ProPhase LABS

April 2024

Investor Presentation

ProPhaseLabs.com

NASDAQ: PRPH

FORWARD LOOKING STATEMENTS

Except for the historical information contained herein, this document contains forward looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including statements regarding our strategy, plans, objectives and initiatives, including our plans to grow our subsidiaries and build a multi-billion dollar company, our expected timeline for commercializing our BE-Smart Test and its market potential and our belief in Project ZenQ-AI's potential to contribute to the identification of novel, actionable targets for cancer therapies. Management believes that these forward-looking statements are reasonable as and when made. However, such forward-looking statements involve known and unknown risks, uncertainties, and other factors that may cause actual results to differ materially from those projected in the forward-looking statements. These risks and uncertainties include but are not limited to our ability to obtain and maintain necessary regulatory approvals, general economic conditions, consumer demand for our products and services, challenges relating to entering into and growing new business lines, the competitive environment, and the risk factors listed from time to time in our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and any other SEC filings. The Company undertakes no obligation to update forward-looking statements except as required by applicable securities laws. Readers are cautioned that forward-looking statements are not guarantees of future performance and are cautioned not to place undue reliance on any forward-looking statements.

OUR BEST IS YET TO COME!
PERFORMANCE TRACK RECORD

2012

Ted Karkus, CEO, restructures and turns around the Company. Ultimately revenue grew to a peak of $122 million for the FY2022 vs $22 million for FY2012.

2017

Sold the Cold-EEZE cold remedy brand for $50m to Mylan Pharmaceuticals.

2018

From 2018 to 2022 we delivered shareholder value through special dividends of $2.40 per share cumulatively over 4 years.

Q4 2020

We commenced CLIA lab services and have transitioned from COVID-19 testing to genomic sequencing in our CLIA lab, which represents significant upside.

2021

Acquisition of Nebula Genomics. Plan to leverage Food, Drug and Mass distribution and genomic sequencing in CLIA labs. Significant upside.

Q2 2022

We exclusively licensed two potential broad based anti-virals, Equivir (Dietary Supplement) and Equivir G (Rx)

Q4 2022

We acquired worldwide exclusive rights to the BE-Smart Esophageal Pre-Cancer diagnostic screening test and related intellectual property assets.

Q1 2023

Reported FY 2022 results – Net Revenue: $122.6M, Net Income: $18.5M, Adjusted EBITDA: $38.6M

Q4 2023

We opened a world class whole genome sequencing (WGS) lab in Garden City, NY. This includes 4 leading platforms of WGS equipment and allows for the ability to build a B2B WGS business offering exceptionally low prices.

2024

We began our expansion plan of Pharmaloz in 2024, and the new equipment delivered is expected to double current capacity[FN]. A second lozenge line is expected to be installed by midyear 2024 increasing capacity to $30-$35M[FN].

- See Appendix A for Adjusted EBITDA reconciliation.
- Management's analysis and guidance announced by ProPhase Labs on January 23, 2024: https://www.globenewswire.com/en/news-release/2024/01/23/2814037/0/en/Pharmaloz-Manufacturing-Accelerates-Expansion-Improves-Pricing-Boosts-Profitability-and-Secures-New-Contracts.html

Pharmaloz
Manufacturing, Inc.

TK SUPPLEMENTS®

GROWING CUSTOMERS AND EXPANDING PRODUCTION CAPACITY AHEAD OF SCHEDULE

Aggressive expansion commenced Q3 2023

Current demand greater than max capacity and growing significantly.
Increased prices on all customers effective Q1 2024.
Pharmaloz turns profitable in Q1 2024.

Automation increased plant capacity from below $10 million to over $15 million annualized revenue*. Goal: 20-25% net profit margins.

Additional lozenge line to be installed end of Q2 2024 with the goal of tripling new capacity during Q3 2024**.

NEW CAPACITY ESTIMATE $45 MILLION IN Q3**

Signed two top-tier lozenge brands adding an additional $5m annualized revenues with significant profit margins*.

T**wo additional large global brands,** currently in late stage discussions.

Additional lozenge lines on order set to arrive by Q4 2024
Goal is to add additional production lines to increase capacity to $80-$100 million annualized revenues by mid 2025*.

