RPRD Diagnostics Receives SBIR Grant to Develop Ethnicity-Inclusive Pharmacogenetics Test for CYP2D6 Genetic Variation

Test will cover genetic variants found across race and ancestry groups, translating to improved patient outcomes across ethnic populations

MILWAUKEE, USA, July 28, 2021 /EINPresswire.com/ -- RPRD (Right Patient Right Drug) Diagnostics, a leading pharmacogenomics (PGx) test developer and services provider, today announced a Phase 1 Small Business Innovation Research (SBIR) grant (No. R43FD007247) awarded by the FDA to develop a clinical test to accurately identify the genetic variation associated with Cytochrome P450 2D6. This gene, also known as CYP2D6, is recognized as part of a family of genes affecting up to 25% of all drug interactions, including those associated with cancer, pain management, and several antidepressant and antianxiety medicines.

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The grant will fund the development of a new assay using leading-edge technologies, including long-read sequencing, to comprehensively characterize the full gene region. While PGx aims to optimize drug therapy based on the effect of genetic variations on drug response, most current tests for CYP2D6 are based on commonly identified genetic variants affecting drug metabolism in those primarily of European descent. However, RPRD's assay development would include ethnicity-inclusive testing for diverse populations to also cover clinically important genetic variants found across race and ancestry groups. The resulting improved accuracy will reduce false testing results of CYP2D6 and likely directly translate to improved patient outcomes across ethnic populations.

The CYP2D6 genetic variants influence the metabolism of certain drugs, thereby affecting drug efficacy and safety. Due to its complex structure and surrounding pseudogenes, CYP2D6 is a very challenging gene to diagnose, and clinical testing platforms and labs struggle with mischaracterizing or inaccurately identifying it, leading to incorrect prescription and dosing recommendations.

"RPRD's proposed approach to more accurately genotype for CYP2D6 is innovative and if

successful will be a substantial step forward towards a unifying testing method across the industry," said Andrea Gaedigk, Ph.D., a leading expert on CYP2D6 pharmacogenetics and the Director of the Pharmacogene Variation Consortium (PharmVar.org). "I see this assay development as holding great potential not only for PGx research but also clinical testing." Gaedigk also holds positions as Director of the Pharmacogenetics Core Laboratory at Children's Mercy Hospital, Kansas City, and as a professor at the School of Medicine, University of Missouri-Kansas City.

"This grant from the FDA enables RPRD to further act on our mission to innovate PGx testing and develop ethnicity-inclusive testing for diverse populations, thus improving patient outcomes across ethnic lines," said Dr. Ulrich Broeckel, M.D., cofounder and CEO of RPRD Diagnostics.

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About RPRD Diagnostics
RPRD (Right Patient Right Drug) Diagnostics is a precision medicine company offering clinical pharmacogenomics (PGx) testing and analysis services to healthcare providers and pharmaceutical companies worldwide. The Company is the PGx reference lab of choice for the leading pediatric cancer centers in the nation, as ranked by US News and World Report for 2019-2020. Results from RPRD Diagnostic's PGx tests are used by healthcare providers to support clinical decision-making, thereby improving patient outcomes and reducing costs. The company specializes in both comprehensive PGx and tailored panels, such as the CNT Panel for identification of leukemia patients at risk for toxicity from thiopurine drugs. These tests enable physicians to consider a patient's unique genetic profile when recommending drug treatment. For more, see www.rprdx.com or visit @RPRD on LinkedIn.

In addition to CEO and co-founder of RPRD, Dr. Ulrich Broeckel also serves the Medical College of Wisconsin, Milwaukee, as Professor of Pediatrics; Adjunct Professor of Medicine, Physiology at the School of Pharmacy; Chief of Genomic Pediatrics; and Associate Director of Pharmacogenomics at the Genomic Sciences and Precision Medicine Center.

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