

December 2023



bioAffinity
TECHNOLOGIES

NASDAQ: BIAF / BIAFW

INVESTOR PRESENTATION
DECEMBER 2023

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Investment Highlights

CyPath[®]Lung is a non-invasive test to improve early detection of lung cancer



Patient-friendly

At-home collection (no needles, no blood) with results to physician 3 days after sample arrives at the lab



92%

Sensitivity¹

87%

Specificity¹

99%

Negative Predictive Value¹

88%

Accuracy¹

High specificity and sensitivity with small nodules, similar to more invasive, expensive procedures



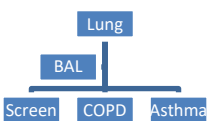
Proprietary Automated Data Analysis

Powerful automated data analysis utilizing artificial intelligence (AI) differentiates patients with lung cancer from those who are cancer-free



Flow Cytometry Data Collection

Profiles the lung microenvironment by identifying cancer and cancer-related cell populations and other characteristics indicative of lung cancer with high accuracy

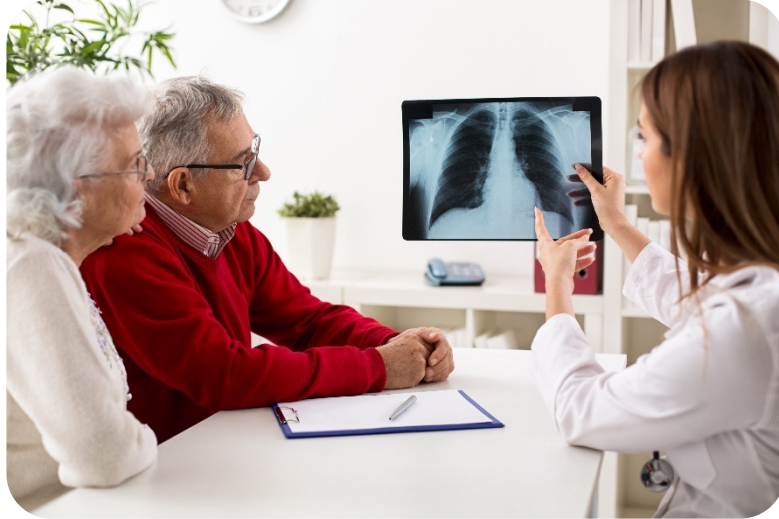


Growing Platform Technology and Therapeutics Potential

Developing noninvasive diagnostic tests for additional lung diseases, starting with COPD; OncoSelect[®] Therapeutics research subsidiary developing a pipeline of preclinical therapeutics candidates

Market Opportunity:

The Need for Early Lung Cancer Detection



Most patients currently are diagnosed with late-stage (Stages III-IV) lung cancer when the survival rate is low

23%¹
5-year overall survival rate

92%²
10-year survival if detected at Stage I & treated within one month

Accurate, early cancer detection can

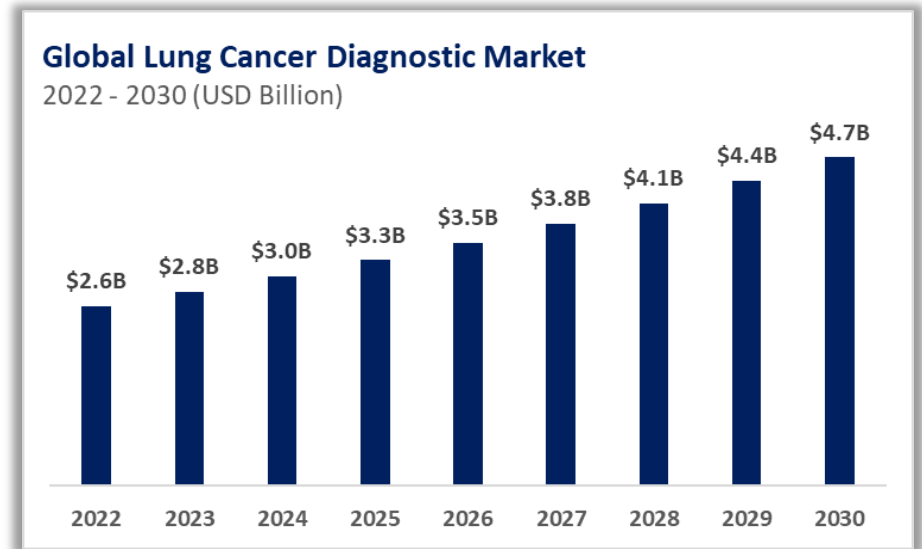
- ✓ Increase long-term survival
- ✓ Reduce unnecessary invasive procedures
- ✓ Improve the positive predictive value of screening

Market Size:

The Need for Early Lung Cancer Detection

Lung cancer is the leading cause of cancer-related death worldwide, claiming nearly 1.8 million lives annually.