*Management's analysis and guidance announced by ProPhase Labs on January 23, 2024: https://www.globenewswire.com/en/news-release/2024/01/23/2814037/0/en/Pharmaloz-Manufacturing-Accelerates-Expansion-Improves-Pricing-Boosts-Profitability-and-Secures-New-Contracts.html

**https://finance.yahoo.com/news/prophase-labs-announces-financial-results-120000611.html

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Nebula Genomics

MEET GEORGE CHURCH, FOUNDER OF NEBULA GENOMICS AND SCIENTIFIC ADVISOR

Mission: To usher in the era of personal genomics by providing access to affordable and secure Whole Genome Sequencing.

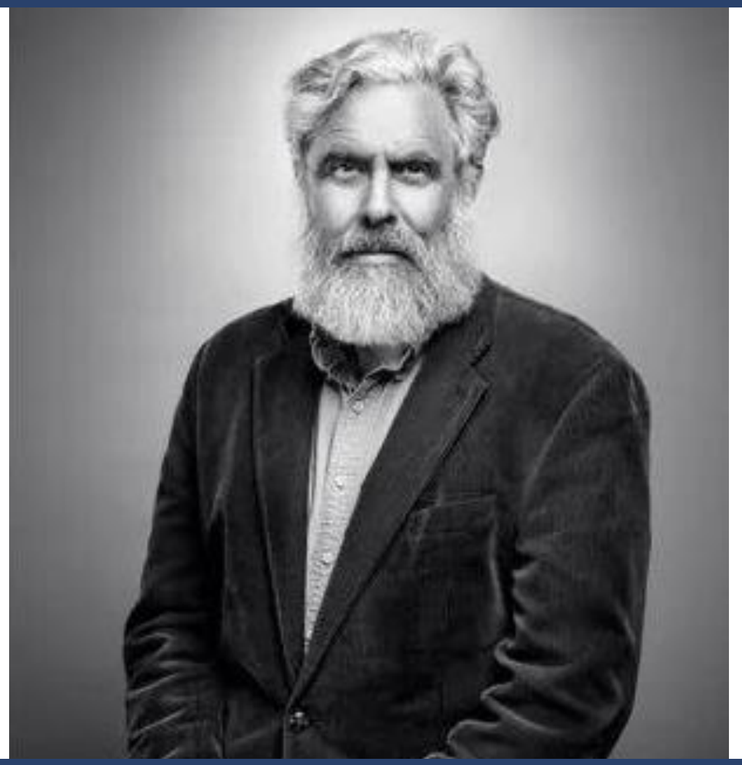
Nebula Genomics turns these breakthrough technologies into B2C and B2B products available around the globe.

Prof. George Church, co-founder of Nebula Genomics; Professor of Genetics at Harvard Medical School and Professor of Health Sciences and Technology at Harvard University and the Massachusetts Institute of Technology (MIT).

Contributed to the development of multiple DNA sequencing methods. In particular, molecular multiplexing approaches that enabled next-generation DNA sequencing as well as long-read nanopore sequencing.

Initiated the Personal Genome Project whose pioneering work contributed to the development of DNA sequencing and genome engineering technologies for which he received multiple awards including the 2011 Bower Award and Prize for Achievement in Science from the Franklin Institute and election to the National Academy of Sciences and Engineering.

Co-authored over 550 publications; more than 150 patents; authored the book, “Regenesis: How Synthetic Biology Will Reinvent Nature and Ourselves”; started over 20 companies.



"Genome sequencing is like the internet back in the late 1980s."

George M. Church
Professor - Harvard and MIT
Co-founder - Nebula Genomics

WHOLE GENOME SEQUENCING (WGS)

