



# HMT Newsletter

Friends and Colleagues,

This month we celebrate the opening of our European office and present three new and exciting publications exhibiting the power of CE-MS. The Leiden, Netherlands, office signifies our company's growth and expansion into Europe, allowing us to bring our next generation metabolomics platform to the global stage. Last year we opened our Biomarker division. This year our first European office. Stay tuned for more from HMT in the near future.

In our featured articles we have cancer studies using CE-MS to help understand metabolic changes in pancreatic and gastric cancer. These knock out and xenograft studies continue to be one of our strengths to contribute to the understanding the complexities of cancer metabolism. Our last featured article is a large cohort discovery and validation study of Parkinson's patients where our CE-MS platform was able to discern multiple analytes, including long chain acyl carnitines, as promising diagnostic biomarkers for this debilitating disease.

Sincerely,

Alexander Buko, PhD  
Vice President  
Human Metabolome Technologies America

## HMT Updates

### HMT Europe Opening Ceremony

The opening ceremony of HMT Europe was held on July 25th, 2017 in Leiden, Netherlands. Mr. Henri Lenferink, the Mayor of Leiden, Hiroshi Inomata, the Japanese Ambassador to the Netherlands, and many from the local biotech community joined us to celebrate the establishment of the HMT European office.



The ceremony was held at BioPartner Center, located within the Leiden Bio Science Park, and home to four incubator buildings. The event was well attended, despite the fact that the summer is typically a quiet time due to the vacation season. HMT Europe received a warm welcome from both the Mayor of Leiden, as well as, from the Japanese Ambassador. Also in attendance was the President of HMT Japan, Mr. Ryuji Kanno. HMT Europe will be only the second Japanese company to open an office in the Leiden Bio Science Park.

In the 19th century, Japanese culture was introduced to the Netherlands and the rest of Europe by Philipp Franz von Siebold who was a Professor at the University Leiden. Ever since, there continues to be a close connection between the Netherlands and Japan and as a result, support for this venture has been high from the Netherlands Government, the Innovation-Quarter Development Department and the local life science community. HMT Japan president, Ryuji Kanno, said "It would be great if HMT becomes a bridge between the Leiden Bio Science Park, which is one of the most successful science parks in Europe, and our growing Bio Science Park in Tsuruoka Japan". It would be wonderful if Leiden and Tsuruoka can create new synergies based on their unique and advanced biotechnologies.

Now HMT Europe is ready to provide metabolomics services to European customers. Please contact us!

Tsutomu (Tom) Hoshiba  
Managing Director  
Human Metabolome Technologies Europe B.V.

---

## Campaign

### Start a new project with our 15% discount in September

- Untargeted, Targeted or Isotope tracing platforms
- Full statistical analysis and biological interpretation
- 4-8 weeks data delivery
- Minimum study size: 6 samples



Special offer expires on September 30th, 2017

## Featured articles

### **Paraoxonase 2 Facilitates Pancreatic Cancer Growth and Metastasis by Stimulating GLUT1-Mediated Glucose Transport**

*Nagarajan A., et al., Mol. Cell., 67, pp. 685-701.*

---

Metabolic deregulation is a hallmark of human cancers, and the glycolytic and glutamine metabolism pathways were shown to be deregulated in pancreatic ductal adenocarcinoma (PDAC). To identify new metabolic regulators of PDAC tumor growth and metastasis, we systematically knocked down metabolic genes that were overexpressed in human PDAC tumor samples using short hairpin RNAs. ..

### **Anti-tumor efficacy evaluation of a novel monoclonal antibody targeting neutral amino acid transporter ASCT2 using patient-derived xenograft mouse models of gastric cancer.**

*Kasai N., et al., Am. J. Transl. Res., 9, pp. 3399-3410*

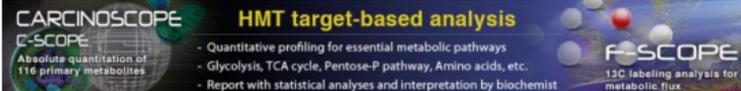
---

ASC amino acid transporter 2 (ASCT2), also known as solute linked carrier family 1 member A5 (SLC1A5) is a Na<sup>+</sup>-dependent glutamine/neutral amino acid transporter. ASCT2 acts as a high-affinity transporter of L-glutamine (Gln) and has been reported to be up-regulated in a variety of cancerous tissues including stomach, liver, and kidney. In this study, we evaluated anti-tumor efficacy of a novel anti-ASCT2 humanized monoclonal antibody, KM8094, which has a neutralizing activity against glutamine uptake, as a therapeutic antibody against gastric cancer and explored clinical predictive biomarker candidates by utilizing patient-derived xenograft (PDX) mouse models. ..

## Decreased long-chain acylcarnitines from insufficient $\beta$ -oxidation as potential early diagnostic markers for Parkinson's disease.

Saiki S., et al., *Sci. Rep.*,7: 7328.

Increasing evidence shows that metabolic abnormalities in body fluids are distinguishing features of the pathophysiology of Parkinson's disease. However, a non-invasive approach has not been established in the earliest or pre-symptomatic phases. Here, we report comprehensive double-cohort analyses of the metabolome using capillary electrophoresis/liquid chromatography mass-spectrometry. ...



**CARCINOSCOPE**  
C-SCOPE  
Absolute quantitation of 116 primary metabolites

**HMT target-based analysis**

- Quantitative profiling for essential metabolic pathways
- Glycolysis, TCA cycle, Pentose-P pathway, Amino acids, etc.
- Report with statistical analyses and interpretation by biochemist

**F-SCOPE**  
13C labeling analysis for metabolic flux

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.

*Edited by Takushi Oga, PhD*

© Copyright Human Metabolome Technologies America Inc. All Rights Reserved.



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