- An estimated 19.3 million Americans should have annual screening for lung cancer, according to American Cancer Society² recommendations.
- Lung cancer is the leading cause of cancer death in the European Union.³
- China has an estimated 300 million smokers.⁴



The market worldwide for lung cancer diagnostic tests was estimated at \$2.6 billion in 2022 and is projected to reach \$4.7 billion by 2030, with a CAGR of 7.8% over 2022-2030.⁵

¹ *The Cancer Atlas, Third Edition*, American Cancer Society (ACS), World Health Organization (WHO) and The Union for International Cancer Control (UICC); <https://canceratlas.cancer.org/the-burden/lung-cancer/>

² NBC News. "Lung cancer screening guidelines: Quit smoking, annual test." NBC News Health. Accessed Nov. 2023. <https://www.nbcnews.com/health/cancer/lung-cancer-screening-guidelines-quit-smoking-annual-test-rcna122602>

³ Lung Cancer Burden in EU. European Union Joint Research Centre. Jan. 2021. <https://visitors-centre.jrc.ec.europa.eu/en/media/infographics/lung-cancer-burden-eu-27#:~:text=Lung%20cancer%20is%20the%20fourth,EU%2D27%20countries%20in%202020.>

⁴ WHO. Tobacco. World Health Organization, China. Accessed Nov. 2023. <https://www.who.int/china/health-topics/tobacco>

⁵ ReportLinker. Global Lung Cancer Diagnostics Industry. Jan. 2023. <https://www.reportlinker.com/p05834219/Global-Lung-Cancer-Diagnostics-Industry.html>

Physician-Focused, Patient-Friendly Market Opportunity

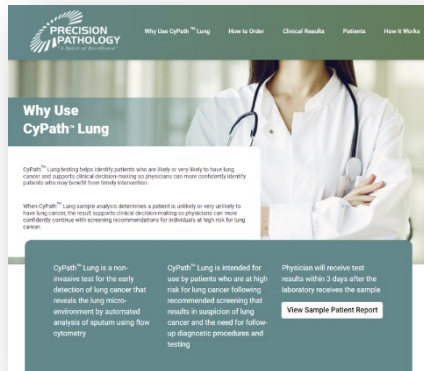
More Accurate Diagnosis / Fewer Unnecessary, Invasive Procedures

