Athena SWAN Gold department award application

Name of university: Queen's University Belfast

Department: School of Biological Sciences

Date of application: 31st November 2012

Date of Silver Athena SWAN award: August 2009

Date of university Bronze and/or Silver Athena SWAN award:

University Silver Award 2012

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An Athena SWAN **Gold Department** award recognises a significant sustained progression and achievement by the department in promoting gender equality and to address challenges particular to the discipline. Applications should focus on what has improved and changed since the Silver award application.

Not all institutions use the term 'department' and there are many equivalent academic groupings with different names, sizes and compositions. The definition of a 'department' for SWAN purposes can be found on the Athena SWAN website. If in doubt, contact the Athena SWAN Charter Coordinator well in advance to check your eligibility.

It is essential that the contact person for the application is based in the department.

Sections to be included

At the end of each section state the number of words used. Click here for additional guidance on completing the template.

1. Letter of endorsement from the head of department (497 words; maximum 500)

I am delighted to have this opportunity to confirm my commitment to the School's SWAN Gold award application. I am the first female Head of School in Biological Sciences and in science at Queen's University Belfast (QUB). My position stems directly from Athena SWAN initiatives. In 2007, analyses by Queen's Gender Initiative indicated a declining proportion of women in positions of academic leadership. I therefore agreed to become a Director of Research, which qualified me to apply for the position of HoS in 2010. My ambition to be a leader in QUB was supported by attending events involving successful women such as Judith Gillespie (Deputy Chief Constable), Baroness Susan Greenfield, and Rosabeth Kantor. These leadership seminars have been very helpful to me in developing my own management strategy for the School, in the context of the university's objectives. Gender diversity, particularly at board level, is correlated with better corporate performance (McKinsey & Co., Women Matter). I am therefore totally committed to achieving gender equality within our School, a process also strongly supported by my predecessor, Prof. Ian Montgomery.

Our 2009 action plan addressed several gender parity bottlenecks in the academic pipeline in our School. Since we identified key actions to improve gender balance, the School has shown a continuous improvement in the proportion of females in the academic staff, from 24% in 2005 to 34% (44% at Lecturer AC2/AC3) today. We have attracted large numbers of female applicants for academic positions through rigorous recruitment processes that recognise internationally leading research. Our transparent workload allocation model now ensures that female staff make a fair, but not disproportionate, contribution to teaching and administration. Eligible women applying for promotion have been equally successful as men. Over the next three years a large cohort of female academics will become eligible for promotion and I will ensure fair opportunities.

QUB's code of practice on the fair and transparent selection of staff for inclusion in the Research Excellence Framework (REF) 2014 submissions ensures that the School can return staff with reduced outputs, and we expect to return 100% of staff.

I am particularly pleased at the success of initiatives aimed at postdoctoral researchers, which have increased the proportion of women at senior research grades, and helped them progress into permanent academic positions. Our Postdoctoral Forum is flourishing, and postdocs have generated many excellent ideas for improving their research environment. They have also exported our best practice: a researcher gave a SWAN presentation at the Sanger Institute in Cambridge as part of their Sex in Science series. Our new student-led PhD peer mentoring initiative developed from the Postdoc Forum activities and is proving popular with our doctoral students.

As HoS, I want to create a working environment in which the careers of women will flourish alongside those of men. To this end, I consciously attend to leading and managing current best practice and innovations. I am very proud of our School achievements to date and look forward to bringing the School to Gold standard.

2. The self-assessment process: 999 words (maximum 1000)

Describe the self-assessment process. This should include:

a) A description of the self assessment team: members' roles (both within the department and as part of the team) and their experiences of work-life balance.

The School of Biological Sciences Self Assessment Team (SBS-SAT) was established in 2007 to prepare our first Athena SWAN submission, which gained a Silver award in 2009. The SBS-SAT is recognised as a school committee, reports to the School Board, and participation is recognized in our workload model. The SBS-SAT monitors the school's progress in promoting gender equality, updates the school's Athena SWAN action plan as necessary and prepared this Athena SWAN Gold Award application.

Professor Christine Maggs is Professor of Phycology and the current Head of School. She was appointed as a Lecturer in 1995, and was promoted to Reader in 2001, Professor in 2005, Director of Research in 2008, and Head of School in 2010. She is Joint Editor in Chief of *European Journal of Phycology* and Associate Editor of *Journal of Biogeography*; she is President-Elect of the British Phycological Society. Christine is married with one teenage daughter, and her husband is an academic.

Mrs Elizabeth Purdy is the School Manager. She was appointed as clerical staff in 1969 and progressed between grades. She achieved a Humanities BA (first class) by part time study in 2002, and was appointed as School Manager in 2005.

Dr Alison Cameron (SAT Champion) was appointed as a lecturer in 2010. Prior to this Alison completed 5 years of Postdoctoral Research Fellowships at Princeton, Berkeley, and the Max Planck Institute. Her husband is also a lecturer at QUB, and they both enjoy horse-riding.

Dr Alan Trudgett was translated to Lecturer in 1996, and promoted to Senior Lecturer in 2007. Prior to this Alan worked as a Senior Research Officer in QUB and at the National Institutes of Health, Bethesda, USA. His administrative duties included a period as the University's Biological Safety Officer (2000-2008) and he is currently coordinator of the School's tutorial scheme. He has two adult sons and two granddaughters.

Dr Moira Dean worked as a physics teacher until 1987, gained a PhD in Psychology in 2000, and completed a postdoctoral research fellowship at Surrey. She was appointed as a lecturer in 2007, and confirmed in post 2009. Moira has two adult children and enjoys line dancing!

Dr John Bothwell was appointed as a Lecturer in 2009 and confirmed in post in 2011. John has a long-standing interest in Early Career Staff development, was one of the authors of the RCUK Staff Development Concordat, and has served on the External Advisory Board of Vitae for the past 5 years. John is married to a teacher on a career break, and has two young children.

Dr Chris Harrod (case study 2) was appointed as a Lecturer in 2007 and confirmed in post in 2010. He worked in industry (Senior Environmental Consultant) and the Environment Agency. He completed Postdoctoral Research Fellowships at the National University of Ireland, Galway, and the Max Planck Institute in Germany. His partner is a Chilean academic; he is currently on secondment in Chile, and has recently become a father.

Dr Gemma Beatty (Postdoctoral representative) started a two year Postdoctoral Research Fellowship in 2011. She obtained her BSc, MSc, and PhD from QUB. Gemma is currently co-chair of the School's Postdoctoral Forum.

Dr Debbie Bailie (Postdoctoral representative) started a five year Postdoctoral Research Fellowship in 2010. She obtained her BSc and PhD from Queen's University Belfast. Debbie is currently co-chair of the School's Postdoctoral Forum and married recently.

Catherine Reavey (PhD student representative) is a second year PhD student. She has a BA from the University of Cambridge in Natural Sciences and an MSc in Environmental Protection and Management from The University of Edinburgh. In 2012 she initiated a PhD student mentoring scheme within the school.

b) An account of the self assessment process: details of the self assessment team meetings, including any consultation processes that were undertaken with staff or individuals outside of the university, and how these have fed into the submission.

The SBS-SAT convenes full meetings twice annually. For example, shortly after Alison (Convenor) attended the September 2012 Athena SWAN "Going For Gold" seminar in London, the SAT reviewed the School's action plan in light of the seminar discussions and the Good Practice for University Science Departments assessment framework. Members also meet several times per year, in pairs or groups, to follow up on responsibilities allocated during the main meetings. The SBS-SAT report at every School Board and some research cluster meetings. The presence of the Head of School on the SAT is a substantial benefit, allowing her to report on SAT activities to the School Management Board and to raise awareness among staff of the gender-related imbalances at different career stages. SBS-SAT held a SWAN postdoctoral focus group in Belfast for Sarah Hawkes (Senior Policy Adviser) in April 2011 to discuss the experiences of, and opportunities for, early career researchers. Members of the SAT have attended various consultations with other academics, such as Professor Paul Walton (Chemistry, York), and Dr Kim Sullivan (Utah State University), whose work analysing women in science was funded by the NSF. These have helped us to develop and refine our understanding of gender equality and its promotion.

c) Plans for the future of the self assessment team, such as how often the team will continue to meet and how the department will deal with the turnover of team members, any reporting mechanisms and in particular how the self assessment team intends to monitor implementation of the action plan.

The SBS-SAT will continue to meet on a bi-annual basis, and to encourage sub-groups to meet together and work with other staff on a quarterly basis. This provides a balance of effective communication in the biannual meetings, and group activity in the sub-group meetings. Four of the nine current members (CM, CH, MD, and EP) have served on the team since its formation, but staff usually serve for 1 to 2 years. This ensures that as many lecturers as possible understand the team's activities, avoids committee fatigue, broadens awareness, and increases engagement with education and action undertaken by the SAT within the school. Highest turnover is expected among the postgraduate and postdoctoral members. In 2012 our previous postdoctoral representative was appointed to a lectureship. Two researchers were elected to replace her as convenors of the Postdoctoral Forum, and both have joined the SBS-SAT. Having two representatives should promote continuity as it is unlikely that both will transition to new jobs at the same time. In future, in line with the postdoctoral representatives, we will request the Postgraduate Forum to nominate two representatives.

3. A picture of the department: 2000 words (maximum 2000 words)

a) Provide a pen-picture of the department to set the context for the application, outlining in particular any significant and relevant features.

Queen's University Belfast School of Biological Sciences (QUB-SBS) resulted from mergers between departments and sub-departments. By 1992 the Departments of Botany, Zoology and Biochemistry had fused into SBS, with 38 academic staff, of whom 9% were women.

Academic staff in the School of Biology and Biochemistry in 1992, showing 33 of the complement of 38 academic staff (including two of the four women).

Academic staff in the School of Biological Sciences in November 2012, showing 33 of the complement of 60 academic staff (including 10 of the 18 women).

In 1996/7 the staff included only 3 women – 7% of 40 academics. By 2004, it still employed less than 10% female academics. In 2005, the Institute of Agri-Food & Land Use replaced the Department of Agriculture. Eleven new lecturers were appointed, over 50% of whom were

female. The almost immediate merger of this Institute with SBS increased our proportion of female academics to 24% of 41 staff, the baseline reported in our 2008/9 SWAN Athena Silver award document. Since then our proportion of female academics has continued to increase, to 34% of 62 (November 2012), so that the majority of female academic staff are on probation or early in career. SBS was the first School in QUB to gain a Silver award, which contributed to QUB's 2012 unique institutional Silver award.

