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KNOW LABS

Know Labs Demonstrates Improved Accuracy of Machine Learning Model for Non-Invasive Glucose Monitor

New study validates algorithm performance for its Bio-RFID™ sensor on expanded dataset

SEATTLE--(BUSINESS WIRE)-- [Know Labs, Inc.](#) (NYSE American: KNW) today announced results from a new study titled, “[Novel data preprocessing techniques in an expanded dataset improve machine learning model accuracy for a non-invasive blood glucose monitor.](#)” The study demonstrates that continued algorithm refinement and more high-quality data improved the accuracy of Know Labs’ proprietary Bio-RFID sensor technology, resulting in an overall Mean Absolute Relative Difference (MARD) of 11.3%.

As with all Know Labs’ previous research, this study was designed to assess the ability of the Bio-RFID sensor to non-invasively and continuously quantify blood glucose, using the Dexcom G6® continuous glucose monitor (CGM) as a reference device. In this new study where data collection was completed in May of 2023, Know Labs applied novel data preprocessing techniques and trained a Light Gradient-Boosting Machine (lightGBM) model to predict blood glucose values using 3,311 observations – or reference device values – from over 330 hours of data collected from 13 healthy participants. With this method, Know Labs was able to predict blood glucose in the test set – the dataset that provides a blind evaluation of model performance – with a MARD of 11.3%.

Comparatively, [Know Labs released study results in May 2023](#) that analyzed data from five participants of a similar demographic using 1,555 observations from 130 hours of data collection, and the first application of the lightGBM ML model, which resulted in an overall MARD of 12.9%.

In June 2023, Know Labs announced the [completed build of its Gen 1 prototype](#), which incorporates the Bio-RFID sensor that Know Labs has been using to conduct clinical research in a lab environment for the last two years, and has [published results of its proven stability](#), into a portable device. Testing with the Gen 1 device is underway, optimizing the sensor configuration for data collection, including new environmental and human factors.

The Company’s focus is on collecting more high-quality, high-resolution data across a diverse participant population representing different glycemic ranges and testing scenarios, to refine its algorithms based on this new data, and to optimize its sensor in preparation for scale. To support this work, the Company is continuing to test with its Gen 1 device every day in parallel with ongoing clinical research with its stationary lab system. Gen 1 is expected to generate tens of billions of data observations to process which will be critical to helping validate algorithm performance across the real-world scenarios in which Know Labs’ glucose monitoring device may be used. This is a key component of realizing the Company’s vision for bringing an FDA-cleared product to the market.

For 2023, Know Labs remains focused on refinement and external validation of its technology and contributing to its growing body of peer-reviewed evidence, which can be found at www.knowlabs.co/research-and-validation.

About Know Labs, Inc.

[Know Labs, Inc.](http://www.knowlabs.co) is a public company whose shares trade on the NYSE American Exchange under the stock symbol "KNW." The Company's technology uses spectroscopy to direct electromagnetic energy through a substance or material to capture a unique molecular signature. The Company refers to its technology as Bio-RFID™. The Bio-RFID technology can be integrated into a variety of wearable, mobile or bench-top form factors. This patented and patent-pending technology makes it possible to effectively identify and monitor analytes that could only previously be performed by invasive and/or expensive and time-consuming lab-based tests. The first application of our Bio-RFID technology will be in a product marketed as a non-invasive glucose monitor. The device will provide the user with accessible and affordable real-time information on blood glucose levels. This product will require U.S. Food and Drug Administration clearance prior to its introduction to the market.

Safe Harbor Statement

This release contains statements that constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 and Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These statements appear in a number of places in this release and include all statements that are not statements of historical fact regarding the intent, belief or current expectations of Know Labs, Inc., its directors or its officers with respect to, among other things: (i) financing plans; (ii) trends affecting its financial condition or results of operations; (iii) growth strategy and operating strategy; and (iv) performance of products. You can identify these statements by the use of the words "may," "will," "could," "should," "would," "plans," "expects," "anticipates," "continue," "estimate," "project," "intend," "likely," "forecast," "probable," "potential," and similar expressions and variations thereof are intended to identify forward-looking statements. Investors are cautioned that any such forward-looking statements are not guarantees of future performance and involve risks and uncertainties, many of which are beyond Know Labs, Inc.'s ability to control, and actual results may differ materially from those projected in the forward-looking statements as a result of various factors. These risks and uncertainties also include such additional risk factors as are discussed in the Company's filings with the U.S. Securities and Exchange Commission, including its Annual Report on Form 10-K for the fiscal year ended September 30, 2022, Forms 10-Q and 8-K, and in other filings we make with the Securities and Exchange Commission from time to time. These documents are available on the SEC Filings section of the Investor Relations section of our website at www.knowlabs.co. The Company cautions readers not to place undue reliance upon any such forward-looking statements, which speak only as of the date made. The Company undertakes no obligation to update any forward-looking statement to reflect events or circumstances after the date on which such statement is made.

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