



Infectious Disease Testing Specialists



Corporate Presentation – Winter 2023

Forward-Looking Statements

- This presentation contains forward-looking statements about trends and objectives.
- Risks and uncertainties related to such statements could cause actual outcomes to differ materially.
- Such risks include, among others, those related to operations, customers or markets, growth drivers, products or technologies, product pricing or costs, development projects, financial results, regulatory matters, and access to capital.
- Forward-looking statements represent Microbix's current judgement, and it disclaims any obligation to update them.

Microbix Senior Management



Cameron L. Groome

CEO, President, and Director

- Has served on the MBX BoD and AC since 2012, and was appointed CEO in 2017.
- 30+ years' experience in senior life sciences and finance roles.
- Successful leader, executive, director, and advisor for public and private companies.

Phil Casselli

Senior. V.P. Business Devel.,
Sales, and Marketing

- Manages MBX's relationship with over 100 makers of infectious disease diagnostics across multiple regions.
- He holds a Bachelor of Applied Science in Chemical Engineering and has more than 30 years' experience in the biotech and pharmaceutical industries.

Jim Currie, CPA

Chief Financial Officer

- Joined MBX as CFO in 2016 after several CFO roles and a VP of Finance role at MDS SCIEX, a global leader in life science and analytical technologies.
- Jim holds a Bachelor of Commerce and holds a CPA and a CMA.

Mark Luscher, Ph.D.

Senior Vice President,
Scientific Affairs

- Responsible for scientific programs, he is a specialist in cell biology, immunovirology, and cytometry.
- He is an inventor on numerous patents and patent applications and oversees scientific and technological programs and initiatives related to MBX's products.

Ken Hughes, Ph.D.

Chief Operating Officer

- Executive and biomedical scientist with 25 years of experience in biotech and pharma.
- Previously was CEO of iTP Biomedica, VP, Sci. & Reg. Affairs at Innovative Medicines Canada and Co-founder and Advisory Board member of PlantForm Corporation.

**>20 Other Skilled
Directors & Managers,
and total of >100 Staff**

- Including but not limited to: **Amer Alagic** – Director of R&D, **Steven Hagerman** – Senior Director of Operations, **Bo Hollas** – Director, QA & Compliance, **Damian Klimaszewski** – Director of Manufacturing, **Lucy Lin** – Director of QC, and **Pavel Zhelev** – Director, Product Management.

Microbix Board of Directors



Martin Marino
Board Chairman

- Mr. Marino has more than 30 years' experience in corporate legal roles and executive management functions, with emphasis on transaction-based corporate development.
- He also has considerable experience in conflict resolution and litigation management.

Dr. Peter M. Blecher
Director

- Dr. Blecher worked as an Emergency Room physician for ~25 years.
- He is a Medical Director of NeuPath Centres for Pain & Spine, and is a credentialed pain practitioner with both the American and Canadian Academies of Pain Medicine.
- Dr. Blecher is a co-founder and CMO of both Entourage Health and FH Health.

Mark A. Cochran, Ph.D.
HRGC Chair

- Dr. Cochran was Executive Director of Johns Hopkins Medicine.
- His experience spans all levels of the drug discovery and development value chain, including operational and executive roles in the healthcare, venture capital, pharmaceutical, and biotech industries.

Vaughn C. Embro-Pantalony
AC Chair

- Mr. Embro-Pantalony has held multiple executive roles in life sciences, with responsibility for licensing, business development, and strategic planning.
- His experience includes executive roles with Bayer, Novopharm and Terra International. He is a Chartered Director and Audit Committee Certified through McMaster University.

Joe Renner
Director

- Mr. Renner, Chairman of Zydus Pharmaceuticals, Pennington, New Jersey, has more than 30 years' experience in the pharmaceutical industry.
- He has enjoyed a successful career leading businesses with many drug approvals in the United States.

