

Gender Equality in Science

Research by the Biochemical Society and other organisations has illustrated the continued under-representation of women in the molecular biosciences, and more broadly across science.ⁱ Historically, science has been perceived as a male occupation and fundamental barriers such as exclusion from higher education were significant obstacles for women. However, the gender balance in academic biology is now approximately equal up to and including doctoral level, with retention after this point the key issue.ⁱ In 2008, only 5.3% of employed women were in Science, Engineering and Technology (SET) occupations. For men, that equivalent figure was 31.3%. Overall, women accounted for just 12.3% of people in SET occupationsⁱⁱ although the proportion of women studying SET subjects (including mathematics) in higher education was 33.4%. In academic bioscience, a discipline with a critical mass of female students, researchers and lecturers, women still account for only 15 per cent of Professors.^{iii, iv} Data from across Europe does not support the hope that the changing demographical balance in higher education is leading us towards equality in this respect.^v

The Biochemical Society strongly believes that the established inequalities should not continue to be accepted. The continuing 'leak' of women from the science pipeline (the notional conduit along which scientists flow as they train and advance) in the UK represents a tragic waste of available expertise and threatens our global competitiveness, as some of the most highly skilled individuals are lost to science or fail to reach their full potential. The probable reasons for this leak are varied and many. Within the research system there are acknowledged issues around short-termism in the career structure, a lack of flexibility regarding taking and returning from career breaks and also a recognition and reward system which is not kind to individuals who work part-time. At local levels, there are problems with promotion systems such as those which rely on self-nomination and poorly-designed promotion criteria which do not take into account perceived and actual strengths and weaknesses associated with different genders.

The Biochemical Society supports the view that, in order for the sector to change, we need to more fully understand how and why inequalities arise and persist in science and ensure that the challenges and complexities of removing these inequalities are recognised by individuals throughout the career pyramid. This includes the 'mainstreaming' of gender issues amongst the management of research institutes, universities and industry, in order that such issues are routinely considered when taking decisions. The Society is committed to raising the profile of this issue amongst decision makers by undertaking and disseminating our own research, supporting that of others and collaborating with other partners to develop a stronger policy framework. Furthermore, a more complete understanding will allow us to develop evidence-based strategies to increase the participation and retention of women in science. We acknowledge that there is no 'quick fix' for the problems that exist, but that eventually the biases that exist may be eliminated. To this end, we commend the efforts of the Athena SWAN Charter award scheme, which we help fund and support and which rewards good practise in UK institutions.

Poor rates of female retention matter for several reasons:

- For diversity reasons: diversity enriches scientific enquiry, promotes excellence, opening up new markets and ensures the agenda of science reflects the interests of the population.
- For equality reasons: gender inequality in scientific careers undermines the principles of fairness, equality of opportunity, and social justice to which liberal democracies such as the UK subscribe.
- For economic reasons: female attrition has the potential to compromise the ability of the UK to successfully compete in the global economy, particularly in growth areas where a boost to numbers of skilled personnel is required.

It is therefore both a moral and business issue for society, for organisations like ourselves, for employers and for individuals.

The UK produces some of the most respected science in the world and our academic institutions are amongst the most prestigious, attracting large numbers of students and scientists for education and research. By cultivating a more gender-balanced environment we can continue to demonstrate our forward-looking approach, with a research community that is reflective of the general population. As has been acknowledged by the European Commission, this is an international issue, but not a self-resolving one.^v

ⁱ Biochemical Society, UK Resource Centre for Women in Science, Engineering and Technology, and the Royal Society of Chemistry 2008 'The Molecular Bioscience PhD and Women's Retention: A Survey and Comparison with Chemistry'

<http://www.biochemistry.org/Portals/0/Public%20Affairs/Docs/Molecular%20Biosciences%20Report%20For%20Web.pdf>

ⁱⁱ UK Resource Centre for Women in Science, Engineering and Technology 2010 'Under-representation'

<http://www.theukrc.org/resources/key-facts-and-figures>

ⁱⁱⁱ UK Resource Centre for Women in Science, Engineering and Technology 2010 'Women and men in science, engineering and technology: the UK statistics guide 2010' http://www.theukrc.org/files/useruploads/files/final_sept_15th_15.42_ukrc_statistics_guide_2010.pdf

^{iv} Athena SWAN 2010 'Women in SET statistics 2007/08-2008/09' <http://www.athenaswan.org.uk/html/athena-swan/about-the-charter/women-in-set-statistics-200506/in-women-in-set-statistics-200708200809/>

^v European Commission 2009 'She Figures 2009 – Statistics and Indicators on Gender Equality in Science'

http://ec.europa.eu/research/science-society/document_library/pdf_06/she_figures_2009_en.pdf