

A*Star, QuantuMDx to develop lung cancer assays

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Singapore: A*STAR's Genome Institute of Singapore (GIS) has signed an agreement with QuantuMDx (QMDx), a UK-based biotech developing handheld diagnostics and whole genome sequencing devices.

Under this collaboration, QMDx's wholly owned Singapore-based subsidiary, QMDx Asia, and GIS will develop Asia-specific point-of-care genetic tests for use with Q-POC, QMDx's handheld point-of-care device. QMDx will commercialize the tests. The first assay from the development pipeline will direct treatment of East Asian patients with kinase-driven cancers, such as chronic myeloid leukemia (CML) and epidermal growth factor receptor-mutated non-small lung cancer (EGFR NSCLC).

QMDx's handheld, sample-to-result diagnostic device Q-POC will be used to rapidly test patients, in a cancer clinic or post surgery, for the presence of a BIM deletion polymorphism genetic mutation which GIS has shown causes a patient's malignancy to be unresponsive to the standard Tyrosine Kinase Inhibitors (TKI) treatment regime. Instead, the treatment can be personalized and made more effective by switching treatment to other chemotherapeutic agents such as the promising BH3 mimetics. Q-POC, which is currently at prototype stage, utilizes novel sample preparation, extraction, amplification and a nanowire biosensor to detect DNA sequences of interest in under 15 minutes, from sample to result.

Dr Michael Rossbach, head, strategic alliances, GIS, said that, "This collaboration has the potential to be most far-reaching for the continent of Asia by harnessing the Genome Institute of Singapore's quality cancer research, focused on East Asian populations, and translating and testing our validated biomarkers for disease for use in QuantuMDx's ground-breaking sample to result point of care platform Q-POC. The assays can then be commercialised and utilized in a near patient setting, taking us into the realms of true personalized treatment."

QMDx's Group CEO, Ms Elaine Warburton, said that, "The collaboration with GIS is of great importance to QuantuMDx and our Asia subsidiary, QMDx Asia, as it offers access to GIS's world class genomic expertise and facilities and to their Asian-specific validated disease biomarkers. This is of immense importance in developing Asian-specific diagnostic and companion diagnostic assays for sale within Asia. As part of our global drive for precision medicine using Q-POC, it is our strategy to develop disease specific panels which are developed for and validated on populations from the geographic regions in which they are sold."