



INDia-Scotland Partnership for pRecision mEdicine in Diabetes

The INSPIRED Project is funded by the NIHR Global Health Research Programme

The University of Dundee has been awarded a £7million grant from the National Institute of Health Research Global Health programme to establish a major new Scotland-India clinical partnership to combat diabetes.

The Aim of the Project

The NIHR Global Health Research Unit on Diabetes Outcomes Research project will see Dundee’s world leading expertise in the use of medical records to deliver improved care in diabetes ‘twinned’ with the large patient data set (covering over 400,000 Indian diabetic patients) collected by Dr Mohan’s Diabetes Specialities Centres, the largest clinical network of diabetes care in India.

Diabetes in India and Scotland will be compared and contrasted to determine the common and specific problems in both countries, with the aim of providing an improvement in health and reduction in health inequalities in India and Scotland.

Summary of Work

Diabetes results in a wide range of serious medical complications with significant implications both for the affected individual and their society. Globally three quarters of diabetes is now in low and middle income countries who lack the infrastructure to manage the scale of the emerging problem. Diabetes is a major problem in India with 1 in 12 people affected amounting to 69 million individuals currently (more than the entire UK population).

With increasing economic development the numbers are rapidly increasing. The majority of studies on how diabetes develops, how patients respond to medications and the causes of medical complications that arise are from white European ancestry populations despite the fact that diabetes in Europeans is very different to diabetes in South Asians. There is an urgent need for a large in-depth study of the specific causes and consequences of diabetes in India in order to identify different subtypes of diabetes that exist in India and understand how best to manage each subtype.

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Prof. Colin Palmer

Colin Palmer is NIHR GRU Director/Chief Investigator, based at the University of Dundee.



Professor Palmer specializes in studying the genetic basis for susceptibility to common diseases such as type 2 diabetes, heart disease, asthma and cancer. He has published over 300 papers in top journals including papers in Science, Nature, Nature Genetics and the New England Medical Journal. These papers have been cited by over 30,000 other studies worldwide and Professor Palmer has been listed as one of the most highly influential scientists of the 21st Century by Thomson Reuters.

“ We need to understand more about diabetes in different populations. There is an urgent need for a large in-depth study of the specific causes and consequences of diabetes in India in order to identify different subtypes of diabetes that exist in India and understand how best to manage each subtype. ”

Colin Palmer

The proposed Unit commands access to two of the most advanced diabetes management systems in the world: the Scottish Clinical Care Information-Diabetes Care (SCI-DC), which provides a sophisticated shared electronic patient record for every individual with type 2 diabetes in Scotland (n=250,000) and the Dr Mohan's Specialty Diabetes Centres (DMDSC)(n=400,000).

Both clinical systems are partnered with internationally renowned research groups (GoDARTS, UK and Madras Diabetes Research Foundation), who have previously worked together in international studies of how genes influence susceptibility to type 2 diabetes.

Now we wish to use this extensive infrastructure to deliver precision medicine to improve outcomes in patients with diabetes in India.

“ People in Scotland can contribute directly to this research by signing up to SHARE at www.registerforshare.org. Nearly 200,000 people have already signed up to SHARE to date and are helping diabetes research in Scotland. ”



Project Launch

On the 10th of October 2017 the inaugural meeting took place in the Madras Diabetes Research Foundation (MDRF) in Chennai, India. It was a 4 day programme of presentations and workshops covering current research activities, aims of the project and how we will work together to achieve them.

The 5 core work streams/packages were discussed and action plans devised and put in place to take the project forward. The 5 Work Packages are:

- **Disease Stratification**
- **Genetics**
- **Retinal Image Analysis**
- **Artificial Intelligence in Diagnostics**
- **Telemedicine in Rural India**



From the left: Bharat Joshi, British Deputy High Commissioner Chennai; Dr V. Mohan, Chairman & Chief Diabetologist MDRF; Prof. Colin Palmer, NIHR GRU Director/Chief Investigator UoD & Dr Anjana, Director and Diabetologist, MDRF at the inaugural launch meeting held in October 2017, Chennai, India.

If you'd like to help with research in your area then please sign up to the Scottish Health Research Register (SHARE). The SHARE register is a unique initiative, created to establish a database of people interested in participating in health research, making it easier for doctors and scientist to carry out ground breaking research.

SHARE uses blood left over from routine testing for anonymized genetic research to help improve treatments for diseases such as Cancer, Diabetes, Alzheimer's and Asthma. To sign up and see what studies we are recruiting for visit our website at www.registerforshare.org today.



“Please help medical research today”



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