The School's academic staff members have diverse teaching and research interests ranging from cancer biology to conservation and biodiversity. The School is based in the Medical Biology Centre with the Institute of Global Food Security nearby – a new building to house the whole School will open in 2016. The QUB Marine Laboratory is at Portaferry on Strangford Lough.

The School runs 16 BSc and 5 MSc pathways, spanning Agriculture to Zoology. In the most recent Sunday Times league tables, our courses were ranked 5th in the UK for Agriculture and 20th for Biology. Our National Student Survey scores are high and increasing (overall satisfaction increased from 93-94% in 2011 to 96% in 2012 against the sector average of 86-89%).

b) Provide data for the past five years (where possible with clearly labelled graphical illustrations) on the following with commentary on their significance, how they have affected action planning, and any improvements since the department's Silver award.

A) Student data

(i) **Numbers of males and females on access or foundation courses**.

The School teaches a Foundation Degree (FdSc) providing Accreditation of Prior Experiential Learning (*e.g.* community-based, workplace, and independent learning). The total number of students on the Foundation pathway increased from 2007 to 2012 (Fig. 1), but the number and percentage of female students have declined.

Action 4.1: Monitor student enrolments and identify causes of any changes.

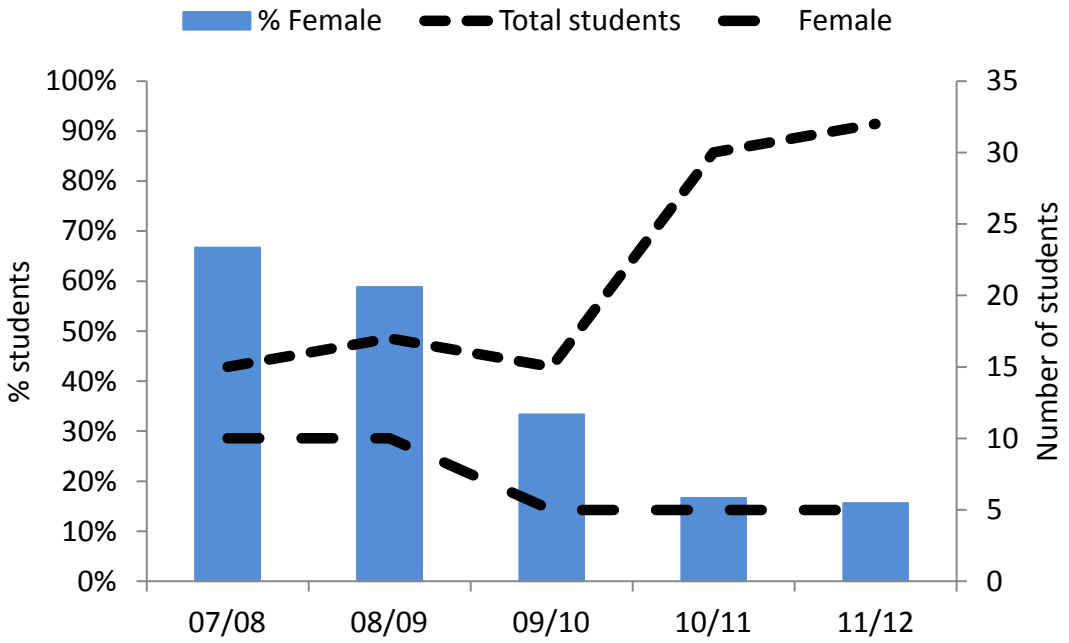


Figure 1. Percentage of female students on Biological Sciences Foundation pathways

We also offer a self-study summer programme for potential Food Quality Safety and Nutrition students, covering the essentials of A-level biology for students with other good A-levels. They must achieve 50% in a short exam in QUB in August. All four students who have benefitted from this programme since 2007 are female, enabling entry into science for otherwise unqualified candidates.

(ii) **Undergraduate male and female numbers**.

Over 50% of full-time and part-time undergraduate students in SBS have been female (all pathways combined) throughout the last six years (Fig. 2). Taken as a whole, from 2006 to 2012, total numbers of undergraduate students have varied by 17% (529-617), and the total numbers of females have mirrored these fluctuations. Our percentage of female students is not significantly different from the UK as a whole for Biological Sciences and related pathways[1].

The percentage of female part-time students dropped below 50% in 2010 but they comprise ~6% of total undergraduate numbers, so the percentage is affected by small fluctuations in numbers.

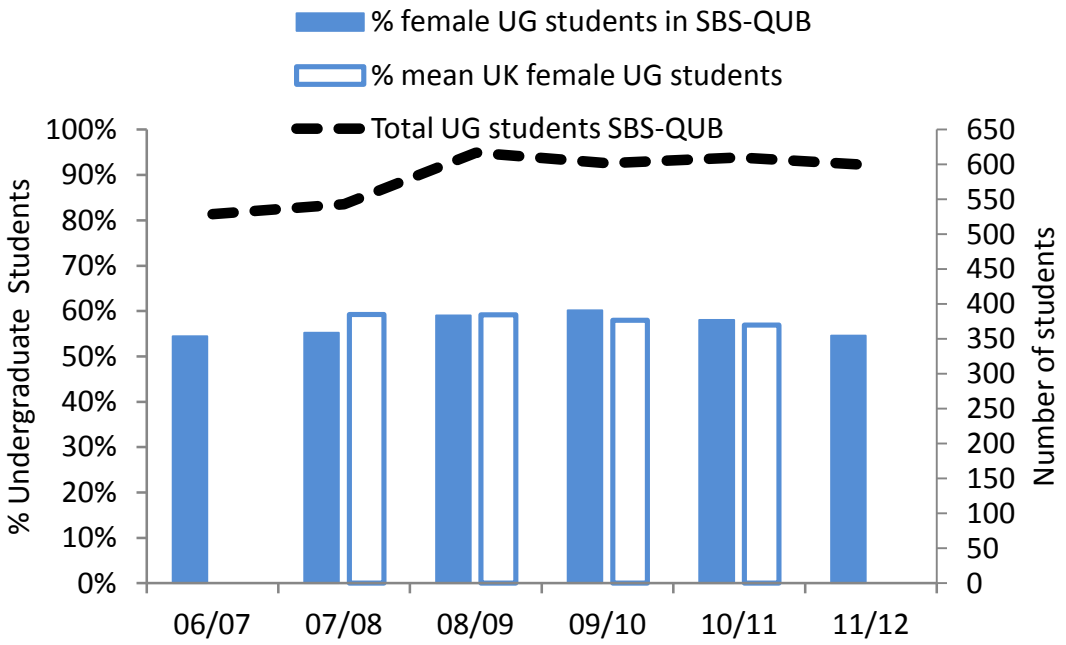


Figure 2. Comparison of the percentage of female students registered on undergraduate (UG) degrees (levels 1 to 3) within the School of Biological Sciences, QUB (SBS-QUB), against the mean percentage of female UG students in the UK, with total numbers of undergraduate students in SBS-QUB.

The increase in total student numbers means that the number of female students is much higher today than in 2006/7. The percentage of females has dropped slightly over the last two years but it is too early to tell if this is a natural fluctuation or the first signs of a longer term trend. There is no significant[2] difference between the percentages of female students for 2006-2009 and 2010-2012.

Action 4.1: Monitor and analyse ratio.

[1] G-test, G = 0.36, df = 1, p = 0.54.
[2] Chi-square test, X^2 = 0.09, df = 1, P = 0.76.

(iii) **Postgraduate male and female numbers completing taught courses[3].**

Our PGT courses appear to be particularly attractive to female students. Percentages of female students on our postgraduate taught (PGT) courses have been consistently higher (65-73%) than on undergraduate (53-60%) programs since 2006, with females forming the majority of both part-time and full-time students (Fig. 3). The School has a significantly higher[4] proportion, consistently high[5] between 2006-2009 and 2010-12, of female PGT students than the UK average (Fig. 3).

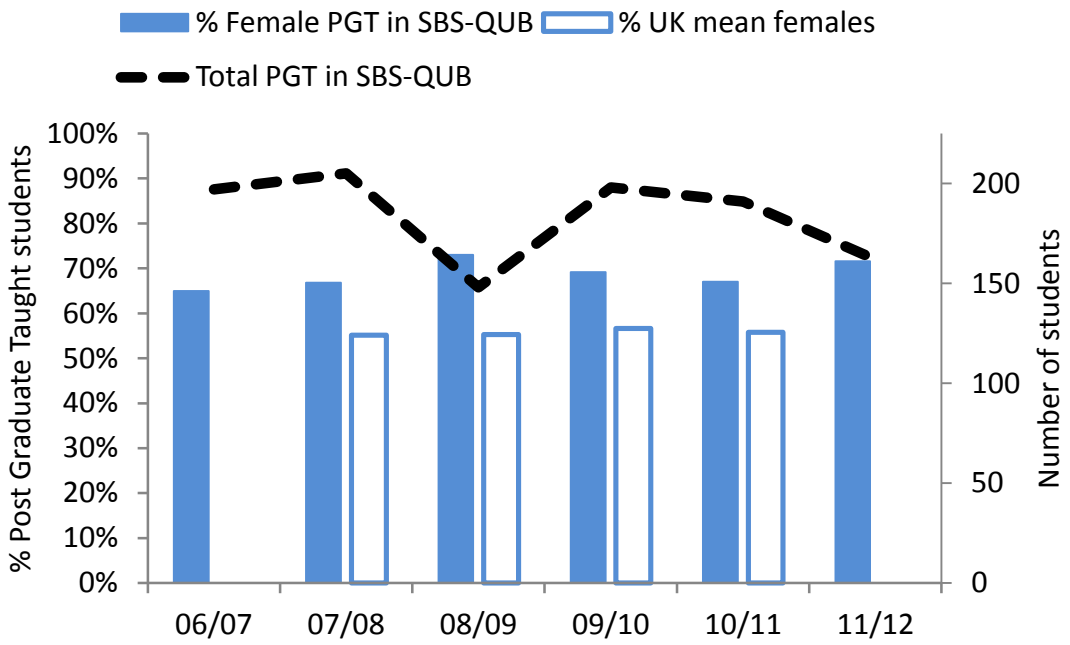


Figure 3. Percentage of female students registered on Postgraduate Taught (PGT) degrees in SBS-QUB, mean percentage of female PGT in UK, and total PGT numbers.

[3] Note: We have registration data not completion data. Also note that the UK data appear to be all registered PGT students per year (not numbers of registrations).

