokinase to its product portfolio from the Company that had acquired it from Abbott. The acquisition of the Kinlytic assets has enabled the Company to enter into a commercial relationship with Zydus Cadila for the reintroduction and licensing of the drug worldwide, which will open the opportunity for future growth with anticipated new indications for the drug. Kinlytic will be produced for the U.S. market and approval will subsequently be pursued in other markets around the world.

**Urokinase in the Thrombolytics Market**

In 1998 Abbott Laboratories' Urokinase products represented half the total market for thrombolytic drugs in the United States. Abbott's product Abbokinase™ was the leading product used in hospitals to treat patients with peripheral clots (Peripheral Occlusive Disease) with 93% of the sales in the category at $206 million.1 Abbott's product Abbokinase Open-Cath™ held 100% of the catheter clearance market with sales of $68 million. Abbokinase and Open-Cath sales totalled $274 million. The other main thrombolytics, Genentech's Activase® (tPA) and Centocor's Reteplase® occupied the other half of the market in coronary category where products are used for treatment of heart conditions (AMI). Streptokinase products occupied less than 1% of the market. Sales of all non-Urokinase thrombolytics totalled $273 million in the year.

Microbix' Urokinase program will now focus on the transfer of the Kinlytic manufacturing process to Zydus Cadila, and on the completion of regulatory files and approvals for the site transfer and reintroduction. Going forward, the Company will continue clinical development of the product for indications beyond the currently-approved use in peripheral occlusive disease.

Urokinase for Multiple Indications

Kinlytic® (Urokinase for Injection) is indicated for the treatment of acute massive pulmonary embolism. Urokinase has been used in more than 4,000,000 patients over the past 25 years and has an exemplary safety record.

[1] Market information in this section is from IMS

Urokinase for Biomedical Catheters

Urokinase has been used for many years to dissolve blood clots in the cardiovascular system. It has also previously been approved and used to clear clots from blocked biomedical catheters. After the relaunch of Kinlytic in the marketplace in collaboration with Zydus Cadila, approval of a catheter indications will be pursued.

**Catheter Clearance**

Urokinase was the standard of care for the clearance of blocked biomedical catheters, including catheters placed deep within the body (Central Venous Catheters or CVCs). Over 5 million catheters are placed in patients annually in the US for indications such as oncology, infection, nutrition and dialysis. Use of these devices is growing as medical treatments continue to become more sophisticated and disease rates climb. 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 though the catheter into the body. Urokinase is a fibrinolytic enzyme that breaks down blood clots, and has a demonstrated capability of restoring flow to these devices, thereby preventing the need for expensive and traumatic catheter replacement.

The reintroduction of Kinlytic to the market for this indication will be achieved with minimal regulatory risk as this product, and its regulatory file, have previously been approved by the FDA for catheter clearance. Catheter-related thrombosis occurs in approximately 1.5 million patients per year. Replacement of occluded catheters can be difficult for patients and can cost up to $7,000 per patient. Treatment with Kinlytic will offer a safe, cost effective approach to management of an occlusion and resumption of treatment for the patient.

**Catheter Prophylaxis**

Serious complications can result from the placement of CVCs in patients. They include catheter-related bloodstream infections (CRBSI) and catheter-related thrombosis (CRT). Both of these conditions represent a huge personal and healthcare cost. CRBSI and CRT are both linked to the deposition of fibrin on biomedical catheters. Fibrin from the blood deposits on the surface of the catheter giving bacteria and blood clots the opportunity to grow on the fibrin lattice. Urokinase breaks down the fibrin lattice and, based on previously performed clinical studies, reduces the frequency of both CRBSI and CRT.

The fact that more than 5 million catheters are placed annually in the US shows the potential size of the catheter management market. About 87% of bloodstream infections are catheter-related. Between 200,000 and 400,000 CRBSI incidents occur per year leading to approximately 30,000 deaths. The cost of treatment is estimated at up to $2.3 billion in the US alone. By using Kinlytic as a prophylactic, Microbix expects to offer significant cost savings to the healthcare market.

## *Vaccine Technology (VIRUSMAX™)*

This proprietary vaccine manufacturing technology is the second major product in the pipeline. The technology provides for a state of the art manufacturing process for the production of influenza vaccine.

The Discovery and the Technology

Microbix manufactures influenza antigen for the diagnostic market its core business. The Company discovered that yields of influenza virus from the egg could be significantly improved by liberating virus from particulate matter in the egg, commonly referred to as 'debris', that is usually discarded as a waste by-product. Microbix developed a proprietary process to liberate additional virus from the debris so that it could be used to produce vaccine. The method developed has been validated to produce an increase in yield for influenza virus produced in eggs.

Microbix has been granted patents in the US, Canada, India and Australia and China. Additional countries are expected to grant the patent.

Microbix is in discussions with governments in emerging economies that are interested in establishing domestic manufacturing capacities for influenza vaccine that would be used for national immunization programs. The Company is considering technology licenses for vaccine manufacturers.

## *The Influenza Vaccine Market*

The market for seasonal influenza vaccine is US$3.5 billion and growing, and is global in nature. The market for pandemic H1N1 vaccine in 2009 has recently been reported to be in excess of $5.5 billion (Fierce vaccines December 2009, Global Vaccine Market Review December 2009). The worldwide capacity of influenza vaccine is only 500 million doses and governments and industry are searching for ways to increase capacity. Consistent with Microbix' criteria for products selected for development, the Vaccine Technology is expected to have a limited regulatory process prior to market launch.