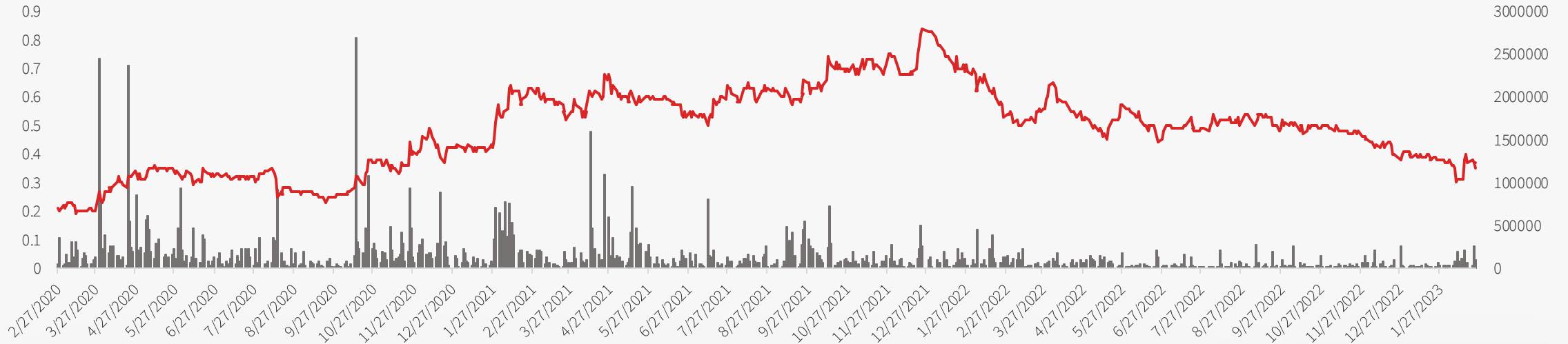
Jennifer Stewart
Director

- Ms. Stewart is founder, President, and CEO of Syntax Strategic, a leading firm in the sector of advocacy and communication for the public and private sectors in Canada.
- She is a renowned expert in this field, and is actively involved with media, business, and the community.

Cameron Groome
Director

- Mr. Groome is CEO and President of Microbix.

Microbix Capital Structure



TSX LISTED, SYMBOL: MBX • OTC QX LISTED, SYMBOL: MBXBF

Current Price	\$0.37 (Feb 24)
Shares Outstanding (Basic)	138.5M**
(Fully Diluted)	181.1M**
52 Week High	\$0.69
52 Week Low	\$0.30

Market Capitalization	\$48.459M
Avg. Daily Volume	~36K (3 mos.)
Cash and Line of Credit	~\$14.4M**
Longer Term Debt	\$4.1M BDC & Govt.** \$4.0M debentures*

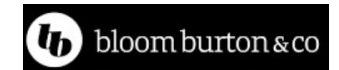
Analyst Coverage



Bruce Krugel



Chelsea Stellick



Antonia Borovina

*Convertible at \$0.23

** As of December 31,2022


Products & Customers Across the Diagnostic Testing Industry



+ Supporting over 100 diagnostics, clinical lab, and lab-proficiency related customers worldwide

 **Pre-Analytical
Test Collection Devices (DxTM™)** →

 **Peri-Analytical
Test Ingredients (Antigens)** →

 **Pan-Analytical QMS support
Test Controls /
Quality Assessment Products (QAPs™)** →

Leveraging Microbix's experience to service the many needs of the global diagnostics Industry.



Microbix – Three Interrelated Business Segments



- ⊕ Microbix is a medical devices company that supports the Dx & lab industry in a variety of ways through three integrated business lines. Profitable and with revenues targeting C\$ 2.0 million per month.

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TEST COLLECTION DEVICES DxTM & Others

- Identified need for secure domestic supply of “viral transport medium.”
- Secured Ontario Together Fund grant of \$1.45M to equip MBX for supplying provincial needs.
- Ontario orders for C\$ 9M delivered in fiscal 2021 and 2022.
- Capacity now at 100K vials/week, automating to 100K/day.
- Squarely within core competencies and medical devices accreditations.

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TEST INGREDIENTS Antigens

- Critical supplier to ~100 global makers of tests for infectious diseases.
- >95% of sales are exported to clients in the Americas, Europe and Asia.
- Poised to benefit from post-pandemic return to higher volumes of infectious disease testing, alongside tech-driven gross margin expansion.

