



HMT Newsletter

Dear Researchers,

The days are getting shorter, which means it is time to leave the summer behind. I hope all of you had some time for vacation and are rejuvenated with a focus til end of the year. As always, we are here for all of your metabolomic needs, so please let us know how we can help with your year end goals.

Metabolic profiling continues to be growing and prevalent in biochemical approaches for a variety of medical research areas. Our qualified CE-MS based technology is being used in over 400 projects a year and has provided key data for many research projects resulting in a number of manuscripts. This month, we would like to introduce several notable studies that have utilized HMT's CE-MS based metabolic profiling data. We hope these examples can provide additional and valuable insight for your own research. A quick email or phone call to our office can get you started. Our experts are available to discuss your research and how our focused and quantitative metabolomics can provide new insights for your work. Whether your interests are in medicine, agriculture or nutrition, academia or industrial, we have the experience to meet your needs.

Sincerely,

Tsutomu (Tom) Hoshiba
CEO
Human Metabolome Technologies America

HMT Updates

Conference and Exhibition Information

6th International Conference on Biomarkers & Clinical Research

August 31-September 02, 2015, Toronto, Canada

Our vice president, Alex Buko, will talk about the discovery and development of a diagnostic marker for major depressive disorder (MDD) in the Track 3/4 on September 1st.

Protein Kinase Inhibitor Design & Screening Conference

September 11, 2015, Philadelphia, Pennsylvania

Our vice president, Alex Buko, will talk about metabolic profiling based mechanistic analysis of EGFR Kinase Inhibitors related drug resistance property in the session of "Biomarkers in Kinase Drug Discovery" on September 10th.

Featured 10 articles in the first half of 2015

Cancer metabolism

SHMT2 drives glioma cell survival in ischaemia but imposes a dependence on glycine clearance
Nature, 520, pp. 363-367.

Lysine demethylase LSD1 coordinates glycolytic and mitochondrial metabolism in hepatocellular carcinoma cells

Cancer Research, **75**, pp. 1445-1456.

Signaling through the Phosphatidylinositol 3-Kinase (PI3K)/ Mammalian Target of Rapamycin (mTOR) Axis is Responsible for Aerobic Glycolysis mediated by Glucose Transporter in Epidermal Growth Factor Receptor (EGFR)-mutated Lung Adenocarcinoma

The Journal of Biological Chemistry, **290**, pp. 17495-1504.

Metabolism for stem cell and cellular differentiation

DNA methyltransferase 3a regulates osteoclast differentiation by coupling to an S-adenosylmethionine-producing metabolic pathway

Nature Medicine, **21**, pp. 281-287.

Retinoblastoma protein promotes oxidative phosphorylation through upregulation of glycolytic genes in oncogene-induced senescent cells

Aging Cell, **14**, pp. 689-697.

Pyruvate kinase M2, but not M1, allele maintains immature metabolic states of murine embryonic stem cells

Regenerative Therapy, **1**, pp. 63-71.

Profiling for metabolic syndromes

L-cysteine reversibly inhibits glucose-induced biphasic insulin secretion and ATP production by inactivating PKM2

Proceedings of the National Academy of Sciences, **112**, pp.1067-76.

Excessive degradation of adenine nucleotides by up-regulated AMP deaminase underlies afterload-induced diastolic dysfunction in the type 2 diabetic heart

Journal of Molecular and Cellular Cardiology, **80**, pp. 136-145.

Technical developments

Quantification of folate metabolism using transient metabolic flux analysis

Cancer & Metabolism, **3**: 6.

Effects of processing and storage conditions on charged metabolomic profiles in blood

Electrophoresis, in press.

[Please visit our website to find more of application for your interests.](#)



Need Metabolomics Data for Your Grant Application?
HMT Can Provide Accurate Quantitative Data in 4 to 6 Weeks.

HMT is a leading company providing metabolomic profiling based on unique and high performance CE-MS technology. We complete over 400 projects a year and our technology has contributed to the advancement of research in a variety of scientific areas.

Human Metabolome Technologies America

24 Denby Road, Suite 217, Boston, MA 02134, USA | p. 617-987-0554 | f. 617-902-2434
hmtamerica@humanmetabolome.com | humanmetabolome.com/en