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ProPhase Labs Announces Collaboration with Dana-Farber Cancer Institute

GARDEN CITY, NY, Nov. 08, 2022 (GLOBE NEWSWIRE) -- ProPhase Labs, Inc. (NASDAQ: PRPH), a growth oriented and diversified diagnostics, genomics and biotech company, today announced that its wholly owned subsidiary, ProPhase BioPharma, Inc. ("PBIO"), and Dana-Farber Cancer Institute have entered into a two-year collaborative agreement to further the research and development of a small molecule, Linebacker-1 (LB-1), that is intended as a therapy enhancer for traditional chemotherapeutic agents to both increase efficacy and decrease toxicity in current cancer treatments. This collaboration provides for year 1 and year 2 research plans and will examine the tumoricidal effects of the flavonoid/polyphenol. LB-1 will be co-administrated with chemotherapy agents in-vitro, in different cell lines, and in-vivo subcutaneous mouse tumor models. The project will examine the tumoricidal effects in an orthotopic mouse model and the potential advantages of nanoparticle-based administration of Linebacker-1 in-vivo.

The collaboration will be led by Mike Makrigiorgos Ph.D. and Sayeda Yasmin-Karim, MD, Ph.D. Dr. Makrigiorgos is a Professor at Dana-Farber, Professor at Harvard Medical School, and Director of the Medical Physics and Biophysics Division of the Department of Radiation Oncology at Dana-Farber and Brigham and Women's Hospital. Dr. Makrigiogos has conducted extensive research with similar compounds and has diverse experience in the fields of molecular diagnostics, nano technology-based drug delivery, and radiation therapeutics. His lab has published several papers in scientific journals including Nature, Nucleic Acid Research and Nano-Letters.

"We are very familiar with the polyphenols in the linebacker compound and believe that this compound has significant potential. We look forward to exploring this further in our upcoming studies," stated Dr. Makrigiorgos.

Dr. Yasmin-Karim is an Instructor at Dana-Farber and Harvard Medical School. She is a senior member of Dr. Makrigiorgos' laboratory and has more than 25 years of experience in developing and testing cancer drugs in preclinical models, in-vivo. She has extensive research skills in the fields of oncology, polyphenols and nano delivery systems. Dr. Yasmin-Karim has numerous publications to her credit.

Dr. Yasmin-Karim commented, "We've performed extensive research on the data sets and have chosen the best way forward for continued research on LB-1."

"ProPhase Labs is eager to explore new avenues for scientific discovery with these talented scientists as we pursue novel pathways for cancer treatment. At ProPhase, we strive for excellence in assessment and discovery, abiding by the standards of the leaders in the industry. We aim to create our own path, become the leaders and pioneers of tomorrow, and we are delighted to be joined by our new collaborators on this journey of new cancer treatment discovery," commented Ted Karkus, ProPhase Lab's Chief Executive Officer.

“We believe that this collaboration fits nicely within our 18-month, $2-5 million budget for Linebacker. Our goal over this period is to complete preclinical lab studies and a Phase 1 human clinical study. We continue to believe that this platform has multi-billion-dollar potential in oncology as well as significant potential in other fields,” Mr. Karkus concluded.

About Linebacker

LB-1 is designed as an anti-cancer agent to be used as a potential co-therapy that targets PIM (proviral integration site for moloney murine leukemia virus) kinase receptors, a growth factor expressed in cancer. In preclinical laboratory studies, LB-1 inhibited PIM, which could potentially slow the growth of cancer and allow for better efficacy of the co-therapy drug or treatment being used. Under the terms of the license agreement, PBIO has obtained exclusive rights worldwide to develop and commercialize LB-1 and LB-2 for the treatment of cancer, inflammatory diseases or symptoms and memory related syndromes, diseases or symptoms including dementia and Alzheimer’s disease.

Linebacker is a modified polyphenol. Polyphenols are substances found in many nuts, vegetables and berries. Linebacker compounds are modified Myricetin, which is a common plant-derived flavonoid. Myricetin exhibits a wide range of activities that include strong antioxidant, anti-cancer, antidiabetic and anti-inflammatory activities. It displays activities that are related to the central nervous system.

LB-1 is Mono-chlorinated Myricetin with a Chlorine atom substituted for the Hydroxy group at 5’ (position 5 on the B-ring). LB-2 is Di-chlorinated Myricetin with Chlorine atoms substituted for the Hydroxy groups at 5’ and 7 (position 5 on the B-ring and position 7 on the A-ring).

About ProPhase Labs

ProPhase Labs, Inc. (Nasdaq: PRPH) (“ProPhase”) is a growth oriented and diversified diagnostics, genomics and biotech company that seeks to leverage its CLIA lab services to provide whole genome sequencing and research direct to consumers and build a genomics database to be used for further research. The Company provides traditional CLIA molecular laboratory services, including COVID-19 testing. The Company also operates a contract manufacturing subsidiary and offers the TK Supplements line of dietary supplements, which are distributed in food, drug and mass stores throughout the country.

ProPhase Diagnostics, Inc., a wholly owned subsidiary of ProPhase, offers a broad array of clinical diagnostic and testing services at its CLIA certified laboratories including polymerase chain reaction (PCR) testing for SARS-CoV-2 (COVID-19) and Influenza A and Influenza B. Critical to COVID-19 testing, ProPhase Diagnostics provides fast turnaround times for results. ProPhase Diagnostics also offers best-in-class rapid antigen and antibody/immunity tests to broaden its COVID-19 testing beyond RT-PCR testing. The Company has announced plans for the expansion of the lab to include traditional clinical testing and genomics sequencing.

ProPhase Precision Medicine, Inc., a wholly owned subsidiary of ProPhase, focuses on genomics sequencing and testing technologies, a comprehensive method for analyzing entire genomes, including the genes and chromosomes in DNA. The data obtained from genomic sequencing may help to identify inherited disorders and tendencies, help predict disease risk, help identify expected drug response, and characterize genetic mutations, including those that drive cancer progression. The Company currently offers Nebula

Genomics whole genome sequencing products direct-to-consumer online, with plans to sell in food, drug and mass (FDM) stores and to provide testing for universities conducting genomic research.

ProPhase BioPharma, Inc. (PBIO), a wholly owned subsidiary of ProPhase, was formed for the licensing, development and commercialization of novel drugs and compounds. Licensed compounds currently include Equivir (OTC/dietary supplement) and Equivir G (Rx), two broad based anti-virals, and Linebacker LB-1 and LB-2, two small molecule PIM kinase inhibitors. The company is collaborating with the Dana Farber Cancer Institute to develop LB-1 as a cancer co-therapy.

ProPhase Labs has decades of experience researching, developing, manufacturing, distributing, marketing, and selling OTC consumer healthcare products and dietary supplements under the TK Supplements® brand and Pharmaloz contract manufacturing subsidiary.

ProPhase actively pursues strategic investments and acquisition opportunities for other companies, technologies, and products.

For more information, visit www.ProPhaseLabs.com.

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 statements regarding our anticipated timeline for completing preclinical lab studies and a Phase 1 human clinical study of LB-1 and our projected budget, as well as our plans to expand our New York lab to include traditional clinical testing and genomic sequencing, to sell our whole genome sequencing products in food, drug and mass (FDM) stores and to provide testing for universities conducting genomic research, and our ability to develop and commercialize LB-1 as a cancer co-therapy. 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.

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