

JBS Science, Inc. Awarded \$3 Million Bridge Award By National Cancer Institute To Commercialize a Urine Test For Liver Cancer Screening

Doylestown, PA - JBS Science is pleased to announce that it has received the National Cancer Institute (NCI) Small Business Innovation Research (SBIR) Phase IIB Bridge Award. This award will provide JBS Science with \$3 million in funding over 3 years to commercialize its first liquid biopsy product, JBS HCC urine DNA screening test, for the early detection of hepatocellular carcinoma (HCC).

HCC is the fourth leading cause of cancer death worldwide with more than 80% of patients dying within 5 years. HCC is also one of the few cancers rising in incidence in the U.S. The survival rate, however, can be as high as 40% if HCC is detected early; thus, early detection is critical for the effective treatment of HCC. Unfortunately, the current most used screening biomarker, serum AFP, is of limited value with only 40-60% sensitivity for all stages of HCC, and only 25-50% sensitivity for early stages of HCC (stage I/II). HCC usually goes undetected until its late stages, even with HCC surveillance programs implemented in well-defined, high-risk populations such as those with chronic hepatitis B or C infection, liver cirrhosis, or alcoholic and non-alcoholic fatty liver disease (NAFLD). The NCI SBIR Bridge Award will fund JBS Science's effort to address this urgent unmet medical need, using its patented urine-based technologies of isolating circulation-derived DNA in urine and the specialized PCR-based assays to identify circulation derived tumor DNA biomarkers for the early detection of HCC.

JBS has partnered with Dr. James Hamilton (Johns Hopkins University Medical Center) and Dr. Hie-Won Hann (Thomas University Hospital) to develop the JBS HCC urine DNA test. In a blinded pre-validation study, the JBS test showed a sensitivity of 89% (~30% more HCC cases than AFP test) in distinguishing early HCC from other liver diseases when used with serum AFP. Using the Bridge Award funding, JBS will conduct a blinded validation study to address steps needed for commercialization, through partnership with two additional clinical collaborators, Dr. Daryl Lau (Harvard University Medical Center) and Dr. Terence Gade (University of Pennsylvania Medical Center).

Each year, the NCI's SBIR Development Center presents the Phase IIB Bridge Award to a select number of companies based on NCI and external expert review of the scientific merits and commercial potential of the technology. Awardees are required to allocate third-party investment to match the Bridge funding prior to submitting funding application; the third party matching fund of \$3 million is provided by the investment group led by Richen-Forge Holding Co., Ltd. (<http://www.china-richen.com.cn>). Its subsidiary company, Richen-Forge Science & Technology Co., Ltd (<http://m.ureabreathtest.com>) is a strategic partner to assist in the commercialization of the JBS HCC test first in China, and then other parts of Asia where 90% of the world's at-risk population for HCC is located.

About JBS Science, Inc.

JBS Science Inc. (www.jbs-science.com), a small biotechnology company based in Pennsylvania, is a discovery and development phase cancer genomic liquid biopsy company focused on the delivery of urine based DNA tests for cancer screening and precision medicine to improve disease management. JBS Science has demonstrated that urine contains DNA from the circulation. This circulation-derived cell-free urine DNA (urine cfDNA) contains tumor derived DNA if a tumor is present in the body. JBS Science developed a method for the isolation of urine cfDNA and specialized assays that detect biomarkers for cancer for cancer screening and precision medicine to improve the prognosis and save lives.