

# Corporate Presentation

(NASDAQ: TTOO)

March 2022

T2 Biosystems

# Forward-Looking Statements

This presentation contains forward-looking statements. Such statements reflect the current views of senior management of T2 Biosystems, Inc. ("we", "us", "our", "T2", "T2 Biosystems" or the "Company") and include those about T2's goals, strategies, plans, objectives, prospects, milestones, future operations, business and industry, anticipated product benefits, future events and conditions and potential scenarios. Such statements and those that include the words "expect," "intend," "plan," "believe," "project," "forecast," "estimate," "may," "should," "anticipate" and similar statements of a future or forward-looking nature identify forward-looking statements for purposes of the federal securities laws or otherwise. Forward-looking statements address matters that involve risks and uncertainties. Each forward-looking statement is subject to risks and uncertainties that could cause actual results to differ materially from those expressed or implied in such statement, including, for example: (i) our status as an early commercial-stage company and expectation to incur losses in the future; (ii) our ability to obtain marketing authorization from the FDA or regulatory clearance for additional product candidates in the United States or abroad; (iii) the market acceptance of our technology; (iv) our ability to timely and successfully develop and commercialize existing and future product candidates; (v) our lengthy and variable sales cycle and lack of sales history; (vi) our ability to successfully manage growth; (vii) federal, state and foreign regulatory requirements; (viii) our uncertain future capital needs and ability to raise future capital; (ix) dependence on third parties; (x) recruiting, training and retaining key personnel; (xi) competitive factors; (xii) manufacturing and other product risks; (xii) risks related to intellectual property; and (xiii) other risk factors included in our annual report on form 10-K filed with the Securities and Exchange Commission (SEC) on March 31, 2021 and other documents we file with the SEC from time to time. Accordingly, there are or will be important factors that could cause our actual results to differ materially from those indicated in these statements. The statements made herein speak only as of the date of this presentation. We do not undertake, and specifically disclaim, any obligation to update any forward-looking statements contained in this presentation.

# Investment Highlights

Proprietary technology platform with potential to become standard of care in sepsis management

## Proprietary Platform



Innovative proprietary technology platform (magnetic resonance)

## Novel Sepsis Diagnostics



Direct from blood ID in 3-5 hours (culture independent)

## Large Market Opportunity



Initial target market \$2 billion+

## Established Reimbursement



U.S. hospital in-patient testing is covered (DRG payment system)

## Robust Product Pipeline



BARDA contract may fund up to \$69 million (milestone-based)

## Commercially Focused



Commercial focus on U.S. hospitals

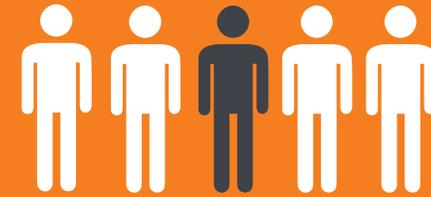
# T2 Biosystems

**We create life-saving diagnostic innovations to  
achieve targeted therapy, faster.**

T2 Biosystems

# Sepsis is a Global Problem with Fatal Consequences

An estimated 11 million people worldwide die from sepsis each year



Sepsis contributes to  
**1 in 5 deaths**  
globally

# Sepsis is the Number 1 Cause of Death in U.S. Hospitals

Causes more deaths each year than the top three cancers combined (lung, colorectal, breast)<sup>2</sup>