@ Clinic

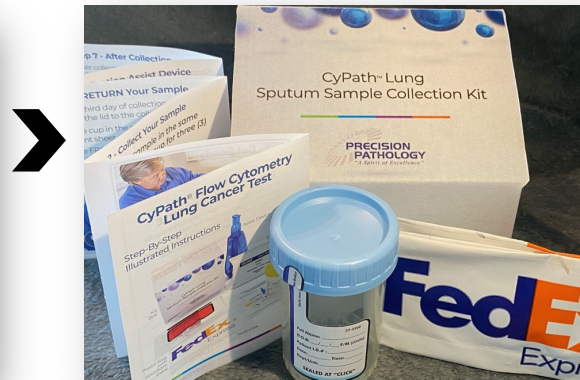
@ Home

@ Laboratory

@ Clinic



Physician orders
CyPathLung test

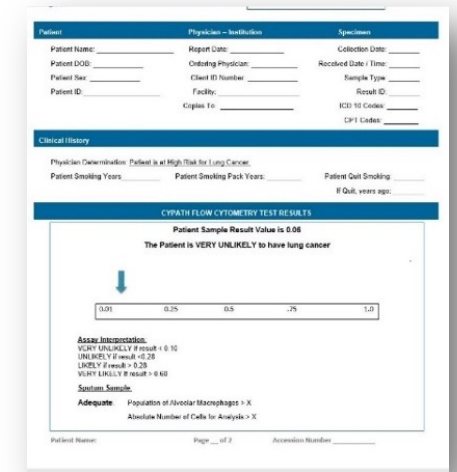


Patients complete a 3-
day sputum sample
collection **at home**

ships
overnight



AI-driven automated data
analysis of flow cytometry
data



Physician receives results
within **3 days** after lab
receives sample

Actionable Results = Greater Confidence in Patient Care

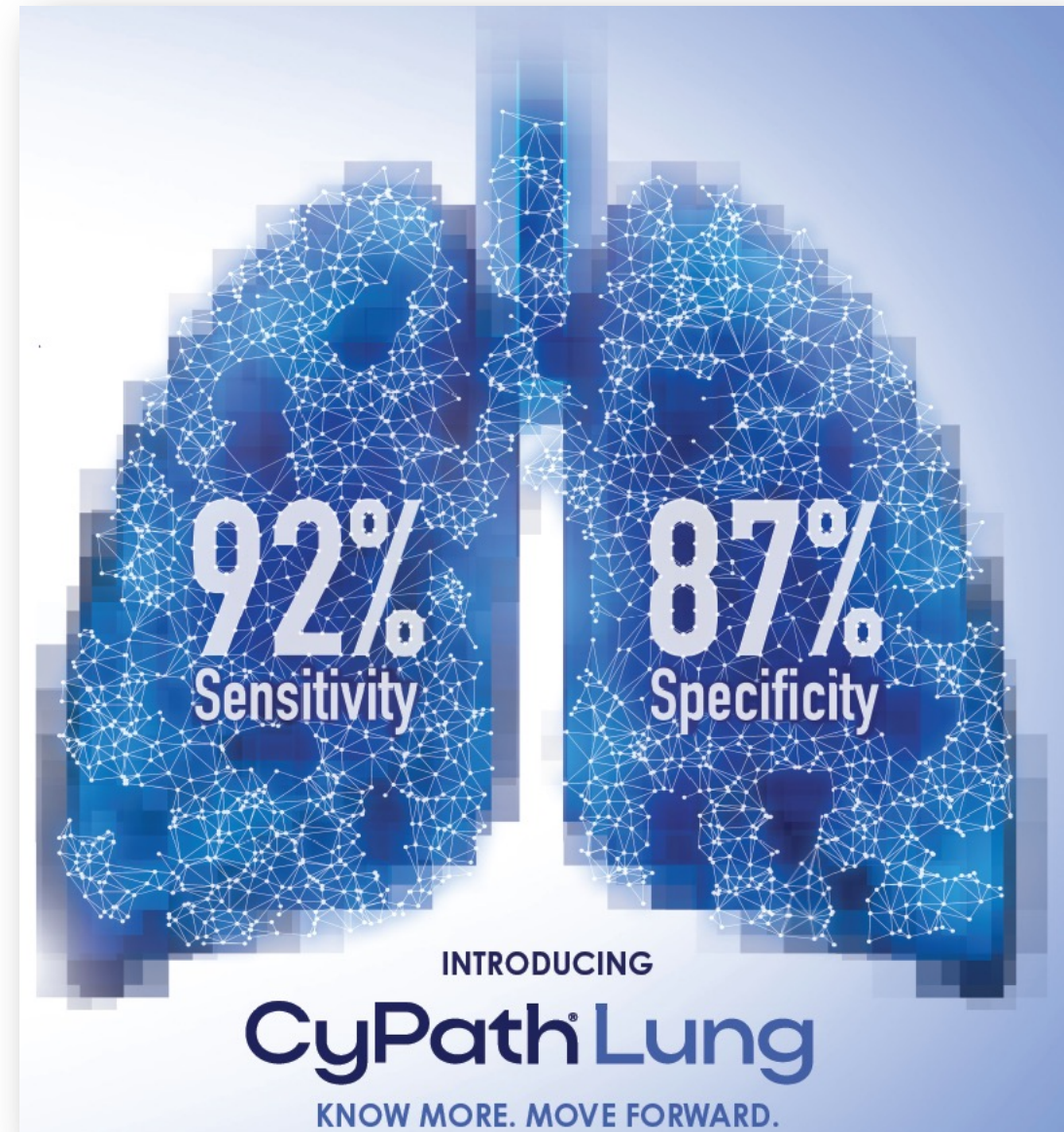
Impactful Branding

Well-tested Brand Strategy being rolled out:

- ✓ Articulates a clear, simple message
- ✓ Acknowledges the clinical need
- ✓ Highlights competitive advantages

CyPath[®] Lung

**THE NODULE WAS
INDETERMINATE.
BUT YOU CAN'T TREAT
INDETERMINATE.**



Results of Market Testing

❑ Reimbursement is Essential

- ✓ Specific CPT code for CyPath® Lung effective October 1, 2023
- ✓ CMS decision November 2023 on allowable Medicare payment with effective date January 1, 2024
- ✓ Precision fee schedule = \$1,900 per test

❑ Publications are Powerful

- ✓ Clinical trial results published in peer-reviewed *Respiratory Research* journal (1/23/2023)
- ✓ CyPath® Lung technology's ability to diagnose lung diseases published in peer-reviewed *PLOS One* (8/17/2022)
- ✓ Publications build upon numerous peer-reviewed journal articles about CyPath® Lung

❑ Brand Awareness is Key

- ✓ Market research reveals physicians see the need for our **noninvasive** test providing **actionable results**
- ✓ Branding complete; multi-media/multi-channel implementation underway

❑ Sales Driven by Reps + Multi-Media

- ✓ Approach to market = multi-media and personal selling
- ✓ Physician testimonials highly effective
- ✓ Physician follow-up and feedback inform and improve operational efficiencies

CyPath Lung

Comparison to Current Standard of Care for Follow-up after Positive LDCT

Lung Cancer Diagnostic Procedure or Test

CyPath Lung
(individuals at high risk with nodules <20mm)

FDG PET imaging
(individuals with suspicious lung nodules)

Bronchoscopy
(individuals with suspicious lung nodules)

Fine Needle Biopsy
(individuals with suspicious lung nodules)

Core Needle Biopsy
(individuals with suspicious lung nodules)

Sensitivity

92%

89%

88%

90%

89%

Specificity

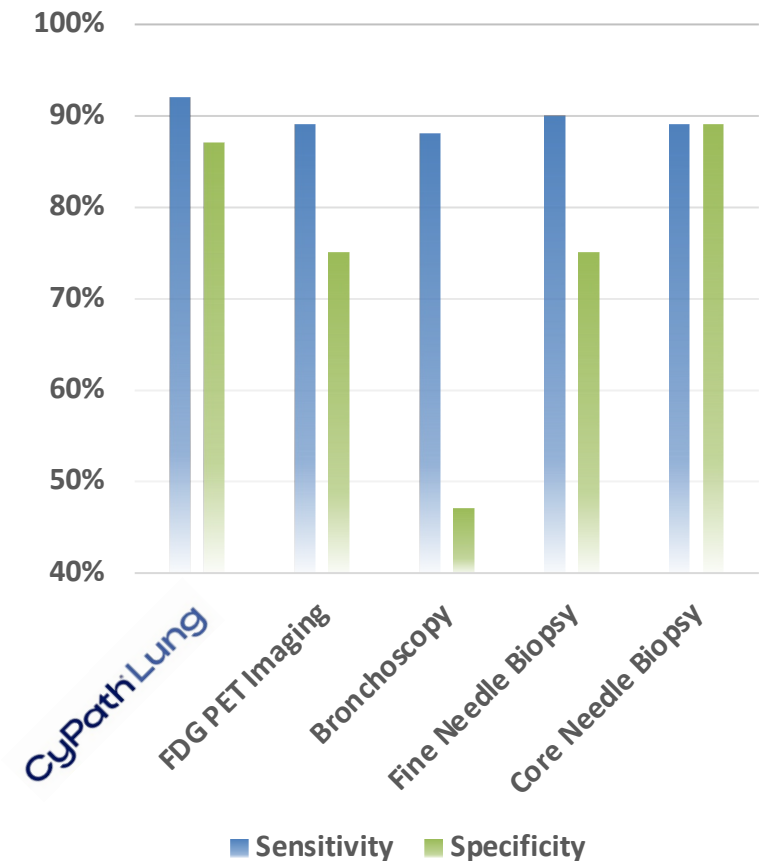
87%

75%

47%

75%

89%



CyPath[®] Lung

Revealing the Lung Microenvironment with AI-driven Flow Cytometry

Advanced flow cytometry interrogates millions of cells in minutes

Reveals cell populations residing in the lung micro-environment (sputum) by labelling cancer and cancer-related cells with TCPP, our specific porphyrin that is taken up by cancer cells