## *LumiSort™, the Third Large Market Product in the Pipeline*

LumiSort has the potential to enable the producers of dairy and beef animals to predetermine the sex of offspring prior to conception, thereby maximizing productivity, profitability, and genetic potential. In virtually every sector of commercial animal breeding there is the clear preference for one sex over the other. This technology fits well with the Company's core expertise in biological development and manufacturing. Microbix will enter the market through an existing distribution network, the Artificial Insemination ("AI") industry supplying animal producers with semen.

AI is the process by which a dairy or beef producer inseminates a female animal with semen from the male animal of its choice via artificial means. The animal producer purchases semen from AI companies. AI breeding companies collect semen from animals which possess superior genetic traits. For cattle, semen is processed, stored in plastic containers ("straws"), and then sold to producers. Frozen cattle semen can be stored indefinitely and transported to virtually any region of the world. For swine, semen freezing is difficult so semen is sold unfrozen, usually within a limited geographic area.

AI is in general a much more efficient and cost effective production system than natural insemination, as it enables food animal producers to access the genetics of the very best male animals without actually owning such animals. The global AI industry is already large and well established. Microbix estimates current global semen sales to be approximately $2.5 billion per year in OECD countries alone. For cattle, the dairy industry is the largest AI market segment with approximately $1.5 billion per year in sales, followed by beef at approximately $150 million per year in sales. Microbix will license to the AI industry and generate revenue from royalties on total semen sales.

The technology is expected to enable farmers to purchase a dose of semen for use in an AI breeding program that will produce either a "male" or "female" offspring with a high degree of reliability.

Microbix implemented the research program of this promising technology in 2006. Significant activity has been undertaken on this project. The research program was completed in April 2009 with the result that patent applications for novel inventions were filed for global exclusivity in June 2009.The first patent was granted by the USPTO in July 2011.

In July 2006, Microbix established a number of key global distribution agreements for the SST Semen Sexing Technology for the dairy, beef and swine industries representing 13% of the market for semen doses sold worldwide, and most importantly, 25% of the dairy market. The total revenue for premium priced sexed semen sold by these companies is expected to exceed $350 million by 2010. Microbix will retain a 15% royalty or minimum unit price whichever is higher, on sales of all semen treated by SST.

The signed companies, based in Europe, North America and Australasia, represent a significant sales presence in all major markets around the world.

Competition and Approval

The Company is aware of only one active competitor, Sexing Technologies. Sexing Technologies has modified an instrument called a FACS (Fluorescent Activated Cell Sorter) and uses a chemical dye to separate sperm cells based on small size differences in DNA content between the X chromosome and Y chromosome bearing sperm cells. The process using this technology inherently damages significant quantities of sperm cells and it can only be used in virgin heifers (about 1/3 of the dairy market). The technology is reported to lead to reduced fertilization rates. Notwithstanding, it is the only

technology available for sexing semen and the market has adopted it for use in niche markets. A premium price of at least twice that of unsorted sperm is charged for sexed semen. The technology has poor recovery of saleable sperm cells, affecting the economics of the AI distributor. In 2008, the dairy industry suffered a setback in the US market as costs for fuel and fertilizer rose sharply and concomitantly milk prices slumped as the economy faltered. In 2012 the situation was similar with a severe drought decreasing the supply of feed across North America. The US is one of few countries in the world without milk marketing monopolies, like Canada and European countries, set up to protect producers from unstable markets. In spite of this, the demand for sexed semen is expected to recover and continue to command premium pricing again, as producers rebuild their herds in future years.

LumiSort technology does not involve genetic modification, is non-invasive, does not affect the motility of viability of the sperm cells, and like the Sexing technologies technology, the Company believes LumiSort will not require regulatory approval.

## *Virology Products*

Microbix' Virology business, ("Virology") is used by large multinational customers in the diagnostic industry to manufacture their finished products. Our products are based on the disciplines of cell culture, bacteriology, virology, protein purification, and protein characterization. Microbix' has expanded into other biologics market sectors based on these core competencies. Profits from Virology are used to invest in the Company's product pipeline.

Products in this category are sold primarily to customers located primarily in Europe, the United States and Asia. The majority of sales are made directly to clients and product is shipped by air freight from Toronto. Virology sales contributed 99% of total sales in 2008 and 2009, 95% in 2010 and 78% in 2011 and 80% in 2012. Pharmaceutical grade water products decreased as a percentage of virology sales from 17% in 2011 to 11% in 2012.

In late 2007, the Company raised equity capital to build more manufacturing capacity for Virology. In 2008, a new facility was acquired in the Toronto area. Construction of the new laboratories finished in April 2009 and the new plant operations began immediately. The facility at 265 Watline Avenue in the city of Mississauga, Ontario, has been in full operation since that time, and our increased capacity has helped the company to supply its customers worldwide.

Microbix monitors technological and epidemiologic trends in the diagnostic and infectious disease markets, and continually develops new specialty biologicals as opportunities occur. The product line currently includes key human disease antigens such as influenza virus, Hepatitis viruses, Rotavirus, Epstein Barr Virus, Dengue Fever, Rubella virus, and Cytomegalovirus virus. These antigens are the Company's major commercial products from a comprehensive catalog that numbers over 40 products sold to over 100 customers worldwide.

