

Development and commercialization of a plasma amino acid based risk diagnosis service

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From observations indicating that amino acids were a convenient metabolomic subset to investigate changes in metabolism associated with various physiological states, we have developed a technology package (“AminoIndex technology”) to generate biomarkers using plasma amino acid concentration data, and have commercialized a service based on this technology. In order to achieve commercialization, various problems ranging from sample handling, throughput, standardization and follow-up services had to be overcome and some of these issues, which may be relevant to other biomarker commercialization, will be addressed in the presentation. So far, “AminoIndex technology” has been used to generate risk biomarkers for gastric, lung, colorectal, prostate and breast cancer, and more recently for pancreatic cancer, and since its launch as a biomarker service in April 2011 in Japan, it has been adopted by over 1000 hospitals and clinics as an optional blood test, and has led to the receipt of various awards in Japan. Research is ongoing to add other cancer risk biomarkers as well as biomarkers for other diseases risks and recent evidence indicate the possibility of generating biomarkers to predict the risk of developing a number of diseases four years in the future. We believe that in the near future, other validated metabolites and omics data could be added to the current analytical platform, increasing discriminative power. Although there are a number of issues still needing refinement, we believe that the “AminoIndex technology” platform can play a role in tailor-made nutrition and medicine.

Biography

Takeshi Kimura received his BSc in Cell and Molecular Biology and PhD in Biochemistry from University of London King's College and became a Visiting Fellow and then Visiting Associate at LMB, NIDDK, NIH, Bethesda, MD, USA. He joined Ajinomoto Co., Inc. in 1989 and after heading the Washington DC. Office, Basic Safety Research Group, Quality Assurance and External Scientific Affairs Department, R&D Planning Department, he became Member of the Board and Corporate Vice President in 2013. He is a Trustee for International Life Science Institute and Research Foundation, International Advisor to the Monell Chemical Senses Center amongst other external positions.

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