

## Mary Osborn

Mary Osborn was born in Darlington, UK, and educated at Cheltenham Ladies College. She studied maths and physics at Newnham College, Cambridge, receiving a BA in Physics in 1962. She obtained a PhD in biophysics from Penn State University and was a postdoc in Jim Watson's lab at Harvard University. She was a scientific staff member at the MRC Laboratory of Molecular Biology in Cambridge, UK, for three years, and then at Cold Spring Harbor Laboratory for two and a half years. In 1975, with her husband Klaus Weber, she moved to the Max Planck Institute for Biophysical Chemistry in Göttingen, where she remains today.

Mary's research has focused on the cytoskeleton and in particular on microtubules and intermediate filaments. Antibodies developed in her lab have proved to be useful reagents in typing human tumors. Her more recent work has focused on nuclear structure and in particular on the NuMA protein.

In the interview that follows, Fiona Watt, Editor-in-Chief of JCS, asks Mary about her experiences as a woman in science.

**FMW:** *What changes for women in science have you observed during the course of your career?*

**MO:** I have made my career in three countries – England, the USA and Germany. In the USA it is encouraging to see female scientists finally appointed to named chairs at leading universities or recruited to head major universities or foundations. In EU member states, the situation for women is also improving, albeit at a slower rate and with quite a lot of variation between countries. When one looks at the percentages of full professors that are female (or indeed at the percentages of female researchers in industry), countries such as Finland, Portugal, France and Spain are doing very well and countries such as Germany, Austria, Belgium and the Netherlands are doing rather badly. Encouragingly, women now occupy 23% of the positions on the top EU advisory board for science and technology (EURAB) – up from 4% a

decade ago. Discouragingly, women are still extremely poorly represented in almost all National Academies.

In Europe there are still meetings with very low or no representation of women among the plenary lecturers or major speakers. In Germany one still often finds oneself the only female on high-level committees, although this is changing. In contrast, when I was on the board of trustees of the Swedish Foundation for the Environment (MISTRA) there were five women and six men! Pictures on the walls are still an issue – for example, a recent institute brochure I received showed only a single woman, photographed at a party holding a champagne glass, while all the men were shown in formal portraits or in laboratory settings. The implication, of course, was that only men do serious science.

In Europe women have now begun to speak out if they feel discriminated against because of their gender. And there is more appreciation that it is economically wasteful to train large numbers of women for a scientific career if they quit science after they get a bachelor's or a PhD degree. Governments are finally realizing that much more needs to be done to retain women in science and attract women back into scientific careers if the EU is to meet the goal of investing 3% of the GNP in science by 2010.

**FMW:** *How has your research career impacted on your personal life and vice versa?*

**MO:** A key factor in my career has been the belief instilled in me by my parents and by my schooling that I was capable of doing anything I wanted and my choices should not be restricted because I was female. Competitive games (Monopoly at home and hockey and lacrosse at school) were undoubtedly part of this, but so was a good basic schooling in maths and science. In April 2003, when I returned to the LMB in Cambridge for a meeting to celebrate 50 years of DNA, I realized once again how formative my postdoc years at Harvard and at the LMB had been, and how many excellent life scientists have been through these two labs. I was also struck by how important it can be to change labs and countries in the early stages of



Mary Osborn at Niagara Falls while a graduate student.

a scientific career. And it is essential to remain curious as one gets older.

Having the right partner has been critical for me, since research takes a lot more than 40 hours a week. Having a partner in the same research area means that often one's personal and one's scientific life get inextricably mixed up. Inevitably many of our mutual friends turn out to be scientists.

The Max Planck Society (MPG) has a very liberal policy towards dual career couples compared to the German universities. German organizations (universities and others) still have to learn how important it is to make those they want to hire feel wanted, and that for many appointments the key to hiring a particular individual may be to find an interesting job for the spouse!

The freedom provided by the MPG to do basic research has also been of paramount importance to me. Certainly when one begins a project one may not know where it will lead. A good example is our work on intermediate filaments. When we started we were interested in them only as a cytoskeletal filament system in the cell. Only later did we realize that antibodies to the different types of intermediate filaments were excellent markers with which to characterize the cell type of origin of human tumors and were able to license them commercially for worldwide use.

**FMW:** *Do you feel that being a woman is an inherent advantage/disadvantage for a career in science? Why?*

**MO:** I think today that if you are at the

top of your field and your research is at the cutting edge it is neither an advantage nor a disadvantage. The top 5% of women scientists make it without trouble in all EU countries. It is at the next level down where the disadvantages of being female creep in and can lead to discrimination as women try to move up the career ladder.

**FMW:** *What are your remaining career ambitions?*

**MO:** When one is young it is vital to have career ambitions. At my age I have relatively few! If I was starting again I might try to get more involved in scientific policy making. I find myself intrigued by how money for research is divided between the different disciplines and how hard it is in general to move money from one discipline to another.

Looking back, however, what has been

the most fun (apart of course from the research) are the unexpected invitations and the chances they have provided to interact with other scientists on an international level – for instance, to chair the Scientific Advisory Committee at EMBL, to be a trustee of MISTRA, or to chair the group that produced the ETAN Report on Women and Science sponsored by the EU, and also the opportunities a scientific career provides to travel to other countries.

One of my continuing concerns is to increase equality of opportunity for female scientists in Germany and in other EU member states. A second is to see that young scientists get a chance to run their own labs at an early stage in their careers. A third is to use my position as President of the International Union of Biochemistry and Molecular

Biology (IUBMB) to stimulate interactions between scientists in developed and in developing countries.

In deciding whether to accept new challenges a remark by Diane Britten some years ago in *The Times* has proved very helpful: “When asked to do something women tend to say ‘Why me?’ Men say ‘Why not me?’ I have learned to say ‘Why not me?’”

For EU publications on Women and Science including the ETAN report and She Figures 2003 see [http://europa.eu.int/comm/research/science-society/women/wssi/publications\\_en.html](http://europa.eu.int/comm/research/science-society/women/wssi/publications_en.html)

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Feedback on our series of *Women in Cell Science* articles is always welcome and should be emailed to [wics@biologists.com](mailto:wics@biologists.com)

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