## Materials for Research and Manufacturing

Working closely with the technology originators at McMaster University, Hamilton, Ontario, Microbix established a successful product line in molecular adenovirology. These products are used for construction of virus vectors for the study of cell signalling, protein production, vaccine development and gene therapy applications.

The Company licensed a recombinant Rabies vaccine derived from the McMaster collaboration to the Province of Ontario, Ministry of Natural Resources for the manufacture of vaccine for Ontario's eradication program for raccoon and fox rabies, endemic in the Province. The Company earns minimal royalties on this business annually. The Ministry's program advanced through laboratory testing and entered field trials with nearly 300,000 vaccines distributed in 2006. Revenue is now being generated in eradication programs in Canada and one just started in the US from this out-licensed technology will increase when the vaccine is approved.

Pharmaceutical Grade Water For Injection

Water for Injection (WFI) is a vital part of pharmaceuticals manufacturing. The WFI pharmaceutical water products were developed by Microbix and following a successful launch of these products, partnered with a third party to provide the manufacturing capacity needed to support projected growing market demand. Microbix has been a purchaser of bulk WFI for many years.

The Company has been supplying sterile packaged WFI water. Customers include biotechnology and pharmaceutical companies that do not have their own supply of this key raw material. This product may be used for further manufacturing to pharmaceutical products directly such as USP monographed water, USP Water for Irrigation, a water used in hospitals for things such as wound cleansing. Other uses may include incorporation of the product into biopharmaceutical and pharmaceutical processes, production of tissue culture media and purification reagents, facility cleaning and for research purposes.

The Company accesses markets for all its products through partners with a franchise in its business. The Company has signed distribution agreements with three large US based distributors. These companies supply many clients in the US.

## *Other Biotherapeutic Developments*

Microbix is approached with product and technology opportunities from the biologics industry. The Company selects some of these opportunities for evaluation and proceeds with licensing discussions if the product or technology is a good fit with Microbix' core competencies and if the development can be financed.

## *Human Resources Skills and Availability*

The Company currently has 44 employees engaged in research and development, manufacturing, and selling and administrative roles. The Company has had good success in attracting qualified technical and management staff to support its development and manufacturing efforts. Microbix expects this will continue in the future.

Raw Materials

Microbix either acquires raw materials and components for its manufacturing operation from a number of alternative suppliers or manufactures its own raw materials for rare reagents. The Company has no supply problems that would affect its business today. Pricing is competitive for most of these materials and readily available. A key raw material, used to produce Urokinase, is sourced under the control of Microbix and not dependant on suppliers or outside vendors. Generally, the Company has reliable suppliers and has access to materials it needs for its business activities.

## *Business Cycles*

Microbix' sales are not cyclical in nature, but there are normal fluctuations on a quarterly basis due to timing of customer orders, and changes due to the receipt of research and development contract revenues.

## *Social and Environmental Policies*

To the best of the Company's knowledge, all of the Company's facilities and policies are in compliance with environmental and occupational health and safety legislation.

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

## Risk Factors

A number of risk factors known and unknown may affect the operations of Microbix. You should consider the following and all of the other information included in this document and in other documents incorporated by reference herein or otherwise filed on Sedar when considering investing in the securities of the Company.

Dependence on Key Clients

The bulk of the Company's sales of specialty biologicals are made to an increasing number of key customers. However, the loss of two or three key customers could significantly adversely affect revenue and profitability.

Hiring of qualified staff to support growth

The Company must be able to hire qualified staff in management, scientific and technical roles if it is to grow its business. There are no assurances the Company can attract or retain qualified personnel. The Company competes with other well financed biotechnology and pharmaceutical companies for qualified staff.

Environmental and Safety Regulations

The Company's research and manufacturing operations involve hazardous materials. We believe we take necessary precautions to appropriately contain such materials in our operations. We are required to comply with applicable environmental and safety regulations. Changes to environmental and safety legislation may limit our activities or increase our costs. An environmental accident may have adverse consequences for our operations.

Dependence on open borders and international transportation systems

Microbix'customers for specialty biologicals are primarily located outside Canada and as such the Company ships its Virology products internationally. The Company depends on open borders and international transportation systems to sell and deliver its products. These products contributed more than 95% of revenue from 2008 through 2012. Restrictions on export or import, or on international transportation of Company products could significantly adversely affect our business.

Competitive Conditions

Microbix competes in three markets, biopharmaceuticals, vaccines and virology products for the medical diagnostics industry. There are a small number of virus antigen suppliers worldwide. The majority of these products have been traditionally supplied by in-house manufacturing departments of large diagnostic manufacturers.

Large pharmaceutical and biotechnology companies have identified smaller companies as the source of new biological products for new candidates to grow their businesses. Microbix competes for financing of its product development projects among numerous options available to large potential partners. The partner company assists with funding and key commercialization steps, including sales and marketing. Microbix' lead drug in this category is Urokinase. The Company has identified a partner, Zydus Cadila, to support the return to market of Urokinase in existing and new therapeutic indications. Delays in the technology transfer or in obtaining regulatory approvals may delay the

timeline for market launch. While there are no other potential suppliers of Urokinase currently in development to the knowledge of the Company, there is no guarantee that this will remain the case.

Regulatory

Microbix' Virology products and Water-For-Injection products are regulated when customers products are submitted for approval in markets. The Company's products are are not regulated directly by governments in Canada or other countries. Commercialization of biopharmaceutical products, including Microbix' lead product Urokinase, requires approval of regulatory agencies such as the UFDA. Urokinase cannot be distributed until regulatory authorization is obtained from the US FDA, Health Canada or other national regulators to do so. Regulations and their administration may delay the reintroduction of Microbix' therapeutic products into market.