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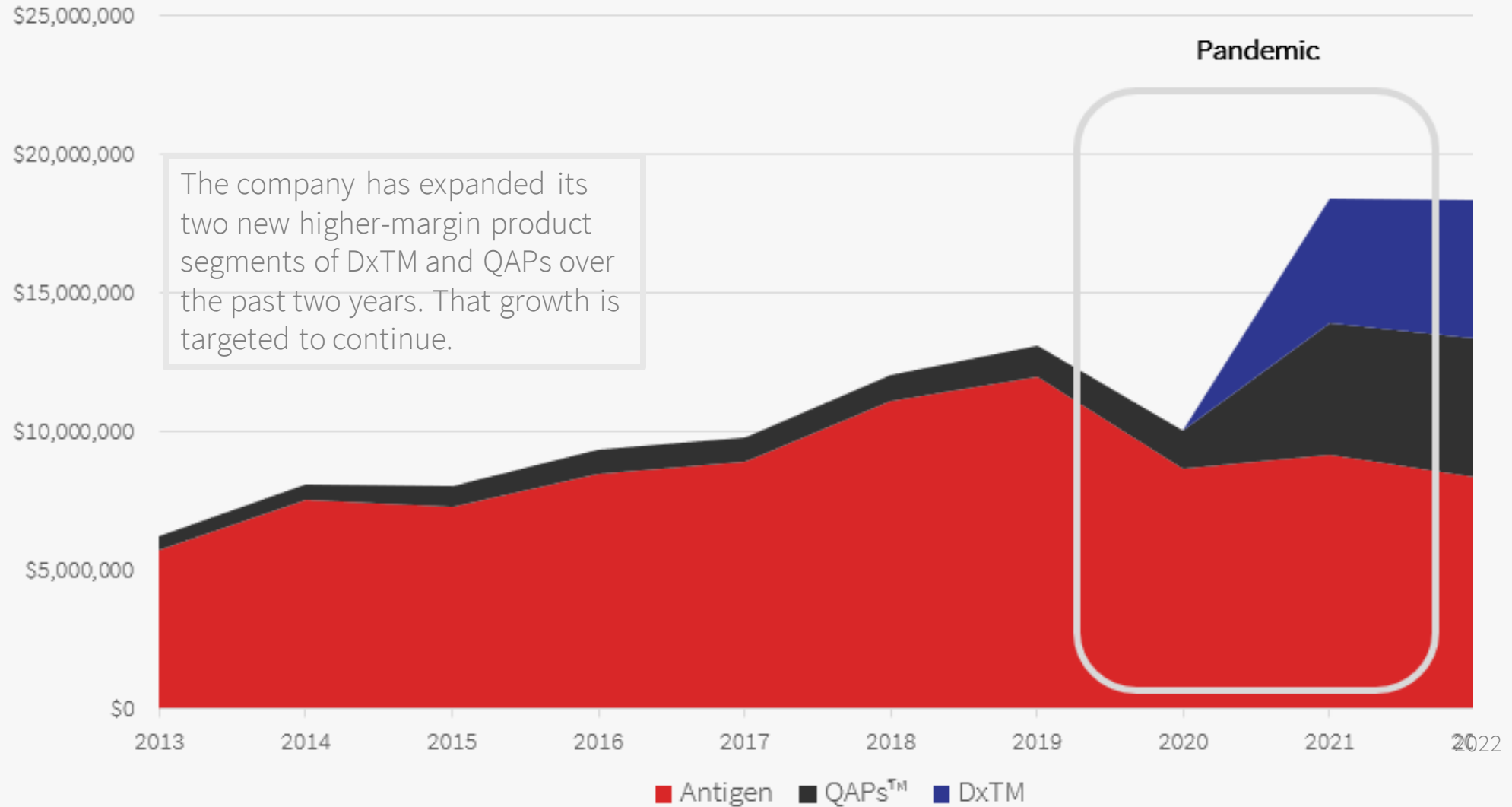
TEST CONTROLS QAPs

- A leading supplier to the agencies that test and accredit clinical laboratories.
- Expanding markets through support of test-makers and clinical laboratories.
- Adding new and innovative QAPs with large sales potential at good margins.
- Strategic Agreement with Copan Italia S.p.A., the global leader in specimen-collection devices.

