



Reactive Oxygen highlighted in House of Lords as a new solution in fight against antibiotic resistance.

By Matoke Holdings Ltd, September 15, 2016



Lord Colwyn in the House of Lords calling for Reactive Oxygen to be at forefront of debate on AMR

A British biotech business pioneering a new approach in the fight against antimicrobial resistance won parliamentary attention today (September 15) in the House of Lords.

The high-profile support came in a key debate on tackling drug resistant infections globally and the Government-commissioned O'Neill report.

The technology – known as Reactive Oxygen – was championed by Lord Colwyn as “a new generation of antibiotics.” He said it was “one alternative that could play a vital role in tackling drug resistant infections.”

The peer called for Government support for the British innovation as part of action to tackle the crisis in the UK and abroad.

In response, Lord Prior, Parliamentary Under Secretary of State, Department of Health, said: “Certainly it is a technology that we should look at very closely in our fight against infection.”

According to the O'Neill Report, the global cost of failing to tackle the threat of bacteria becoming increasingly hard to treat with antibiotics could be the loss of 10 million lives per year by 2050.

A key focus of the report, published in May 2016, was how to incentivize the development of new drugs, vaccines and other alternatives.

British biotech business Matoke Holdings Ltd has developed a new technology employing reactive oxygen species (ROS), mainly hydrogen peroxide, that destroys a range of Gram-positive and Gram-negative bacteria, including several multi-drug resistant forms, such as MRSA, *E.Coli* and *Pseudomonas aeruginosa*.

The first product, Surgihoney RO, has already been brought to market as a treatment for infected wounds and burns, including diabetic ulcers. The gel is available on NHS prescription.

Early clinical research has included its use to prevent surgical wound infections after caesarean operations and as a novel antimicrobial coating for knee replacements.

During the debate, Lord Colwyn, who had a career as a dentist, said antimicrobial resistance is already thought to kill 700,000 people per year globally, including 3,000 in the UK and cost the NHS more than £180m a year. Numbers are forecast to spiral in future.

He congratulated government on the O'Neill report, adding: "The problem has been well documented and assessed. We now need to move on from discussing the problem to supporting the development and roll out of solutions.

"I would ask the Government to do all it can to put British enterprise and research and development at the forefront of its strategy to combat AMR and to ensure that it looks at innovative new solutions which are already out there."

He said Reactive Oxygen was one example. "It works by generating highly reactive, free-radical oxygen species, mainly hydrogen peroxide – one of nature's fundamental defences against infection."

The peer said the technology had been developed by a small British company, Matoke Holdings Ltd, and its chief executive Ian Staples working in collaboration with eminent clinicians and researchers at Southampton, Birmingham and Manchester universities, including Dr Matthew Dryden and Professor Jonathan Cooke.

"These British scientists have developed a unique technology to precisely control levels and the rate of release of Reactive Oxygen, harnessing its ability to fight infection.

“No Gram-negative, Gram-positive or multi-drug resistant bacteria tested to date has survived contact with Reactive Oxygen in either the laboratory or clinic, including MRSA and *Pseudomonas aeruginosa*.”

Lord Colwyn said early clinical use of Surgihoney RO had included Ethiopia and Uganda. He said the treatment was suitable for the developing world as it is effective, low-cost and doesn't require refrigeration.

“The technology is now being rapidly developed to tackle other complex clinical infections where conventional antibiotics are failing, including cystic fibrosis, chronic rhinosinusitis and recurrent urinary tract infections.

“Such technology has the potential to deliver significant savings to the NHS and international health economies by providing a new effective treatment for wounds, reducing amputations and days spent in hospital and nursing care.

“This innovative British technology, which represents a new generation of antibiotics, needs to be brought to the forefront of the policy discussion about how we tackle AMR, both within the UK and globally.

“Whilst Reactive Oxygen technology is being pioneered by one small British company, this needs to be supplemented by strong Government support for innovation to address this global challenge at a pace and a scale.

“Investing in British research and development and supporting British enterprise will support our economy and allow us to export solutions to the AMR threat across the globe.

“British innovation can still be a leader in the post-Brexit world.”

Reactive Oxygen technology was also mentioned by Baroness Walmsley, Lord Hunt and Lord Lansley.

The debate comes after a question was asked about Reactive Oxygen technology by Conservative MP Andrea Jenkyns in the House of Commons in July.

Commenting after the debate in the House of Lords, Ian Staples, founder and chief executive of Matoke Holdings Ltd, said: “I'm delighted Reactive Oxygen is getting recognition from parliamentarians, particularly as it is a British-led innovation. We would welcome government support to drive this innovation forward as an exciting new solution to this global crisis.”

ENDS

Notes to editors

To read Hansard transcript of the debate see <https://hansard.parliament.uk/Lords/2016-09-15/debates/16091542000350/Drug-ResistantInfections>

To watch the debate on Parliament TV from 12.31 onwards see <http://www.parliamentlive.tv/Event/Index/5136708e-0fb8-4921-879d-2c42919fe809?agenda=True>.

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