# Corporate Presentation

(NASDAQ: TTOO)

November 2022


T2Biosystems®

# 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 23, 2022 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 global hospital market

# T2 Biosystems

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

# 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



Rudd et al, (2020). Global, regional, and national sepsis incidence and mortality, 1990–2017: analysis for the Global Burden of Disease Study. The Lancet, VOLUME 395, ISSUE 10219, P200-211

# 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)[2]

Sepsis represents $62 billion in U.S. healthcare costs[1]

One in three patients who dies in a hospital has sepsis[3]

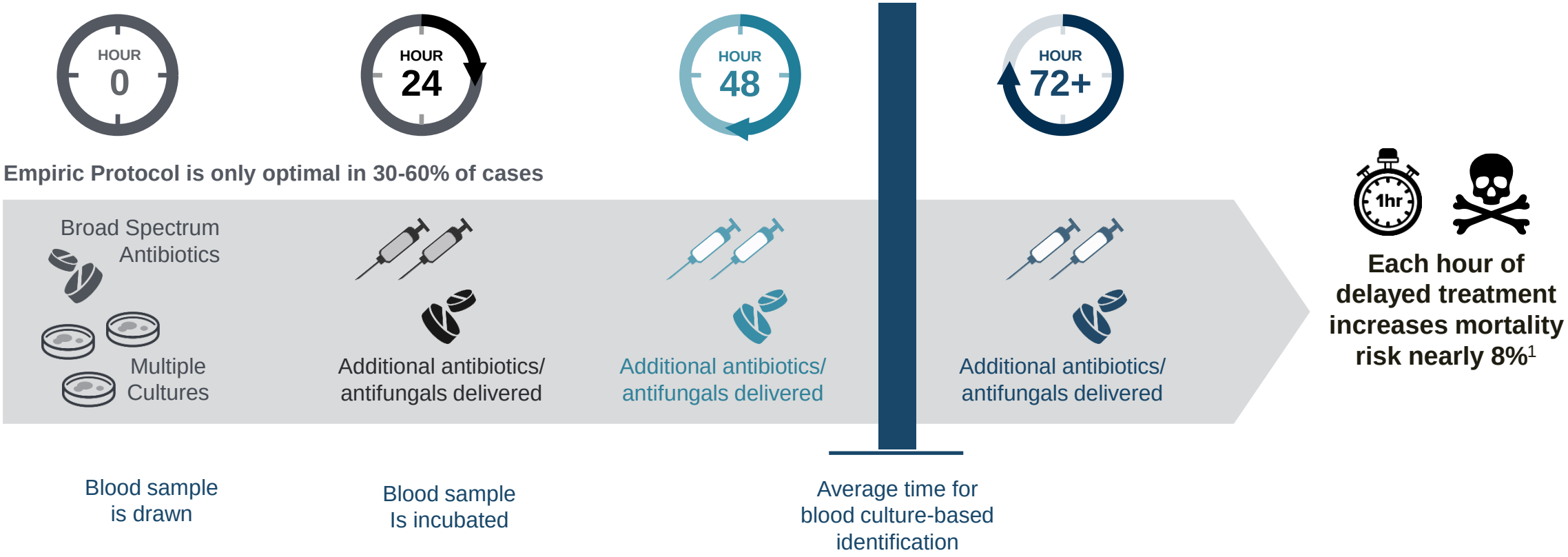
Causes the death of nearly 270,000 Americans annually[3]



1. https://journals.lww.com/ccmjournal/FullText/2020/03000/Sepsis_Among_Medicare_Beneficiaries__3__The.4.aspx
2. National Institute of General Medical Sciences. National Institutes of Health. Sepsis fact sheet. 2014.
3. Centers for Disease Control and Prevention.