Microbix – Historical Revenue



Total Revenue by Product Segment



In-Vitro Diagnostics Market – Growth Opportunities for Microbix



TEST COLLECTION DEVICES

DxTM & Others

- Pre-COVID, Canada imported an estimated C\$ 50 million per year of viral transport medium (VTM).
- Ontario contains ~36% of the Canadian population and Microbix remains its only validated domestic supplier.
- Microbix aims to supply 30-50% of Ontario's VTM needs.
- DxTM sales to Ontario totaled \$4.2 million in fiscal 2021 and \$4.7 million in fiscal 2022.

TEST INGREDIENTS

Antigens

- Antigens to make immunoassays – tests detecting antibodies to pathogens in blood samples.
- The global Immunoassay market was US\$ 28.5 billion in 2021.
- The antigen market is estimated at ~5% of assay selling price and native antigens, MBX's area of expertise, is estimated at ~10% of the antigens market.
- China is the major growth market for native antigens.

TEST CONTROLS

QAPs™

- QAPs mainly support accuracy of Molecular diagnostics (MDx), a US\$ 20 billion market in 2021.
- Test controls are estimated to comprise 5-10% of assay sales.
- Microbix is supporting an ever-increasing range of MDxs for its QAPs customers.
- MDx-based Point-of-Care-Tests (PoCTs) comprise the largest near-term opportunities for growing sales of QAPs.

Test Collection Devices – DxTM™ & Others



+ DxTM™ brand Viral Transport Medium (“VTM”)

→ Why this Program?

Expertise in large-scale biological medium production enables Microbix to produce a secure local supply of highest-quality, medical device grade VTM and other similar sample collection devices.

→ What is DxTM?

DxTM is the vial of liquid into which swabs of patient test-samples are placed. It is a regulated medical device that preserves the stability of any virus that is present until it can be tested by the clinical lab.

Specific Microbix Activities:

- + **Identified Need of Ontario Outreach to MEDJCT**
Security of supply being key
- + **DxTM supply to Ontario**
Over 2 million units delivered. Other clients also supported
- + **Partially Funded by OTF Program Project Selected - \$1.45 million grant**
Supported due diligence by Ontario
- + **Technical Diversity**
New Manufacturing Capabilities Multiple new product opportunities
- + **Project Implementation**
Validation & Manufacturing In new spaces at 2nd then 3rd sites



Ontario procurement has no other validated domestic maker of VTM.

Test Collection Devices – DxTM™ (VTM) & Others

+ Sample Collection Devices (SCDs)

→ Sales Potential for SCDs

Every lab-based PCR test conducted requires a vial of VTM, all of which was imported. SCD needs continue, driven by both respiratory viruses and the ongoing need to test for many other infectious organisms.

- Microbix can now produce at 100,000 vials/week and its pending full automation scales that 5-10x to support multiple products.
- 2 orders from Ontario for \$8.9 million delivered across F2021 and F2022.

- Normal-time pricing for SCD/VTM is in the range of CDN \$3-5 per vial.
- Multiple SCD product opportunities to develop. DxTM sales will continue.



→ **Gross margins from DxTM production are favourable and other clients are now being pursued and secured. SCDs therefore represent a large and sustainable value-creation opportunity.**

Test Ingredients - Antigens

- + Grow, purify, and inactivate native bacteria and viruses for use as antigens for more than 100 leading international diagnostic companies . Microbix provides antigens on a large scale for major international diagnostic manufacturers, most often as a critical sole-source supplier.
 - + ToRCH Antigens – Worldwide commercial leader
 - + Respiratory Antigens – Broad range of pathogens
 - + Childhood Disease Antigens – Unique offerings
 - + Sexually Transmitted Infections – Full range
 - + Tropical Disease Antigens – Insect-borne pathogens



Test Ingredients - Antigens

+ Growth Outlook for Antigens Business

Antigens comprise <50% of total sales, down from 90% historically due to growth of other segments. During the past 3 years, Antigen sales suffered as a result of reduced testing for non pandemic-related diseases.

