

STRENGTHENING THE TECHNICIAN WORKFORCE

A personal perspective on a one-day programme organised by the Gatsby Foundation

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In the Whitsun 2012 issue of Science in Parliament, Jon Poole wrote about “Recognising the role of Technicians” and the Technician Council, which was formed with support from Lord Sainsbury and his family’s Gatsby Foundation, to address the underlying issues behind the skills shortage in the UK to fill technician roles, and to look into how a common framework for professional recognition could be provided across science, engineering, IT and health.

Shortly after publication of Jon’s article, a further milestone was reached in recognising the role of technicians at an event organised by the Gatsby Charitable Foundation, held on 29th May, when Lord Sainsbury was the Introductory Speaker and the Rt Hon Vince Cable MP was the Keynote Speaker. As usual the subject of improving the UK’s scientific, engineering and technical workforce was one to which both speakers enthused, as did later Lord Adonis when he spoke of the progress that was being made with the University Technical Colleges initiative, born out of the vision of Lords Baker and Dearing and the eponymous Baker Dearing Educational Trust.

However, the real milestone of the day was the presentation

event that took place between the speeches from Lord Sainsbury and the Secretary of State for Business, Innovation and Skills. It marked the first awards of RSciTech (Registered Science Technician) to members of three of the seven organisations given pilot licences by the Science Council to make these new awards, which are the equivalent in science to the well-established EngTech awards in engineering. Representative awards of certificates were made to seven science technicians by Vince Cable, two to members of the Royal Society of Chemistry (RSC), two to members of the Association for Science Education (ASE), and three to members of the Institute of Physics and Engineering in Medicine (IPEM), my own organisation.

I was pleased to see the achievements of three IPEM members, Elizabeth St Clair, Francis Pillai, and Hemaltha Ganeshamurthy recognised by the award of RSciTech certificates on this public occasion, but I was also conscious that they were only three of 32 IPEM members whose applications for RSciTech have been accepted, so far, since applications were first invited in March 2012. We estimate that these 32 are less than 20% of existing IPEM

members who should already be eligible to be awarded RSciTech.

However, apart from existing IPEM members eligible for RSciTech, we know that there are many more science technicians (and also engineering technicians) working in physical sciences applied to medicine or biology, in healthcare, or academe, or healthcare industries who have never joined a professional body. We see RSciTech for science technicians (and EngTech for engineering technicians), under the umbrella of the Technician Council’s “Professional Technician” branding, as important awards to attract a group of staff who have traditionally eschewed professional membership. They will benefit from professional recognition that registration brings, especially having an award that recognises the generic standards of competence they have achieved. It also gives an assurance to their employers that they are keeping their competences up to date through continuing professional development, and are working within the framework of a professional body’s code of professional and ethical conduct.

It has been argued that technician roles are essentially

engineering roles and EngTech and Professional Technician are synonymous. This is manifestly not the case, as the Technician Council itself recognises. Colleagues such as Jon Poole (see Whitsun issue of Science in Parliament), working in organisations in the biosciences, eloquently put the case for the recognition of professional science technicians, to which the Science Council has responded with RSciTech.

My own organisation, IPEM, is one of a number amongst STEM professional bodies that hold licences from the Engineering Council as well as the Science Council. We are already seeing an upsurge of interest in RSciTech from technicians whose roles are not synonymous with engineering, giving technical support in areas such as brachytherapy dosimetry, radiation protection and physiological measurement. They would never have been candidates for EngTech, but they are Professional Technicians, and they can now have their professionalism recognised as Registered Science Technicians.

The afternoon was devoted to parallel sessions for Registered Engineering Technicians and Registered Science Technicians. With divided loyalties, I opted for the session aimed at strengthening

vocational pathways in science. Engineering apprenticeships are well established and well recognised, but science apprenticeships less so. The afternoon provided a useful interchange of ideas that reinforced my belief that, in addition to focusing its support for professional development on graduate-level outcomes (leading to RSci and IEng) or postgraduate-level outcomes (leading to CSci or CEng), IPEM should do more to set standards in its own subject areas for science and engineering technicians working in healthcare, in universities and in healthcare industries. I hope that we can work with the Gatsby Foundation and others to mill one small cog in the wider Professional Technician project.

IPEM's first three RSciTech registrants receive their certificates from the Rt Hon Vince Cable and Lord Sainsbury of Turville



Elizabeth Anne St Clair, St James' University Hospital, Leeds



Francis Pillai, Addenbrookes Hospital, Cambridge



Hemalatha Ganeshamurthy, East & North Hertfordshire NHS Trust



All seven RSciTech registrants with Krishnan Guru-Murthy (chair for the event), Lord Sainsbury and the Rt Hon Vince Cable

FOOD AND GUT HEALTH

Meeting of the Parliamentary and Scientific Committee on Tuesday 15th May

**FRIENDS IN LOW PLACES AND HOW TO HELP THEM:
Gut microbiology and health**



Professor Glenn Gibson
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Chronic diseases, including cardiovascular complaints, Type II diabetes, many cancers, some dementias, acute and chronic gut disorders are a major and growing societal and financial concern for humankind (Gibson and Williams, 2000). Moreover, an increasingly obese and ageing population means there is greater prevalence of chronic disease. Increasingly there is a recognition that the 21st century health model will comprise both preventative life style and therapeutic entities, including dietary intervention. For example

the "functional foods" concept suggests that dietary ingredients can be used for purposes over and above their normal nutritional value. The Global Market Review of Functional Foods estimates that by 2013 the worldwide functional food market will reach a value of at least US\$90.5bn. Currently around 60% of functional foods in use in Europe are targeted at gastrointestinal health.

The biological and clinical importance of resident gastrointestinal microflora in

humans is becoming increasingly recognised by consumers and healthcare workers. Although it is known that many disease states involve bacterial metabolism, the human gut microflora may also be considered as extremely relevant for improvements in host health (Gibson and Roberfroid, 2008). For instance, bifidobacteria and lactobacilli are seen as positive components of the human gut microflora that can improve host health. They are thought to help resistance to gut infections by directly