[4] G-test, $G = 11.94$, $df = 1$, $P < 0.001$.

[5] Chi-square test, $X^2 = 0.01$, $df = 1$, $P = 0.94$.

(iv) **Postgraduate male and female numbers on research degrees**.

The mean percentages of female postgraduate research (PGR) students in SBS (53%) and the UK (54%) are not significantly[6] different (2006-2012) (Fig. 4). Percentages of female full-time PGR have remained high since 2006 (49-55%), and are currently increasing (Fig. 4). The percentage of female part-time students has fluctuated considerably because many PGR students switch to part-time near the end of their degrees.

Action: none needed.

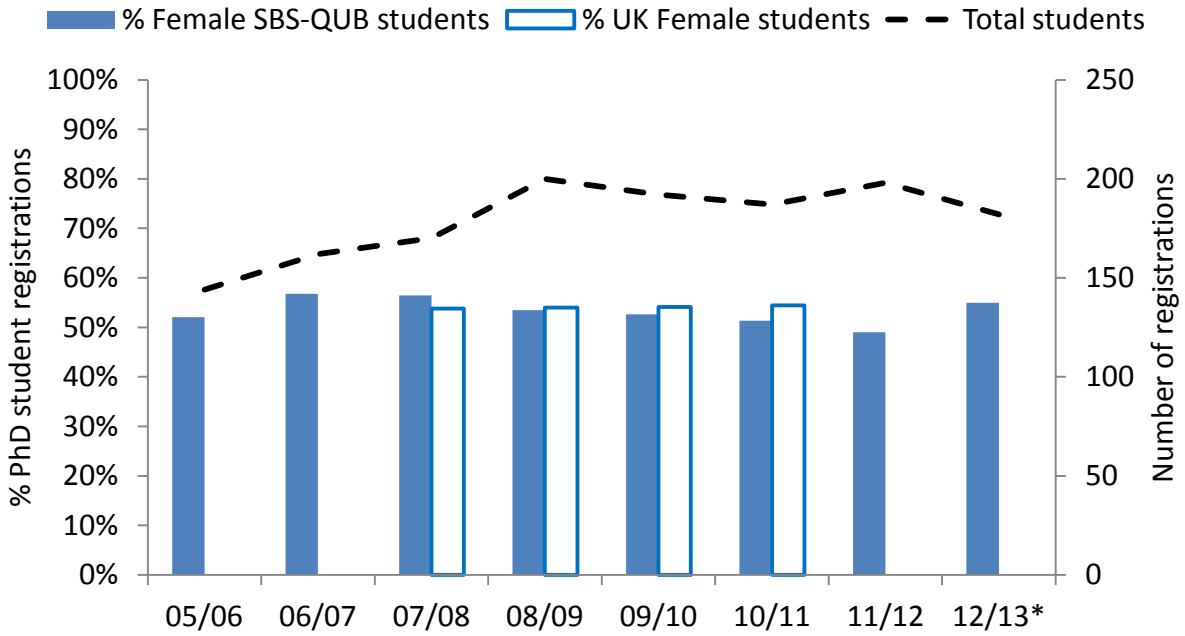


Figure 4. Percentage of female students registered for Postgraduate Research (PGR) degrees (PhD only) within SBS-QUB, mean percentage of female PGR completions in the UK, and total numbers of PGR completions within SBS-QUB. *Data for first 3 months of year 2012/13.

[6] G-test, G = 0.04, df = 1, P = 0.84.

(v) **Ratio of course applications to offers and acceptances by gender for (ii), (iii) and (iv) above**.

As the above sections have outlined, there is a high proportion of female students at undergraduate and postgraduate levels. Data on the gender proportions of student intake reveal a high proportion of females at all levels (mean across all levels ~58%).

Undergraduates: UCAS data from 2009-2012 reveal that female applications to undergraduate courses have remained consistently above 50%, except for a slight decline in 2012 (Fig. 5A). Females made up 51% of all UCAS offers (Fig. 5B) and 53% of all offers accepted (Fig. 5C). Application success rates did not differ[7] between genders with 86% of all males and all females applying receiving offers. Figure 5D indicates a decline in female undergraduate intake over the last three years, and a comparison of mean proportions of female:male students between 2006-2009 and 2010-2012 confirms a significant difference[8].

Action 4.1: Male:female ratios require further analysis.

[7] Proportional test, $X^2 = 0.41$, df = 1, P = 0.52.
[8] Chi-square test, $X^2 = 3.06$, df = 1, P = 0.08.

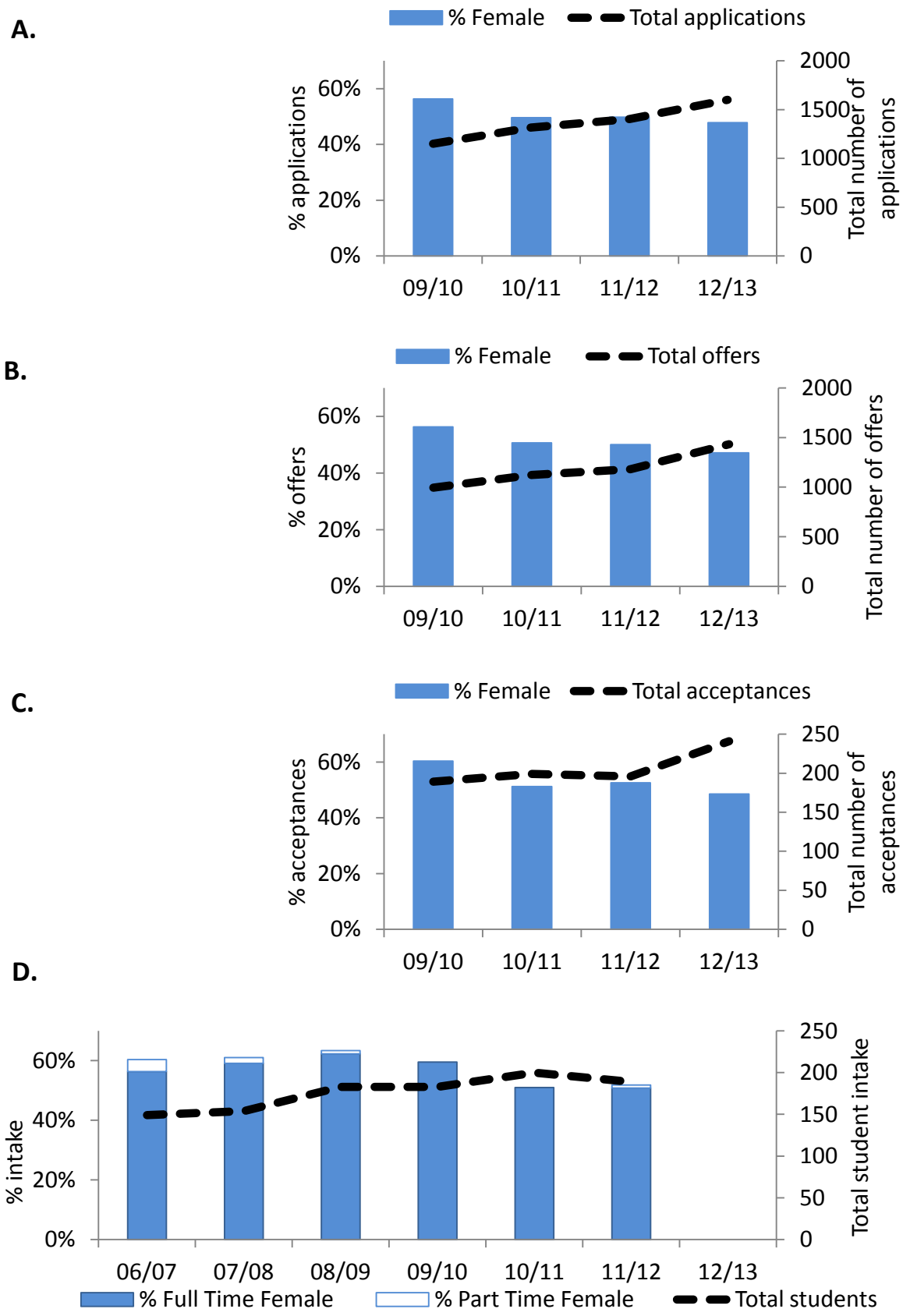


Figure 5. Percentage of A) applicants from, B) offers to, C) offers accepted by, and D) registrations of, females for undergraduate degrees (all pathways) in QUB-SBS.

Postgraduate Taught (PGT): Over the last three years female PGT applications have been consistently over 50% (Figure 6A). Data on offers for PGT courses are not available, but female students comprise 68% of all PGT registrations (45% full-time plus 23% part-time) from 2006 to 2012 (Fig. 6B). Gender proportions of total students did not differ between the periods 2006-2009 and 2009-2012[9].

Action 4.1: monitor and review annually.

