

## **Aldatu Biosciences Receives \$3 Million SBIR Grant to expand PANDAA-based HIV Drug Resistance Diagnostic Development**

February 6, 2017 (BOSTON, MA) – Aldatu Biosciences, an early-stage biotechnology company developing reagents and products for the diagnosis of drug-resistant HIV, today announced it has been awarded a Direct-to-Phase II Small Business Innovation Research (SBIR) grant for approximately \$3,000,000 over three years. From the National Institute of Allergy and Infectious Disease (NIAID) at the National Institutes of Health (NIH), the award will fund the continued advancement of the company’s proprietary platform technology, PANDAA, and its specific application to HIV genotyping.

Previously, Aldatu was awarded a Direct-to-Phase II SBIR from the NIAID for the development of reagents and products to detect specific changes called SNPs in the HIV genome associated with resistance to reverse transcriptase inhibitors (RTIs) commonly found in adult first-line antiretroviral (ARV) drug regimens recommended by the World Health Organization (WHO). This new award, also from the NIAID, will allow Aldatu to further apply the PANDAA technology to reagent and product development for the diagnosis of resistance to HIV protease inhibitors (PIs) commonly found in pediatric first-line and adult second-line ARV drug regimens.

“In short, the work enabled by this grant will significantly expand the patient reach of PANDAA-based diagnostic tools,” said Dr. David Raiser, CEO of Aldatu. “As a result of massive ARV access expansion efforts over the next five to ten years, millions of patients will soon be taking protease inhibitors as part of their anti-HIV drug cocktail. A test for the rapid identification of PI resistance in patients failing these drugs will have a big impact on patient outcomes by making sure that patients are matched with effective drugs, and in the most cost-efficient way. With PANDAA and the funds provided by this award, we can make such a test a reality.”

By 2020, as many as 3 million adults and children will be receiving PI-based antiretroviral therapy (ART), with failure rates ranging from 10-40% depending on the region. These include members of ‘priority populations’ that global health organizations like the WHO have identified as key groups to target in the expanding efforts to curtail the global HIV epidemic, such as adolescents and young mothers. The drug resistance screening product proposed in this funded award will be used to detect clinically-actionable drug resistance mutations in patients failing PI-based ARV regimens and inform cost-effective treatment decisions in resource-limited healthcare settings.

“We are very pleased to have received these funds from the NIAID, which has been extremely supportive of our efforts to develop affordable HIV drug resistance diagnostics using PANDAA,” said Dr. Iain MacLeod, Aldatu’s Chief Science Officer. “Our previous NIAID funding has facilitated a number of advancements to the PANDAA technology which we are eager to apply to these new reagents for the rapid and sensitive detection of resistance mutations in HIV protease.”

According to the company, the PANDAA technology uniquely enables qPCR for SNP genotyping in HIV, bringing the speed, cost, and sensitivity advantages of qPCR to HIV drug resistance diagnostic development for the first time. Aldatu’s approach to HIV genotyping is distinct from Sanger sequencing and next-generation sequencing (NGS) based tests, which generally require many steps and can take several days to return a result. The products under development by Aldatu will provide drug resistance results from isolated viral nucleic acid in under 90 minutes.

Dr. MacLeod noted that current R&D activities include drug resistance SNP detection reagent development for all major HIV ARV drug classes, including reverse transcriptase inhibitors, protease inhibitors, and integrase strand transfer inhibitors.

Aldatu is a current resident of the Pagliuca Harvard Life Lab in Boston, MA and a former resident of LabCentral in Cambridge, MA.

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**About Aldatu Biosciences** ([www.aldatubio.com](http://www.aldatubio.com)) Aldatu Biosciences is a Boston, MA-based, early-stage biotechnology company developing innovative diagnostic tools based on its proprietary genotyping platform, PANDAA. Aldatu is committed to commercializing products that address diagnostic challenges in global health, primarily in HIV and other infectious diseases, and which improve both the quality of patient care and healthcare cost-efficiency. Inquiries can be sent to [change@aldatubio.com](mailto:change@aldatubio.com).

**About the NIAID** The National Institute of Allergy and Infectious Diseases (NIAID) conducts and supports research -- at NIH, throughout the United States, and worldwide -- to study the causes of infectious and immune-mediated diseases, and to develop better means of preventing, diagnosing and treating these illnesses. News releases, fact sheets and other NIAID-related materials are available on the NIAID Web site at <http://www.niaid.nih.gov/>