

# GSK advances research excellence

The University of Strathclyde has developed an innovative industry-based doctoral training programme with GlaxoSmithKline (GSK). The original programme enabled GSK employees to work towards a higher research degree through their work-based research projects; success in this venture has led to creation of an expanded programme including GSK-sponsored research students.

## 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.



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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 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 initial 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. This initiative builds on our previously established collective collaborations, specifically an effective and sustainable partnership at undergraduate and postgraduate level.

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 strategies to increase scientific rigour within the 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.

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. In this way, the programme is now contributing to overall organisational learning within GSK.

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## the place of useful learning

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## 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 disciplines of Drug Metabolism and Pharmacokinetics (DMPK), Biological Sciences and Analytical Chemistry. The collaborative MPhil programme started in December 2009, with the PhD programme commencing in May 2010.

At the initiation of the 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. At present a total of 29 GSK employees are registered as postgraduate research students at Strathclyde.

Whilst the programme is demanding, for the students the intellectual challenge, peer review, and recognition of their



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“The involvement and dedication of my Strathclyde academic supervisor to this programme are amazing. From the regular meetings and discussions we have had, I believe that he has enhanced my GSK scientific research as well as my personal knowledge. My supervisor and his group really make me feel part of their team. The interaction with academia is extremely valuable for our GSK projects, bringing additional perspectives and peer review from highly regarded academics.”

Sebastien Campos, MPhil student, December 2009  
PhD student, April 2011-

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.

In January 2010, the Scottish Parliament congratulated GSK and the University on the success of this innovative collaboration, which has been endorsed by a Scottish Parliamentary motion.

More recently, the Wilson Report highlighted the novel approach to postgraduate chemistry training delivered through the GSK-Strathclyde partnership as an example of business-industry collaboration on research which enhanced the careers of research graduates.

## Further developments

Following the success of the original collaborative programme, this overall endeavour has now been extended with the establishment of a GSK-Strathclyde Collaborative Doctoral Training Centre. The Centre has established additional PhD positions, where newly recruited students are registered at Strathclyde and co-supervised by researchers from GSK and Strathclyde. Some are based within the GSK laboratories, working on GSK-based programmes; other are based on the Strathclyde campus, undertaking Strathclyde-led research programmes. This allows the expansion of personnel numbers, who become engaged on work-based academic-supported programmes. In order to take full advantage of the opportunities offered by the Centre, secondments of PhD students take place in both directions.

The programme is now being extended beyond the UK. One GSK employee in the US has just been admitted and recruitment of a cohort of Brazilian students is planned.

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

## How we can help your organisation

If you are interested in a continuous professional development programme for your employees, please contact:

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