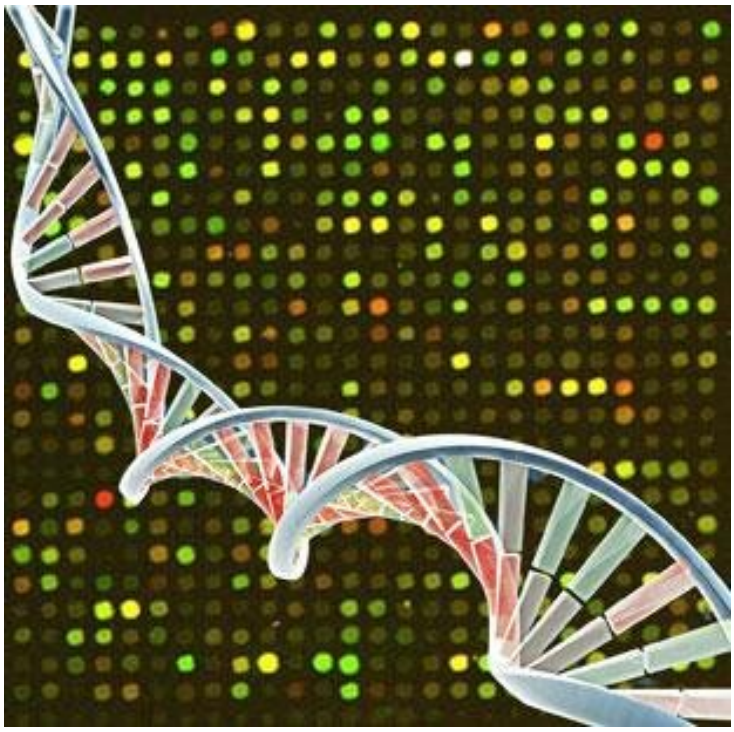
BioSpectrum
the business of Bio & Health Sciences
ASIA EDITION

Hitachi mRNA assay to target personalized medicine

November 19, 2012 | News | By BioSpectrum Bureau



Singapore:Ã?Â Hitachi Chemical has developed a novel mRNA quantitative assay called Hem(A)+ System that offers a wide range of applications in clinical biomarker discovery and molecular testing to target personalized medicine.

By targeting personalized medicine, Hitachi Chemical developed the Hem(A)+ System, to address this need for improved medical treatments. This system can extract and quantify leukocyte-derived mRNA from a very small amount of whole blood (0.05 mL). It employs simple filtration to capture leukocyte prior to extraction and purification of mRNA. This eliminates interference by a large amount of red blood cells in whole blood, and enables sensitive detection of the changes in mRNA levels.

Also, the system adopts a 96-well microplate format, making it suitable for simultaneous processing of multiple samples. The best feature of this system is that it simulates the drug response of an individual in a test tube by using whole blood samples stimulated with the drug. This system successfully brought a new "ex vivo" concept, which measures in vivo response in an in vitro assay, to practice and makes it possible to predict drug efficacy.

With this system, Hitachi Chemical plans to conduct contract test services for pharmaceutical companies to find novel biomarkers and select subjects for clinical trials by predicting drug efficacy, and eventually aims to have this system as a companion diagnostic.

Hitachi is actively conducting collaborative research in a wide range of clinical fields in Japan and the US. It had poster presentations at the SITC 27th annual meeting held in the late October, on predictive markers for the efficacy of a breast

cancer drug and dendritic cell vaccine therapy for cancers. They also have a poster presentation at the 2012 ASH Annual Meeting and Exposition scheduled in early December about the predictive markers of effect of a multiple myeloma drug and adverse effect.