Sepsis represents  
\$62 billion in U.S.  
healthcare costs<sup>1</sup>



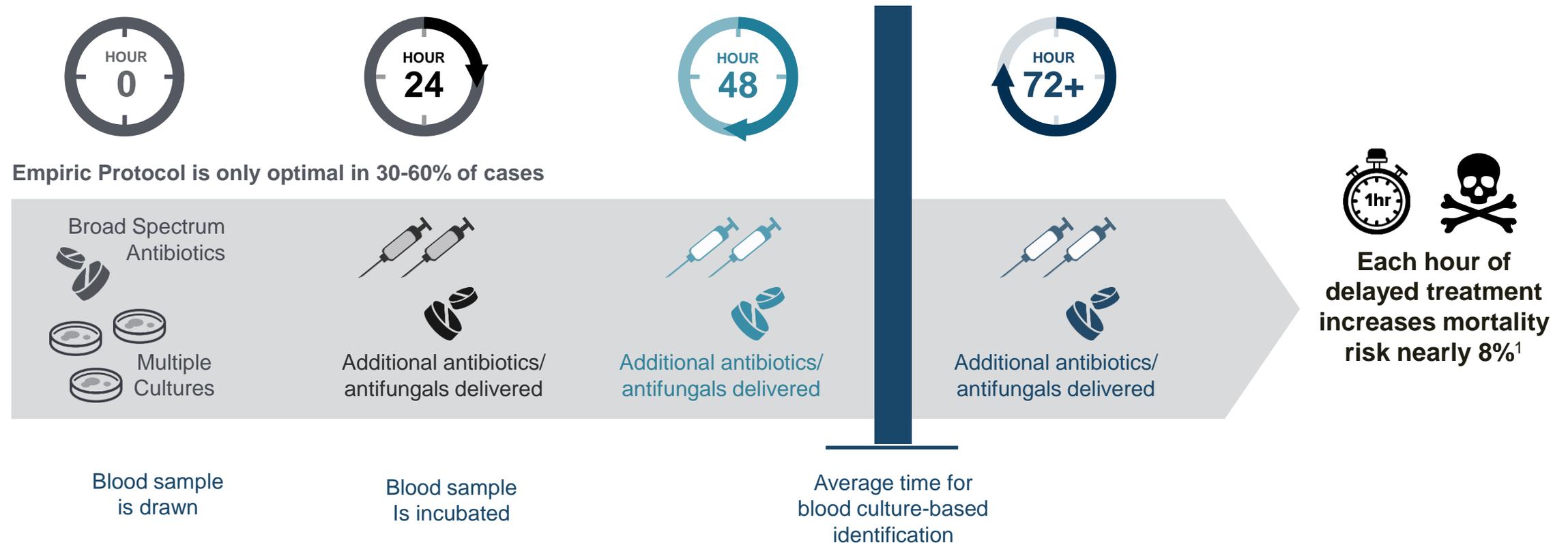
One in three patients  
who dies in a hospital  
has sepsis<sup>3</sup>



Causes the death of  
nearly 270,000  
Americans annually<sup>3</sup>

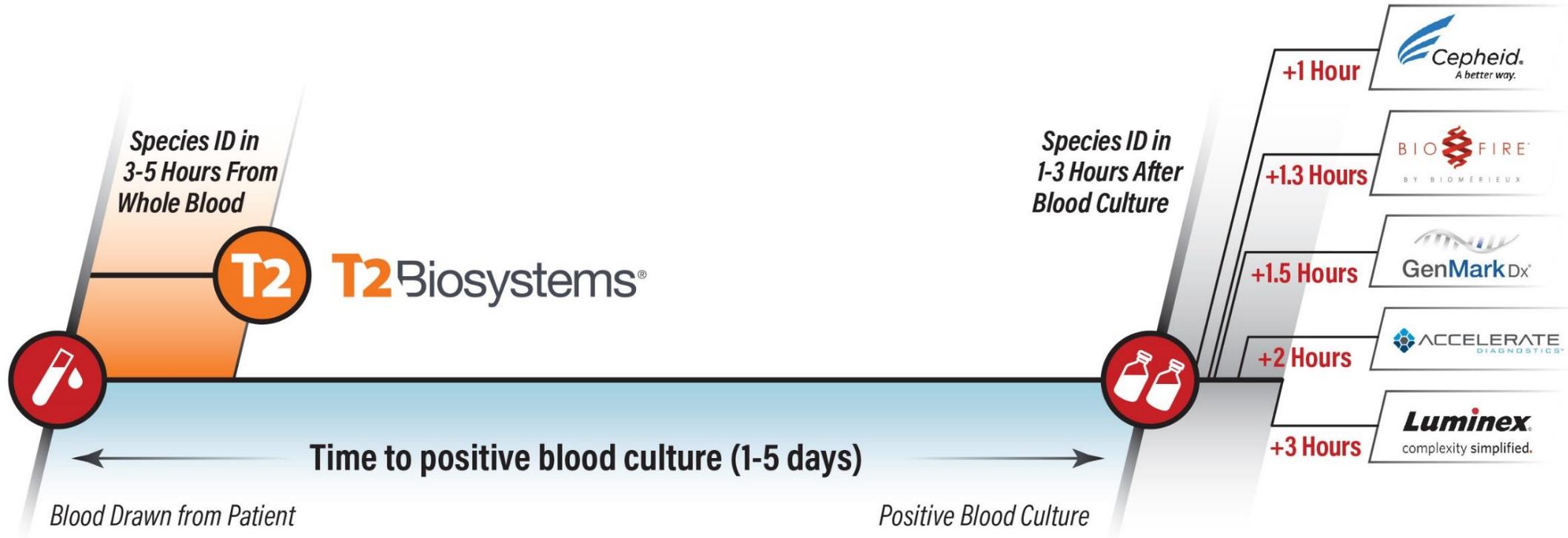
# The Challenge of Detecting Sepsis-Causing Pathogens

