News Highlights

September 22, 2014

Serum metabolites and metabolic pathways as novel prognostic markers and potential therapeutic targets for AML

By Chantal Jackson

HONOLULU, HI- University of Hawai‘i Cancer Center's Dr. Wei Jia's collaborative article regarding acute myeloid leukemia (AML) has received the Cancer Center’s September 2014 award as the "Publication of the Month." Dr. Wei Jia has acted as corresponding author to a report which has identified a panel of markers used in the identification of intermediate group prognosis in individuals with AML.

Acute myeloid leukemia (AML) is a group of hematological malignancies. AML patients can be divided into groups associated with variable health outcomes: favorable, intermediate, and unfavorable. While the favorable and unfavorable groups demonstrate clear prognoses, the outcome of the intermediate group is not as straightforward.

In collaboration with Dr. Sai-Juan Chen and Dr. Zhu Chen in Shanghai, China, Dr. Jia and his team used serum metabolic profiling as a measure, and subsequently determined that the profiles of AML patients were markedly different from those of healthy controls. Metabolite markers were differently expressed in serum which contributed to these different profiles.

Dr. Wei Jia explains: "In patients with AML, physicians can divide between favorable, intermediate, and unfavorable with associated prognostic outcomes. It would be valuable to those in the intermediate group to be able to use these molecular biomarkers to determine whether or not they face a poor prognosis. Based on the prognostic identification of intermediate group AML patients, a treatment plan can be better established."

Through this report, the authors support the use of serum metabolites and metabolic pathways as novel prognostic markers and potential therapeutic targets for AML. By incorporating these markers, intermediate group prognoses can be determined, and ultimately a treatment plan can be better established for low-survival rate patients. The study: "A distinct glucose metabolism signature of acute myeloid leukemia with prognostic value" is published in the September 4, 2014 edition of Blood. http://www.ncbi.nlm.nih.gov/pubmed/25006128