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bioAffinity Technologies Announces New U.S. Patent for Novel Broad Spectrum Cancer Therapeutics

Simultaneous siRNA Knockdown of Specific Cell Receptors Shown to Selectively Kill Cancer

Company Research Targets Topical Application for Treatment of Skin Cancers

SAN ANTONIO--(BUSINESS WIRE)-- **bioAffinity Technologies, Inc. (Nasdaq: BIAF; BIAFW),** a biotechnology company advancing noninvasive diagnostics and targeted therapeutics for cancer, today announced the U.S. Patent and Trademark Office (USPTO) has issued a new patent covering a novel composition and method for selectively killing cancer by targeting the CD320 and LRP2 receptors on the cell membrane.

The patent, “Compositions and Methods for Treating Cancer,” (Patent No. 12,305,171) provides for use of the novel therapeutic approach with cancers of the lung, breast, prostate, brain and skin. Research has begun toward development of a topical treatment for cutaneous malignancies and neoplasms of the skin.

The therapeutic patent is an important addition to bioAffinity Technologies’ patent portfolio, which includes 19 awarded U.S. and foreign patents and 36 pending patent applications related to its diagnostic platform and cancer treatment therapeutics.

The invention uses small interfering RNAs (siRNAs) to suppress the expression of CD320 and LRP2 proteins. In vitro studies demonstrated that the double knockdown of the proteins using siRNAs is selectively cytotoxic to human cancer cells but does not kill normal cells under the same treatment.

“The cancer cells killed by this discovery were not selected on the basis of any characteristic or biomarker, and the effect appears to be quite general,” said William Bauta, PhD, Chief Science Officer at bioAffinity Technologies. “We believe our research has discovered a fundamental vulnerability of cancer that could be leveraged for new, highly selective therapies.”

In vitro studies demonstrated that when only one of the receptors was down regulated, there was an increase in protein expression in the other receptor. The double knockdown of CD320 and LRP2 is required to kill cancer cells or significantly inhibit their proliferation.

“This patent marks a significant advancement in our therapeutic pipeline as well as our intellectual property portfolio,” said Maria Zannes, President and CEO of bioAffinity Technologies. “This discovery is a continuation of the scientific curiosity that led to our CyPath® Lung diagnostic for early-stage lung cancer and opens a potential new path to

precision treatment across multiple cancer types. Our first target is developing a topical treatment for skin cancer."

About CyPath® Lung

CyPath® Lung uses proprietary advanced flow cytometry and artificial intelligence (AI) to identify cell populations in patient sputum that indicate malignancy. Automated data analysis helps determine if cancer is present or if the patient is cancer-free. CyPath® Lung incorporates a fluorescent porphyrin that is preferentially taken up by cancer and cancer-related cells. Clinical study results demonstrated that CyPath® Lung had 92% sensitivity, 87% specificity and 88% accuracy in detecting lung cancer in patients at high risk for the disease who had small lung nodules less than 20 millimeters. Diagnosing and treating early-stage lung cancer can improve outcomes and increase patient survival. For more information, visit www.cypathlung.com.

About bioAffinity Technologies, Inc.

bioAffinity Technologies, Inc. addresses the need for noninvasive diagnosis of early-stage cancer and other diseases of the lung and broad-spectrum cancer treatments. The Company's first product, CyPath® Lung, is a noninvasive test that has shown high sensitivity, specificity and accuracy for the detection of early-stage lung cancer. CyPath® Lung is marketed as a Laboratory Developed Test (LDT) by Precision Pathology Laboratory Services, a subsidiary of bioAffinity Technologies. For more information, visit www.bioaffinitytech.com.

Forward-Looking Statements

Certain statements in this press release constitute "forward-looking statements" within the meaning of the federal securities laws. Words such as "may," "might," "will," "should," "believe," "expect," "anticipate," "estimate," "continue," "predict," "forecast," "project," "plan," "intend" or similar expressions, or statements regarding intent, belief, or current expectations, are forward-looking statements. These forward-looking statements are based upon current estimates and assumptions and include statements regarding the U.S. patent being an important addition to bioAffinity Technologies' patent portfolio, the ability to leverage the double knockdown effect for new cancer therapeutics, and the discovery opening a potential new path to precision treatment across multiple cancer types. These forward-looking statements are subject to various risks and uncertainties, many of which are difficult to predict, that could cause actual results to differ materially from current expectations and assumptions from those set forth or implied by any forward-looking statements. Important factors that could cause actual results to differ materially from current expectations include, among others, the ability to leverage the in vitro findings for new cancer therapies, the ability to use the discovery for precision treatment across multiple cancer types, and other factors discussed in the Company's Annual Report on Form 10-K for the year ended December 31, 2024, and its subsequent filings with the SEC, including subsequent periodic reports on Forms 10-Q and 8-K. Such forward-looking statements are based on facts and conditions as they exist at the time such statements are made and predictions as to future facts and conditions. While the Company believes these forward-looking statements are reasonable, readers of this press release are cautioned not to place undue reliance on any forward-looking statements. The information in this release is provided only as of the date of this release, and the Company does not undertake any

obligation to update any forward-looking statement relating to matters discussed in this press release, except as may be required by applicable securities laws.

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