# The Challenge of Detecting Sepsis-Causing Pathogens

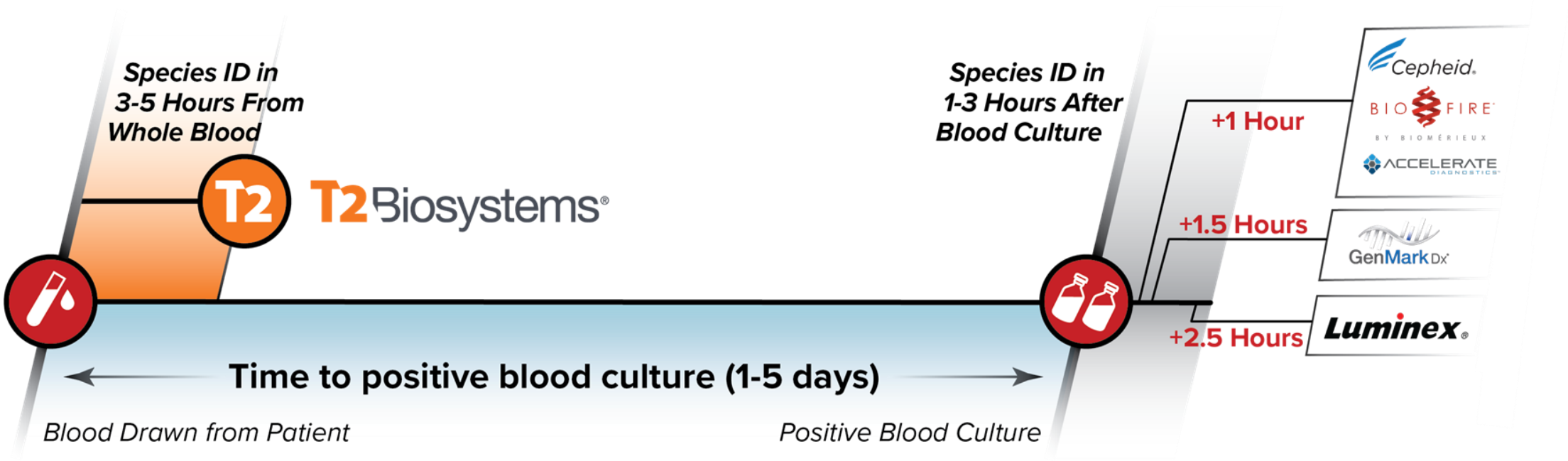
## The current standard is a race against time, relying on empiric probability-based protocols






1. Kumar, A., Roberts, D., Wood, K.E., et al, (2006). Duration of hypotension before initiation of effective antimicrobial therapy is the critical determinant of survival in human septic shock. Critical care medicine, 34(6), 1589-1596.

# Rapid Detection of Sepsis-Causing Pathogens is Critical




T2 Biosystems provides species and resistance gene identification **directly from whole blood within 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.



1. Peker, N., et al. Table 1. Clin Microb & Inf, 2018

# 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
- T2MR technology is not inhibited by prior antimicrobial administration[3]


| T2Candida® | T2Bacteria® | T2Resistance™ |
|---|---|---|
| Sensitivity: 91.1%[1]<br>Specificity: 99.4%[1] | Sensitivity: 95.4%[2]<br>Specificity: 98.0%[2] | FDA Breakthrough Device<br>CE Mark/RUO 2019 |
| *C. albicans*<br>*C. tropicalis*<br>*C. parapsilosis*<br>*C. krusei*<br>*C. glabrata* | *E. faecium*<br>*S. aureus*<br>*K. pneumoniae*<br>*P. aeruginosa*<br>*E. coli* | *mecA/C*<br>*vanA/B*<br>CTXM-14/15<br>KPC<br>OXA-48 Group<br>NDM, VIM, IMP<br>AmpC (CMY/DHA) |
| **FDA-Cleared**<br>**CE-marked**<br>1-3 CFU/mL LoD | **FDA-Cleared**<br>**CE-marked**<br>2-11 CFU/mL LoD | **Currently RUO (U.S.)**<br>**In clinical trial**<br>**CE-marked**<br>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%.
3. T2Candida and T2Bacteria Instructions for Use, refer to Performance Characteristics: Interfering Substances

# T2Lyme Panel

## FDA breakthrough designation with greater sensitivity than existing Lyme diagnostic tests[1,2]

- 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
- Patent issued “NMR Methods and Systems for the Rapid Detection of Tick-Borne Pathogens” covers the T2Lyme Panel

### Lyme Market Opportunity

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



1. Snyder, J, Giese, H, Bandoski-Gralinski, C, et al. (2017). T2 Magnetic Resonance Assay-Based Direct Detection of Three Lyme Disease-Related Borrelia Species in Whole-Blood Samples. JCM August 2017 Volume 55 Issue 8, p. 2453-2461; 2. Andre, P., Smith, R., Damle, N., et al. (2018). A Prospective Clinical Evaluation of the T2Lyme®Diagnostic Demonstrated a High Positive Predictive Value for Borrelia Infection. 15th International Conference on Lyme Borreliosis and other Tick-Borne Diseases (ICLB). September 11-14, 2018 Atlanta Georgia; 3. Hinckley et al. Clin Infect Dis; 4. www.cdc.gov/lyme/stats/; 5. Nelson et al. Emerging Infect Dis. 2015.

