Corporate Presentation

(NASDAQ: TTOO)

August 2023

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 31, 2023 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 $62 million (milestone-based)

Commercially Focused

Commercial focus on global hospital market

T2 Biosystems®

Our mission is to fundamentally change the way medicine is practiced through **transformative culture-independent diagnostics** that improve the lives of patients around the world

We are advancing our mission by creating life-saving diagnostic innovations to achieve targeted antimicrobial 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

Source: 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

Significant Human and Economic Toll from Sepsis in the U.S.

Causes more deaths each year than the top three cancers combined (i.e., lung, colorectal, breast)[2]

Sepsis is the #1 cost of U.S. hospitalization: $62 billion annually[1]

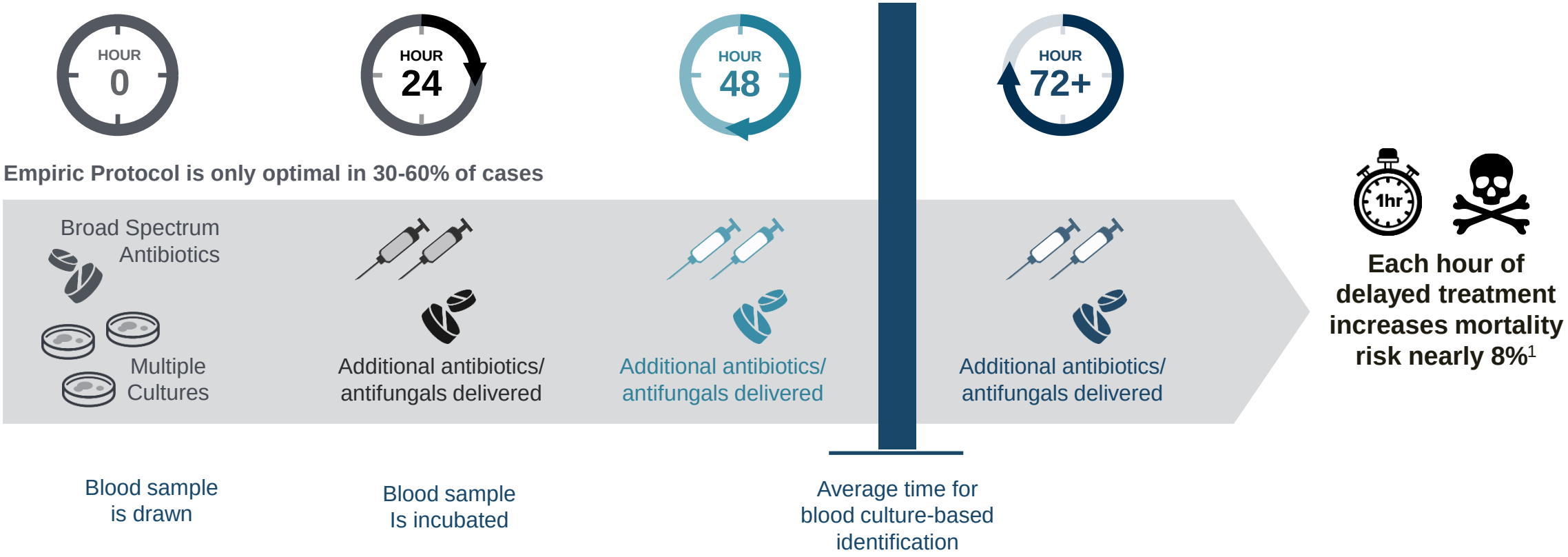
Sepsis is the #1 cause of death in U.S. hospitals: 270,000 annually[3]

Sepsis is the #1 cause of 30-day readmission: 19% readmission[4]

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
4. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6741358/