The current standard is a race against time, relying on empiric probability-based protocols



# Rapid Detection of Sepsis-Causing Pathogens is Critical

T2 Biosystems' culture independent diagnostics enable targeted therapy within 3-5 hours



T2 Biosystems provides species and resistance gene identification **directly from whole blood in 3-5 hours of the first blood draw**, often before the second dose of broad-spectrum antibiotics is delivered, enabling clinicians to achieve targeted therapy faster than the current standard of care.

# The only FDA-Cleared Direct-From-Blood Sepsis Tests

Fully-automated T2Dx Instrument and Sepsis Tests are Rapid, Easy-to-Use and Reliable

- Rapid: results in 3-5 hours
- Simple: no sample preparation
- Ultra Sensitive: ~1 CFU/mL LoD



T2Candida®	T2Bacteria®	T2Resistance™
Sensitivity: 91.1% <sup>1</sup> Specificity: 99.4% <sup>1</sup>	Sensitivity: 95.4% <sup>2</sup> Specificity: 98.0% <sup>2</sup>	FDA Breakthrough Device CE Mark/RUO 2019
<i>C. albicans</i> <i>C. tropicalis</i> <i>C. parapsilosis</i> <i>C. krusei</i> <i>C. glabrata</i>	<i>E. faecium</i> <i>S. aureus</i> <i>K. pneumoniae</i> <i>P. aeruginosa</i> <i>E. coli</i>	<i>mecA/C</i> <i>vanA/B</i> CTXM-14/15 KPC OXA-48 Group NDM, VIM, IMP AmpC (CMY/DHA)
FDA-Cleared CE-marked 1-3 CFU/mL LoD	FDA-Cleared CE-marked 2-11 CFU/mL LoD	Currently RUO (U.S.) CE-marked 3-11 CFU/mL LoD

1. Mylonakis, E., Clancy, C.J., Ostrosky-Zeichner, L., et al. (2015). Clinical Infectious Diseases

2. T2Bacteria Pivotal Clinical Study. This is a combination of samples run in both prospective and contrived arms of study. T2Bacteria showed an overall average sensitivity of 90% in the prospective arm of the study and the contrived arm an overall average PPA of 97%.

# T2SARS-CoV-2™ Molecular (RT-PCR) Diagnostic Test

Direct detection of SARS-CoV-2 from upper respiratory samples

- Runs on FDA-cleared T2Dx® Instrument
- Results in < 2 hours, sample-to-answer
- Throughput of up to 60 samples/day
- Validated in accordance with FDA EUA guidelines<sup>1</sup>
- Established reimbursement under existing codes
  - CPT 87635
- Can detect 99.99% of all currently identified SARS-CoV-2 viruses, including the following variants:
  - alpha, beta, gamma, delta, lambda, mu and iota

## T2SARS-CoV-2™



**Sensitivity: 95%<sup>1</sup> | Specificity: 100%<sup>1</sup>**

# Growing Independent Support for T2 Technology

T2Bacteria represents a substantial clinical improvement over existing technologies<sup>1</sup>



Included in **dozens of independent, real-world clinical case studies** demonstrating clinical utility of T2Bacteria and T2Candida ([www.t2biosystems.com](http://www.t2biosystems.com))



U.S. Food & Drug Administration **granted breakthrough device designation** for T2Resistance™ Panel



U.S. Centers for Medicare & Medicaid Services (CMS) **established T2Bacteria® as first diagnostic product to gain incremental reimbursement** through its New Technology Add-on Payment (NTAP)



U.S. Department of Health and Human Services (i.e., BARDA) **awarded T2 Biosystems with up to \$69 million in milestone-based product development funding**



