



DNAe's Semiconductor DNA Analysis Technology Featured in *Nature's Scientific Reports'* Top 100 Most Read Papers of 2016

London, UK and Carlsbad, CA, USA – 18 May 2017 – DNA Electronics ('DNAe'), the inventor of semiconductor DNA sequencing technology and developer of a new, revolutionary blood-to-result test for bloodstream infections, announces that an article on research utilizing the Company's patented semiconductor DNA analysis technology has achieved recognition as one of the top 100 read articles for 2016 in *Scientific Reports*, a peer reviewed journal from the publishers of *Nature*.

Research carried out by scientists at Imperial College, London (within the Division of Infectious Diseases and the Department of Bioengineering) and supported by DNAe, uses a novel approach for detecting the amount of virus present in the blood of HIV patients. If successfully developed into a test, it could in the future enable HIV patients to monitor their response to treatment, and provide an early alert to the patients and their doctors to the development of drug-resistance.

The article, entitled '*Novel pH sensing semiconductor for point-of-care detection of HIV-1 viremia*' was [published on 10th November 2016](#)¹. In November and December, the paper received 8,628 views, placing it within the top 100 most read of more than 20,000 articles published in *Scientific Reports* last year.

The research involved analysis of 991 clinical samples, showing the method using DNAe's technology had a high level of sensitivity (95%) and an average time to result of 20.8 minutes. Currently marketed tests take three or more days to detect the amount of HIV virus present in the blood, providing a strong indication of the very rapid performance of the underlying semiconductor DNA analysis technology, Genalysis®. This is a potential new application of Genalysis®, already being developed by DNAe for the diagnosis of serious bloodstream infections leading to sepsis, antimicrobial resistant infections and influenza².

Earlier this year, DNAe expanded its US operations and appointed four members to a newly formed Clinical Advisory Board in preparation for the launch of its first product, the LiDia™ Bloodstream Infection (BSI) Test. The test is being commercialized to address the urgent unmet need for a diagnostic capable of diagnosing the microbial cause of bloodstream infection leading to sepsis quickly and accurately. Responsible for over 200,000 deaths per annum in the US³, and 44,000 in the UK⁴, sepsis claims more lives than bowel, breast and prostate cancer combined⁴. Rapid diagnosis and treatment with the correct antibiotic can significantly reduce mortality rates. Unlike current blood culture based diagnostics which can take two to six days, the LiDia™ test for bloodstream infection will offer a 'blood-to-result' readout in just a few hours.

Following its test for bloodstream infections, DNAe plans to expand the range of diagnostic tests available on the LiDia™ platform to include other disease areas where rapid diagnosis is a key factor in success of treatment.

DNAe's Founder and Executive Chairman, and Regius Professor at Imperial College London (Department of EEE) Professor Chris Toumazou (FRS, FEng, FMedSci) commented: "It is a great achievement for the whole team at Imperial and DNAe to have the article placed in *Scientific Reports'* top 100 read list for 2016, and is a demonstration of the power and utility of DNAe's technology. At DNAe, our focus is on applying our semiconductor sequencing and other technologies to address significant global threats to health, where treatment is time-critical and needs to be right first time."

Dr Steve Allen, CEO of DNAe Group Holdings commented: "The popularity of this article is a fantastic recognition for the team at Imperial, supported by our scientists, and is testament to the importance of the work they're doing. This

is a further example of the breadth of application of DNAe's technology. We wish the Imperial team every success as they develop their research further.

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References

1. A copy of the research paper can be viewed here: <https://www.nature.com/articles/srep36000>
2. In October 2016, 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 to develop Genalysis® for rapid diagnosis in two key applications; antimicrobial resistant infections and influenza
3. World Sepsis Day factsheet, Global Sepsis Alliance: http://www.world-sepsis-day.org/CONTENTPIC/2015_WSD_FactSheet_long_English.pdf
4. UK Sepsis Trust: <http://sepsistrust.org/>

About DNAe – www.dnae.com

DNAe is commercializing its pioneering semiconductor DNA sequencing technology for healthcare applications where rapid near-patient live diagnostics is needed to provide actionable information to clinicians, saving lives by enabling the right treatment at the right time.

In January 2015 DNAe acquired nanoMR, Inc. (now DNA Electronics Inc.), a developer of a novel system for rapid isolation of rare cells in the bloodstream. DNAe is developing LiDia™, its sample-to-result genomic analysis platform, combining DNA Electronics Inc.'s Pathogen Capture System with its own portfolio of semiconductor-based genomic technologies, trademarked Genalysis®. The LiDia™ range of tests will enable DNA analysis directly on a microchip, providing rapid and accurate results from a user-friendly system.

DNAe's initial focus is on infectious disease diagnostics, where speed and DNA-specific information can make the difference between life and death. LiDia™ launches with the LiDia™ Bloodstream Infection (BSI) test, a groundbreaking rapid direct-from-specimen test for bloodstream infections that lead to sepsis. Built into a compact device for use at the point of need, the system will diagnose accurately and rapidly what infection a patient has, providing the clinician with actionable information to help select the appropriate antibiotics to treat the disease.

A private company, with bases in London, UK and Carlsbad, CA, USA, DNAe has strong financial backing from its investors, including major shareholder Genting Berhad, a Malaysian-based global investor with a growing portfolio of cutting-edge life sciences companies.

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