Maple Syrup Urine Disease (MSUD) is an inherited disorder affecting an estimated 1:190,000 births in which the body is unable to properly process branched-chain amino acids. The condition is characterized by poor feeding, vomiting, lethargy, and developmental delay. Depression, anxiety, and learning disabilities are common. If untreated, MSUD can result in seizures, coma, and death. Two grants are available for applied (not basic) MSUD research.

The first grant is to support the development of technology to be used to individually measure blood levels of the branched chain amino acids (BCAAs) vital to treatment. These BCAAs include leucine, isoleucine, and valine, with leucine being the most important. The technology should be usable in the home by MSUD patients as well as by clinics and provide a rapid (<1 hour) assessment. This project will be funded at $54,465.

A second grant of $54,465 will support one of the following areas: (a) a project to identify possible neurological biomarkers in the brain of MSUD patients and/or evaluate the neurocognitive health of individuals with MSUD; or (b) innovative applied research leading to improvements in the quality of life of MSUD patients or potentially lead to a cure.