



## REACTION BIOLOGY RECEIVES NIH GRANT AWARD FOR BROMODOMAIN RESEARCH

Malvern PA, June 11, 2015--Reaction Biology Corporation ("RBC") announced today that it has been awarded a Phase I SBIR grant from the National Center for Advancing Translational Sciences to create tools and techniques for bromodomain drug discovery. The grant will help fund an examination of the interaction of over 1400 FDA-Approved drugs and drug-like compounds with a variety of bromodomains, and facilitate the creation of new bromodomain probes that can be used by other researchers. The project will begin immediately at RBC's lab facilities, and will last for one year.

Bromodomains are epigenetic proteins that are so-called "readers." These proteins "read" various acetylation modifications that can occur to the complex genetic protein package carried in each cell, and then affect downstream genetic expression, acting as "on" and "off" switches for the human genome. Malfunction of this process is implicated in a number of cancer, immunological, and neurodegenerative conditions. Understanding these mechanisms may explain why one person with a genetic disposition to a certain type of cancer may become sick while another with the same genetic sequence may stay healthy.

The project will consist of creating a pure and active line of bromodomain proteins, and then screening a large library of compounds to discover probe molecules that can measure the proteins' activity. Also, a library of 1400 compounds, including almost every FDA approved drug, will be evaluated for effect against these targets. The resulting data will generate a roadmap researchers can use in creating new drug compounds to combat conditions with known epigenetic mediators. In addition, the data may shed new light on the mechanisms of side effects of known drugs, and possibly give direction for "repurposing" existing drugs for new treatments.

Dr. Haiching Ma, Chief Science Officer of RBC and Principal Investigator of the study, said, "Many organizations are now interested in performing bromodomain drug discovery, but the research community needs more tools for this purpose. We're very pleased that NCATS saw the same need in this area as we did."

Based in Malvern, PA, RBC specializes in providing high quality biochemical enzyme assay data, using ultra-low volumes and proprietary methods. RBC has provided its services to over 600 customers worldwide, including large pharmaceutical, biotech, government, and academic labs. RBC's HotSpot<sup>SM</sup> platform is a widely used service for providing high quality kinase and epigenetic screening data worldwide. The company also manufactures and sells recombinant human epigenetic proteins for research services.

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