The Key to Unlocking True Personalized Medicine

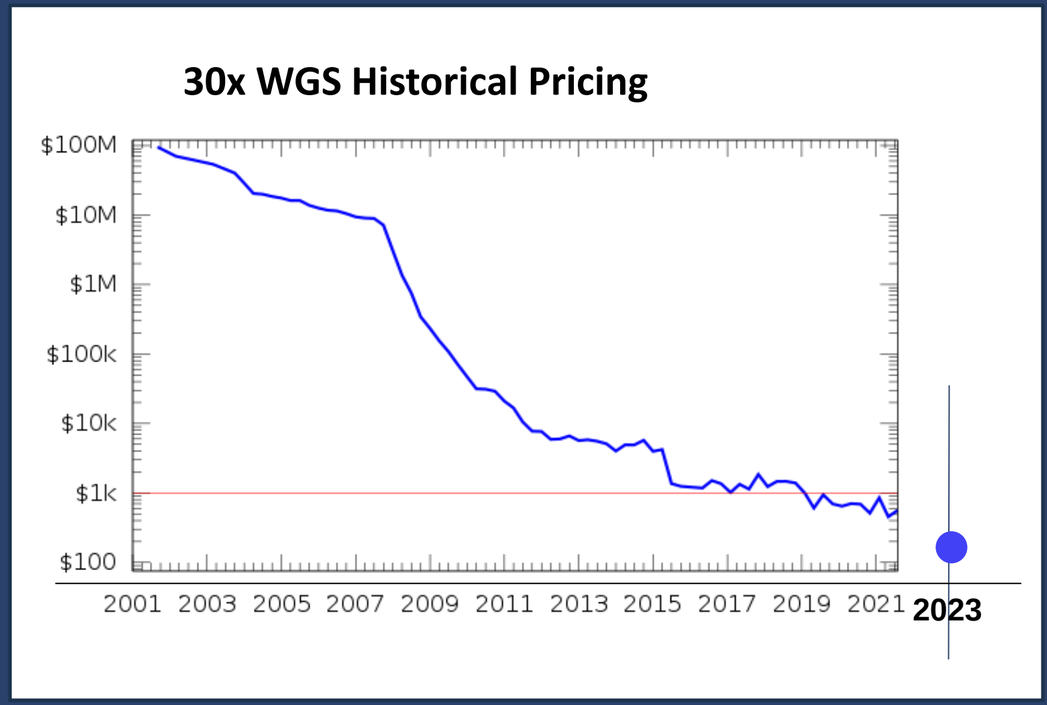
WGS technology obtains comprehensive data on every gene and chromosome in your DNA. Our WGS DNA test analyzes greater than 99% of your DNA compared to typical (SNP) Single Nucleotide Polymorphism – based ancestry tests that analyze less than 1% of your DNA, at a competitive price. Our WGS offers deep health-related insights that are not possible with SNP-based tests. Can be used to examine ancestry, health, diet, rare gene mutations and potential predispositions to disease.

Large WGS database with specimens from over 120 countries globally. The database is the equivalent of approximately 150 million SNP-based ancestry tests, while collecting deep genetic information that SNP-based tests cannot collect.

Proprietary library with over 300 reports leveraging the proprietary database. Regularly updated with genetic research articles and studies.

<u>The Nebula Membership includes:</u>

- ✓ **330+ personal genomic scores that provide insights into your personal genetic makeup**
- ✓ **New scores every month**
- ✓ **Thorough explanations of research findings – updated regularly**
- ✓ **Ancestry report & add-on deep ancestry report**
- ✓ **Oral Microbiome Test**
- ✓ **Gene Analysis Tool ***



* Nebula Gene Analysis is a user-friendly platform that explores genes and how they impact our health. It uses trusted health databases to make complex genetic information easy to understand, ensuring the data you see is accurate and reliable. Whether you're curious about your own genetic makeup or just interested in genetics, this tool opens up the science of genes to everyone.

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INSIGHTS + TOOLS + REAL WORLD APPLICATION

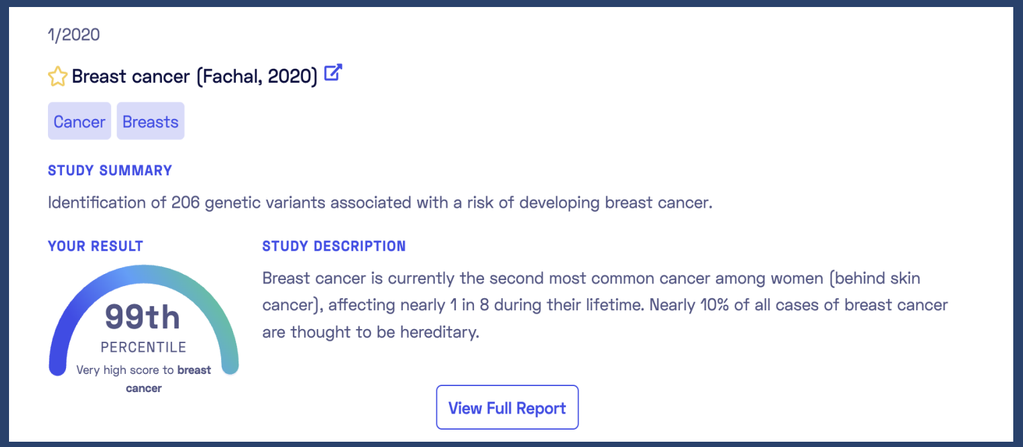
Nebula Library digests global genetic research and keeps you informed regularly about the latest genomic discoveries and advances in medicine.