In 2023, antigen sales have started to return to pre-pandemic levels and remain a growth area for Microbix.







<50%
of sales

- ✓ As healthcare re-stabilizes, Antigen sales should benefit from greater global attention to respiratory and infectious disease testing as a result of the COVID-19 pandemic.
- ✓ In the more mature markets of the USA and Europe, growth can be derived from expanding relationships with established diagnostics clients.
- ✓ Further growth likely from adoption of public health-oriented immunoassays in new regions, such as Asia-Pacific nations.
- ✓ Microbix antigens are already being incorporated into dozens of tests seeking approval for use in China – for a large emerging-market opportunity.
- ✓ Improvements to processes, including the use of bioreactor technologies for viral antigen production, are now enhancing gross margins for this segment.

Test Controls - Quality Assessment Products (QAPs™)



+ Product Lines & Key Achievements

Product Line	Sales Potential Current & Targeted	Target Market(s)
	Currently ~C\$ 1M/yr Targeted ~C\$ 20M/yr	<ul style="list-style-type: none"> Licensed/ registered for sale in Canada, EU, U.S, and Australia Sold directly to clinical lab chains or via distributors (via 10 Cos., into 30+ countries) Targeting multiple lab and distributor accounts of >\$100K/year
	Currently ~C\$ 1M/yr Targeted >>C\$ 20M/yr	<ul style="list-style-type: none"> Often sold directly to Dx makers for inclusion with their test kit consumables The larger Dx makers can become multi-million dollar accounts
	Currently ~C\$ 1M/yr Targeted ~C\$ 5M/yr	<ul style="list-style-type: none"> Often sold directly to Dx makers that want a “white glove” new customer experience Used to support IQ/OQ/PQ of newly-purchased instruments and to train technicians
	Currently ~C\$ 3M/yr Targeted ~C\$ 10M/yr	<ul style="list-style-type: none"> Sold directly to a limited pool of clinical lab accreditation organizations Have already tripled sales from historic base of ~\$1.0M/year

- + Over 200 SKUs at favorable gross margins (~60-70%)
- + Reached sales of ~C\$5.4 M in FY2022, which are targeted to exceed C\$10M in fiscal 2023
- + Secured first major contract with large Dx maker to supply in-kit QAPs
- + International sales into North America, Europe, and Australia

Test Controls - Quality Assessment Products (QAPs™)



+ QAPs™ Competitive Advantages



1. Performance – QAPs are whole-genome and whole-workflow to prevent systemic errors



2. Formats – Having vials & FLOQSwab® formats enable support of both lab-based & point-of-care testing



3. Stability – Proven stability at room temp (swabs) or 2-8°C (vials) for up to two years



4. Multiplexing – Multiple pathogens loaded onto one QAP to support next generation test-platforms



5. Resistance/Variants – Supporting tests for viral variants and tests for antibiotic resistance



6. Intellectual Property – Defended by issued or pending patents of both Microbix and Copan



Test Controls:

QAPs™ Receive International Praise From Industry Leaders

+ Example: QAPs™ Human Papillomavirus (HPV) Panel

+ MBX is the sole provider of quality control materials for extended HPV genotyping panels

- HPV molecular diagnostics market is ~US\$ 800M at YE 2022, with 5-10% accessible to MBX QAPs.

+ MBX supporting launch and ongoing QMS of the HPV assays of leading Dx makers

- Providing quality control materials for assay verification/validation, onboarding, etc.

+ Securing contracts to supply HPV quality control materials for cervical cancer screening

- Country-wide programs being targeted, alongside multi-province support in Canada.