Vizient, Inc. **awarded T2 Biosystems with Innovative Technology contract**, providing access to more than 50 percent of the nation's acute care hospitals, 95 percent of all academic medical centers and 20 percent of the country's ambulatory market

# Meta-analysis of 14 Controlled Studies (Peer-Reviewed)

Highlights benefits of T2 Biosystems sepsis technology vs. blood culture

**Title:** Antimicrobial and Resource Utilization with T2 Magnetic Resonance for Rapid Diagnosis of Bloodstream Infections: Systematic Review with Meta-analysis of Controlled Studies (2021)

**Authors:** Maddalena Giannella, George A. Pankey, Renato Pascale, Valerie M. Miller, Larry E. Miller, Tamara Seitz

**Journal:** Expert Review of Medical Devices

## Seven Outcomes Evaluated

- Time to **detection 81 hours faster** with T2MR
- Time to **species identification 77 hours faster** with T2MR
- Patients testing positive on T2MR **received targeted antimicrobial therapy 42 hours faster**
- Patients testing negative on T2MR **de-escalated from empirical therapy 7 hours faster**
- Length of **ICU stay 5 days shorter** with T2MR
- Length of **hospital stay 4.8 days shorter** with T2MR
- Mortality rates were comparable between T2MR and BC



# 2022 Corporate Priorities



**ACCELERATE SALES**



**ENHANCE OPERATIONS**



**ADVANCE PIPELINE**

# 1

## ACCELERATE SALES

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# Accelerating Sales of Sepsis Products

Focus on the global hospital market

## Enhancement of Value Chain Activities

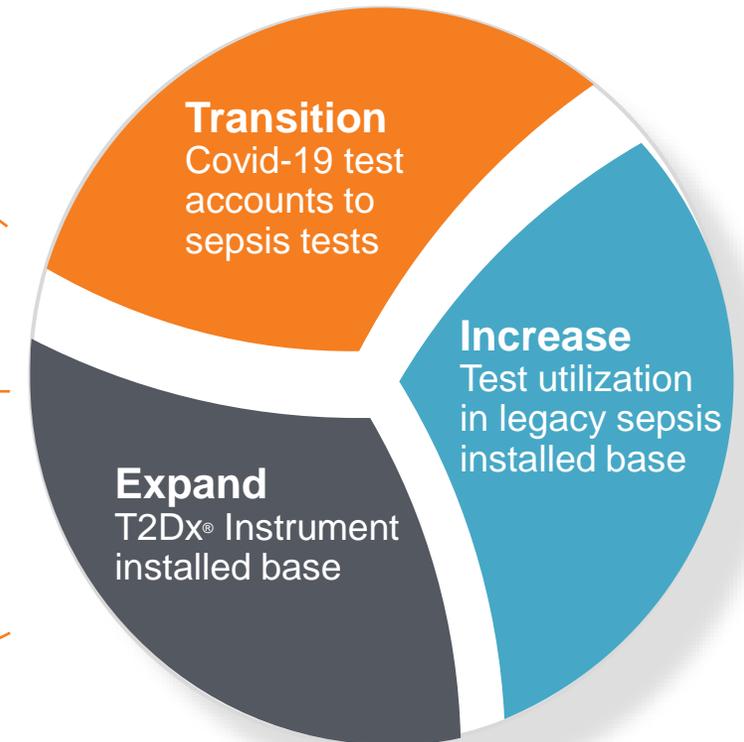
- Customer support – Field Application Specialists, Medical Affairs
- Marketing – Customer-centric focus leveraging clinical and economic value proposition
- Sales – Expansion of training program to accelerate sales ramp
- Operations – Strengthening supply chain

## Expansion of Functional Capabilities

- Sales & Marketing – Broad diagnostics and capital experience in the hospital market
- Chief Medical Officer – Evidence generation of clinical and health economic data, clinical education programs, and raising visibility of firm to key stakeholders
- Service and Support – Expansion and alignment of Medical Affairs and Field Application Specialists

## Channel Optimization

- Increased direct salesforce presence in U.S. market
- Leveraging GPO relationship to expand reach (e.g., Vizient)
- Full-funnel digital marketing strategy
- Expanding number of international distribution partners



# Commercial Execution

Driving changes to standard of care



## Educate

Clinical and economic value proposition



## ID Use Cases

Patient Selection Criteria:  
Hematology/Oncology, ICU,  
Transplant



## Implement

Secure approval for go-live and  
incorporation into sepsis protocol



## Routine

Establish patient sample and  
results reporting workflow  
Post-Go Live Customer Support