Proprietary automated software ensures only cells of interest are interrogated

The automated analysis identifies sputum cells of interest and eliminates debris, dead cells and cell aggregates

Quality control assures the sample comes from the lung

Fluorescent antibody specifically identifies lung macrophages to ensure the sample comes from the lung

Automated analysis takes minutes to identify lung cancer in patient samples

AI-driven analysis detects cell populations indicative of lung cancer including populations of cancer and cancer-related cells, immune cells and dying cells. Proprietary algorithm uses flow cytometric data and patient age to determine patient risk of lung cancer

Automated Analysis = Standardized Results

Benefits of Precision Pathology Laboratory Acquisition

September 18, 2023

Increases Revenues

- ✓ Captures **CyPath® Lung** full revenues
- ✓ Adds Precision revenues to consolidated financials
- ✓ Accretive in 2023; 100% return on cash investment expected in 24 months

Adds Resources

- ✓ Integrates operations and captures efficiencies
- ✓ Adds 54 experienced laboratory professionals to team
- ✓ Roby Joyce, MD, continues as laboratory and medical director; joins BIAF Board of Directors

Expands Reach

- ✓ Adds capacity for nationwide expansion under one structure
- ✓ Expands client base to 155 customer sites including seven Central Texas hospitals and nearly 600 practicing physicians



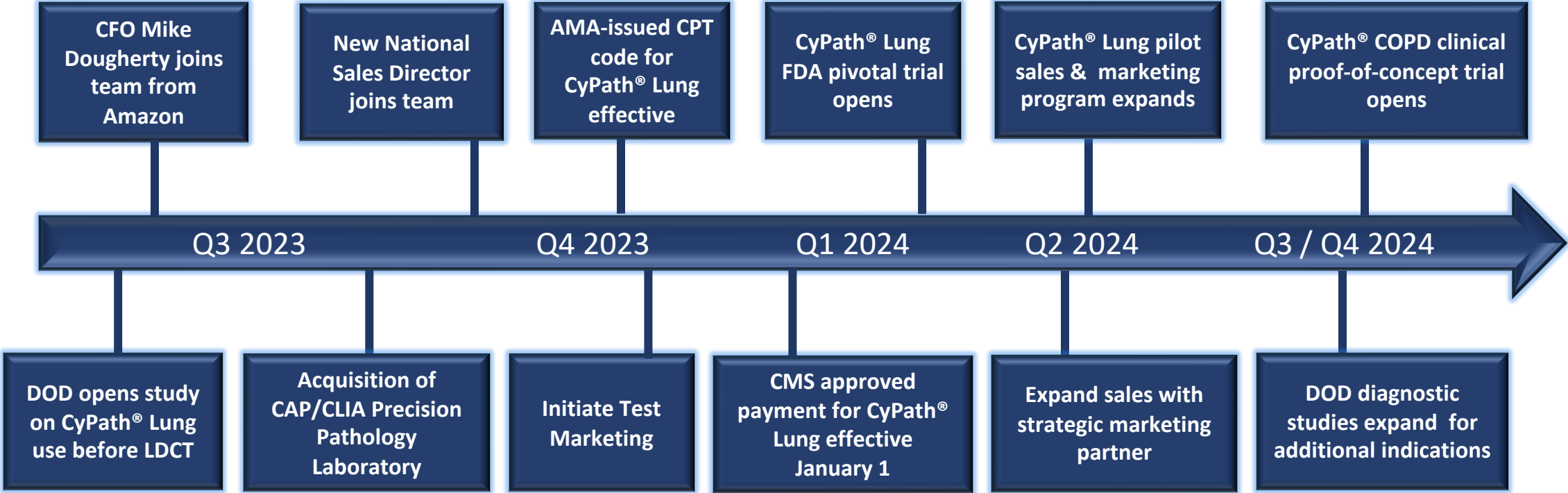
\$6.9M

Precision's 2022
net revenue;

12.5% growth

H1 2023 vs. H1
2022

bioAffinity Technologies Recent and Anticipated Milestones



Management

Innovative, Experienced, Dedicated



Maria Zannes, JD
Founder, President & CEO
20+ years executive in the medical, environmental and engineering fields; focused on building high performing corporate teams who meet ambitious business goals