Financials

+ Fiscal 2022 Results: A Flattish Year as Company Invests in Growth

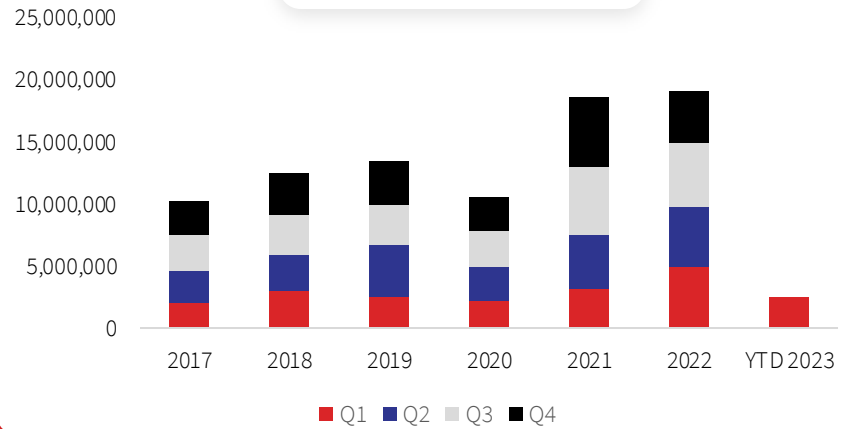
- Record revenue of \$19.1M in f2022
- In f2022, created & launched 22 new products with its QAPs and sales from this segment grew 14% y/y.
- Antigen sales slightly slower until Q4 f2022, when they were up 30% versus Q4/21.
- Gross Margin was 58% versus 59% prior year due to inflationary pressures such as increased labour and manufacturing costs, higher supply costs, and infrastructure investments.
- Despite lumpiness of orders and inflationary pressures, Microbix delivered strong f2022 EBITDA performance, positive operating and net incomes.
- At end of fiscal 2022, MBX's Current Ratio was 8.45 and its Debt-to-Equity Ratio was 0.33.
- Expansion and upgrades at facilities pave way for faster revenue growth and better margins.