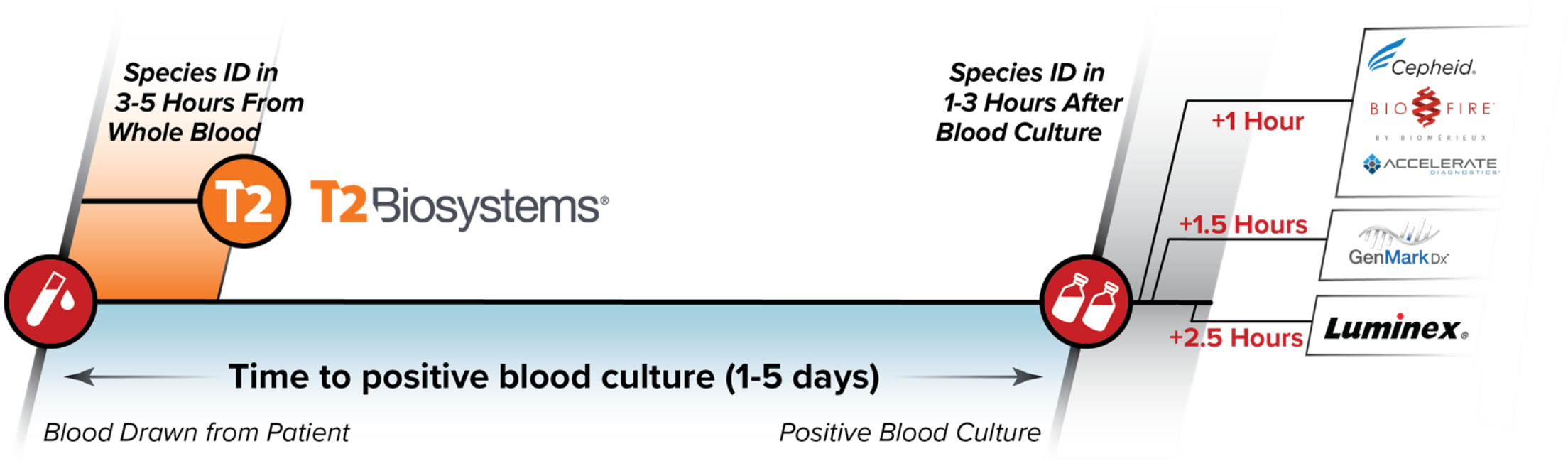
The Challenge of Detecting Sepsis-Causing Pathogens

It is a race against time, as each hour of delayed treatment increases mortality by up to 8%



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' products are able to detect sepsis-causing pathogens and antibiotic resistance genes directly from whole blood within 3-5 hours, without the need to wait days for positive blood culture, enabling clinicians to achieve faster targeted antimicrobial

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] Specificity: 99.4%[1]	Sensitivity: 95.4%[2] Specificity: 98.0%[2]	FDA Breakthrough Device CE Mark/RUO 2019
C. albicans *C. tropicalis* *C. parapsilosis* *C. krusei* *C. glabrata*	*E. faecium* *S. aureus* *K. pneumoniae* *P. aeruginosa* *E. coli*	*mecA/C* *vanA/B* 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	**U.S. clinical trial** (patient enrollment complete) **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%.
3. T2Candida and T2Bacteria Instructions for Use, refer to Performance Characteristics: Interfering Substances

T2Biosystems®

Growing Independent Support for T2 Biosystems' Products

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 the T2Resistance® Panel, the T2Lyme™ Panel and the *Candida auris* test

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)[1]

U.S. Department of Health and Human Services (i.e., BARDA) awarded T2 Biosystems with up to $62 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

U.S. Department of Health and Human Services and the Steven & Alexandra Cohen Foundation named T2 Biosystems a Prize 1 Winner in LymeX Diagnostics Prize with potential for a portion of up to $9 million in future funding

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

2023 Corporate Priorities

ACCELERATE SALES

ENHANCE OPERATIONS

ADVANCE PIPELINE

1

ACCELERATE SALES

Commercial Go-To-Market Strategy

Increase T2Dx Instrument installed base and expand sepsis testing

UNITED STATES MARKET

- Installed base: 100 T2Dx Instruments
- Enhanced customer training program
- Instrument placement programs
- Convert COVID-driven T2Dx to sepsis

INTERNATIONAL MARKETS

- Installed base: 80 T2Dx Instruments
- Pursue geographic expansion
  - EU/ME, APAC, and LATAM
- Enhanced distributor training and support

