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MUSC discovery leads to global license for new tool

Pharmacy diagnostic to change way physicians can prescribe certain drugs

Charleston, S.C. (August 25, 2010) – The Medical University of South Carolina (MUSC) and Lab21 Limited have announced the completion of an exclusive global license from MUSC's Foundation for Research Development, which allows for the detection and analysis of genetic variants of the human carboxylesterase-1 gene (*CES-1*). Now, patients and families who have struggled with medication issues have new hope in determining potential medication problems before they happen, thanks to this partnership and the diagnostic tool it will create.

"The Medical University of South Carolina is excited to have Lab21 as a partner moving forward," said Ray Greenberg, M.D., Ph.D., MUSC President. "Together we have an outstanding opportunity to build tools that will improve patient outcomes and reduce healthcare costs. In addition, it is partnerships such as this one that advance our role in the growth and recovery of our state's economy as we help develop the state's biomedical and biotechnology industries."

This license is a major step in Lab21's quest in becoming a leading global provider of diagnostic services and products for personalized medicine according to company executives. Pharmacogenetics is gradually becoming integrated into mainstream medicine and this license represents Lab21's first exclusive proprietary position in this important area.

In 2008, researcher John Markowitz, Pharm.D., then with the South Carolina College of Pharmacy's Department of Pharmaceutical and Biomedical Sciences and MUSC's Darby Children's Research Institute, discovered *CES-1* gene mutations directly involved in the metabolism of common medications. These natural mutations can have profound effects on the way a person's body metabolizes drugs from almost every therapeutic class. For example, the body is unable to use the drug properly, there are unanticipated drug toxicities, or there is overall

therapeutic failure to treat the targeted disease or disorder. When Markowitz and his colleagues discovered the mutation, they also discovered the means to pre-test individuals when choosing an initial course of medication. Imagine the relief a patient or parent might feel, having access to advance testing to be sure that they can metabolize this medication normally (ensuring that the drug works) and avoiding potential toxicity. By identifying these mutations before therapy, treating clinicians can avoid the unnecessary time and expense of a failed drug trial by allowing them to screen for the mutation and initiate a different type of drug at the outset of treatment. *CES-1* analysis stands ready for use regarding a number of medication classes, including but not limited to those used to treat cardiovascular, cancer and mental health disease and disorders.

Graham Mullis, Lab21 CEO, said, “This license is a significant milestone for Lab21 as we expand our collaborative reach into the US, with our new operation in Greenville, and this transaction marks the first of a number of technology deals which Lab21 plans to execute in the biomarker and companion diagnostic field”.

Lab21 will offer *CES-1* analysis from both of its service laboratories in Greenville, SC and Cambridge, UK and plans to develop commercial diagnostic kits through its Diagnostic Products Division. These kits will be sold to pathology laboratories throughout the world.

“We are delighted by this first step of our growing relationship with the Medical University of South Carolina. Lab21 is well suited to working with medical schools and other healthcare providers who need the expertise to develop and commercialize biomarkers for use in personalized medicine,” said Michael Bolick, Lab21 President.

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About MUSC
Founded in 1824 in Charleston, The Medical University of South Carolina is the oldest medical school in the South. Today, MUSC continues the tradition of excellence in education, research, and patient care. MUSC educates and trains more than 3,000 students and residents, and has nearly 11,000 employees, including approximately 1,500 faculty members. As the largest non-federal employer in Charleston, the university and its affiliates have collective annual budgets in excess of $1.7 billion. MUSC operates a 700-bed medical center, which includes a nationally recognized Children's Hospital, the Ashley River Tower (cardiovascular, digestive disease, and surgical oncology), and a leading Institute of Psychiatry. For more information on academic information or clinical services, visit www.musc.edu. For more information on hospital patient services, visit www.muschealth.com.

About Lab21
Lab21 is a global provider of state-of-the-art diagnostic products and services, supporting blood bank screening, medical diagnostics and drug discovery. Its customers include international healthcare providers, pharmaceutical and biotechnology companies. The product division of the Company manufactures immunodiagnostic kits and reagents that are distributed into 110 international countries and is focused on infectious diseases for the blood-banking market. The service division has a growing test portfolio providing companion diagnostics and high technology molecular assays for the growing integration of personalized medicine into healthcare. These services are currently in infectious diseases, oncology and pharmacogenetics areas with emerging interests in cardiovascular and metabolic disease. Lab21's clinical reference laboratory and corporate office is based in Cambridge and has additional UK sites in Newmarket, Bridport, Liverpool and Ipswich. It also has operations in South Carolina, USA. The Company's investors include Merlin Biosciences, Nexus Medical Partners, Medicis Capital, Rowan Dartington and Kreos Capital. For more information, visit www.lab21.com.