Editorial

**A crisis in diabetes research funding**

As the prevalence of diabetes continues to grow worldwide, so the burden, through microvascular and macrovascular complications, increases for people with diabetes. One in 16 people in the UK, and one in seven of those in hospital, now have diabetes. With this personal cost of diabetes comes substantial spending by the NHS, currently around £10 billion per annum. There can be little doubt that the demand for high quality diabetes research has never been higher.

Despite the enormity of the challenge, research spending regrettably lags farther and farther behind. The latest UK figures from 2014 indicated that £60 million was spent on metabolic research, with around £50 million on diabetes. This equates to only half a penny for every pound spent on care. While the NHS budget is spends 5% of its budget on diabetes care, only 3% of medical research funding is spent on diabetes. By contrast, £500 million is spent on cancer research equivalent to approximately 50 pence for every pound spent on care and £165 million on cardiovascular disease.

In this issue, we publish a paper that indicates that the crisis in diabetes research extends across much of Europe (1). Indeed the situation may be even worse than in the UK, which is currently the biggest contributor to European diabetes research, publishing 30% more papers than Germany, the second ranked country. Between 2002 and 2015, European diabetes research declined from 45% of the world output to 33% while at the same time the burden of diabetes increased from 2% to 2.6% of disability-adjusted life years. In general, spending follows gross domestic product with Denmark and Sweden investing more but France, Lithuania and Romania performing less well. The major sources of funding are government (30%), non-government or charitable organisations (18%) and industry (13%, notably from Novo Nordisk). The European Commission contributed to 2.7% of total support for diabetes research although its contribution to some of the new EU member countries was substantially higher. The leading charitable organisation funding diabetes across Europe was Diabetes UK. In the UK, it is notable that three biggest private–non-profit funders made a bigger contribution than the UK Department of Health.

A diverse range of research topics are being addressed with regional differences but perhaps unsurprisingly studies of type 2 diabetes and cardiovascular disease predominate. Given the disability relating to feet ulceration, research on the diabetic foot appears under-represented with less than 2% of research output. That research contributions from Eastern European countries grew rapidly in the last decade only serve to highlight the decline in Western European countries.

These findings have important implications. First and foremost, more research funding is needed to match the ever-growing burden of diabetes and it is incumbent on all of us to lobby for the necessary resources. This is particularly the case in Cinderella areas such as diabetic foot disease. Nevertheless, the breadth of research across Europe provides clear opportunities, not least through greater collaboration between academic institutions and industry. Finally, it is clear that diabetes research is increasingly an international endeavour and governments and institutions need to facilitate mobility of researchers and cross-country funding streams, which is particularly pertinent in the light of Brexit.

1. Begum et al. European diabetes research and its funding, 2002–2013. DME13411