# Growing Independent Support for T2 Technology

## T2Bacteria represents a substantial clinical improvement over existing technologies[1]

Included in dozens of independent, real-world clinical case studies demonstrating clinical utility of T2Bacteria and T2Candida (www.t2biosystems.com)

U.S. Food & Drug Administration granted breakthrough device designation for T2Lyme and 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

HHS, Cohen Foundation Name T2 Biosystems a Phase 1 Winner in LymeX Diagnostics Prize awarded $100,000 and an invitation to participate in a second phase of competition to accelerate the development of Lyme disease diagnostics



1. United States CMS FY 2020 inpatient prospective system final rule

# 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

# Commercial Go-To-Market Strategy

Increase instrument installed base and expand sepsis testing

## UNITED STATES MARKET

- Installed base: 101 T2Dx Instruments
- Sales force expansion
- Enhanced training program
- Instrument placement programs
- COVID transition to sepsis

## INTERNATIONAL MARKET

- Installed base: 69 T2Dx Instruments
- Sales force expansion
- Geographic expansion – EU/ME, APAC, and LATAM
- Enhanced distributor training and support

**Plans to Commercialize Dx for Early Lyme Disease as a Laboratory Developed Test in 2023**

# 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

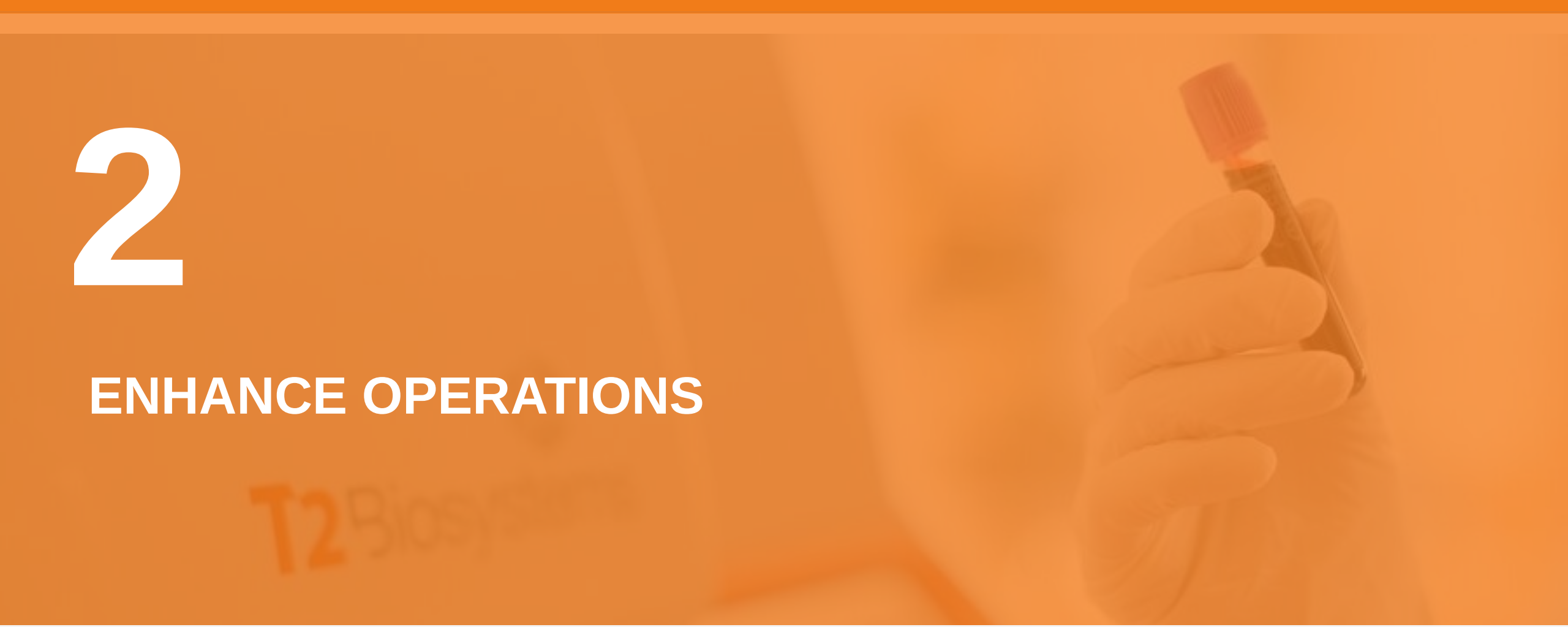
Instrument Installs

Prepared to run clinical samples

Routine clinical use

# 2

# ENHANCE OPERATIONS

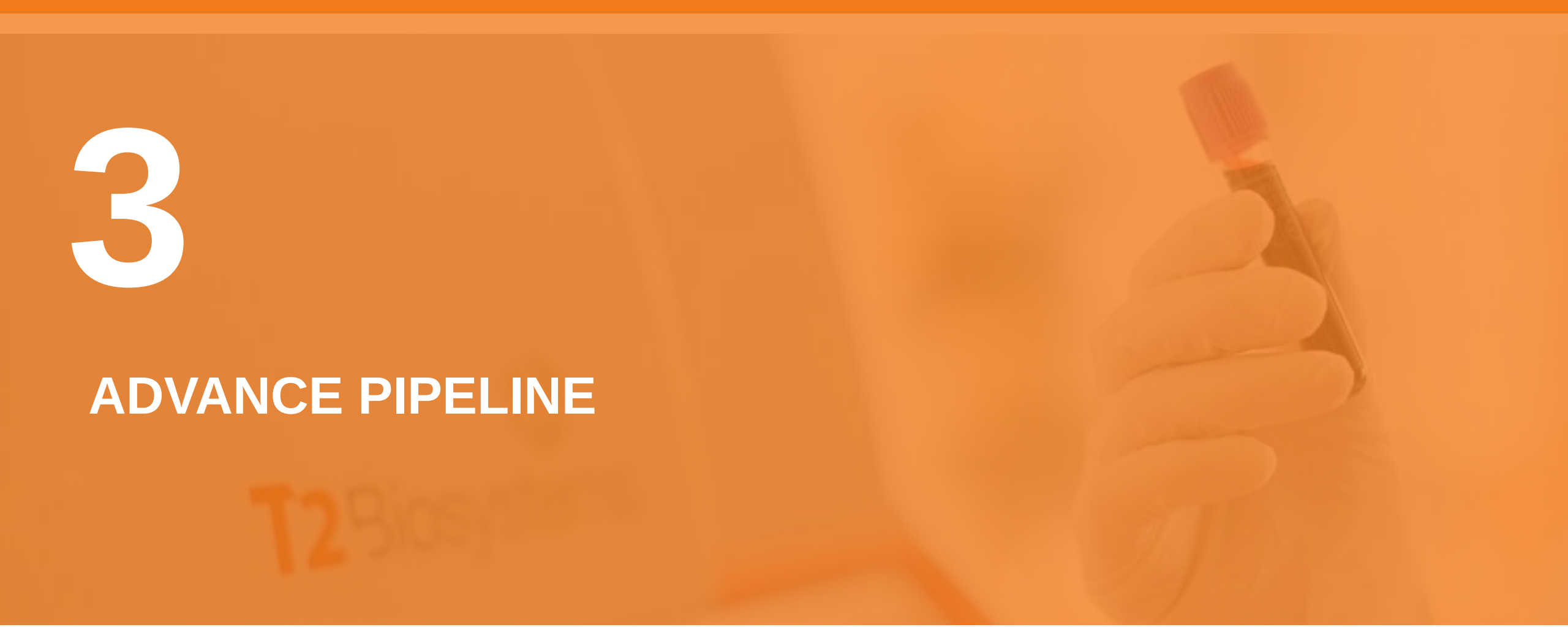


# 2022 Operational Objectives

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

# 3

# ADVANCE PIPELINE



# Advancing Pipeline with Multi-Year Government Contract[1]

## 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; same as T2Bacteria & T2Candida
- Initiated U.S. clinical trial during the first quarter of 2022 with FDA submission planned for early 2023

