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TAP POTENTIAL OF PRECISION MEDICINE

New Straits Times, Malaysia



GENOME PROJECT

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PRECISION medicine is a way of treating and preventing diseases that takes into account a person's genetic makeup, environmental factors and lifestyle.

Now that symptoms are being prevented rather than treated when they arise, we can see that the goal of medical care is to be proactive rather than reactive. Precision medicine is the change agent behind this.

It employs genetic and molecular profiling to learn about a person's DNA and how these variations may impact the individual's health.

Simply put, it means administering the appropriate treatment to the appropriate patient at the appropriate time with the appropriate outcome.

The concept has been used, for example, in blood transfusion in which patients are given appropriate blood units based on their blood types.

Nonetheless, the emergence of genome data has enabled a more extensive application of personalised medicine to improve its precision.

During the past decade, some developed nations launched initiatives in precision medicine.

In 2012, then British prime minister David Cameron initiated the 100,000 Genomes project. The goal was to sequence 100,000 genomes, which will include cancers, rare diseases and pathogens.

Malaysia must not fall behind. On Sept 12 last year, former prime minister Datuk Seri Ismail Sabri Yaakob unveiled three thrusts of the National Biotechnology Policy 2.0.

One of the thrusts, biotechnology in healthcare and wellbeing,



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FILE PIC

provides fresh hope for people with disabilities and the rare disease community.

For Malaysia to make precision medicine a success, we need a policy agenda and a strategic plan should be implemented.

In this regard, the Malaysian Genome Vaccine Institute, one of the three biotechnology institutes

under the Science, Technology and Innovation Ministry, has taken the initiative to bring together researchers, geneticists, scientists and medical specialists to brainstorm ways to make the Malaysian Genome project a success.

The project aims to sequence between 10,000 and 100,000 Malaysian genomes and generate

a reference genome for the country.

This will require collaboration from the government, medical institutions as well as medical professionals, researchers, geneticists, scientists and bioinformaticians.

Precision medicine will lead to advances in the treatment of chronic and fatal diseases and Malaysia should be prepared for this change.

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SUMMARIES

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PRECISION medicine is a way of treating and preventing diseases that takes into account a person’s genetic makeup, environmental factors and lifestyle.Now that symptoms are being prevented rather than treated when they arise, we can see that the goal of medical care is to be proactive rather than reactive. Precision medicine is the change agent behind this.