



Rapid, Near-patient Genomic Tests for Infectious Disease set to Revolutionize Antibiotic Prescribing and Patient Care

DNAe CBO, Nick McCooke provides update in a presentation at Molecular Diagnostics World Summit 2017, 12 July, London

London, UK and Carlsbad, CA, USA – 12 July 2017 – DNA Electronics ('DNAe'), the inventor of semiconductor DNA sequencing technology and developer of a new, revolutionary sample-to-result diagnostic platform to rapidly determine the causative agent of infectious diseases, provided an update on its LiDia™ test for serious bloodstream infections (BSI), a condition which can lead to the potentially life-threatening complication of sepsis if not diagnosed and treated quickly. The test is on track for commercial launch in 2018.

"Sequencing-related technologies have moved on rapidly from their use as research tools, with improvements now enabling real-life application in clinical settings. Bringing genomics and DNA sequencing closer to the patient will be transformative to the way that patients are treated, arming doctors with the information they need to make an informed decision when prescribing drugs. This not only leads to better outcomes for patients, but will help to curb the increase in antimicrobial resistance by fundamentally changing the way antibiotics are prescribed. Our LiDia BSI test for bloodstream infection is one of the first examples of a near-to-patient test that will enable swift treatment with the right antimicrobial drug." said Nick McCooke, DNAe Group's Chief Business Officer, during a presentation today at the Molecular Diagnostics World Summit 2017¹.

DNAe's pioneering work in bringing DNA sequencing into the clinical setting, is an example of where the UK has the potential to lead the way in genomics – as highlighted last week by Prof Dame Sally Davies, UK's Chief Medical Officer in her report *Generation Genome*².

During his career, Mr McCooke led the British company that pioneered next-generation-sequencing (NGS) in the early 2000s, which has been fundamental in enabling the genomics revolution. He is now CBO at DNAe, which is commercialising semiconductor sequencing. It is poised to lead the next step-change in DNA sequencing, bringing DNA sequencing into the near-to-patient clinical setting, by enabling the whole process of a DNA-based diagnostic test to be miniaturized and fully contained with clinically actionable results in just a few hours.

DNAe's LiDia test for BSI overcomes many of the challenges currently associated with implementing near-to-patient genomic analysis as a routine diagnostic approach. It can be performed by non-specialists, enabling 24/7 use in healthcare settings such as hospitals. Results can be used to inform treatment decisions directly, without the need for any 'wet' microbiology labs or any additional analysis. The blood sample is fully contained in a sealed, disposable cartridge to avoid potential for contamination.

In the UK, sepsis results in 44,000 deaths every year, more than bowel, breast and prostate cancer combined. Because treatment in the early stages of sepsis is so crucial to outcome and mortality rate, there is an urgent need for new, rapid diagnostics.

In September 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 further develop LiDia™ for rapid diagnosis in two applications; antimicrobial resistant infections and influenza. DNAe's is the first NGS platform supported by BARDA, marking its game-changing potential in the diagnosis and treatment of infectious diseases.

Lord O'Neill in his final report and recommendations on combatting antibiotic resistance, published in May 2016, highlighted the need for faster more accurate diagnostics in tackling this global threat saying "Most casual, and some very informed, observers automatically think the main part of the problem is getting new drugs. At least as big, if not bigger, is reducing the demand side, of which state-of-the-art diagnostics is front and center."³

1. Mr McCooke's presentation, 'Rapid, User-Friendly, Sample-to-Result Diagnostic Sequencing'. For more information on Molecular Diagnostics World Summit 2017, please visit: <http://www.moleculardiagnosics.co.uk>.

2. 2016 Annual Report: Generation Genome <https://www.gov.uk/government/publications/chief-medical-officer-annual-report-2016-generation-genome>

3. Review on AMR: https://amr-review.org/sites/default/files/160518_Final%20paper_with%20cover.pdf

—Ends—

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.

Contact Details

DNAe

Dr Steve Allen, Chief Executive Officer, DNAe Group

Tel: +44 (0)20 7036 2100

Instinctif Partners (media relations)

Sue Charles / Alex Bannister / Deborah Bell

Tel: +44 (0)20 7457 2020

Email: DNAe@instinctif.com