Medical Xpress

Scientists create world-first antimicrobial medical gloves

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Credit: University of Nottingham

A new type of medical examination glove that has built in antimicrobial technology proven to prevent the spread of infection has been developed with help from a renowned University of Nottingham microbiologist.

Professor Emeritus Richard James has been working for several years on the project with medical glove makers Hartalega Malaysia and antimicrobial research and development company Chemical Intelligence UK. The European launch of this unique medical product took place in London today.

The new gloves are the first non-leaching antimicrobial medical gloves in the world. They are eventually expected to sell in their billions as healthcare organisations strive to fight infection and combat antimicrobial resistance.

The gloves are the first to contain a new active microorganism-killing molecule designed to prevent the spread of bacteria to and from surfaces and people. As the technology is built into the material, the gloves don't need surface applications of further solutions or chemicals.

In independent testing, the gloves achieved up to a 99.9% kill within just five minutes of contact. Part of the testing was carried out in the Advanced Microscopy Unit at the University of Nottingham's Centre for Biomolecular Science.

Professor James said: "These gloves will be a game-changer for the healthcare industry, both public and private. I am delighted that my lifetime's research into bacteria and antibiotic resistance has directly informed the science behind a practical tool that will have a major impact on medical care in the future."

Mr Kuan Mun Leong, Managing Director of Hartalega Holdings Berhad, said: "In the European Union alone, cross-contamination in hospitals results in 37,000 deaths a year at an additional cost of 7 billion euros. By renovating a medical device that has not been remodelled in over 30 years, our innovation is set to make waves in the healthcare industry and save lives across the globe."

The product has been in the research and development phase for over six years with millions of dollars of funding already being channelled into it and various stages of testing completed.

The gloves will be available in hospitals around the world because the manufacturing partnership will make sure the product is being produced at a low cost in order to prevent barriers to access.

Founder of Chemical Intelligence UK, Rob Gros said of the partnership: "After years of development, we are delighted to finally release this

product to market and truly believe it will make a significant difference in the fight against healthcare associated infections (HAIs). Like Hartalega, we have a passion for innovation and together we are the perfect partners to release this technology."

Provided by University of Nottingham