### 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

### T2Biothreat 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
- Initiated U.S. clinical trial during the first quarter of 2022, completed negative arm of trial, FDA submission planned for 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



1. Milestone-based contract valued up to $69 million if all options are exercised

# 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 ≤ 5 CFUs/mL which is greater than a 100-fold increase in sensitivity compared to other molecular diagnostic tests for *C. auris*[1,3,4,5]
- The Centers for Disease Control and Prevention (CDC) validated the T2Cauris™ Panel swab test on patient skin samples and published their findings in Mycoses[1]
- 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*.



1. Sexton DJ, et al. Mycoses, 2018; 2. Centers for Disease Control and Prevention, 2017; 3. Sexton DJ, et al. Journal of Clinical Microbiology, 2018; 4. Kordalewska M, et al. Journal of Clinical Microbiology, 2017; 5. Leach L, et al. Journal of Clinical Microbiology, 2018; 6. Manning B, et al. Poster Presentation, IDWeek, 2017

# Financial Summary

| | 2022 Guidance[1] | Q3 2022 |
|---|---|---|
| **Total Revenue** | $22-23 million | $3.7 million |
| **Product Revenue** | $11.5-12 million | $2.6 million |
| **R&D Revenue** | $10.5-11 million | $1.0 million |
| **Instruments** | 50-55 | 11 |
| **Cash Balance** | | $21.5 million[2] |

- Achieved sepsis and related revenue (non-COVID product revenue) of $2.4 million, representing a record number for a single quarter and an increase of 24% compared to the prior year period.

- 88% decline in sales of COVID-19 tests from $2.4 million in Q3 2021



1. Guidance assumes a decrease in sales of COVID-19 tests compared to 2021
2. Includes $1.1 million restricted cash as of 9/30/2022.