

A*STAR, OBD to find epigenetic footprint in stem cells

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Singapore: Genome Institute of Singapore (GIS) from the Agency for Science, Technology and Research (A*STAR) and Oxford Biodynamics (OBD) will collaborate to identify epigenetic signatures utilizing OBD's proprietary EpiSwitch biomarker discovery platform that can robustly differentiate or confirm the epigenetic footprint of induced pluripotent stem cells (iPSCs), embryonic stem cells (EC-ESCs) or progenitor cells from representative cell lines.

EpiSwitch platform is a unique world class industrial platform that allows scientists to discover and monitor highly specific epigenetic biomarkers, called chromosome conformation signatures, which define and control key aspects of epigenetics and gene regulation.

The new collaboration is an important advancement for current stem technology, as the control of the quality of epigenetic differentiation of stem cells remains one-of-the-most important problems. In their first and immediate application EpiSwitch biomarkers will provide a quick and efficient tool to monitor the quality and safety of iPSCs.

GIS executive director Professor Huck Hui Ng, said that, "Epigenomics is an exciting frontier for biological research and it offers a new perspective to analyse the human genome. We are very pleased to partner with Oxford BioDynamics to employ their EpiSwitch technology for applications in stem cell differentiation."

Oxford Biodynamics CEO, Dr Christian Hoyer Millar, said that, "We are delighted to be collaborating with GIS. GIS is one of the leading influences worldwide in the development of stem cell technology. Singapore's focus on adoption of new technologies, like EpiSwitch, has been instrumental in translation of latest epigenetic scientific advances into practical

industrial applications in health-care and drug development."