

NOVEL DECONTAMINATION WIPE TO PREVENT SPREAD OF COVID-19

The Defence Forces has collaborated with a pioneering Irish company, based at NUI Galway, to provide Irish soldiers with chemical-free decontamination wipes to help prevent the spread of the Coronavirus, and the Ordnance Corps is now actively engaged in the concept and product trials.

Aquila Bioscience and Ireland's Defence Forces have been collaborating on this technology for over four years. Working with the Defence Forces, the Department of Defence and the European Defence Agency, the Galway company has developed this novel, safe, effective and environmentally-friendly technology to decontaminate surfaces from bacterial, viral and bio-toxin threats. ABwipe™ technology serves as a decontamination wipe for first responders, healthcare workers and for civilians to significantly reduce and prevent pathogen transmission from person-to-person, therefore reducing the spread, panic and impact of the pathogen, as is the case with coronavirus COVID-19. Prof Lokesh Joshi, co-founder and director of Aquila Bioscience, and Vice-President for Research and Innovation at NUI Galway said: "The concept for this technology was driven by the Irish Defence Forces and an identified capability need in the Chemical, Biological, Radiological & Nuclear (CBRN) protection measures.

"The innovative concept resulted in European Defence Agency supported research and development by Aquila Bioscience at NUI Galway and is just now ready for mass manufacture."

UNPRECEDENTED MEASURES

"It could be a valuable technology in the fight against the Coronavirus. This unprecedented situation requires unprecedented measures and the Defence Forces have committed to the purchase of a consignment of the AB wipes for troop force protection measures."

Aquila Bioscience's Anti-Bioagent Wipe contains components that bind to and decontaminate the surface including skin, taking advantage of the virus's own attack mechanism (in this case, carbohydrates and proteins).

Since ABwipe™ contains no harmful ingredients, it can also be used on skin and sensitive areas such as eyes, nose and mouth (the main routes for virus infection). Most current decontamination measures contain chemicals that are harmful to the skin, health of the user and to the environment. The ABwipe™ technology was developed to safely and



effectively decontaminate multiple bio-threat agents (including viruses), and its use will significantly reduce the spread of COVID19 and will help ensure that soldiers and resources are kept safe to allow them to react when called upon. Prof Joshi noted that at this time of global urgency and unknown impact on human lives and economy due to the COVID-19 pandemic, "ABwipe™ will serve as an essential tool in the arsenal against coronavirus to stem its spread and to save lives".

REDUCING SPREAD OF INFECTION

And in an interview with the 'Sunday Business Post' in February, he said that he could see a growing market among international aid agencies and medical organisations tasked with protecting civilians and first responders in the event of a viral outbreak.

"What we're seeing right now with the Coronavirus outbreak is frightening. Innovations that can help to reduce the spread of infection are especially important, because we are entering an era where we will be more vulnerable to disease," he noted. According to Prof Joshi, the factors contributing to this include the rising resistance to antibiotics caused by their widespread overuse. "On the viral side, the new Coronavirus, the Sars virus that emerged in 2003 and Ebola, all came from animals." His company has secured funding of about €300,000 from the European Defence Agency and Horizon 2020, the EU's SME funding instrument. It's developing its technology in conjunction with the Irish Defence Forces and the University of Defence in The Czech Republic. Prof Joshi now plans to apply for further EU funding of about €2 million to kick-start the process of commercialising this research.

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