Microbix' LumiSort product will serve the artificial insemination market which is not regulated by government authorities.

The Company relies on regulations remaining as currently administered and cannot control changes that may occur in any country or in changes to product review by regulatory authorities currently not done.

Dependence on core product sales to fund research and development

The Company depends on revenue from sales of its Virology Products, WFI sales and contract manufacturing revenue to fund research and development activities. While sales of these products and services to the medical diagnostic and biotechnology industries have increased, the profitability and ability to fund research and development, and commercialization of other products, depends on Microbix' ability to continue to sell these products and services and continue to increase revenues and gross profits. The industry is constantly changing and the Virology Products may require re-development beyond the technical capability of the Company resulting in a loss of revenue used for development.

Products in development

Most of the products in the Company's development pipeline are at a late development stage. It is impossible to ensure that research and development activities will result in the completion of these products. If the Company is unable to develop and commercialize products Microbix will be unable to recover the research and development and other expenses incurred and not achieve revenue projections in the years ahead.

Commercialization of Kinlytic™

The Company is dependent upon the decisions and processes of third parties including Zydus Cadila to produce and market Kinlytic successfully.

Kinlytic site transfer and reintroduction may not be successful or may not result in regulatory approval to market the product, and if approved may not meet projected sales or revenues to the Company.

Vaccine Technology

The market for the Vaccine Technology, VIRUSMAX™ is limited to a small number of flu vaccine manufacturers and certain emerging market governments. The Company is also commercializing its technology through licensing to third parties that will incorporate the technology into a new vaccine manufacturing business. Such a venture requires capital to construct and validate a new manufacturing facility having international standards. There is no assurance the financing can be obtained, that the facility will meet regulatory approval internationally or that the third party will complete the work and have the vaccine, incorporating VIRUSMAX, reach the market.

LumiSort™

LumiSort may not reach the market. The Company may not be able to demonstrate separation of sperm based on the X and Y chromosomes using the invention known as LumiSort. The Company may not be able to obtain or maintain patents for LumiSort resulting in a potential loss of an exclusive market. LumiSort instruments for separating sperm cells at a commercial scale may not be developed, and if developed, the market may not accept the technology and/or sexed semen product, resulting in lower than projected sales or no sales. Unexpected regulatory requirements may be introduced by national or regional regulators that may affect the Company's ability to bring LumiSort to market.

Product commercialization requires strategic relationships

In order to commercialize products in development Microbix will need to forge strategic partnerships, such as joint ventures or licensing relationships with much larger pharmaceutical and biotechnology companies. The Company may not be able to form acceptable strategic partnership. The resources of prospective strategic counterparties may put Microbix at a significant disadvantage in negotiating relationships.

The Company has to forge and maintain strategic alliances to develop and market products in its current product line. If Microbix is unable to reach agreements with prospective partners, or if any such agreements are terminated or substantially modified, the Company may be unable to obtain sufficient licensing revenue for our products, which might have a material adverse effect on further product development and on Microbix financially.

Raw materials and ingredients

In carrying out its operations, Microbix is dependent on a stable and consistent supply of ingredients and raw materials. For strategic reasons, certain of key raw materials are sourced from single suppliers. The Company sources raw materials from suppliers on an on-going basis at negotiated prices. There can be no assurance that it will be able, in the future, to continue to purchase products from its current suppliers or any other supplier on terms similar to current terms or at all. An interruption in the availability of certain raw materials or ingredients, or significant increases in the prices paid by Microbix for them, could have a material adverse effect on the business, financial condition, liquidity and operating results.

Operating and capital requirements

Microbix believes that cash available cash generated from operations and from cash soured from capital markets, for working capital, should be sufficient to meet its operating and capital needs for the short term. However, funding needs may vary depending upon a number of factors including: progress of research and development programs; costs associated with the regulatory process; collaborative and license arrangements with third parties; cost of filing, prosecuting and enforcing our patent claims and other intellectual property rights; potential acquisitions and technological and market developments. Consequently, Microbix may need to raise additional funds to satisfy the financing of its current research and development programs to meet capital requirements and for potential acquisitions. Additional financings may not be available, and even if available, may not be on acceptable terms. The Company may seek to raise additional capital through an offering of common shares, or debt, which may result in dilution or the issuance of securities with rights senior to the rights of the holders of common shares.

The current unprecedented disruptions in the European and US credit and financial markets could continue to cause a loss of confidence in the broader financial markets and create a climate of greater volatility, less liquidity, and tighter credit conditions which could cause stock markets to decline substantially. In addition, general economic indicators could deteriorate, including increased unemployment, declining economic growth and uncertainty about corporate earnings.

This could have a significant adverse impact on access to capital and credit for many companies, making it more difficult for the Company to obtain, or increase its cost of obtaining capital and financing for its operations. The Company's access to additional capital may not be available on terms acceptable to it or at all.

Success depends on the commercialization of Microbix' technology

The successful commercialization of the Company's large market products is crucial for Microbix. Microbix has a development pipeline including VIRUSMAX™, LumiSort™, and Kinlytic® (Urokinase). The pipeline is funded primarily with income earned from the sale of the Company's cell culture based virology products and licensing of technologies.