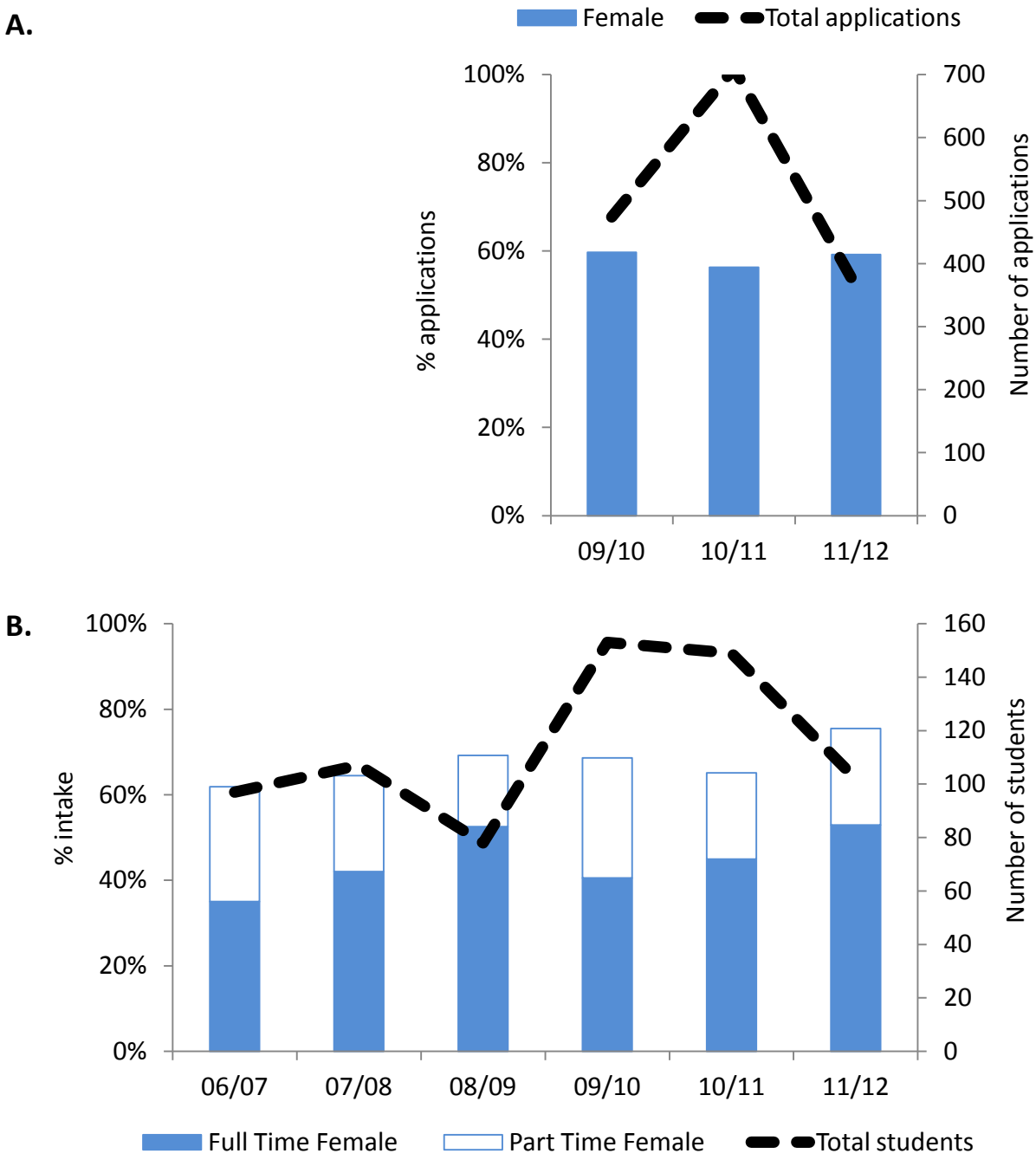


Figure 6. Percentage of A) applications from, and B) registrations of, females and totals for postgraduate taught (PGT) degrees (all pathways) in QUB-SBS.

[9] Chi-square test, $X^2 = 0.026$, df = 1, P = 0.87.

Postgraduate research (PGR): The percentage of female applicants (58%) and offers (60%) for PGR studentships have remained high during 2009-2012 (Fig. 7A, B). Female PGR students account for 54% of all intake (Fig. 8). As with PGT courses, the gender balance of students has not differed[10] between 2006-2009 and 2010-12.

Action: None needed.

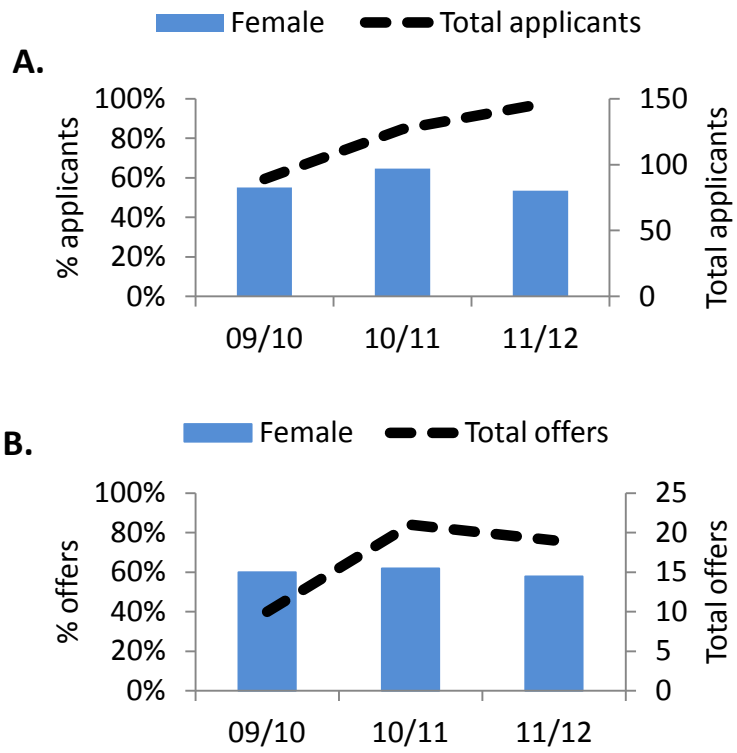


Figure 7. Percentage of female A) applications and B) offers for DEL-funded PhD positions.

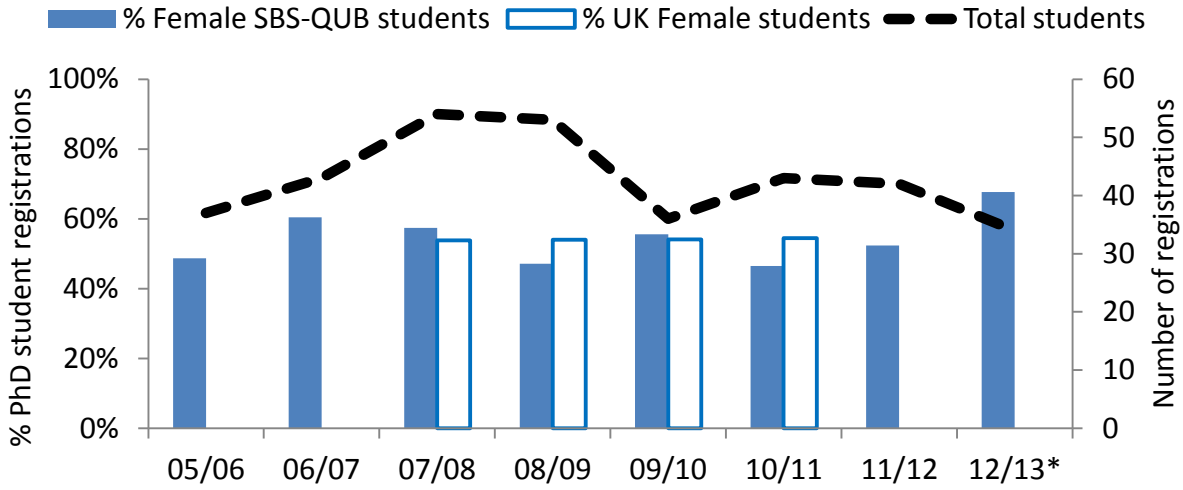


Figure 8. Percentage of female intake for PhD Postgraduate Research (PRG) student positions for all sources of funding (including DEL = Department of Employment and Learning).

[10] Chi-squared test, $X^2 = 0$, df = 1, P = 1.

(vi) **Degree classification by gender**.

From 2006-2011, female students were on average more likely to achieve first class degrees (16%) than males (12%). The mean proportion of female students obtaining first and upper second class degrees (73%) was slightly higher than the proportion of all students awarded the same classifications (69%). Changes in the percentage of females achieving degree classifications must be interpreted in light of the increasing proportion of females within the undergraduate student population (black dashed line, Fig. 9). The narrowing of the spread in percentage female for each of the four degree classifications through time (Fig. 9) from 87% (1st) to 33% (3rd) in 2006/07, to 71% (2.1), and 52% (1st) by 2010/11, indicates that females are being awarded degree classifications in closer proportions to their proportion within the student population (i.e. 67% in 2010/11). We consider that the relative improvement in performance of males with respect to first class degrees reflects the movement of top-performing female A-Level students into expanded Medicine and Biomedical Science courses. The large fluctuations in third class degrees are due to their very small numbers.

Action 4.1: We will monitor the distribution of females within and between degree classifications.

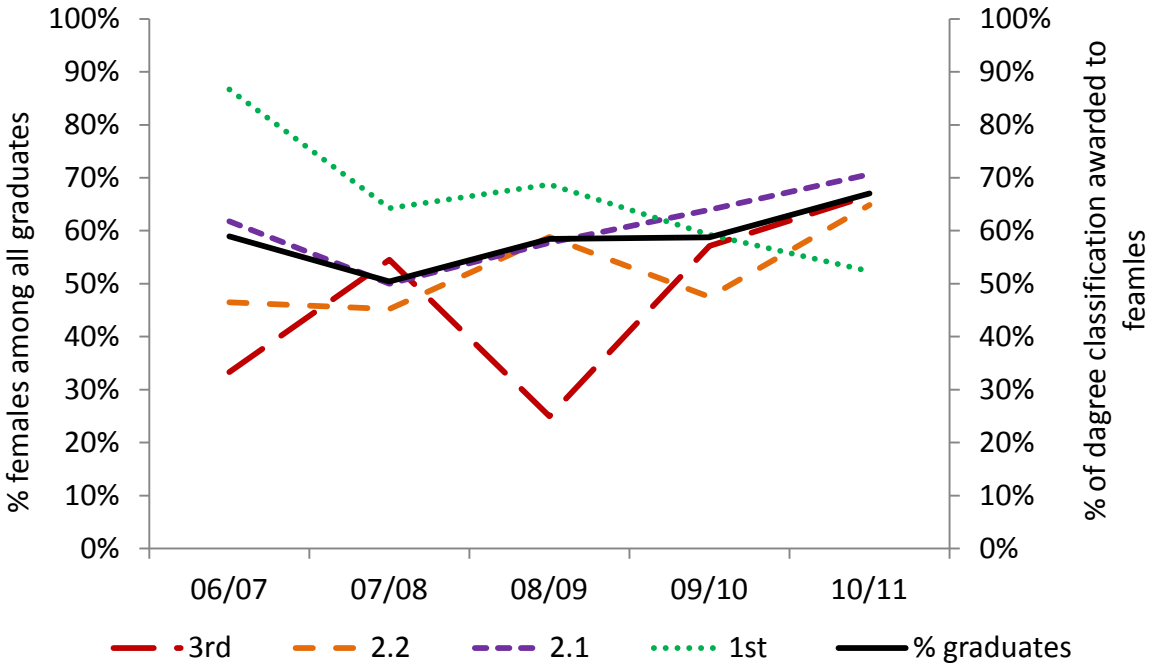


Figure 9. Percentage of undergraduate degree classifications awarded to females each academic year (right Y axis), and the percentage of graduates who are female each year (left Y axis).

B) Staff data

(i) **Female:male ratio of academic staff and research staff**.