Learn how research in personalized precision medicine might be relevant to your health and well-being!

Thorough explanations of research findings – updated regularly

Personal genomic scores that provide insights into your personal genetic makeup

Based on your personal sequencing results.



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NEBULA GENOMICS ROADMAP

Low-cost provider of DTC WGS

- (DTC) Direct to consumer
- 73% Global market penetration
- Goal: FDM retail stores

Low-cost provider of B2B WGS – currently research use only with clinical grade data. B2B partners include:

- Academic Research Centers
- Clinical Research Organizations
- Pharmaceutical Companies
- Physicians' offices
- Telemedicine platforms
- Healthcare Systems
- U.S. and international clients
- Longevity clinics
- Labs without internal sequencing

Nebula Library: Genomic Information with exploration tools

- High margin subscription model with high long-term customer value
- Continuous access to sequencing reports
- Confidentially secured data

SIGNIFICANT NEBULA ASSETS

NYS DOH CLIA/CLEP Accredited Laboratory*

Platform Agnostic

Illumina, BGI/MGI, and Element Biosciences

Strong Brand Equity - Globally

Featured in WSJ, NY Times, Wired, MIT Technology Review, Nature

Advisory Board Key Opinion Leaders

George Church, Harvard Medical School
Russ Altman, Stanford University
Patrick Merel, Genomics Professional

100,000 Robust Data Sets

Specimens from 120+ countries, B2B clients

40,000+ WGS plus 60,000 Snips

The snips come from consumers uploading their data to get small sample report which captures less than 1% of your DNA. The WGS captures 100% DNA

* NYS DOH – New York State Department of Health; CLIA - Clinical Laboratory Improvement Amendment of 1988; CLEP – Clinical Laboratory Evaluation Program

NEBULA – CURRENT GROWTH UPDATES

New Consumer DNA Test Set For Release – Q2 2024

Market Disruptor: Introducing a whole genome sequencing (WGS) DNA test that analyzes greater than 99% of your DNA compared to typical SNP-based ancestry tests that analyze less than 1% of your DNA, for about the same price. Offering deep health-related insights that are not possible with SNP-based tests. Cost-effective DTC genetic test designed for broad market penetration and consumer accessibility.

Strategic Alliances: Collaborating with a premier marketing, growth, and branding firm to amplify reach and adoption.

Expert-Driven Growth: Hired senior-level consultant, a former executive of a billion-dollar digital media company to spearhead our DTC strategies and establish influential partnerships.

Affordability Meets Innovation: Launching an exceptionally priced WGS product with the cost appeal of traditional ancestry tests, setting a new benchmark for value in genomic testing.

DNA Upload Product – Exponential Growth

Seamless Integration: Users effortlessly upload their DNA data from other ancestry/DNA tests to unlock our proprietary reports and advanced features.

Unmatched Offer: Outperforms rivals on price, security, and capabilities—redefining value in the DNA analysis market.

Organic User Growth: Scaled to 10,000+ active users with a pure word-of-mouth buzz.

Aggressive Scale-Up: Ready to amplify reach with the robust marketing machine that propelling our DTC business lines.

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NEBULA – FUTURE GOALS

Nebula is becoming a dominant technology and software leader in genomics and (BIX) Business Intelligence Exchange, leveraging extensive bioinformatics R&D to revolutionize genomic data analysis.

Our transformative actions include:

- ✓ SaaS Solutions Launch: We're introducing a specialized SaaS business line to address the growing need for sophisticated genomic reporting and bioinformatics applications.
- ✓ Monthly Genomic Reports: Launching a vast catalog of in-depth genomic reports for our subscribers, positioning us as the preeminent genomic reporting platform worldwide. Our approach emphasizes immediate value, with a wealth of insights ready to be unlocked.
- ✓ Pharmacogenomics & Nutrigenomics Testing: Our personalized testing services unlock critical insights into how genetics affect drug responses and the impact of nutrients on health, guiding the path to personalized medicine.
- ✓ WGS Database Expansion: We're enhancing our Whole Genome Sequencing database, creating an unmatched resource for research and innovation in genomics.

