

# Women in science

## Tracey Duncombe

### The Athena Project

How does gender affect progress in science education and research? Here we examine some of the issues and look at one woman microbiologist's career path.

#### Further reading

*Report on the 1999 Development Programme.* Athena Report No. 7. Available from Athena (email [athena@ic.ac.uk](mailto:athena@ic.ac.uk)).

*Beating Barriers and Constraints in HE Careers.* The Open University, Athena Project No 5.

*ResNet 2000.* UEA Norwich, Athena Project No 2.

*Who applies for research funding? Key factors shaping funding application behaviour among women and men in British higher education institutions* (2000). The full report can be obtained (price £15) from the National Centre for Social Research (email [info@natcen.ac.uk](mailto:info@natcen.ac.uk)).

A 'landmark' year for the Athena Project was completed in February when top academics met with Professor David King, Chief Scientific Advisor, at a reception in London to discuss the realization of the past year's projects and the way forward for Athena.

The Athena Project was established in 1998 with the aim of advancing women in science, engineering and technology (SET) in higher education. Athena works with higher education institutions (HEIs) to develop, share and disseminate good practice. The Athena Project developed out of the agenda of the Committee of Vice Chancellors and Principals' (now Universities UK) Commission on University Career Opportunity which aimed to remove barriers to discrimination of women in HE at all levels and to increase significantly the number of women in top posts by 2007.

David King highlighted the threat to the UK science base as the number of science undergraduates continues to fall. He believes that women are a key part of British science. But at present, although women account for roughly half of all biology graduates, they account for only 9 % of biological science professors. A study carried out by the Wellcome Trust and the Research Councils has shown that women are less likely to apply for research grants. A survey held in February 2000 of 3,090 academic staff found that only 50 % of women had applied for research grants in the past 5 years compared to 59 % of men. Women also made a smaller number of applications, were less likely to be the principal applicant, sought lower levels of funding than their male counterparts and generally applied for grants for shorter periods of time. The inadequacies of specific HEIs in terms of the numbers of senior women scientists were pointed out by Nancy Lane, who is on the Athena Project committee. A league table of UK HEIs puts Cambridge University at the bottom!

In 1999 Athena funded six HEIs to set up local projects to try to identify and tackle some of the issues that prevent women from progressing in their scientific careers. Professor Julia Higgins, Chair of Athena, said, 'All the projects contributed to an improved understanding of the under representation of women in SET in higher education, the differences between the academic careers of men and women and the choices and constraints women face in balancing their career and caring commitments'.

A major feature of the 1999 projects was mentoring. Mentoring projects lasted between 6 and 9 months and most pairs met between two and seven times. Mentees highly rated having someone impartial to talk to, who helped them to improve their self-image and who encouraged them to do things that they would not have done otherwise. These schemes also had an impact on the senior academics who had become mentors – 'they saw their institution through different eyes and understood the obstacles that young women face in progressing their careers'.

Career progression in SET in HE is very different for those who are single and childless. The Open University (OU) however, has proved more successful than wider HE in recruiting women academics. A total

of 55 % of OU lecturers are women, compared with 21 % elsewhere. Associate Lecturer (AL) positions offer women the chance to work part-time which also allows women researchers to gain experience in HE teaching. 'ALs are a valuable resource of qualified and experienced women who, mainly as a direct or indirect consequence of family and child-care responsibilities, have been excluded from other HE work.' Flexibility is the key to the success of OU's AL scheme. Most work can be done at home with timetables planned well in advance to arrange for child care.

All of the 1999 Athena projects involved networking, which was recognized by participants as a positive benefit. Networks are not unions – there is a tightrope to tread between campaigning, development and influence. The University of East Anglia (UEA) project was a self-sustaining support network for contract research staff in the science schools and local research institutes. Participants valued the opportunity to ask questions in a single sex environment. They discovered where to go for information on their rights and also recognized that their eyes had been opened to the realities of research careers. The UEA concluded that 'women are too willing to believe that the answer lies in training, when what they need is to have the confidence to actively pursue their own development needs'.

In September 2000 Athena launched five Local Academic Women's Networks (LAWNs). LAWNs are regionally based networks of women working in SET in HE, research establishments or in related industry and the professions. They will address:

- Institutional culture, values, attitudes and behaviour
- Organizational policies, practices, systems and arrangements
- Personal factors which shape or constrain career choices and outcomes

To contact Athena email [athena@ic.ac.uk](mailto:athena@ic.ac.uk)

● **Tracey Duncombe is the SGM Public Affairs Administrator**

RIGHT:  
Left to right: Nancy Lane, Julia Higgins, David King and Margaret Evans.  
PHOTO GEOFF WILSON



# A job in... Research & Development

Tracey Duncombe interviews Alison Flanagan from Pfizer about her career.