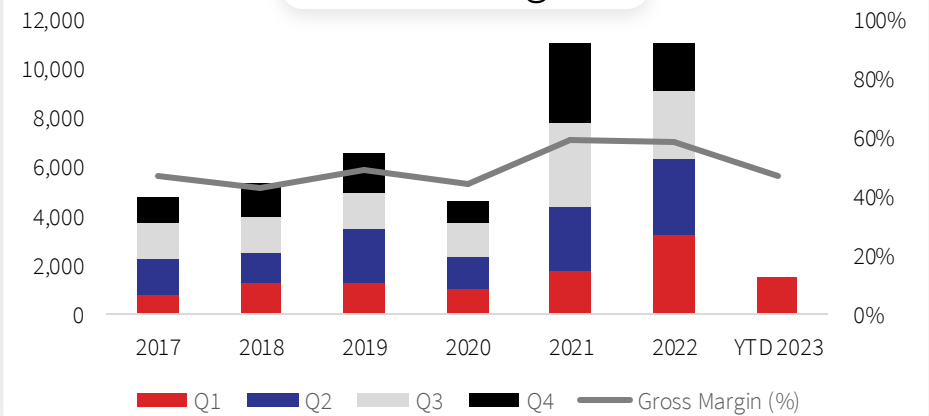
Financials

+ Financial Results – 2017 to 2023 YTD

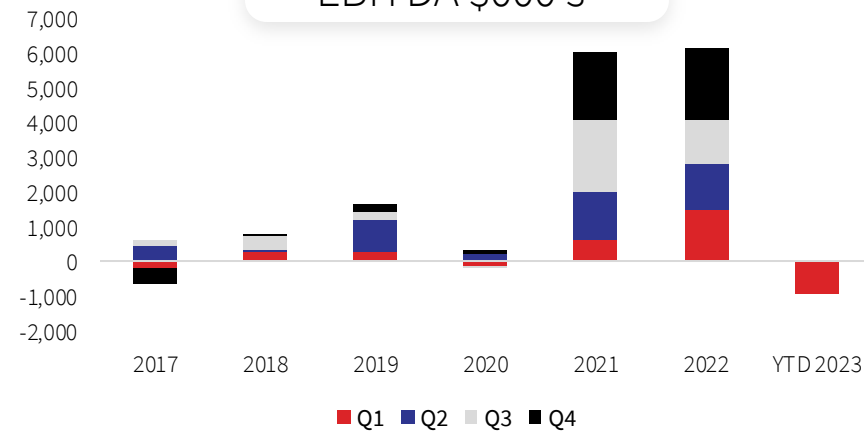
Revenue



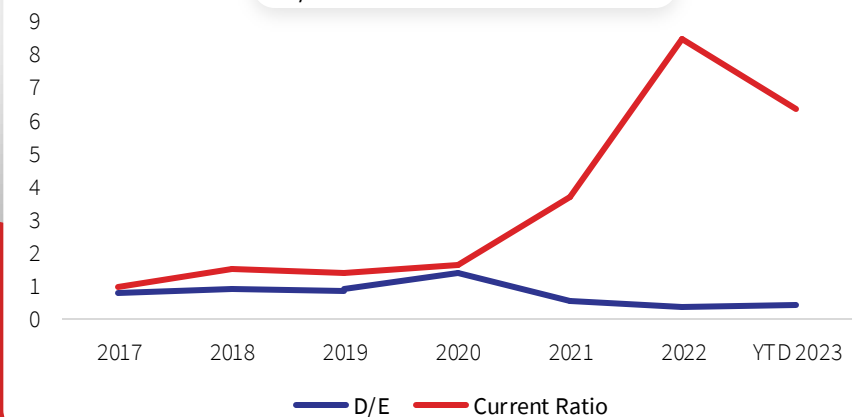
Gross Margin



EBITDA \$'000's



D/E & Current Ratio



Financial Performance

Financials



+ Comparables & Valuation

ia Capital Markets has a BUY rating and a 12-month target price of C\$ 1.25.
 Bloom Burton & Co also has a BUY rating and a 12-month target price of C\$0.80.

Company	Est. Source	Ticker	Currency	Price	EV (M)	EV/Revenue			EV/EBITDA		
						2021A	2022E	2023E	2021A	2022E	2023E
Thermo Fisher Scientific	Con	NYSE: TMO	USD	\$568.93	\$249,095.8	6.4	5.5	5.5	19.2	20.8	20.9
Bio-Rad Laboratories Inc.	Con	NYSE: BIO	USD	\$465.76	\$13,424.8	4.6	4.8	4.6	19.8	21.1	19.6
Average						5.5	5.2	5.1	19.5	21.0	20.2
Microbix Biosystems Inc.	BB	TSX: MBX	CAD	\$0.30	\$34.7	1.9	1.8	1.6	6.1	9.5	13.4

*Source: Fact Set, Bloom Burton Initiation Report (Feb 10, 2023)

Company	Ticker	Close	Mkt Cap (\$M)	Debt+Pref (\$M)	Ent. Value (\$M)	EBITDA (\$M)			Debt/EBITDA 22	EV/EBITDA			Revenue			EV/Revenue		
						2021A	2022E	2023E		2021A	2022E	2023E	2021A	2022E	2023E	2021A	2022E	2023E
Bio Rad Laboratories Inc	BIO-N	408.00	12,020	(652)	11,368	734.4	637.4	681.6	-1.0x	15.5x	17.8x	16.7x	2,891	2,820	2,891	3.9x	4.0x	3.9x
Danaher Corp	DHR-N	262.83	190,760	15,768	206,528	10,151.2	10,572.9	10,546.1	1.5x	20.3x	19.5x	19.6x	29,129	30,744	30,714	7.1x	6.7x	6.7x
Thermo Fisher Scientific Inc	TMO-N	551.75	213,650	26,418	240,068	12,290.5	11,886.7	11,991.6	2.2x	19.5x	20.2x	20.0x	37,652	43,864	43,955	6.4x	5.5x	5.5x
Meridian Bioscience Inc	VIVO-O	31.98	1,390	(57)	1,333	n/a	n/a	n/a	n/a	n/a	n/a	n/a	310	334	304	4.3x	4.0x	4.4x
Sartorius AG	SATG-DE	321.50	25,800	2,945	28,745	1,080.8	1,426.8	1,561.0	2.1x	26.6x	20.1x	18.4x	3,449	4,166	4,527	8.3x	6.9x	6.4x
Agilent Technologies Inc	A-N	156.87	46,270	1,720	47,990	1,709.0	1,984.0	2,133.7	0.9x	28.1x	24.2x	22.5x	6,318	6,759	7,010	7.6x	7.1x	6.8x
DiaSorin SpA	DIAS-MI	132.45	7,410	0	7,410	496.0	516.7	502.2	0.0x	14.9x	14.3x	14.8x	1,218	1,356	1,365	6.1x	5.5x	5.4x
Totals / Average			497,300	46,100	543,400	26,460	27,020	27,420	0.9x	20.5x	20.1x	19.8x	80,970	90,040	90,770	6.7x	6.0x	6.0x
Microbix Biosystems Inc (ia)	MBX-T	\$ 0.48	70	-12	58	5.1	4.7	6.2	-2.6x	11.2x	12.2x	9.3x	18.6	20.2	24.5	3.1x	2.9x	2.4x