Nebula is not just leading the charge in genomics and biotech; we're setting new standards for personalized healthcare and genomic exploration.

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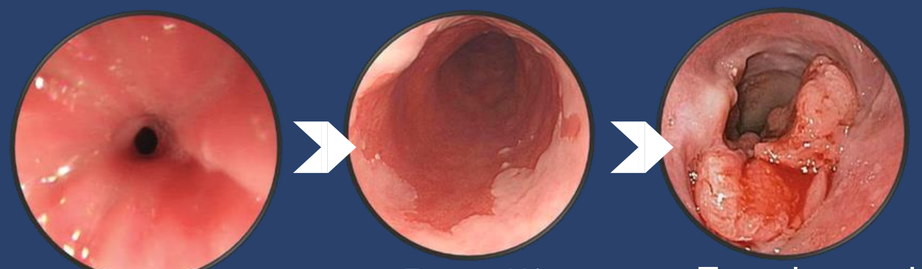
BIOPHARMA

BE-SMART ESOPHAGEAL CANCER TEST

ESOPHAGEAL ADENOCARCINOMA (EAC) – ONE OF THE DEADLIEST CANCERS

- 16,000+ Estimated Deaths in 2023 in the U.S.[1]
- 78.3% - 5-Year Mortality Rate (2013-2019)[1]
- 21,000+ Estimated New Cases in 2023[1]
- The change in the annual incidence of EAC was 766.67% higher in 2017 compared to 1973[2]
- Journal of American Medical Association once again reported that GI cancers for the 2nd straight decade are the fastest growing cancer type in America[3]



Gastroesophageal Reflux Disease (GERD) occurs when stomach acid repeatedly flows back into the esophagus. Backwash (acid reflux) can irritate the lining of esophagus. Many experience acid reflux from time to time; for some, GERD may trigger a change in the cells lining the lower esophagus causing **Barrett's Esophagus**.

Barrett's Esophagus - esophagus becomes damaged by acid reflux; causes the lining to thicken and become red. Associated with increased risk of developing **Esophageal Adenocarcinoma**.

Discovering pre-cancerous tissue in early and treatable stages may increase disease survival and decrease cost of care. As high as 40% of esophageal carcinoma is missed or found late leading to more unfavorable diagnosis.

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1- - https://bit.ly/40ONuqt - Cancer Stat Facts: Esophageal Cancer
2- . https://bit.ly/3KGWGr9 - Epidemiology of early esophageal adenocarcinoma
3- . https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2808381

ADVANTAGES OF THE BE-SMART ESOPHAGEAL CANCER TEST COMPARED TO LIQUID BIOPSIES

- ✓ BE-Smart is taking EXISTING biopsy blocks from routine endoscopies, which is the standard of care for diagnosis of GERD, Barrett's Esophagus and esophageal adenocarcinoma. No additional samples are needed from patients after the endoscopy. With liquid biopsies, the patient would have to return to the physician's office to draw the blood.

- ✓ BE-Smart is highly sensitive and specific in distinguishing early-stage esophageal adenocarcinoma. On the other hand, liquid biopsies require the cancer to spread to neighboring tissue and blood vessels in order to produce detectable markers in the blood.

- ✓ Our BE-Smart test examines the suspicious tissue DIRECTLY, not a bi-product somewhere in the blood. In liquid biopsies, there are factors that can create many false positives and false negatives as the tested markers are at very low concentrations. These factors can be other pathological and non-pathological conditions, including exercise, trauma, and surgery.[1]

- ✓ We are testing the affected tissue directly on a clinically proven instrument (mass spectrometer), which is highly sensitive. BE-Smart is a molecular test that analyzes if a suspicious tissue will progress to cancer.

- ✓ By directly analyzing the affected tissue, the BE-Smart test detects early stages of cancer before markers have entered the blood.

- ✓ FDA Approved liquid biopsy tests on the market are used to monitor a disease or to determine treatment path of a disease. They are still required to be used in combination with standard tests such as endoscopies.

Conclusion: The utility of BE-Smart can be quite significant. The BE-Smart test can determine early carcinogenesis of biopsies in which a pathologist might be on the fence and/or mistakenly classify as non-cancerous. This can literally mean the difference between life and death for the patient. An accurate and early diagnosis can lead to more effective and earlier treatments which can lead to significantly better outcomes for the patient.