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

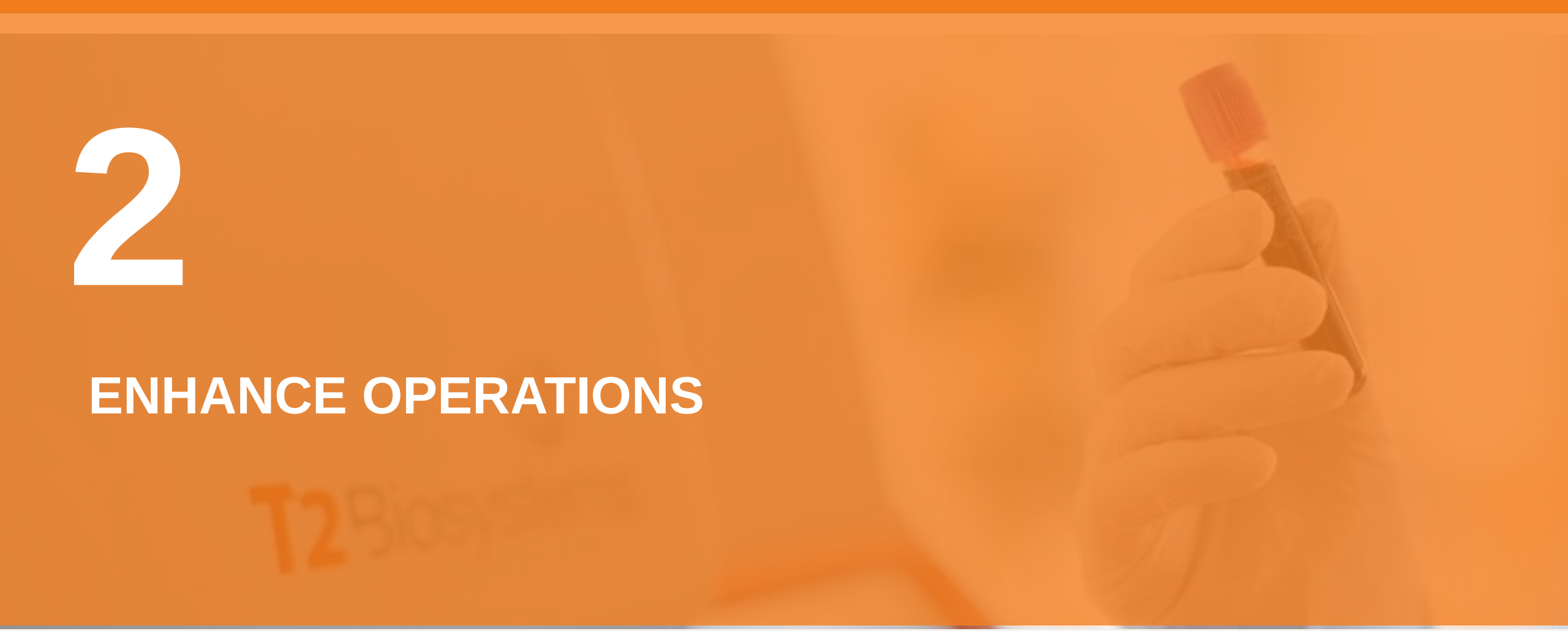
Instrument Installs

Prepared to run clinical samples

Routine clinical use

2

ENHANCE OPERATIONS

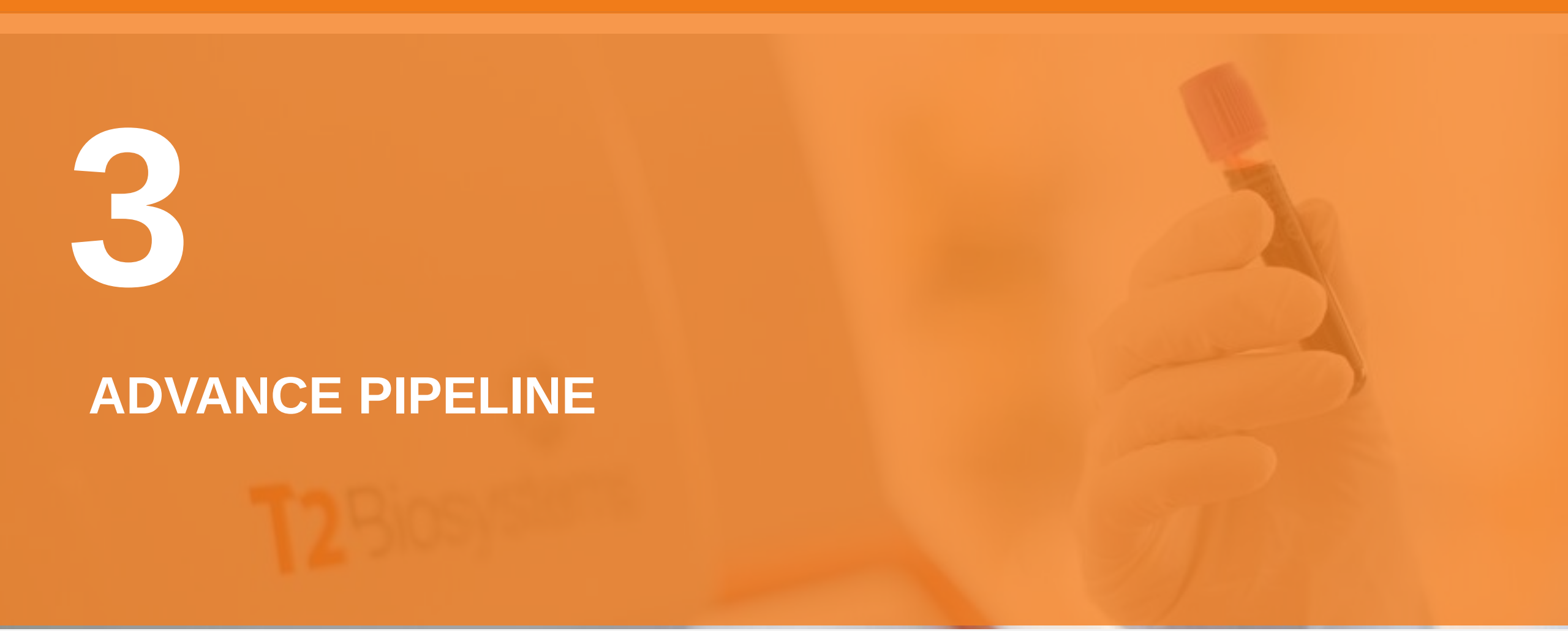


Operational Objectives

- Achieve on-time delivery targets
- Improve product gross margins
- Achieve ISO recertification
- Reduce operating costs
- Transfer new products from R&D
- Scale manufacturing processes
- Implement Oracle ERP system

3

ADVANCE PIPELINE



Menu Expansion Initiatives for the FDA Cleared T2Dx Instrument

T2Resistance and T2Biothreat funded under contract with BARDA[1]

T2Biothreat Panel[1]

- Direct-from-blood test panel designed to detect 6 biothreat pathogens, in 3-5 hours, without the need to wait days for blood culture results
- Proposed to aid in the diagnosis of CDC's category A and B biothreats, including anthrax, tularemia, melloidosis, glanders, typhus fever, plague
- Completed U.S. clinical evaluation, demonstrating high sensitivity and specificity, filed FDA submission for 510(k) clearance in May 2023

T2Resistance Panel[1]

- Direct-from-blood test panel designed to detect 13 antibiotic resistance genes, in 3-5 hours, without the need to wait days for blood culture results
- Proposed to confer resistance to common antibiotics, including carbapenems, vancomycin, β-lactams, methacilin
- Received FDA Breakthrough Device Designation; completed patient enrollment in U.S. clinical trial

Acinetobacter baumannii Test

- Direct-from-blood test designed to detect *Acinetobacter baumannii*, in 3-5 hours, without the need to wait days for blood culture results
- *A. baumannii* considered the tenth most common bacterial pathogen with ICU mortality rate of 34%-43%; can be resistant to many antibiotics
- Completed studies to add *A. baumannii* to FDA-cleared T2Bacteria Panel; plan to file FDA submission for 510(k) clearance in 2H 2023

Candida auris Test

- Direct-from-blood test designed to detect *Candida auris*, in 3-5 hours, without the need to wait days for blood culture results