Additional funding for research and development is raised from equity and/or debt offerings. The Company's pipeline will require additional development and investment to move through commercialization and it is not certain that these products will be produced at reasonable cost and quality or be successfully marketed. It is not known whether the Company's investment in such products or product candidates will be recovered through sales or royalties.

Product development in the pharmaceutical and biotechnology industry is highly uncertain and very few research and development projects produce a commercial product. Applications utilizing the Company's products and technology are in various stages of commercial development and face a variety of risks and uncertainties. Even if a technology is shown to be effective, it can face significant or unforeseen difficulties in utilizing the technology. These difficulties may only become apparent when scaling-up the manufacturing to commercial scale. Even if Microbix' products are successfully developed, receive all necessary regulatory approvals and are commercially produced, there is no guarantee that there will be market acceptance of them. The Company's ability to achieve market acceptance for any of its products will depend on a number of factors, including whether or not competitors may develop technologies which are superior to or less costly than its products, with the result that its products, even if they are successfully developed, manufactured and commercialized, may not generate significant revenues.

If Microbix is unsuccessful in dealing with any of these risks, or if it is unable to successfully commercialize its product for some other reason, it could seriously harm our ability to generate revenue.

Reliance on others for manufacturing and potential commercialization of products

Other than the Virology products, Microbix may rely on others to manufacture and commercialize its products. For example, the Company will outsource manufacture of LumiSort instrument, and the Urokinase drug will be licensed to Zydus Cadila for marketing and distribution. Generally, Microbix will depend on other larger pharmaceutical and biotechnology companies to commit the resources and capital to manufacturing facilities and marketing. There is no assurance it will be able to enter into satisfactory arrangements or that its prospective partners will proceed in a timely manner or at all.

The Vaccine Technology is meant to be utilized by an influenza vaccine manufacturing plant. Microbix does not currently have a facility to manufacture vaccine. There is no assurance the technology is effective for an influenza vaccine manufacturing process or if effective, warrants the capital and operational resources and commitment to exploit it. The Company will not receive any revenue for its VIRUSMAX vaccine technology unless it is utilized, should Microbix not establish its own manufacturing capability.

LumiSort is meant to be utilized by AI breeding companies. There is no assurance that any AI breeding companies will determine that the LumiSort is effective or if effective

warrants the capital and operational resources and commitment to utilize it. Microbix may not receive any revenue for LumiSort unless it is licensed to AI breeding companies.

Any failure to obtain and protect intellectual property could adversely affect the Company's business.

Microbix' success will depend, in part, on its ability to obtain patents, or licenses to patents, maintain trade secret protection and enforce its rights against others. The Company has filed, and will continue to file, and is actively pursuing patent applications in Canada, the United States and other jurisdictions. Microbix may not be able to obtain patent protection for key elements of its technology. The patent positions of pharmaceutical and biotechnology companies are uncertain and involve complex legal and factual questions for which important legal issues are largely unresolved. In addition, the coverage claimed in a patent application can be significantly reduced before a patent is issued. There can be no assurance that patent applications will result in the issuance of patents; additional proprietary products developed will be patentable; patents issued will provide adequate protection or any competitive advantages; patents will not be successfully challenged by any third parties; or the patents of others will not impede our ability to commercialize our technology or products.

Patent protection may not be available based on prior art. The publication of discoveries in the scientific or patent literature often lags behind actual discoveries. As a consequence, there may be uncertainty as to whether Microbix, or where applicable, one of its licensors, were the first creator of inventions covered by issued patents or pending patent applications or that the Company was the first to file patent applications for such inventions. Moreover, it might have to participate in interference or re-examination proceedings declared by the U.S. Patent and Trademark Office, or other proceedings outside the United States, including oppositions, to determine priority of inventions or patentability. An unfavourable outcome in an interference or opposition proceeding could preclude Microbix from making, using or selling products using the technology or require it to obtain license rights from prevailing third parties. Microbix does not know whether any prevailing party would offer it a license on commercially acceptable terms, if at all.

As part of Microbix' patent strategy, it has filed a variety of patent applications internationally, including in Europe and Japan. Pursuant to the review of patents in these countries, an opposition can be filed by a third-party after the granting of a patent. An adverse decision could result in the revocation of Microbix' patent. Such a decision could narrow the scope of protection afforded by the patent. The Company does not know whether the patents that it has received would be held valid or enforceable by a court or whether a competitor's technology or product would be found to infringe such patents.

The Company does not know whether the patents that it has received, or may be able to obtain in the future, would be held valid or enforceable by a court or whether a competitor's technology or product would be found to infringe such patents. Assurance that third parties will not properly or improperly modify or terminate any license they have granted to Microbix.

The Company's intellectual property includes trade secrets and know-how that may not be protected by patents. There can be no assurance that it will be able to protect trade secrets. To help protect Microbix' rights, the Company requires employees, consultants, advisors and collaborators to enter into confidentiality agreements. These agreements my not adequately protect trade secrets, know-how or other proprietary information in the event of any unauthorized use or disclosure.

The Company may incur substantial costs as a result of litigation or other proceedings relating to patent and other intellectual property rights

Microbix' future success and competitive position depends in part on its ability to obtain and maintain certain proprietary intellectual property rights for its products. Any such success may be achieved in part by prosecuting claims against others who we believe are infringing the Company's rights and by defending claims of intellectual property infringement brought by its competitors and others.