1. :Braig D., Becherer C., Bickert C., Braig M., Claus R., Eisenhardt A.E., Heinz J., Scholber J., Herget G.W., Bronsert P., et al. Genotyping of circulating cell-free DNA enables noninvasive tumor detection in myxoid liposarcomas. Int. J. Cancer. 2019;145:1148–1161. doi: 10.1002/ijc.32216.

OPPORTUNITY TO PREVENT ESOPHAGEAL CANCER

Prevalence of GERD in the U.S ranges from 18.1% to 27.8% in North America (Census 303 million)[1]	**~ 60 million**
Prevalence of Barrett's Esophagus in the U.S. is 5.6% of the population (Census 303 million)	**~ 16 million**
New Cases of Esophageal Adenocarcinoma in U.S. per year[1]	**~ 20K**
Endoscopy (upper) related to GERD and Barrett's Esophagus average	**~ 7 million**
Endoscopy (upper) related to Barrett's Esophagus average[1]	**~ 2 million**

Annual Tests	~2-7mm
Average Cost/Test	$1k-$2k
Total Addressable Market	**~$2-$14bn**

1 - Barrett Esophagus: Rapid Evidence Review | AAFPGastroesophageal Reflux Disease - StatPearls - NCBI Bookshelf (nih.gov)Esophageal Cancer — Cancer Stat Facts U.S. GI Endoscopy Volumes: Biggest Change Is Increases in Upper Endoscopic Ultrasound - Endoscopy Campus (endoscopy-campus.com)Management of Barrett's esophagus - American Gastroenterological Association

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EQUIVIR CLINICAL TRIAL**

Equivir Clinical Trials with Vedic Lifesciences

Final analysis targeted for completion in Q2 2024. Goal of launching in 2024 as an OTC dietary supplement.

Preliminary results*: Overall, in the initial 150 patient group, approx. 46 incidences of upper respiratory viral infections. 62.3% of the patients in the placebo group acquired a viral infection versus only 37.7% in the Equivir group.

Additional key statistics from the initial findings are:

- 39% of the placebo population acquired an upper respiratory viral infection vs 22.9% in the Equivir group.
- After 4 days of illness, only 3% of the Equivir group still had mild symptoms vs 55% in the placebo group.
- The average severity was 16% less severe when taking Equivir vs the placebo.
- No patients in the Equivir group became ill a second time while 2 patients in the placebo group had a second upper respiratory viral infection.

**Equivir is being developed with plans to market as an OTC dietary supplement. Therefore, the Company cannot make specific claims regarding Covid-19 [*or respiratory viral infection]* treatment or prevention and is not seeking the U.S. Food and Drug Administration's approval of Equivir as a drug. However, the Company plans to publish the results when both studies are completed.

*Preliminary results announced by ProPhase Labs on February 14, 2024: https://www.globenewswire.com/en/news-release/2024/02/14/2829018/0/en/ProPhase-Labs-Announces-Preliminary-Positive-Results-for-Dietary-Supplement-Equivir.html.html

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PROJECT ZENQ-AI: LEVERAGING A COMBINATION OF AI PLATFORM, GENOMIC DATABASE AND IP-PATENTED ESOPHAGEAL CANCER INSIGHTS

ProPhase Labs has developed a proprietary AI platform, optimized to integrate and analyze data from two pivotal resources: an extensive genomic database compiled from six years of comprehensive whole genome sequencing tests, and a specialized esophageal cancer database enriched with six years of dedicated research and IP-protected discoveries.

Technological Foundations
- ✓ AI Platform: developed with cutting-edge AI technologies from leading platforms
- ✓ Hardware utilization: leveraging on-premises NVIDIA hardware alongside major cloud AI services for enhanced data processing capabilities

Genomic Insights
- ✓ Whole genome sequencing: captures all 3 billion base pairs, providing a full genetic blueprint
- ✓ Database size: extensive genomic data from over 130 countries, equivalent to about 150 million ancestry SNP-based tests

Innovations in Cancer Therapy
- ✓ Antibody drug conjugates (ADCs): targeting specific cancer cell markers to minimize healthy cell damage
- ✓ BE-Smart test: patented, tested on over 300 human samples with demonstrated high accuracy for early-stage EAC detection

Data and Efficiency
- ✓ Data comparison: WGS provides up to 30,000 times more genetic data than traditional SNP testing
- ✓ Cost-effectiveness: low operational cost of data analysis through AI, enabling affordable scaling of genomic research

Future Potential and Impact
- ✓ Early detection and treatment: potential to significantly alter the course of cancer treatment with early and precise targeting
- ✓ Global Reach and Collaboration: data diversity enhances the ability to identify unique genetic markers across different populations

COMPETENT AND PROVEN EXECUTIVE MANAGEMENT TEAM

Jed Latkin

COO
ProPhase Labs, Inc.

