

## Women in Pharmacology: Role models

*Barbara McQuade (VP Medicines Development Leader, GlaxoSmithKline) was interviewed by Chloe Rose, currently an undergraduate Pharmacology student doing an industrial placement as a clinical research scientist with GSK.*

### **1. Why did you decide to study science at University?**

I liked science at school and whilst there I studied Physics and Chemistry but not Biology because it wasn't taught at my school at the time. I just enjoyed science, but I could have easily gone on to study languages because I really enjoyed those too. I did my Highers in Scotland where you can usually study more subjects than for A levels. I chose French and English as well as Physics, Chemistry and Geography. I then went off to university and decided to include biology in the mix of subjects I studied in the first year as it was new to me. I really enjoyed biology and so then chose to specialize in biological applications of chemistry and ended up with a first degree in biochemistry from the University of Glasgow.

### **2. What did you do your PhD project on? Which aspects did you most enjoy?**

I joined Glaxo based in Greenford in the outskirts of London when I finished university and whilst there I studied for a masters degree in Pharmacological Biochemistry which was a part time course. At this point I was fortunate enough to be sponsored by Glaxo to work on a PhD project looking at aspects of the enzymes in the biological production of penicillin. One of the many opportunities I had during my PhD studies was to work with colleagues in the manufacturing pilot plant for antibiotic improvement programmes in Ulveston.

During this time, I also enjoyed external collaborations with academics; it was a really nice balance of working in the industry and also working with people outside of my day to day environment. I really enjoyed writing up my thesis and I think that goes back to my love of languages.

### **3. What have been your previous Job Roles at GSK?**

So I've done a lot of different things. I always had an interest in clinical research and that's the real reason I joined the pharmaceutical industry. After my PhD which was very biochemical in its basis, I had an opportunity to move to clinical research to work on a newly discovered medicine which later became marketed as Zofran, the anti-emetic for patients with chemotherapy and radiotherapy induced emesis and for patients with post operative nausea and vomiting. This was a really exciting and satisfying experience and I felt that the work I did was worthwhile and of true benefit to patients. Then I did something that felt quite radical at the time and moved to a strategy role which was in early discovery science in the respiratory area. It was very different but had a lot of links with what I'd done before e.g. with my masters degree thesis on allergy. After a short while in this role I was able to bring together the threads from my early discovery science experience and my clinical research experience in a role leading the development of medicines from discovery through development and to first launches. I've been working in

the respiratory area now for 12 years and can honestly say that I love my role.

#### **4. Why did you join the pharmaceutical industry?**

I joined because I wanted to do something useful for mankind, to link my biology and biochemistry with something that would make a difference. Glaxo was a relatively small company at the time and published lots around basic research in medicine development that interested me. Also they were based in London and I wanted to come to London.

#### **5. Would you recommend a PhD for someone wishing to enter the industry?**

I think that's an interesting question. It depends on what people's aspirations are and what they want to do. I think for any career in basic research I would recommend it. For people more interested in other aspects of medicine development or commercial areas then I'd suggest doing something else. Particularly for careers in commercial areas then I would consider an MBA. It depends on what people want to do, I don't think it's necessary for everyone but for people who are academically interested it's a good thing to do

#### **6. What does your role as medicine development leader involve?**

I've held this role on a number of projects and it varies depending on the challenges and opportunities that any particular project brings. I'm currently working on Relvar/Breo which we've submitted to regulators for license approval so my job currently involves making sure we work with the regulators with the aim of gaining approval for the medicine. I also work closely with my commercial colleagues to help make this medicine available to the appropriate group of patients by providing the supportive evidence that is needed. I work with a relatively small group of people who are specialists in their areas and they all have teams themselves. As examples, I have a project physician leader who runs a large clinical team and a global regulatory leader who runs the global regulatory network. I love projects that have passed their proof of concept stage and are in Phase IIb or Phase III when we are still designing clinical studies. Having said that many interesting studies are conducted in Phase IIIb and even when we have a license to market. These phases of studying medicines can be really exciting too. I am fortunate to have a very varied and interesting job and get to work with lots of talented people in lots of different areas.

#### **7. What has been your favourite project?**

My favourite project was our Zofran project which I worked on when I was in clinical research. It was so obvious it was making a difference to patients and, I really loved it. One of the opportunities I had then was to run the pediatric programme and working with the pediatricians was fantastic.

#### **8. How do you maintain your work/life balance?**

I think I've been good at that; I have two children and a husband. We had a nanny when the children were young; but I always made sure I was home certainly at weekends and most evenings and that's something I've

always maintained to be important. I've got lots of interests outside of work and lots of friends. I make sure that we have that kind of balance and I've always been interested in interior design, decorating and garden design. I do that as well as lots of sports: cycling, swimming, skiing and doing things with the family. I've been lucky; I have a very supportive husband, he also has a good job and is a scientist too so we've always had that in common. We met at University and came to London together.

**9. Who has been an inspiration person during your career?**

The person who made the biggest impression on me by setting an example of what a good balanced all round project leader was the head of toxicology at GlaxoWellcome. He was a great mentor to me.

**10. If you could have invented any drug what would it be and why?**

If I had been of a different generation, I think penicillin it was a real turning point. Just making that connection between what was seen in a Petri dish and what made a huge difference to mankind. I'd love to make that kind of a leap in science that ends up in medicine or a series of medicines that change the way we treat diseases. A great aspiration; but unlikely to be realised at a personal level. However I hope we will see that kind of revolution again at some point