



Singapore's three major ethnic groups – Indian, Chinese, and Malay. Image was used for Cell's cover, volume 179, issue 3. (Illustration by Gloria Fuentes - The Visual Thinker LLP)

Congratulations to Prof Liu Jian Jun for winning the SMRT Grant 2019 with his Asian Reference Genome project!

The SMRT Grant was open to scientists worldwide and offered three winning projects each up to six SMRT Cells 8M and sequencing on the Sequel II System by PacBio's Certified Service Providers and co-sponsors.

Asian Reference Genome

With this SMRT Grant, scientists will sequence the genomes of three individuals — one each of Chinese, Indian, and Malay descent. This is part of a larger effort at the Genome Institute of Singapore to generate Asian population-specific reference genomes for improved variant calling for people in these populations. The assemblies produced through the SMRT Grant will be used to analyze structural variation, evaluate different genome assemblers and adapt the Institute's methods for HiFi data. Ultimately, population-specific data will play an important role in the implementation of precision medicine for people of all ancestries.



“We are excited about this project and very thankful for support by PacBio and DNA Link. Genomic analysis of Asian populations has fallen behind the efforts in western populations. We hope that our effort can help to improve it by providing tools and resources that can empower the studies of Asian populations.”

Prof LIU Jian Jun
Deputy Executive Director
Genome Institute of Singapore



“The project provides a pilot genetic map of Asian populations that allows us to measure precisely the genetic contribution to disease, and combine it with other sources of data within a data-driven healthcare system. Potentially, this will provide insights to prevent disease before it occurs, diagnose disease earlier, and ensure that therapies are deployed in a way that maximises clinical benefits while minimising adverse effects. This will benefit both Singapore and the Asian population at large by providing more effective and efficient healthcare services.”

Prof Patrick TAN
Executive Director
Genome Institute of Singapore

For more information on the Asian Reference Genome project, please access the links below:

- [Press release](#)
- [Research paper](#)