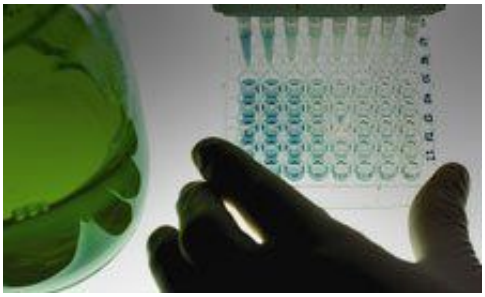
Technology to identify genes

May 4 2011



(Medical Xpress) -- King's researchers in the Division of Cancer Studies have developed new technology for the identification and validation of microRNA (miRNA) targets in research and clinical diagnostics, resulting in an exclusive licence agreement with Sigma Life Science announced today.

Patented by King's Business, this technology is now being co-developed with Sigma Life Science into a kit ready for commercialization.

miRNAs function as critical regulators of gene expression in eukaryotic cells, with over 1,000 different miRNAs in the human genome already known to play multiple roles in gene regulation. Although the specific targets of most miRNAs are largely unknown, aberrant expression of miRNAs has been implicated in numerous disease states, making them important targets for clinical research in oncology, wound healing and infectious disease.

Currently, identification of miRNA targets is laborious and inefficient, relying on computer algorithms and subsequent validation by in vitro assays. To overcome this research bottleneck, scientists in the Division of Cancer Studies at King's have developed a technology allowing simple, accurate identification and validation of miRNA targets.

Dr. Joop Gaken, lead King's researcher of this project, explained: "The role of miRNAs in cancer is well established, and several miRNAs clearly function as either oncogenes or tumor suppressor genes, although the target genes are unknown in the majority of cases. This new test will enable the straightforward identification of target genes that are strongly regulated by a given miRNA, helping to elucidate important gene regulation events in vivo."

"miRNA research is a rapidly growing field, and this test will be an invaluable asset to commercial and academic researchers working with miRNAs," commented Steven Suchyta at Sigma Life Sciences. "The exclusive license agreement has allowed Sigma Life Science and King's College London to work closely together to ensure rapid development of this technology for the benefit of the research community, and underlines our commitment to accelerating scientific discovery through innovative technology."

Dr. Mike Shaw, Director of Commercial Development in King's Business commented: "We are delighted to see this innovative technology commercialized by a leading life science company. The licence agreement has enabled close working between King's and Sigma Life Science to take the technology efficiently through further development steps. We are excited about the opportunity for our technology to appear as a product for the research community in the relatively near future."

Provided by King's College London