The Company's involvement in intellectual property litigation could result in significant expenses, adversely affecting the development of products or sales of the challenged product or intellectual property and diverting the efforts of our technical and management personnel, whether or not such litigation is resolved in our favour. Some of its competitors may be able to sustain the costs of complex patent litigation more effectively than Microbix can because they have substantially greater resources. Uncertainties resulting from the initiation and continuation of any litigation could affect its ability to continue its operations.

In the event of an adverse outcome as a defendant in any such litigation, Microbix may, among other things be required to pay substantial damages; cease the development, manufacture, use or sale of product candidates or products that infringe upon the intellectual property of others; expend significant resources to design around a patent or to develop or acquire non-infringing intellectual property; discontinue processes incorporating infringing technology; or obtain licenses to the infringed intellectual property.

If third-parties file patent applications, or are issued patents claiming technology also claimed by us in pending application, Microbix may be required to participate in interference proceedings with the U.S Patent and Trademark Office, or other proceedings outside the United States, including oppositions, to determine priority of invention or patentability, which could result in substantial cost to us even if the eventual outcome were favourable.

The Company may incur costs as a result of litigation or other proceedings relating to the removal of employees performing below standard

Microbix' future success and competitive position depends in part on its ability to maintain certain employee performance standards. It may become necessary to remove

certain employees who do not maintain the standard required for the business to return maximum benefits to shareholders. Any party can prosecute claims against Microbix whether valid or not, that the Company will either have to litigate or settle.

The Company's involvement in litigation could result in significant expenses, adversely affecting and diverting the efforts of the Company's technical and management personnel, whether or not such litigation is resolved in its favour. Uncertainties resulting from the initiation and continuation of any litigation could affect its operations.

In the event of an adverse outcome as a defendant in any such litigation, Microbix may, among other things be required to pay damages which could result in costs to the Company even if the eventual outcome were favourable.

Microbix may be exposed to liability related to products manufactured by Microbix and used in clinical trials

If product liability claims are brought against the Company or it is unable to obtain or maintain product liability insurance, it may incur substantial liabilities that could reduce its financial resources.

The clinical testing and/or commercial use of pharmaceutical products involves significant exposure to product liability claims. Liability insurance converge is becoming increasingly expensive and the Company might not be able to obtain or maintain product liability insurance on acceptable terms or in sufficient amounts to protect it against product liability damages. Regardless of merit or eventual outcome, liability claims may result in decreased demand for a future product, injury to reputation, withdrawal of clinical trial volunteers, loss of revenue, costs of litigation, distraction of management and substantial monetary awards to plaintiffs. Additionally, if Microbix is required to pay a product liability claim, it may not have sufficient financial resources to complete development or commercialization of any of our product candidates and our business and results of operations will be adversely affected.

The Company's ability to operate could be hindered by the proprietary rights of others

A number of pharmaceutical and biotechnology companies and research and academic institutions have developed technologies, filed patent applications or received patents on various technologies that may be related to Microbix' business. Some of these technologies, applications or patents may conflict with or adversely affect its technologies or intellectual property rights. Any conflicts with the intellectual property of others could limit the scope of the patents, if any, that the Company may be able to obtain or result in the denial of its patent applications altogether.

If patents that cover Microbix' activities are issued to other persons or companies, it could be charged with infringement. In the event that other parties' patents cover any portion of its activities, the Company may be forced to develop alternatives or negotiate a license for such technology. Management does not know whether they would be

successful in either developing alternative technologies or acquiring licenses upon reasonable terms, if at all. Any such license could require the expenditure of substantial time and other resources and could harm Microbix' business and decrease its earnings. If it does not obtain such licenses, the Company could encounter delays in the introduction of its products or could find that the development, manufacture or sale of products requiring such licenses is prohibited.

The Company faces and will continue to face significant competition

Competition from pharmaceutical companies, biotechnology companies and academic and research institutions is significant and is expected to increase. Many of the Company's competitors and potential competitors have substantially greater product development capabilities and financial, scientific, manufacturing, sales and marketing resources and experience than Microbix. Other companies may develop and patent products earlier; obtain regulatory approvals for such products more rapidly; obtain patent protection for such products earlier; or develop more effective or less expensive products than Microbix.

While the Company will seek to expand its technological capabilities in order to remain competitive, there is a risk that research and development by others will render its technology or products obsolete or non-competitive; products developed by others may be superior to any product developed by Microbix; and any product developed by it may not be preferred to any existing or newly developed technologies.

Microbix may be unsuccessful in marketing, selling and distributing certain of its products

The Company distributes a number of our products worldwide. If its distribution personnel or methods are not sufficient to ensure it has supply to meet demand for its products, or demand for its supply, or if there is a quality control failure with its products, it could harm the Company's prospects, business, financial conditions and results or operations.

In order to achieve commercial success for its approved biotherapeutic products, the Company may have to develop an effective marketing and sales force or enter into further arrangements with third parties to market and sell its products. If Microbix develops its own marketing and sales capabilities, it will be competing with other companies that currently have experience and well-funded marketing and sales operations. To the extent that it enters into co-promotion or other marketing and sales arrangements with other companies, any revenues received will be dependent on the efforts of others, and the Company does not know whether these efforts will be successful. Failure to develop a direct sales and marketing force or enter into appropriate arrangements with other companies to market and sell its products will reduce its ability to generate revenues.

