

## **UK-Japan Genomics for Better Health Research**

Four Japanese healthcare companies have signed up or upgraded their membership to the Discovery Forum, Genomics England's industrial partnership scheme, following joint work with SIN Japan. This brings them one step closer to forming collaborative research partnerships with UK universities and industry.

Since UK scientists discovered the double helix structure of DNA in 1953, the UK has been deeply committed to genomics. This commitment has seen the UK become the world-leader in



Genomics England and NHS England visit Japan's National Cancer Centre to discuss applications of genomics in the fight against cancer.

the field through ground-breaking initiatives such as the 100,000 Genomes Project, a moon-shot project aiming to harness whole genome sequencing technology to uncover new diagnoses and improve treatments for patients with rare diseases and cancer.

In the past, the UK and Japan worked together to sequence the first whole genome in the Human Genome Project. Both countries are also active members of international organisations such as the Global Alliance for Genomics and Health (GA4GH). In recent years, Japan has turned its focus to implementing genomic medicine to tackle cancer and rare diseases. Japan's major healthcare companies are also increasingly interested in the opportunities genomics can bring for preventative medicine, diagnostics and drug discovery.

For the past two years, SIN Japan has been working with Genomics England to explore and develop opportunities for further UK-Japan genomics collaborations. Having identified untapped potential for engagement with Japan's research community and healthcare industry, SIN Japan organised a three-day visit in December 2018 coinciding with the completion of the 100,000 Genomes Project. The programme consisted of meetings with life science investors interested in industrial partnerships, seminars promoting UK genomics expertise in Tokyo and Osaka and engagement with key stakeholders across government, research and industry.

During the visit, several Japanese pharmaceutical and diagnostics companies expressed an interest in joining the Discovery Forum as a gateway to develop research partnerships with the UK. Three top companies signed up to become members shortly afterwards and one current member upgraded their membership to begin collaborating on a pilot study. The Discovery Forum will enable these companies to turn research findings from the 100,000 Genomes Project into treatments, diagnostics and benefits accessible by patients in the UK.

In March 2019, PM Abe's Liberal Democratic Party invited Genomics England back to Japan to present on the 100,000 Genomes Project. Genomics England and SIN Japan then helped arrange a fact-finding visit to the UK for officials from Japan's Ministry of Health, Labour and Welfare and National Cancer Centre. In June 2019, Japan's Cabinet Office announced they would commence a 100,000 whole genome study based on the Genomics England model starting in 2020. SIN Japan will continue to support the exchange of best practice and common standards between our governments while exploring opportunities for further research collaboration.

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