Michael Dougherty, MBA, CPA
Vice President & CFO
20+ years of experience in financial management and business strategy; previously CFO of Amazon's Alexa commercial domains, TINT, Filestack and Amazon Pay



Vivienne Rebel, MD, PhD
EVP, Chief Science & Medical Officer
20+ years as a leader in cancer research; 11 years at Harvard's Dana-Farber Cancer Institute; received UT Health SA Cancer Therapy and Research Center's Discovery of the Year Award



Xavier Reveles
Chief Operating Officer
25+ years experience creating, building and managing CAP/CLIA labs and creating and commercializing LDTs; clinical cytogeneticist, American Society of Clinical Pathology

Science & Medical Advisory Board



Sheila Habib, MD
Director of Pulmonary Lung Nodule Clinic and the Lung Cancer Screening, South Texas VA



Neil Alexis, PhD
Principal Investigator, UNC School of Medicine; Environmental Medicine, Asthma & Lung Biology



Gerard Silvestri MD, FCCP
Professor of Medicine & Lung Cancer Pulmonology, Medical University of South Carolina



David Hill, MD
Director, American Lung Association; Assistant Professor, Yale School of Medicine



Catherine Sears MD
Assistant Professor, Indiana University School of Medicine

Board of Directors

Decades of Successful Leadership from Start-Ups to Global Corporations



Steve Girgenti

Executive Chairman

Founded Healthworld, a leading global healthcare marketing firm with 36 offices in 26 offices worldwide; NASDAQ's "Entrepreneur of the Year" (1999)



Robert Anderson

Director

50+ years in healthcare holding executive positions at CIBA Pharmaceutical Co, Becton Dickinson, Pfizer, Parke-Davis Division of Warner-Lambert, and Schering Plough



Stuart Diamond

Director

Global CFO for GroupM, the world's leading media investment company responsible for more than \$50 billion in media investment



Roby Joyce, MD

Director

Precision Pathology founder and Medical Director; board-certified in pathology, neurology; former chief of staff at Methodist Healthcare System; Colonel, US Army, ret.



Peter Knight

Director

Founding Partner of Generation Investment Mgmt. with >\$18B AUM; Campaign Manager for President Clinton's '96 re-election campaign



Jamie Platt, PhD

Director

20+ years in genomics and molecular diagnostics, bringing novel diagnostic technologies to global markets; led successful M&A exits for two companies; Managing Director, CEO of Pictor Ltd.; Founder, CEO of BRIDGenomics



Gary Rubin

Director

CPA, Co-founder and Managing Member of Masters Research Partners, an investment fund of hedge funds



Maria Zannes, JD

Director, CEO

BIAF founder and previously held executive positions at Biomoda, The Zannes Firm, The Energy Recovery Council, ECOS Corp.

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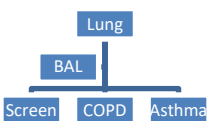
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Publication Links

- 3/24/2023: [Porphyrin-Modified Beads for Use as Compensation Controls in Flow Cytometry](#)
- 1/23/2023: [Detection of Early-Stage Lung Cancer in Sputum Using Automated Flow Cytometry and Machine Learning](#)
- 8/17/2022: [Sputum Analysis by Flow Cytometry; an Effective Platform to Analyze the Lung Environment](#)
- 8/9/2022: [Quality-Controlled Sputum Analysis by Flow Cytometry](#)
- 7/2/2021: [Meso-tetra \(4-carboxyphenyl\) Porphyrin \(TCPP\) is taken up in Cancer Cells by the CD320 Receptor](#)
- 6/25/2021: [Selective Cancer Cell Killing by Dual siRNA Knockdown of CD320 and LRP2 Receptors](#)
- 5/22/2021: [Simultaneous Knockdown of CD320 and LRP2 Receptors is Selectively Toxic to Cancer Cells but not Normal Cells](#)
- 2/25/2021: [Identification of a Novel Mechanism for Meso-Tetra \(4-Carboxyphenyl\) Porphyrin \(TCPP\) Uptake in Cancer Cells](#)
- 1/16/2021: [Automated Flow Cytometry Test Distinguishes Cancer from Non-Cancer in Sputum with High Sensitivity and Specificity](#)

Additional [publications](#) can be found on the Company website

For More Information

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