The overall proportion of female staff at all levels of employment in the school was not significantly[11] different from the UK average for the same period (Fig. 10). The numbers and percentages of female academics increased steadily (125% increase) and progressively from 8 (19%) in 2006/7 to 18 (30%) in 2011/12 (Fig. 10), compared to the increase in males from 35 to 42 (20% increase).

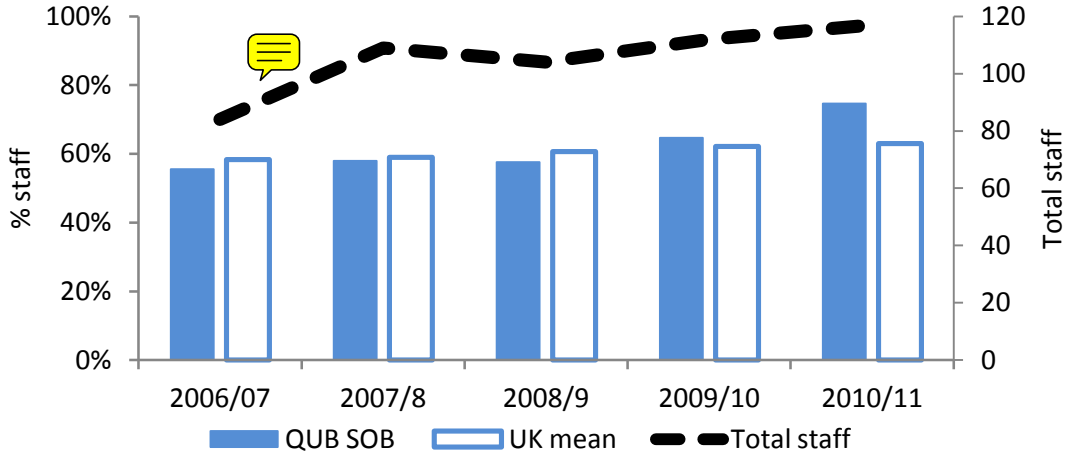


Figure 10. Comparison of mean percentage female staff at QUB-SBS with the UK mean, and total number of staff.

Approximately 50% of all research staff were female throughout the period (Fig. 11A), rising from 47% in 2006-2009 to 51% between 2009-2011.

In 2009, our gender action plan identified a need (Theme 1) to address the low representation of women at Lecturer (AC2-3) level. The rapid and consistent increase in female Lecturers from 23% in 2006/7 to 42% in 2011/12 (Fig. 11B) strongly suggests that our action plan measures (revised recruitment procedures; postdoctoral career support) have had a positive impact[12]. **We will reach parity for Lecturer AC2/3 in the next three years (the timescale of this Gold award application).**

A slight increase in female representation at the Senior Lecturer/Reader level was seen in 2011/12.

For the period shown, 20% of Professors were female; a drop in the proportion of females in 2011/12 is due to the success in promotion of several male members of staff, when there were no eligible females due to their predominantly early career stage.

Action plan: Theme 2 actions

[11] Chi-square test, $X^2 = 0.01$, df = 1, P = 0.92.

[12] Indeed, a positive, significant trend is detectable in percentage of female Lecturers over the period 2006-2012 (Pearson's product-moment correlation, t = 5.8, df = 4, P < 0.01).

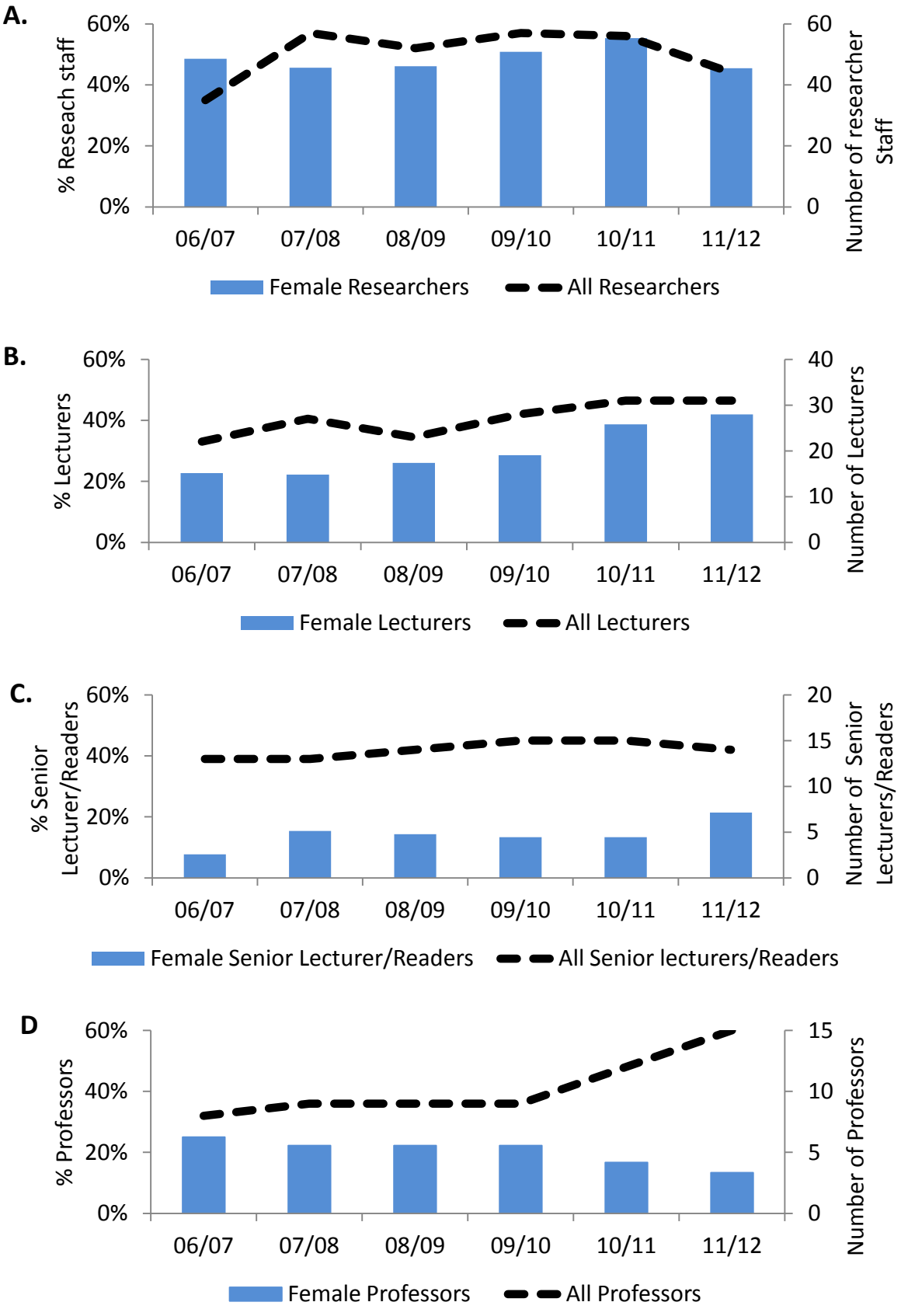


Figure 11. Percentage of female staff in 2006-2012 at levels of A) Researcher; B) Lecturer; C) Senior Lecturer/Reader; D) Professor.

(ii) **Turnover by grade and gender**

Academic turnover is low, with only 16 staff leaving over the last six years, 36% (5) female and 64% (11) male. Turnover for researchers was higher with 81 staff leaving from 2006-2009. 55% (45) of leavers were male and 45% (37) female thus there was no difference[13] in the proportion of leavers grouped by gender. Examining turnover data on a yearly basis reveals no obvious trend in the percentage of either female[14] or male[15] leavers at any pay grade.

[13] Chi-square test, $X^2 = 1.21$, df = 1, P = 0.27.
[14] Friedman rank sum test, $X^2 = 9.65$, df = 5, P = 0.08.
[15] Friedman rank sum test, $X^2 = 7.94$, P = 0.16.

4. Supporting and advancing women's careers: 4850 words (maximum 5000 words)

A) Key career transition points

Our 2009 Silver Award application specified a total of six actions to encourage equality in job applications (**Actions 1.1-1.6**). This Gold application evaluates the relative success of these actions and adds the additional **Action 1.7** to further promote equality over the next three years.

Provide data for the past five years (where possible with clearly labelled graphical illustrations) on the following with commentary on their significance, how they have affected action planning, and any improvements since the department's Silver award

(i) **Job application and success rates by gender and grade**.

Our 2009 Silver Award application reported equal success rates for male and female job applicants to both Research and Academic Staff appointments, noted that only around one third of overall applicants were female, and set in place six actions to attract equal numbers of applications from women and men (equivalent to **Actions 1.1-1.6** in the current Action plan).

The trends that have accompanied these Actions over the past three years are extremely encouraging (Fig. 12); the percentage of female applicants for Academic Staff posts has remained reasonably constant at around 30% (Fig. 12b), but there is now parity in the number of male and female applicants for Research Staff positions (Fig. 12a).

Success rates show a similar story and, taken together with the overall increase in the number of female applicants, mean that we are close to gender parity in the number of Research and Academic Staff appointed (Fig. 12). Equally importantly, the gender pay gap that existed for Research Staff before our Silver Award application (no women at AC3 from 2006/7 to 2008/9) has now been closed (women made up 60% of AC3 staff in 2011/12), representing a significant improvement in the proportion of females in senior research posts.

It is worth noting that for both Research and Academic positions the success rates for female applicants, at 8% and 9% respectively, are slightly, but significantly, higher than for male applicants, at 6% and 7%, respectively (Fig. 12). Women therefore stand a higher chance of success when they apply. We analysed this in detail over a series of six lectureship recruitments in 2010-2012, and found that females made up 28% of applications, 33% of shortlisted applicants, and 50% of appointments. The 2012 Global Food Security recruitment campaign was particularly successful at attracting females: 43% of c. 60 applicants; 67% of 9 shortlisted; 75% of 4 appointments.

Actions: We are very pleased with the trends seen since the introduction of the Actions in our Silver Award application and are renewing these **Actions (1.1-1.6).** The only measure that has not shown a significant move towards parity is the percentage of women applicants for lectureships; we consider ways to improve this in Section b)(I), below.