Jed A. Latkin served as a director and Chief Executive Officer of Navidea from October 2018, until October 2021. Mr. Latkin has more than 28 years of experience in the financial industry supporting many investments in major markets including biotechnology and pharmaceuticals. He most recently was employed by Nagel Avenue Capital, LLC since 2010, and in that capacity he provided contracted services as a CEO/CFO for numerous healthcare related firms. Mr. Latkin worked for over ten years in Investment Banking at Citigroup, Morgan Stanley and Fleet Boston Robertson Stephens. He also spent five years as a Co-Portfolio Manager for ING Investment Management. Mr. Latkin earned a B.A from Rutgers University and a M.B.A. from Columbia Business School.

Jason Karkus

President
Nebula Genomics

Jason drove explosive revenue growth at ProPhase Diagnostics, leading multiple areas including sales, business development, logistics operations, and account management. He oversaw the development of two CLIA-certified labs, generating approximately $200 million in revenues since 2021 and manages account managers and customer service reps who offer 24/7 service to exceed customer expectations. Jason now heads up business development for the rapid build-out of ProPhase's Nebula Genomics business.

With a background in sales and development at top real estate firms, Jason is a graduate of the University of Maryland.

Sergio Miralles

EVP/CIO
ProPhase Labs, Inc.

Sergio Miralles is an experienced IT Leader with over 12 years of experience in enterprise level Cybersecurity, Infrastructure, and Architecture. Sergio is responsible for ensuring a complete end-to-end technology solution that links its lab customers' patient data via an interface to efficiently process and report results.

Previously, Sergio founded and led a successful IT consulting firm overseeing 18 IT consultants. For the last five years, his primary focus has been on the medical, lab, and diagnostics business. Sergio holds several certifications from Cisco, ISC2, and CompTIA.

Kamal Obbad

SVP, Director of
Sales & Marketing
Nebula Genomics

Kamal is co-founder of Nebula Genomics. He received his undergraduate degree at Harvard University and did graduate studies in computer science as a Gates-Cambridge Fellow at the University of Cambridge. Prior to founding Nebula, Kamal led teams at Google.

For his work, Kamal has received multiple honors including being named to the Forbes 30 under 30 list.

Robert A Morse

Controller
ProPhase Labs, Inc.

Prior to ProPhase Labs, Robert served as Global Controller and Chief Accounting Officer at multiple high-growth pre-IPO companies in the FinTech, EdTech and Asset Management sectors. He spent four years at MasterCard Worldwide and 10 years at The McGraw-Hill Companies and Standard & Poor's. He began his career with four years in public accounting including two years with Ernst & Young LLP.

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INVESTMENT HIGHLIGHTS

Expanding Pharmaloz Manufacturing - One of the Largest Lozenge Manufacturing Companies in the U.S.

- Aggressively growing capacity to meet strong demand
- Turned profitable in Q1 2024
- Continuously growing customer base as capacity expands
- Anticipate revenues and earnings to continue growing rapidly for the foreseeable future

Nebula Genomics is Well Positioned to Capitalize on the Future Growth of Genomics and Personalized Medicine.

- Cutting-edge laboratory, globally competitive pricing, proprietary state-of-the-art bioinformatics reporting system
- Growing genomic database
- Significant direct-to-consumer and business-to-business opportunities

BE-Smart Esophageal Cancer Test: multi billion-dollar target market and goal to commercialize H2 2024.

Equivir (OTC): clinically studied dietary supplement. Goal to commercialize H2 2024.

ProPhase Labs Unveils Project ZenQ-AI. Leveraging ProPhase Labs' AI platform, massive genomics database and patented esophageal cancer insights for Antibody Drug Conjugates development.

A History of Returns With a Diversified Business Model and potential for expansion that should yield significant value creation in 2024 and 2025.

Competent and Proven Executive Management Team for more than a decade.

Thank You

ProPhase LABS

ProPhaseLabs.com

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