



Profiles	Pharmaceutical research
Name	Jamie Scott
Age	30
Job	Medicinal chemist

A medicinal chemist interacts with a wide range of specialists including biologists, molecular modellers, chemical engineers, safety consultants and patent attorneys.

Career path and qualifications so far

In my final year at school, I focused on Chemistry, Maths and Physics and was accepted to do a BSc course in Chemistry at the University of Strathclyde, Glasgow. During the four year course, I had the opportunity to do an industrial placement on materials with memory properties. I enjoyed my time at Strathclyde so much that I stayed to complete my PhD (three years) and then moved to University of Cambridge for two years' postdoctoral work on the synthesis of molecules that occur in nature. I then went to work as a science teacher with VSO (Voluntary Service Overseas) in Kenya for two years, teaching chemistry and physics in a rural secondary school. On returning to the UK, I joined a leading pharmaceutical company and now work towards the development of new medicines for the treatment of cancer.

Has anything you've done been especially useful in your career?

During my degree I had the opportunity to do research projects on *The Purification of Cobra Venom* and *The Synthesis of Drugs using Metal Controlled Reactions*. The experience of being in a research group working to discover new science gave me a real buzz and convinced me to continue with my studies. Having the opportunity to present our group's research results at international conferences allowed me to travel in Europe and Japan and gave me confidence and a taste for travel.

What is a medicinal chemist?

Medicinal chemistry involves developing new medicines for treating disease. This involves designing and constructing new molecules, which affect human biology. To do this successfully involves interacting with a wide range of specialists including biologists, molecular modellers, chemical engineers, safety consultants and patent attorneys.

Day to day activities

The most important part of my job is synthesising molecules, which could potentially become medicines for cancer therapy. To achieve this in our team, we need to use our knowledge of chemistry to make these compounds, purify them and submit them for biological testing. Depending on the results of the tests, we then design and make the next set of compounds until we feel we have a drug candidate. Then it gets really exciting!

Further qualifications

Although I have not obtained any formal qualifications following my PhD, the knowledge that I gained during my PhD and postdoctoral studies and my experience of teaching science in a developing country have proved invaluable in my development as a medicinal chemist. The fact that, more than 10 years after leaving school, I still feel that I am on a steep learning curve makes me feel very privileged.

Why medicinal chemistry?

The idea that I can use the knowledge that I have gained in chemistry and apply it to develop new medicines continues to inspire me.

What do you most enjoy about your job?

The fact that the job involves a lot of variety makes it interesting and the belief that I am working towards a worthwhile goal keeps me motivated. The job is challenging, involves interacting with a diverse range of people and I feel that I am continually learning. The fact that I get up in the morning and want to go to work (rather than feel I have to) says a lot!

What other skills do you need?

Information sharing with members of the research team is essential to success. Organising and planning skills as well as the ability to effectively communicate with other people (including those without a chemistry background) are crucial. Manipulation, analysis and presentation of data are also fundamental to the job and involve skills in computing.

Why is it useful to study a science subject at university?

The core aspect of my job is scientific research and this involves a knowledge, understanding and appreciation of chemistry and other sciences. Studying chemistry at university gave me some of the knowledge required but more importantly, the desire and skills required to be able to find out more.

Further information/contacts

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