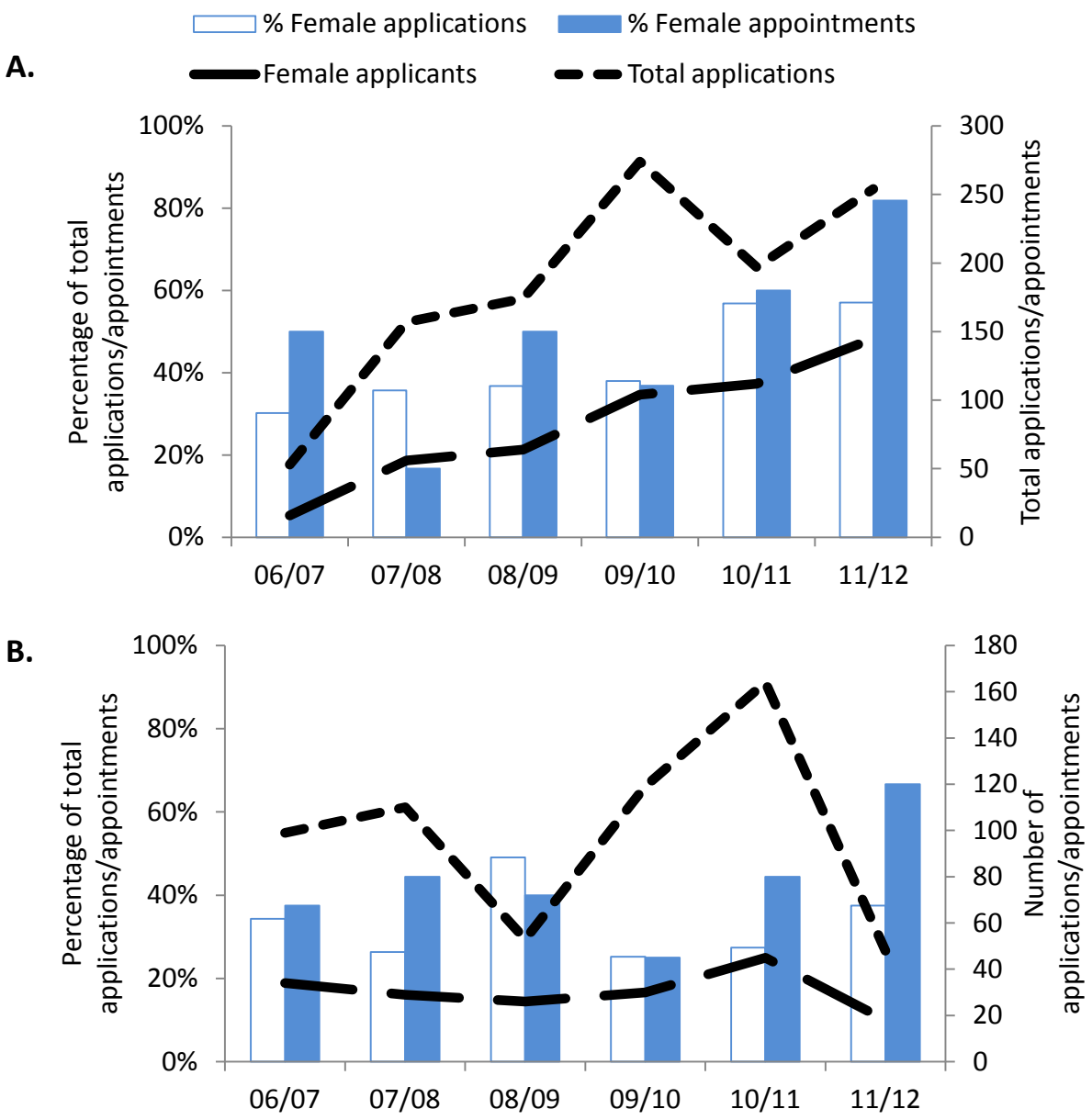


Figure 12. Percentage success rate of job application by gender for A) Research Staff and B) Academic Staff from 2006-2012.

(ii) **Applications for promotion and success rates by gender and grade**.

No inequalities in the promotion process were identified in our 2009 Silver Award application, as comparable promotion rates were reported for women and men and no gender pay gap existed within Academic pay grades. However, our Silver Award application did note under-representation of women in senior management roles (**Action Plan, Theme 2**) and, as promotion is largely a self-driven process and our School has a relatively high number of junior staff, it was thought appropriate to encourage full female engagement with promotion early in Academic Staff careers, in the hope that this will redress the under-representation of women as Staff cohorts progress over the next 10-15 years. Accordingly, six Actions were set in place to encourage self-reflection and the engagement of both male and female staff with the promotion process (equivalent to **Actions 2.1, 2.3-2.4, and 2.6-2.8** in the current Action plan).

As with the Actions in Section A(i), above, we are pleased with the trends that we have seen in the

three years since Actions were introduced; promotion rates at all grades remain comparable for men and women, which bodes well for the future composition of the School's Academic Staff, and there is parity in the identification of candidates for early promotion (**New Action 2.2**).

Action: Again, the Actions from our Silver Award are being renewed and two new Actions are being set in place: **Action 2.2** will encourage equality in applications for early confirmation in post and **Action 2.5** will provide opportunities for eligible women to work-shadow senior University management, ensuring that men and women maintain equal momentum as their careers progress. These are discussed in more detail in Section A b)(ii), below.

a) For each of the areas below, explain what the key issues are in the department, what steps have been taken to address any imbalances, what success/impact has been achieved so far and what additional steps may be needed.

(i) **Recruitment of staff**.

The data in section A(i), above, show that women are less likely to apply for positions in the School than men, but more likely to be appointed if they do apply. This is, of course, a common pattern seen across the professions, and one which we are addressing in two main ways.

First, this Gold Award application will initiate or maintain a number of Actions intended to increase the number of women applying for Academic positions, as follows:

1. (**Action 1.4**) To encourage more women to apply, the Athena SWAN logo will continue to be incorporated into all recruitment advertisements and is prominently displayed on the School homepage (the only other logo on the School's homepage is the University's own). Anecdotal evidence (= discussions with appointees) suggests that this is an important early indicator of the School's culture and supportive approach to female staff.

2. (**Action 1.3**) Similarly, we are increasing the visibility of women and families in all promotional and internet material produced by the School (e.g. Fig. 13; see also Section 4C 'Organisation and Culture', below). Again, this helps to normalise family life and encourages Staff to strike productive work-life balances (see Case studies, Section 7 below)

3. (**Action 1.5**) To highlight the contributions that women make to our School, designated contacts for Lectureship enquiries are female, when possible.

4. (**Action 1.1** and **New Action 1.7**) To reduce the competitive nature of job applications, we are stressing that Academic positions will be collegial and advertise vacancies (so far as possible) in groups of at least two lectureships to allow couples to apply. This is an explicit measure to mitigate what the SBS-SAT has identified as the main deterrent to female applicants for Academic posts in Northern Ireland: the majority of applicants for academic posts come from Britain or abroad and females are differentially affected by mobility issues (e.g. partner's employment or family responsibilities including care of elderly and children). This new Action has already proven successful: during our recent hire for Academic staff in Global Food Security, the Lectureships and Chairs were advertised together, emphasis was placed on the teamwork that would be required (Fig. 13), and the resulting hire recruited four candidates, including one male-female couple.

Second, this Gold award application will strengthen our School's commitment to equality of opportunity at interviews. In addition to QUB measures, our School interview processes include the following further safeguards against unconscious gender bias:

1. A set of core questions is agreed beforehand by members of the interview panel.
2. (**Action 1.1**) Candidates are offered the chance to demonstrate an aptitude for collegial work, as per the Action Plan.

Figure 13. An example of a recent advertisement brochure for multiple hires (QUB Global Food Security campaign). Emphasis is placed on teamwork and male and female staff are represented in equal numbers, including the School's Senior Marie Curie Fellow, Nitsara Karoonuthaisiri, who was awarded the L'Oreal Women in Science Thailand prize in 2009.

(ii) **Support for staff at key career transition points**.

Our data (Section A(ii), above) show that women are less likely to apply for Academic positions within the School, and less likely to fill senior Academic positions. We have, therefore, focused on these two key career transition points in creating career development programmes for our own staff.

Improving support at the Research Staff-to-Academic Staff transition (Action 3.1). Members of the SBS-SAT have worked closely with the UK Research Staff community to establish a Postdoctoral Forum on both of the School's sites. One member of the SBS-SAT team(JB) is a co-author of the RCUK Concordat to Support the Early Career Development of researchers and sat on the External Advisory Board of Vitae during 2007-2012; another member (our original postdoctoral representative) has become closely involved with this work both within QUB and at national level, giving the first SWAN seminar at the Sanger Institute in Cambridge.

Collaborations between SBS-SAT staff resulted in the establishment of a Postdoctoral Forum in 2010, intended to provide relevant and informative information to aid the career and personal development of all Postdoctoral staff working in the School (all Forum committee Chairs and Co-Chairs past and present have been female members of staff). The Forum is viewed as a platform to promote opportunities for career advancement, networking, social interaction and general support, as well as providing a voice for all Postdoctoral Staff within the School.

Feedback from an anonymous questionnaire sent out by the Forum to all Postdoctoral staff was used to provide an informed framework, to ensure its aims and objectives meet the needs and expectations of the Postdoctoral community at large within the School. Throughout the coming year the School's Postdoctoral Forum will directly aim sessions at providing research staff with pertinent career information and support, and as such, three workshops are running over the coming year, 'Grants and Fellowships' (Nov 2012), 'REF, Citations and Research Output' (Jan 2013) and 'Career Management – The How to Guide' (March 2013). Many key members of staff will be speaking at the workshops including both Directors of Research, the current female Head of School, and in the case of the Grants and Fellowship workshop two female members of staff will be talking about their successful Research Council Grant and Fellowship applications.

To help with personal development, noted career coach, Niamh Shiells, gave a session (Nov 2012) specifically targeted at helping women in science with career progression. An initial focus group will help female Postdoctoral staff identify barriers for women progressing in their scientific careers, which will be followed by a number of small group coaching/training initiatives to help overcome current and future barriers that will have to be faced. To ensure further visibility of the Forum within the School a reception has been held (Nov 2012).

Improving support at the Junior-to-Senior Academic Staff transition (Action 2.5). Eligible members of staff are actively contacted about opportunities to gain promotion-relevant experience; as an example, eligible members of staff are invited to sit on the School Management Board to gain administrative experience. In this context, it is particularly pleasing to note the results of **Action 2.4** (= encouragement of mentoring), with half of our eligible female staff taking up mentoring opportunities through the Queen's Gender Initiative and, in so doing, developing the female leadership and role models that our School will need in years to come. A new initiative for this Gold Award application (**Action 2.5**) will offer work shadowing of university senior staff by women in academic positions to help women understand senior management roles in QUB and encourage applications for academic management positions; we aim for at least one female to take up this offer in each of the next three years.

