



## DNAe Technology Successfully Detects SARS-CoV-2 Sequences

- **Semiconductor sequencing platform could play vital role in containing future outbreaks by enabling accurate and rapid identification of viruses at the front line**
- **Pioneering LiDia-SEQ™ technology demonstrated on synthesized samples representing SARS-CoV-2, with plans to move on to patient samples shortly**

**London, UK and Carlsbad, CA, USA – 13 May 2020** – DNAe, the next generation sequencing company developing novel diagnostics for use at the point-of-need, today announces positive results from internal tests using its LiDia-SEQ™ sequencing technology to identify SARS-CoV-2. The SARS-CoV-2 coronavirus is the cause of the COVID-19 pandemic currently causing extensive mortality, morbidity and disruption globally.

DNAe's LiDia-SEQ™ prototypes have been used to analyze synthesized samples (nucleic acids) representing SARS-CoV-2, including both automated preparation and sequencing of the samples. Fragments were successfully amplified in disposable cartridges, in a self-contained and fully automated process. Samples were also sequenced and identified as matching SARS-CoV-2. The ability to sequence samples in a rapid and self-contained format will be unprecedented. And by utilizing sequencing data, LiDia-SEQ™ will be able to provide more accurate and detailed information on the virus than conventional tests, including determining the strain.

Samuel Reed, President of DNAe, commented: *“These early test results demonstrate the potential for LiDia-SEQ™ to identify viruses such as SARS-CoV-2. The team is encouraged and all-the-more driven in our mission to contribute to pandemic responses. Our platform could play a vital role in helping contain future outbreaks by bringing sequencing-based diagnostics to the front line. We are continuing to develop the assay, with a view to working with patient samples soon.”*

Professor Christofer Toumazou, DNAe's Executive Chairman and cofounder, and Regius Professor of Engineering at Imperial College London commented: *“COVID-19 has accentuated the desperate need for accurate and rapid infectious disease diagnostics. This need will only heighten over the coming months as the pandemic persists, as societies make steps to reopen, and as we have the onset of other seasonal illnesses side-by-side with the pandemic. By rapidly providing accurate, actionable information, we believe LiDia-SEQ™ offers numerous benefits to controlling infectious disease outbreaks.”*

LiDia-SEQ™, the world's first rapid and direct-from-specimen diagnostic sequencing platform, is in development for multiple applications including diagnostics for infectious diseases and cancer, with the support of major investor Genting Berhad and BARDA\*. BARDA has awarded DNAe a contract worth up to \$51.9 million if all options are awarded, to support development of the system, initially for antimicrobial-resistant infections, and this platform and assay were recently granted Breakthrough Device designation by the USA Food and Drug Administration.

Tan Sri Lim Kok Thay, Chairman and Chief Executive of Genting Berhad, and Visiting Professor at Imperial College London said: *“We have long-recognized that DNAe's unique technology is the approach of the future and is critical to many medical needs, including pandemics. We are excited by*

*the early results and this is an important step forward to bringing sequencing to the front line as a rapid, cartridge-contained test that allows frontline workers to easily detect the virus and accurately identify it.”*

DNAe’s technology can provide many potential benefits to controlling infectious disease outbreaks. These include:

- High accuracy and sensitivity – by using sequencing, the causative virus or even particular strains can be identified
- Rapid and cost-effective results – obtaining results within hours instead of days allows for rapid triaging, e.g. isolating infected individuals, safely clearing non-infected patients from isolation, and potentially enabling frontline workers to return to work
- Ease of use – closed cartridge format will ensure minimal operator interaction and new operators can be rapidly trained
- Available at the point-of-need – benchtop device will be easily deployable to temporary hospitals and other environments to support triage
- High-throughput – fast turnaround time allows for high volume of testing
- Multi-use – sequencing can identify many different viruses and strains, be they routine diseases or outbreaks, in a single test, which will help to earlier detect and contain new hotspots or outbreaks and distinguish new infectious diseases from routine respiratory disease.

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#### **About DNAe – [www.dnae.com](http://www.dnae.com)**

DNAe is commercializing its pioneering semiconductor sequencing technology for healthcare applications where rapid point-of-need diagnostics are of critical need, including infectious disease and cancer testing and monitoring. It is developing LiDia-SEQ™, a user-friendly, direct-from-specimen platform that performs genomic analysis on a microchip, to provide actionable information to clinicians.

DNAe’s initial focus is on infectious disease diagnostics, where speed and DNA-specific information can make the difference between life and death. This includes a range of tests, starting with a groundbreaking test for bloodstream infections (BSI) and antimicrobial resistance (AMR), which uses whole blood specimens to detect and identify infections that lead to sepsis. This will provide clinicians with actionable information to help select the appropriate antibiotics to treat the disease. A pipeline of follow-on tests is in development for viruses and cancer testing and monitoring.

The Biomedical Advanced Research and Development Authority (BARDA), a division of the Assistant Secretary for Preparedness and Response (ASPR) in the U.S. Department of Health and Human Services (HHS), awarded DNAe a contract worth up to \$51.9 million, if all options are awarded, to develop its diagnostic platform, initially for antimicrobial-resistant infections.

A private company, with facilities in London, UK and Carlsbad, CA, USA, DNAe's major shareholder is Genting Berhad, a Malaysian-based global investor with a growing portfolio of investments in cutting-edge life sciences companies.