- *C. auris* is a multidrug-resistant fungal pathogen that is recognized as a global health threat by CDC and WHO; mortality rate up to 60%
- Received FDA Breakthrough Device designation; developed *C. auris* test in collaboration with CDC

T2Lyme Panel

- Direct-from-blood test panel designed to detect *Borrelia burgdorferi*, in 3-5 hours, without the need to wait days for blood culture results
- B. burgdorferi is the bacteria that causes Lyme disease; T2Lyme Panel is intended to aid in the diagnosis of early Lyme disease
- Received FDA Breakthrough Device Designation; received LymeX prize, with future funding potential from HHS and Cohen Foundation

1. Funded under milestone-based product development contract with BARDA

Next Generation Platform – Funded Under BARDA Contract[1]

Development enabled by up to $62 million in milestone-based BARDA funding

Next Generation Instrument

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

Comprehensive Sepsis Panel

- Direct-from-blood test panel designed to detect >95% 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 ~3 hours
- Designed to run on next generation instrument

1. Milestone-based contract valued up to $62 million if all options are exercised

Financial Summary (as of June 30, 2023)

	Q2 2023 Results
Total Revenue	$2.0 million
Product Revenue	$2.0 million
R&D Revenue	$0.0 million
Instruments	11
Cash Balance (as of June 30, 2023)	$16.1 million[1]

Recent Highlights

- Achieved record quarterly sepsis test panel revenue in Q2; 7% Y-o-Y increase
- Achieved 2nd largest sepsis-driven T2Dx Instrument order (Poland); 7 instruments
- Filed FDA submission for T2Biothreat Panel
- Received FDA Breakthrough Device designation for *Candida auris* test
- Completed patient enrollment in T2Resistance Panel U.S. trial
- Strengthened balance sheet via CRG debt-to-equity conversion and capital raise (ATM)

1. Raised an additional $17.1 million subsequent to the end of the second quarter