B) Career development

Our 2009 Silver Award application specified a total of seven actions to foster career development (**Actions 3.1-3.4, 3.6-3.8**). This Gold application considers equality of opportunity more broadly, in line with the recommendations of the RCUK Concordat to Support the Career Development of Researchers, and drawing on reviews and reports by the Equality Challenge Unit and initiatives such as Vitae's 'Every Researcher Counts'.

a) For each of the areas below, explain what the key issues are in the department, what steps have been taken to address any imbalances, what success/impact has been achieved so far and what additional steps may be needed.

(i) **Promotion and career development.**

Our 2009 Silver Award application identified Research Staff and postgraduate career support as priorities and introduced several Actions to improve the School's provision of this support (**Actions 3.1-3.4, 3.6-3.8).** The overall focus of these Actions was to foster independence and the development of individual research directions for those of our Research Staff hoping for an academic career.

Results have been encouraging: women are actively encouraged to apply for Fellowships and external awards (**Action 3.6**) and a number of our female Research Staff have been successful in securing their own funding. Senior Marie Curie Fellow Nitsara Karoonuthaisiri was awarded the L'Oreal Women in Science Thailand prize in 2009, Research Fellow Linda Stewart was one of the five finalists in the 2012 UK L'Oreal Women in Science scheme, and Research Fellow Pamela Walsh was awarded the London Materials Society's 2012 June Wilson award, as well as attracting her own Marie Curie Fellowship. Further applications were submitted by female staff to the Royal Society URF scheme, the NERC Fellowship scheme (candidate was shortlisted), and the Leverhulme Early Career Fellowship scheme; although these were unsuccessful, the staff involved have indicated that the application process has given them the confidence to try again in future years and an appreciation of the nature of Academic career progression (Actions 3.1 and 3.8).

Action: The SBS-SAT are encouraged by the new momentum that our Silver Award Actions have given to female Research Staff. However, we realise that there is a danger that Academic careers receive too much kudos within our School at the expense of other, equally valuable, STEM careers. Accordingly, this Gold award application understands that not all Researchers need, or want, to follow an Academic Career (**Action 3.7**) and our renewed Actions (**Actions 3.4 and 3.7**) therefore focus on an awareness of transferable skills and the value of other STEM careers. To this end, SBS-SAT staff have encouraged and supported the establishment of the School Postdoctoral Forum (see Section 4b)(ii), above); the development of this Forum, and the improvement of non-Academic Career Development pathways for all Research Staff, will be a major focus of Equality Actions for the next three years.

(ii) **Induction and training.**

As described in our Silver Award application, a range of training and mentoring programmes exist across the University to help new Research and Academic Staff develop key skills, and the strong employment prospects of our Staff testify to the general effectiveness of these programmes.

Nonetheless, our School supplements these with targeted events that are particularly appropriate to biologists and to early career staff. All contract research staff are members of the School's new Postdoctoral Forum and are encouraged to attend regular meeting and workshops; our School spans three distinct sites, so Forum activities often serve to link Staff across these sites. New Research Staff attend an annual reception organised by the Postdoctoral Forum, which provides an ideal setting for interactions between Postdoctoral staff from across the entire school for both general discussion and inter-cluster networking. The reception also provides members with the opportunity to network with academic staff, allowing them to discuss research/grant opportunities with interested parties from both of the School's research clusters. This is then followed up by regular postings to the new Research Staff portal on the School's website, which provides useful information on a wide range of postdoctoral needs and reflects the many and varied challenges of research. The webpage is updated to provide current Grant and Fellowship information, including a special section highlighting grants directly aimed at encouraging women to stay in/come back into science.

To support increased awareness of funding opportunities for Research Staff, members of the School's Academic Staff hold regular grant writing workshops, to which Academic Staff with Review Panel experience are particularly encouraged to contribute. As an example, two SBS-SAT members (Alan Trudgett and Christine Maggs) have been evaluators for the L'Oreal Women in Science scheme, and their involvement has encouraged female Research Staff to apply for these awards (cf. Section 4B a)(i), above).

Action: The creation of the School Postdoctoral Forum is a major step towards creating a culture in which Early Career Staff development is given priority and importance, its support will form a significant part of SBS-SAT activity over the next three years, and we have renewed our Silver Award actions as appropriate. However, and in accordance with recommendations from Vitae's 'Every Researcher Counts' programme, we realise that Research Staff cannot drive institutional change on their own. Accordingly, we have introduced a new Action (**Action 3.5**), which aims to develop PI awareness of Research Staff Career development needs, so that Research Staff-driven initiatives are supported by Management all the way up the School administrative structure. Importantly, **Action 3.5** will also develop managerial awareness in new members of Academic Staff (50% of whom are women), and will link with **Action 2.5** (cf. Section 4A b)(ii), above) in encouraging female staff to engage with Managerial responsibilities.

(iii) **Support for female students**.

Our 2009 Silver Award application supported postgraduate students (**Action 3.3**), with representation on the School Board and a dedicated Postgraduate Week set in place to clarify the pros and cons of Research and Academic careers. Given the well publicised findings of the Royal Society of Chemistry on retention of female PhD holders, and the follow-up study by the Biochemical Society on retention of Molecular Bioscience PhD holders, interest in Postgraduate Week is always high, with extra sessions requested for the talk on 'Juggling an academic career with a family', and the SBS-SAT is pleased with the increasing integration of Postgraduate students with Research and Academic Staff.

Accordingly, while renewing our Actions for postgraduate student support, this Gold Award application aims to more fully embed Equality measures into our Undergraduate support. The School has successfully introduced a Personal Tutor scheme for all undergraduates; contributions to this scheme are embedded into Level 1 syllabus and staff contributions are recognised accordingly (**Action 2.7**). At undergraduate level, increasing emphasis is given to catering for, and assessing, different learning styles, as well as to improving the visibility of female role models within lectures. This focus on more inclusive teaching has seen one of our SBS-SAT (John Bothwell) awarded a QUB Teaching Prize, the first individual teaching award in our School.

Action: The SBS-SAT considers that the most effective way to improve support for female students is to normalise the contributions of female scientists (cf. Section 4C b)(iv), below) and to recognise and reward Academic Staff contributions to postgraduate and undergraduate support (**Action 2.7**).

C) Organisation and culture

Our 2009 Silver Award application stressed the School's inclusive atmosphere and set in place explicit Actions to raise the profile of women within the School (**Actions 1.3 and 2.8**). Our Gold aim is to actively now address residual unconscious bias and to foster 'Equality with quality' by clearly demonstrating that our Silver Actions have been accompanied by an improvement in more traditional, REF-targeted, metrics.

a) *Provide data for the past five years (where possible with clearly labelled graphical illustrations) on the following with commentary on their significance, how they have affected action planning, and any improvements since the department's Silver award.*

(i) **Male and female representation on committees**.

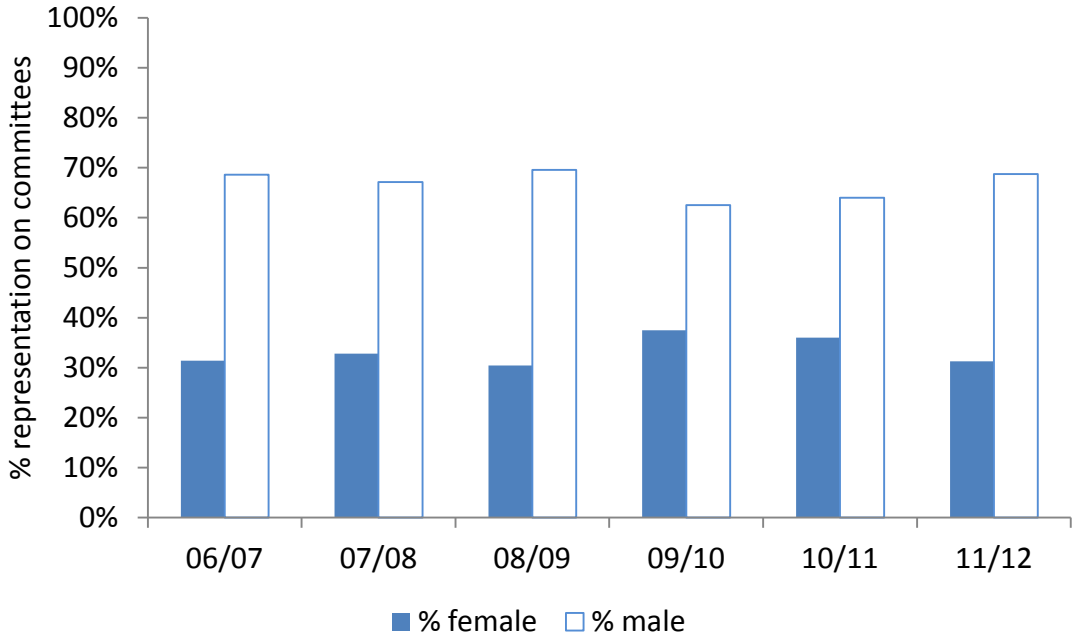
Our 2009 Silver Award application noted that more men than women sit on committees (Fig. 14A), and that this reflects the disproportionate numbers of men in senior posts. However, we also noted that this was expected to change as younger female Academic Staff progressed and, although parity has not yet been reached[16] (Fig. 14A), women now sit on every class of school committee: the School Management Board, the Education Committee, Promotion Panels, Safety committees, the School Student Support Committee, the Undergraduate/Staff Student Consultative Committee, the School Student Progress committee and, of course, the School Swan Athena Self Assessment Team.

However, there is a downside to this improvement, which is that levels of female representation on committees (average of 33% over 2006-2012) are higher than the proportion of female academic staff in the school as a whole for the same period (28%), so that, in order to achieve improved representation, a greater percentage of female staff must sit on committees (Fig. 14B). From 2006-2012, therefore, 89% of all female academic staff were on decision-making committees, compared to 64% of males; this runs the risk of overburdening individual women with administrative responsibilities.

Action: Over the next three years, we will monitor for both representation (aiming for eventual parity, as we do with overall Staff proportions), but also for overburdening (so that no individual is made to represent too broad a constituency). This will be done by incorporating committee work into the School's Work Allocation Model (**Actions 2.6-2.7**), by paying particular attention to representation on the School Management Board - the key decision making body of the School – and by encouraging female engagement with Leadership posts through senior management shadowing (**Action 2.5**).