Foreign exchange risk

Ninety-nine percent (99%) Company revenues are denominated in US dollars and Euros. Microbix is accordingly exposed to risk of fluctuation in the foreign currency exchange rate.

## Dividends

Microbix has not declared dividends on its common shares during the three most recently completed financial years ended September 30, 2012, 2011 and 2010, respectively. 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.

Microbix' current policy is not to pay dividends on its Common Shares, preferring to reinvest its cash in its business.

## Description of Capital Structure

The Company is authorized to issue an unlimited number of Common Shares without nominal or par value, and unlimited number of preferred shares issuable in series.

### *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

| Month Ended | High | Low | Volume |
|---|---|---|---|
| Dec-27-12 | 0.29 | 0.20 | 355,453 |
| Nov-30-12 | 0.28 | 0.22 | 273,328 |
| Oct-31-12 | 0.32 | 0.26 | 212,316 |
| Sep-30-12 | 0.35 | 0.31 | 408,134 |
| Aug-31-12 | 0.35 | 0.26 | 757,033 |
| Jul-31-12 | 0.34 | 0.25 | 422,915 |
| Jun-30-12 | 0.32 | 0.28 | 311,911 |
| May-31-12 | 0.36 | 0.31 | 532,017 |
| Apr-30-12 | 0.38 | 0.32 | 853,217 |
| Mar-31-12 | 0.37 | 0.30 | 1,438,256 |
| Feb-28-12 | 0.44 | 0.29 | 1,901,450 |
| Jan-31-12 | 0.20 | 0.17 | 791,397 |
| Dec-31-11 | 0.20 | 0.13 | 1,499,848 |
| Nov-30-11 | 0.25 | 0.20 | 418,800 |
| Oct-31-11 | 0.26 | 0.22 | 307,156 |

## Directors and Officers

The board of directors currently consists of eight (8) directors to be elected annually. The following table states the names of the current directors, all other positions and offices with the Company now 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 exercised by each of them as of the date of this annual information form.

| Name, Office and Principal Occupation | Director/Officer Since | No. of Voting Securities Owned, Controlled or Directed as at December 30, 2012 (1) |
|---|---|---|
| Peter Blecher<br>Ontario, Canada<br>Director | December 6, 2005 | 515,207 |

| | | |
|---|---|---|
| Medical Doctor – Emergency<br>Lakeridge Health Hospital | | |
| Vaughn Embro-Pantalony<br>Ontario, Canada<br>Chief Executive Officer<br>Microbix Biosystems Inc. | February 6, 2007 | 398,185 |
| Mark A. Cochran [3]<br>Virginia, USA<br>Managing Director<br>Johns Hopkins Medicine Solutions | October 1, 1990 to August 28, 2002 and since October 16, 2002 | 574,277 |
| William J. Gastle [3]<br>Ontario, Canada<br>Director<br>Executive Chairman<br>Microbix Biosystems Inc. | October 1, 1990 | 5,489,109 [1] |
| James Long<br>Ontario, Canada<br>Chief Financial Officer<br>Microbix Biosystems Inc. | December 18, 2006 | 176,987 |
| Andrew C. Pollock [3]<br>Ontario, Canada<br>Senior Vice President<br>Maple Leaf Consumer Foods | March 14, 2006 | 275,000 |
| Joseph D. Renner[3]<br>New Jersey, USA<br>Director<br>Pharmaceutical Executive | February 25, 2003 | 1,665,000 |
| Martin Marino[2][3]<br>Ontario Canada<br>Pharmaceutical Executive | July 29, 2001 | 225,000 |
| Cameron Groome[2]<br>Ontario Canada<br>Pharmaceutical Executive | March 8, 2012 | 200,000 |

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

nominees individually. An additional 514,000 common shares are held by Susan M.S. Gastle, Mr. Gastle's spouse. Mr. Gastle's son holds 138,592 common shares. Mr. Gastle disclaims any beneficial interest in or control over those shares.
(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, 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.

## Interest of Management and Others in Material Transactions

Vaughn Embro-Pantalony, a director of the Company, has been actively performing consulting duties related to the commercialization of the VIRUSMAX, Urokinase and LumiSort pipeline products, prior to his appointment as President and Chief Executive Officer, subsequent to 2012 year end. He has been invoicing the Company on a month-to-month basis beginning in November of 2009, at a rate of $15,000 per month.

Mark Cochran, a director of the Company, has been actively performing consulting duties related to the commercialization of the VIRUSMAX and Urokinase pipeline products. He was invoicing the Company on a month-to-month basis beginning in May 2008 until December 2011, at a rate of $15,000 per month.

## Transfer Agent and Registrar

The Company’s transfer agent and registrar is Canadian Stock Transfer Company Inc. (formerly known as CIBC Mellon Trust Company), 320 Bay Street, Toronto, Ontario, M5H 4A6.

## Audit Committee Information

Members

The members of the Audit Committee are: Martin Marino, Andrew Pollock and Cameron Groome. All members of the Audit Committee are financially literate and independent.

Relevant Education and Experience

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. Marino is the Chairman of the Committee.

Mr. Groome's background is in financial industry and the biotechnology animal health, and innovative human therapeutics industry. He has headed life sciences investment banking for a major national investment dealer and has over 20 years of experience as an equity analyst, and corporate advisor.

