The University of Strathclyde has developed an innovative framework that enables GlaxoSmithKline (GSK) employees to work towards a higher research degree through their work-based research projects.

**The company’s objective**
During the University’s ongoing knowledge exchange partnership with GSK, we were presented with the challenge of formulating a platform to provide their chemists with an environment of continuous professional development to better equip them with the skills to develop even greater scientific excellence.

The success of GSK is dependent on having the highest quality chemists to design, develop and deliver novel transformational medicines that meet the needs of patients and the expectations of stakeholders. The intention is for this programme, together with other initiatives within GSK, to contribute to that success.

**The University’s response**
GSK and the Department of Pure and Applied Chemistry at Strathclyde worked closely together, with open communication of each partner’s requirements and expectations, to build a framework for collaborative MPhil and PhD programmes. Having maintained an effective and sustainable partnership at undergraduate and postgraduate level, this initiative builds on our previously established collective collaborations.

Through rigorous reporting and academic assessment schedules, we put in place a mechanism that allows us to review sensitive research data relevant to the degree, whilst maintaining intellectual property requirements. We developed a robust framework that is sufficiently flexible to be able to accommodate the stringent demands of the workplace, including accommodation of the student’s full-time jobs, sensitivity of the research, and provision for career breaks.

The team also incorporated the existing work-based learning programmes within GSK to provide the taught element for the MPhil or PhD qualification.

**The learning experience**
Research projects are conducted within GSK laboratories with an Industrial (GSK) Supervisor and Academic Supervisors from Strathclyde. The knowledge and experience of the Academic Supervisors is instrumental in enhancing absorptive capacity at GSK, since both student and Industrial Supervisor are exposed to alternative Synthetic Chemistry strategies to increase scientific rigour within the Medicinal Chemistry research project.

GSK employees are integrated within Strathclyde’s initiatives and participate in problem solving sessions, research meetings, and symposia associated with the University. In addition, the students have replicated key academia-inspired support endeavours within GSK, including problem solving sessions and a bespoke symposium relating to their research.

GSK chemists will be exposed to alternative research strategies ... and we will have motivated chemists striving for greater scientific excellence in their research.”

Dave Allen, Senior Vice-President of Respiratory Drug Discovery at GSK
The quality of reporting and depth of literature coverage by the students has advanced through the programme and the standards achieved are of the highest level, and at least equivalent to those achieved by postgraduate students in full-time studies. In this way, the programme is now contributing to the overall organisational learning within GSK.

Successful outcomes
As a result of the experiences of the students and the success of the programme to date, the framework has now been extended for GSK scientists in the scientific discipline of Drug Metabolism and Pharmacokinetics (DMPK), and is currently being evaluated for other areas, such as Analytical Chemistry. The collaborative MPhil programme in Synthetic and Medicinal Chemistry started in December 2009, with the PhD programme commencing in May 2010. In April 2011, the opportunity was extended to scientists involved in DMPK.

At the initiation of the Chemistry MPhil programme, there were five GSK Chemistry employees enrolled, with the objective of having 20 students on the programme within two years. However, due to the popularity of the programme within GSK, this objective was achieved within 14 months. Twenty students were registered by February 2011. As research projects are progressing, students are now transferring onto the PhD programme.

Whilst the programme is demanding, for the students the intellectual challenge, peer review, and recognition of their research is highly rewarding. The number of candidates receiving the GSK Exceptional Science Awards, which is given for outstanding contributions to research projects, has now doubled. One of the GSK chemists, was designated as most meritorious runner-up of the 2011 EFMC Prize for a Young Medicinal Chemist in Industry. This prestigious prize acknowledges and recognizes an outstanding young medicinal chemist working in industry within Europe.

Since joining the programme, the participants are eager to share their science at a mixture of internal and external symposia and conferences; and six participants have presented at eight external conferences whilst a further six participants have presented at 10 internal symposia.

The success of this partnership was recently recognised by the Life Sciences Cross Party Group of the Scottish Parliament and has been endorsed by a Scottish Parliamentary motion.

Professor Kerr continues to work with GSK to progress this ongoing collaboration.

How we can help your organisation
If you are interested in developing a continuous professional development programme for your employees, please contact:

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We have strong, mutually beneficial links with industry and the GSK programme is an ideal example of this. It’s an effective model for investing in personnel and is already generating positive returns for GSK and their people.”

Professor William Kerr, University of Strathclyde