I met Alison at Pfizer's UK research HQ in Kent. Over 1,500 research staff are employed on this site, making it the largest research facility outside the USA. The site has come a long way since its foundation in 1957 with only six staff.

**Q** Why did you choose to work in veterinary medicine?

'I've always had an interest in veterinary medicine. As a student I spent my holidays working on a farm or in kennels and catteries. During my last year as an

undergraduate I spent the summer in a research lab at ILRAD (International Laboratory for Research on Animal Disease) in Kenya. I chose to continue my research in veterinary science for my PhD by studying *E. coli* infection in piglets. As it turned out, this was also of great interest to Pfizer!

'Everything I've done so far at Pfizer has had an element of microbiology. I came into the company as a subject specialist but quickly had to adapt and manage new projects. I think you need to be an expert in one area to give you the confidence to deal with everything else. I very rarely get to do any lab work nowadays but with my current interest (oral disease of companion animals) I have enjoyed learning some new techniques.'

**Q** So, do you miss not being in the lab?

'Occasionally I do. I had a really keen microbiologist working for me recently and he would often get me to go into the lab to see what he was doing. I found it exciting just looking at samples under the microscope again. I have moved away from the lab partly by choice. My job is so varied now, every day is a little bit different, and I enjoy the variety. I enjoy the unexpected: I know it sounds a bit strange, but I quite like it when things don't go according to plan and you have to find a solution.'

**Q** What's a typical day for you at work?

'I don't really have a typical day. I may spend time doing literature searches and developing ideas for new assays or models or I may have to organize and prepare for a meeting; setting the agenda and making sure that other people know what they have to present, circulating information and generally making sure that everything hangs together, as well as often producing overheads and making a presentation myself. I am co-leader of a project, which means that I have to co-ordinate the activities of the project as well as supervising some of the members of the team. I am often in contact with external people. For example,

## Profile

**Name** Alison Flanagan

**Age** 32

### Present Occupation

Senior Scientist, Pfizer Veterinary Medicine Global Research and Development, Sandwich, Kent

### Previous Employment

Wain Fellow, Department of Medical Biochemistry, Göteborg University, Sweden

Visiting laboratory scientist studying intestinal receptor biology

### Education

PhD, Rowett Research Institute, Aberdeen

*K88 fimbriae of enterotoxigenic E. coli and their receptors in piglet small intestine*

BSc (Hons) Microbiology, University of Glasgow



I may seek advice from vets who are experts in their field on a particular aspect of a disease. We have a group of 30 vets visiting our site soon. I have to plan what information we'll provide and the discussions we'll have about different opportunities within veterinary medicine. Often we have seminars on either a particular project area, or increasingly on topics such as intellectual property and patenting. For scientists this is quite a new thing, so it's important to learn about it.'

**Q** You worked in Sweden. Would you consider working abroad again?

'Actually I was offered a Wellcome fellowship to work for another year in Sweden about the same time as I was offered the job at Pfizer. I did consider it, but the job at Pfizer was permanent and I longed just to have a place of my own and settle down. I still have the opportunity to travel occasionally with Pfizer. At the moment I'm planning a global team meeting with our colleagues in the States.'

'I joined Pfizer in 1995 and was promoted to Senior Scientist a couple of years ago. I'm one of the most senior women in my department. At Pfizer you're given a lot of responsibility early on. Although there's an element of choice in taking on responsibilities, if you refused it you probably wouldn't be offered them a second time.'

**Q** Do you think enough is being done to keep women in science?

'Pfizer recently produced a report that highlighted the fact that there are very few senior women. The figures are very bad and they are particularly bad in veterinary science. Now central management are making a conscious effort.'

'Pfizer recently launched a new initiative for returning to work part-time. This is good if it gives you the choice between returning full-time or staying at home. However, you would obviously progress at a slower rate than those who are full-time.'

'In the past six months we've had a Women's network (men are also invited). The role of the network is partly to provide a forum on issues around gender. We've been discussing trying to get people to realise that men and women do things differently. As well as this we've had wine tasting and pampering days at our social club, which gave us the opportunity to meet women from elsewhere on the site.'

*Alison has recently taken a job with GlaxoSmithKline Consumer Healthcare.*

## Catching them young...

SPARK is a new bi-annual magazine to promote SET careers to 11–14-year-old schoolgirls.



SPARK provides information to pupils, teachers, careers advisors and parents alike. The magazine includes quizzes, technology tips and lots of examples of young women working in SET.

SPARK is produced by the Department of Trade and Industry.

Copies of SPARK can be ordered from Becky at SPARK magazine (DTI), Freepost SEA5624, Sevenoaks, Kent TN14 5BR, quoting URN 00/1365.