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PureTech Founded Entity Sonde Health Announces Respiratory Responsive Vocal Biomarker Tool Differentiates Patients with Respiratory Conditions from Healthy Individuals

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Study published in JMIR suggests that RRVB tool could help to pre-screen acute respiratory infections, including asymptomatic COVID-19

[PureTech Health plc](#) (Nasdaq: PRTC, LSE: PRTC) ("PureTech" or the "Company"), a clinical-stage biotherapeutics company, noted today that its Founded Entity, [Sonde Health](#), a health technology company committed to bringing accessible health monitoring to everyone, has revealed new research that demonstrates the ability of its respiratory responsive vocal biomarker (RRVB) machine learning model to differentiate patients with COVID-19 from healthy individuals with about 70% accuracy.

The RRVB tool had already shown strong performance in differentiating patients with asthma, chronic obstructive pulmonary disease (COPD), interstitial lung disease, and cough from healthy individuals. In the new study, conducted in collaboration with Montefiore Health System, Brigham and Women's Hospital, UC San Diego Health System, and Deenanath Mangeshkar Hospital in Pune, India, the model achieved 73% sensitivity and 63% specificity for the entire COVID-19 population (97 patients), and it detected 66% of asymptomatic COVID-19 subjects (46 patients) using only a six-second recording of an "ahh" vowel sound on patient smartphones. These findings suggest the tool could help uncover respiratory conditions before symptoms arise.

The peer-reviewed [study](#), which was published in the Journal of Medical Internet Research (JMIR), suggests the RRVB tool could serve as a pre-screening tool for acute respiratory infection and pave the way for the development of voice-based tools for future disease detection and monitoring applications.

The full text of the announcement from Sonde is as follows:

Sonde Health's Respiratory Responsive Vocal Biomarker Tool Differentiates Patients with Respiratory Conditions from Healthy Individuals

Study published in JMIR suggests that RRVB tool could help to pre-screen acute respiratory infections, including asymptomatic COVID-19

BOSTON, MA - May 23, 2023 - [Sonde Health](#), a health technology company committed to bringing accessible health

monitoring to everyone, has revealed new research that demonstrates the ability of its respiratory responsive vocal biomarker (RRVB) machine learning model to differentiate patients with COVID-19 from healthy individuals with about 70% accuracy.

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"We have shown that the same technology originally developed for asthma and COPD can be applied to pre-screen for COVID-19 with meaningful sensitivity and specificity," said Erik Larsen, Senior Vice President of Clinical Development & Customer Success at Sonde Health. "This study demonstrates the robustness of our tool across conditions, geographies, and languages, paving the way for broader respiratory disease monitoring and surveillance efforts going forward."

The study enrolled 497 participants across four clinical sites in the United States and India, including patients who were COVID-19 positive, patients who had other acute illnesses, and asymptomatic volunteers who did not have an acute illness at the time of the study.

Dr. Sunit Jariwala, M.D., Professor of Medicine and Director of Clinical Research and Innovation in the Department of Medicine at Einstein College of Medicine and Montefiore Health System, served as principal investigator for the study. "This study highlights the potential of vocal biomarkers to improve access and outcomes for diverse and varied populations with respiratory diseases," he said. "By utilizing a digital tool that is non-invasive and can be easily scaled and distributed, we can effectively monitor respiratory health and identify individuals' levels of symptoms and risk. Based on the promising results from this study, we are working with Sonde Health to study the RRVB tool for respiratory monitoring in patients with moderate-to-severe asthma, and we are at the beginning stages of an Agency for Healthcare Research and Quality (AHRQ)-funded study to incorporate the RRVB tool into our own ASTHMAXcel mobile platform."

The RRVB tool was originally developed and tested using a diverse dataset that included over 3,000 patients with respiratory conditions, including asthma, COPD, and interstitial lung disease, as well as healthy individuals. The data was collected from more than 20 hospitals across India between August 2018 and January 2020 and encompassed multiple languages.

The COVID-19 validation study tested this tool for its ability to differentiate patients with COVID-19 from healthy individuals with data collected from September 2020 through April 2021.

About Sonde Health

 Sonde Health is a leader in voice-based health monitoring. Sonde serves top health companies, providers, pharma, and device OEMs through its vocal biomarker platform. Leveraging a best-in-class voice data set with over 1.2 million

samples from 85,000+ individuals on four continents, Sonde uses advanced audio signal processing, speech science, and AI/machine learning to sense and analyze subtle vocal changes due to changes in a person's physiology to provide key insights into health and well-being. www.sondehealth.com

About PureTech Health

PureTech is a clinical-stage biotherapeutics company dedicated to giving life to new classes of medicine to change the lives of patients with devastating diseases. The Company has created a broad and deep pipeline through its experienced research and development team and its extensive network of scientists, clinicians and industry leaders that is being advanced both internally and through its Founded Entities. PureTech's R&D engine has resulted in the development of 27 therapeutics and therapeutic candidates, including two (Plenity® and EndeavorRx®) that have received both US FDA clearance and European marketing authorization and a third (KarXT) that is expected to be filed soon for FDA approval. A number of these programs are being advanced by PureTech or its Founded Entities in various indications and stages of clinical development, including registration enabling studies. All of the underlying programs and platforms that resulted in this pipeline of therapeutic candidates were initially identified or discovered and then advanced by the PureTech team through key validation points.

For more information, visit www.puretechhealth.com or connect with us on Twitter @puretechh.

Cautionary Note Regarding Forward-Looking Statements

This press release contains statements that are or may be forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements contained in this press release that do not relate to matters of historical fact should be considered forward-looking statements, including without limitation those statements that relate to the ability of Sonde's RRVB machine learning model, and Sonde's and PureTech's future prospects, development plans, and strategies. The forward-looking statements are based on current expectations and are subject to known and unknown risks, uncertainties and other important factors that could cause actual results, performance and achievements to differ materially from current expectations, including, but not limited to, the following: our history of incurring significant operating losses since our inception; our need for additional funding to achieve our business goals, which may not be available and which may force us to delay, limit or terminate certain of our therapeutic development efforts; our limited information about and limited control or influence over our Non-Controlled Founded Entities; the lengthy and expensive process of preclinical and clinical drug development, which has an uncertain outcome and potential for substantial delays; potential difficulties with enrolling patients in clinical trials, which could delay our clinical development activities; side effects, adverse events or other safety risks which could be associated with our therapeutic candidates and delay or halt their clinical development; our ability to obtain regulatory approval for and commercialize our therapeutic candidates; our ability to realize the benefits of our collaborations, licenses and other arrangements; our ability to maintain and protect our intellectual property rights; our reliance on third parties, including clinical research organizations, clinical investigators and manufacturers; our vulnerability to natural disasters, global economic factors, geo-political actions and unexpected events; and those additional important factors described under the caption "Risk Factors" in our Annual Report on Form 20-F for the year ended December 31, 2022 filed with the SEC and in our other regulatory filings. These forward-looking statements are based on assumptions regarding the present and future business strategies of the Company and the environment in which it will operate in the future. Each forward-looking statement speaks only as at the date of this press release. Except as required by law and regulatory requirements, we disclaim any obligation to update or revise these forward-looking statements, whether as a result of new information, future events or otherwise.

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