Instrument Installs



Prepared to run clinical samples



Routine clinical use

# 2

## ENHANCE OPERATIONS

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# 2022 Operational Objectives

- Scaled manufacturing capacity
- Implemented new ERP system
- Improve product gross margins
- Reduce operating costs



# 3

## ADVANCE PIPELINE

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# Advancing Pipeline with Multi-Year Government Contract<sup>1</sup>

New product development enabled by up to \$69 million milestone-based BARDA funding



## T2Resistance Panel

- Direct-from-blood test panel designed to detect 13 antibiotic resistance genes from gram-positive and gram-negative pathogens in 3-5 hours, without the need to wait for blood culture results
- Designed to run on current FDA cleared T2Dx Instrument
- Plan to initiate U.S. clinical trial during the first quarter of 2022

## Comprehensive Sepsis Panel

- Direct-from-blood test panel designed to detect ~99% of all bloodstream infections caused by bacterial and *Candida* species, and antibiotic resistant markers identified as threats by the CDC, in a single test with a time to result of approximately 3 hours
- Designed to run on next generation instrument

## Biothreat Panel

- Direct-from-blood test panel for detection of six biothreat pathogens from a single patient sample
- *B. anthracis*, *F. tularensis*, *Burkholderia* spp., *Y. pestis*, *R. prowazekii*, and toxin genes
- Designed to run on FDA cleared T2Dx Instrument; same as T2Bacteria & T2Candida
- Plan to initiate U.S. clinical trial during the first quarter of 2022

## Next Generation Instrument

- Designed to be fully-automated, random access, like the FDA cleared T2Dx Instrument
- Designed in parallel with the comprehensive sepsis panel, to detect an increased number of pathogens and antibiotic resistance genes from a single whole blood sample

# T2Lyme Panel

Demonstrated greater sensitivity than existing Lyme diagnostic tests<sup>1,2</sup>

- Data indicates **>10 times more sensitive** than existing molecular (PCR) Lyme tests
- In a head-to-head comparison, **T2Lyme has higher clinical sensitivity and accuracy** than CDC recommended 2-tier test
- T2 executed a multi-year pivotal study & generated a bio-bank of **>300 clinical samples** for clinical validation of T2Lyme
- Discussions with laboratories to launch T2Lyme as a reference-lab LDT

## Lyme Market Opportunity

- Over 3.4 million diagnostics tests are performed for Lyme disease in the U.S. each year<sup>3</sup>
- There are an estimated 300,000 Lyme disease patients<sup>3,5</sup>
- There are approximately 30,000 cases of Lyme disease reported by CDC each year<sup>4</sup>

# T2Cauris Panel

Recognized by CDC as a serious global health threat

- Direct detection of the **emerging superbug *Candida auris*** in patient skin, patient blood, and hospital environmental samples (detection of all four known clades of *C. auris*)
- The T2Cauris Panel can detect levels as low as which is  $\leq 5$  CFUs/mL which is **greater than a 100-fold increase in sensitivity** compared to other molecular diagnostic tests for *C. auris*<sup>1,3,4,5</sup>
- The Centers for Disease Control and Prevention (CDC) **validated the T2Cauris™ Panel** swab test on patient skin samples and published their findings in *Mycoses*<sup>1</sup>
- Currently available for **Research Use Only (RUO)** and is not cleared for diagnostic use

## A Serious Global Health Threat

- Multidrug-resistant pathogen recognized by CDC as a serious global health threat because it can be resistant to all three major classes of antifungal drugs and difficult to identify
- The T2Cauris Panel demonstrated significant superiority in time advantages (<5 hours) compared to culture methods that took 14 days and inability to detect low levels of *C. auris*.

# Financial Summary

	<u>2022 Guidance</u> <sup>1</sup>	<u>2021</u>	<u>2020</u>	<u>% Change</u>
<b>Total Revenue</b>	\$28-31 million	\$28.1 million	\$18.1 million	55%
<b>Product Revenue</b>	\$16-17 million	\$16.6 million	\$11.7 million	42%
<b>R&amp;D Revenue</b>	\$12-14 million	\$11.4 million	\$6.4 million	78%
<b>Instruments</b>	60-70	32	57	
<b>Cash Balance</b>		\$33.8 million <sup>2</sup>		