*Source: Industrial Alliance, Nov 23, 2022

Key Takeaways

+ Investment Highlights & Catalysts



Record Revenues for two consecutive years (F2022 & '21)



Strong sales growth potential across its three lines of business



Generating positive Net Earnings and Cash Flow from Operations (F2022 & '21)



Strong and improving balance sheet (through CF) and capital structure (through NCIB)



Facility improvements, automation, production expansion, and support systems in place to provide runway for revenue growth across all product lines



of QAP SKUs growing as more offerings are registered/launched on an ongoing basis and sold direct or into an int'l distribution network



Large opportunities across important segments of the global diagnostics industry



Expanding range of products and customers, including formal supply relationships with major test-makers

THANK YOU



Corporate Presentation – Winter 2023

Cameron Groome

CEO, President, and Director
cameron.groome@microbix.com



Kinlytic[®] Urokinase



+ Partnering Opportunity

→ Kinlytic[®] Urokinase

Microbix's expertise in biologicals led to its securing rights to this clot-buster drug, which is approved in the USA and Canada.

- For sales to resume, production of the drug must be restarted and the new product shown to be equivalent to past batches.
- Microbix has validated a path back to market with the U.S. FDA, obtained detailed 3rd party quotations, and is now moving to secure development partners to fund the project.

Specific Kinlytic Activities:

- + **Refined Project Scope**
Catheter Clearance Indication
U.S. market as a value driver
- + **Established Precise Costs**
Quotes from qualified vendors
Remove risk for partners
- + **Engaged Licensing Agent**
Well-respected NYC firm
More effective project outreach
- + **Prepared for Due Diligence**
Electronic Data Room Created
~1,300 pp. updated and organized



A partner to return Kinlytic to the U.S. market is now being sought. Microbix's goal is to secure a material upfront fee and retain a meaningful proportion of economics.

Kinlytic® Urokinase

+ Partnering Opportunity

→ Kinlytic® Urokinase

Urokinase is a human protein that dissolves blood clots and has been used to treat multiple clot-related disorders in millions of patients.



- + The U.S. return of Kinlytic starts with its FDA-approved use for catheter clearance.
- + Clearing blood clots from I.V. catheters is now a **>US\$350 million monopoly** in the USA, held by tPA and growing by about 10% annually.
- + **Microbix aims for sales in excess of US\$200 million by breaking that monopoly.**
- + **Refiling is achievable in 2.5 years with investment of less than US\$20 million.**



Kinlytic is therefore believed to represent a large value-creation opportunity. Qualified parties are engaged in confidential partnering discussions.

→ TERM

→ DEFINITION

Antigens

Any foreign substance that evokes an antibody response and binds to an antibody. Antigens are an essential and core component of immunoassays.

Immunoassays

Diagnostic tests that measure an antigen-antibody reaction, and for infectious diseases, can suggest the presence of a pathogen, establish exposure to a pathogen, or assess the level of immunity to a pathogen.

Uses of Immunoassays

To diagnose exposure or immunity to pathogens that can affect health in adults, children, neonates, or life in utero. For such vital uses, immunoassays cannot be replaced by nucleic acid-based tests.