Auditors Fees

The following table summarizes the fees billed to the Company for services provided by its external auditors, BDO Dunwoody LLP, Chartered Accountants, during the fiscal years ended September 30, 2011 and 2012, respectively:

| Fiscal Year | Audit Fees | Audit Related Fees | Tax Fees | Other Fees |
|---|---|---|---|---|
| 2011 | $56,560 | $71,737 | $5,000 | $31,120 |
| 2012 | $35,696 | $1,936 | $5,000 | $6,000 |

Audit Fees

Audit Fees were for professional services provided by BDO Dunwoody LLP, Chartered Accountants for the audit of our annual consolidated financial statements, audit of the third quarter statements, review of our quarterly consolidated financial statements.
Audit Related Fees

Audit-related fees were for the assurance and related services reasonably related to the performance of the audit review of the annual statements and are not reported under "Audit Fees" above and for matters related to the Base Shelf Prospectus.

Tax Fees

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

Other Fees

All other fees were for services in connection with the prospectus offerings, the review of other regulatory submissions and IFRS consulting.

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 8, 2012 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, 2012 available on SEDAR at www.sedar.com.

# Glossary

**Antigen** - A foreign substance which, when introduced into the body, stimulates the production of antibodies.

**Artificial insemination** - the process used to inseminate livestock

**Biological** - Refers to a substance made from a living organism or its products. Biologicals may be used to prevent, diagnose, treat or relieve of symptoms of a disease. They may also be used for industrial purposes for separation or processing of materials.

**Biotherapeutic** - Protein drug or vaccine produced from a living organism or its product which may be used to treat or relieve symptoms of a disease.

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

**FDA** – means the U.S. Food and Drug Administration.

**Gene** - An inherited unit of DNA that determines a single characteristic in an organism. An organism has many genes, each of which contains information needed to make a specific type of protein or controls when a protein is made.

**Generic biopharmaceutical** - A generic form of a biologically derived drug or other therapeutic agent.

**Generic drug** - A drug that contains the same active ingredients and has the same clinical effects as an innovator's drug that was previously patented. Generic drugs may be manufactured and sold once the patent(s) on the innovator's drug expires.

**Metastatic cancer** - Cancer that has spreads (metastasized) from its original site to another area of the body.

**Neovascularization** – The formation of new blood vessels in a tissue mass

**Peripheral Occlusive Disease (POD)** – Refers to disease caused by blockage of arteries and veins in the body distal from the heart. These clots often occur in the arms and legs of older patients (PAOD – Peripheral Arterial Occlusive Disease, DVT – Deep Vein Thrombosis) or in the lungs (PE – Pulmonary Embolism)

**Peripheral Clot** – Blood clots typically found in the arms, legs and lungs causing peripheral occlusive disease

**Pre-clinical studies** – Laboratory studies on an agents that do not include testing on humans (Clinical studies). May include analytical and animal studies.

**Protein** - Any of a large group of organic compounds found in all living organisms. Proteins include enzymes, antibodies and hormones. The structure and function of a protein is determined by its gene.

**Reagent** – Key material used in the development or manufacturing of biotechnological products.

**R & D** – means research and development.

**Semen Sexing Technology** - the separation of sperm cells based on whether each contains a sex-determining X chromosome or Y chromosome

**Specialty biologicals** - The Company's name for biological products that are used for non-therapeutic applications such as diagnostic testing or research.

**Thrombolytic drug** - A drug that dissolves blood clots. 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 that dissolves blood clots by stimulating the degradation of fibrin found in clots.

**Vaccine** - An antigen preparation of a disease-causing microorganism used to stimulate an immune response in the body and so confer resistance to the disease.

**Vaccine Technology –** means the yield enhancement technology initially applied to enhancement of yield in influenza vaccine production.

**Vector** - Genetic material used to introduce specific genes into the genome of an organism.

## Acronyms

**505b(2) -** An FDA regulatory application with reduced filing requirements used to license generic drugs.

**AI** – Artificial Insemination

**AS4.5** – Anti-angiogenic protein angiostatin 4.5

**bFGF** – Basic Fibroblast Growth Factors

**CA 19-9** – Serum Tumour Marker

**CBER -** Center for Biologics Evaluation and Research. The FDA center is responsible for biological products including most protein drugs.

**cGMP -** current Good Manufacturing Practices. Standards are for production of drugs and medical devices defined by government agencies such as the FDA or HPB. GMPs define facility and production standards, record keeping, quality control, labelling and storage. Drug GMP standards apply to drugs. Medical Device GMP standards apply to diagnostic products.

**FDA -** Food and Drug Administration. The United States government agency responsible for regulating the use and sale of food, drugs and medical devices.

**IMS** – IMS Health Incorporated

**LMW** – Low Molecular Weight

**OECD** – the organization for Economic Cooperation and Development

**OEM -** Original Equipment Manufacturer

**PCT** – Patent Cooperation Treaty

**SST** – Semen Sexing Technology

**tPA** – Tisssue Plasminogen Activator

**USPTO** – U.S. Patent and Trade Office

**WFI** – Water for Injection

**WHO** – World Health Organization

## Trademarks

Trademarks used in this document are:

Abbokinase®, Abbokinase® OpenCath® (Abbott Laboratories, Inc.)

Activase® and Cathflo® Activase®, (Genentech, Inc.)

Alimta® (Eli Lilly and Company)

Avastin® (Genentech, Inc.)

CathClear™ (Microbix Biosystems Inc.)

Erbitux® (Imclone Systems Incorporated)

Herceptin® ( Genentech Inc. )

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## 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.