

Lab test for allergy scoops national award

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Scientists who have developed a new technique that can test for up to 5,000 different allergens from just one drop of blood have scooped a prestigious national award which encourages innovation in healthcare technologies.

The new basophil-microarray based allergy assay is the brainchild of researchers in The University of Nottingham's Schools of Pharmacy and Biosciences, in collaboration with colleagues in the Centre for Respiratory Research at Nottingham City Hospital.

Their innovation has won them a Da Vinci award in the Breakthrough Technology category, which comes with a £15,000 prize to use towards furthering their research.

Now in their second year, the Da Vinci Awards, which are run through Loughborough University, recognise collaborative projects that lead to the potential commercialisation of healthcare innovations to save lives and improve services to patients.

Dr Franco Falcone, Associate Professor in The University of Nottingham's School of Pharmacy, said that he and his colleagues were thrilled to have won a Da Vinci award as it would be crucial in acting as a springboard to the further progression of their research.

He added: "Getting funding from research councils for such a project is not always easy, so this is why Da Vinci award funding is ideal because it's seed funding that we can then use to underpin a major grant

application."

The new technology developed at Nottingham is a lab-based, in-vitro test to mimic human allergic reaction that could be used as an alternative to the traditional skin-prick test. It can test up to 5,000 different food or inhalant allergens that could cause an allergic reaction in a patient and the researchers are hoping it could also be developed as a diagnostic tool for parasitic infections.

It works by adding tiny dots of allergen molecules to paper on a glass slide. A drop of the patient's blood is added before the slide is incubated with the cells causing the symptoms of allergy. Cellular activation can then be analysed to discover which of the allergens are prompting the release of histamine and other chemicals indicative of allergic reaction in the patient's blood.

Dr Marcos Alcocer, a lecturer in the School of Biosciences, said: "The whole idea is to trace what we call our immunological profile, the finger print of our immune system which tells us how we react to the things which we are surrounded by.

"Our technology is one step towards the ultimate goal of being able to have a full in-vitro diagnostic test for allergy. What we have to do now is examine the results of our test further and then assess how well it works compared to the gold standard techniques currently used for diagnosis. We will then be in a very good position for commercialisation."

Researchers from The University of Nottingham were also highly commended in the Clinical Impact category of the Da Vinci Awards. A collaboration between Professor Ian Ellis in the University's School of Molecular Medical Sciences and colleagues at Nottingham Trent University and University Hospital Nottingham has led to the development of a breast cancer prognostic tool.

Nottingham Prognostic Index offers a personalised approach to medicine by classifying patients into groups according to their tumour biology, provides information about the patients' most probable survival outcome and guides clinicians in the most appropriate form of treatment.

The tool should reduce the incidence of over-treatment and minimise the harmful side-effects for patients and is due to be commercialised by a spin-out company Nottingham Prognostics.

Anna Seddon, Manager of the Da Vinci Network, said: "The excellent response to the Da Vinci Awards reinforces the importance of building interdisciplinary and inter-institutional collaboration to address critical issues in healthcare. The quality of applicants reflects the wealth of activity in healthcare innovation developed here in the East Midlands."

An awards ceremony for the Da Vinci Awards was held last night (November 25) at Loughborough University, compered by BBC newsreader Kay Alexander. The after dinner speaker for the event was Professor W Angus Wallace, Professor of Orthopaedic and Accident Surgery at The University of Nottingham, whose special interests lie in the fields of shoulder surgery, sports injuries, osteoporosis, biomechanics and research into passenger safety in aircraft and cars. Guests included senior figures from the East Midlands' clinical, research and health care industry communities.

Source: University of Nottingham

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