[16] Chi-square test, $X^2 = 12.69$, df = 1, $P < 0.01$.

A.



B.

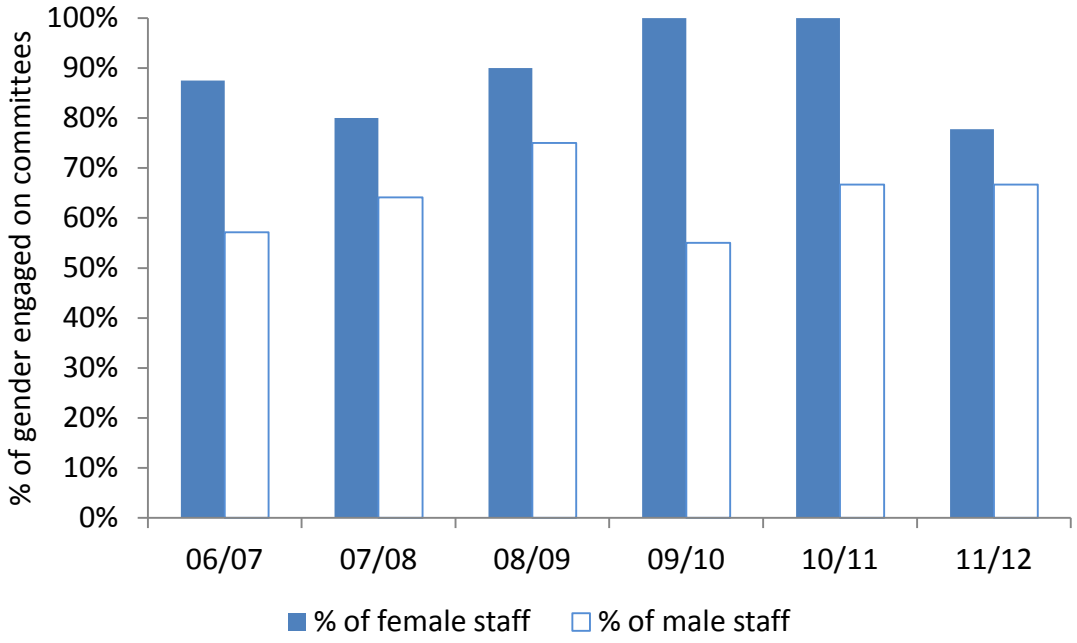


Figure 14. A) Percentage representation of females and males on key decision-making committees in SBS from 2006-2012 and B) percentage of total staff on committees by gender

(ii) **Female:male ratio of academic and research staff on fixed-term contracts and open-ended (permanent) contracts**.

The 2006-2009 ratio of women on fixed-term vs. permanent contracts (roughly 2:1; Fig. 15) was significantly higher[17] than for men (roughly 1:1; Fig. 15) and was raised as a point of concern in 2009. Accordingly, our Silver Award application prioritised increasing the progression of women from fixed-term to permanent positions through Actions aimed at both attracting more female applicants and developing our own Research Staff (cf. Section 4A and 4B, above).

It is, therefore, extremely encouraging to report that, over the past three years, the ratio of women on fixed-term:permanent contracts has converged on that of the males[18] and is now around 1.3 (Fig. 15).

Action: As discussed in Sections 4A and 4B, above, we are renewing our Silver Actions and adding New Actions to continue to encourage both external and internal female applicants for permanent posts.

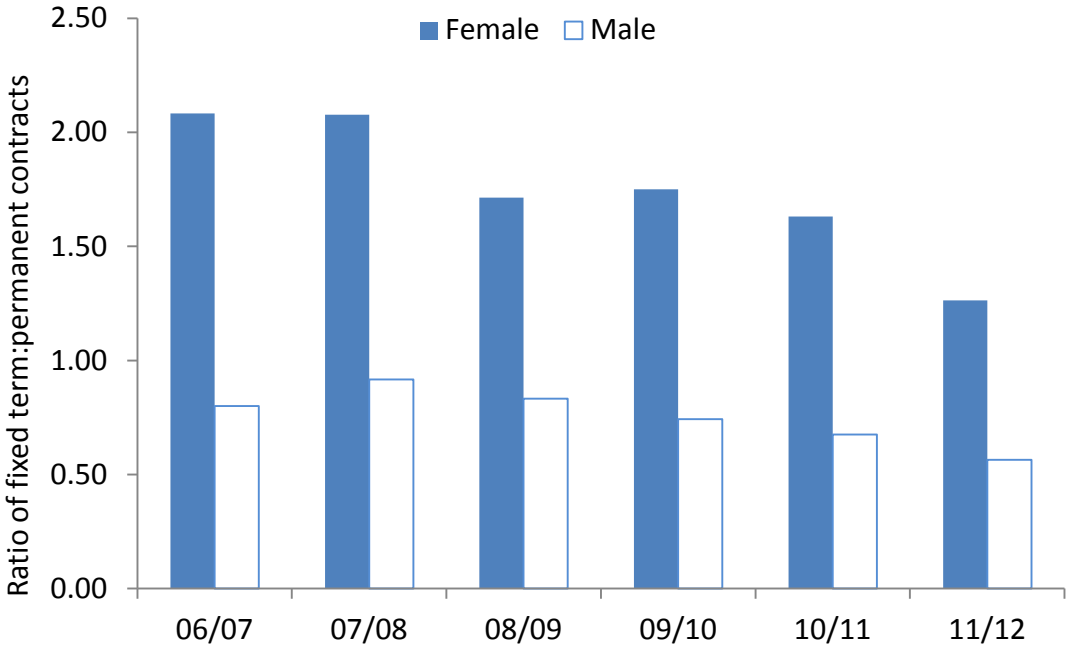


Figure 15: Ratios of fixed term:permanent contracts for females (blue) and males (white) in SBS for the period 2006-2012.

[17] Chi-square test, $X^2 = 4.0$, df = 1, P = 0.04.
[18] T-test, t = -5.48, df = 4, P < 0.01.

b) For each of the areas below, explain what the key issues are in the department, what steps have been taken to address any imbalances, what success/impact has been achieved so far and what additional steps may be needed.

(i) **Representation on decision-making committees.**

Our approach to rectifying gender imbalances on decision-making committees has been driven by the data in Section C A)(ii), above. Since our 2009 report, the Head of School has proactively reviewed the gender balance of all policy and decision-making committees and this has resulted in substantial increases in their female academic membership. To maximise the impact of female staff, eligible women are particularly encouraged to join the School Management Board; as the School's major decision-making body, its gender balance sets a strong precedent.

Specifically, in 2010 the Head of School co-opted one female (Irene Grant) to sit on the SMB and give the recommended 'critical mass' of three women on management boards. Following Dr Grant's promotion to Senior Lecturer, a second woman (Moira Dean) was co-opted.

This proactivity is, however, balanced by the School policy of not overburdening staff with responsibilities to multiple committees and the current 41% representation of females on committees compares reasonably to the 28% of the staff who are female. As the proportion of female staff continues to increase, equal representation will eventually be achieved.

Action: As in C A)(i), above, the SBS-SAT will continue to ensure that committee membership is recognised in probation and promotion reviews and that committee work is monitored through the School's new Work Allocation Model (WAM).

(ii) **Workload model**.

As part of the School's focus on making QUB a productive, friendly, and enjoyable place to work, a WAM was developed during 2012. Actual contact hours were determined by survey over two academic years at the outset, and will be confirmed year-on-year by automated data collection from the module timetables. The model was reviewed by Deloitte, during the University's internal audit of its operation plan, and was determined to be transparent.

The WAM assesses the volume of work for all major teaching and administration tasks, with appropriate adjustments made for variables such as class sizes. Its goal is to evenly distribute teaching and administrative work among School Staff and to allow each Academic an average of at least two research days a week, based on a 1620 hour year. Research time is not accounted for by the WAM (we leave that to the REF!) and, while undergraduate and Masters thesis project supervision is included, PhD supervision is not, as PhD students are regarded as research assets. Our analysis (Fig. 16) indicates that men and women have broadly equivalent workloads in each category of teaching and administration, with some minor differences.

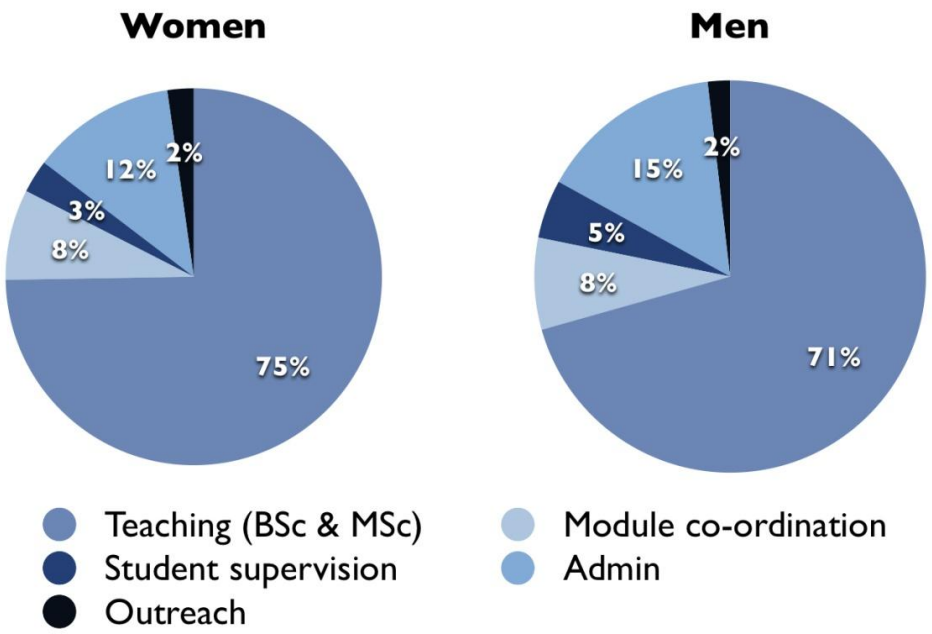


Figure 16. Workload allocation of teaching and administration tasks for women and men in SBS, showing relative time spent, averaged over two academic years

Action: We aim for parity in both total workloads and in workload division; this will be closely monitored using the automated reporting system that will be introduced over 2012-2013. We also appreciate that individual workloads may deviate significantly from average values and will work to ensure that individual variations are nonetheless recognised appropriately in considerations for promotion (**Action 2.7**).

(iii) **Timing of departmental meetings and social gatherings**

In our 2009 Silver Award application, we moved key School meetings within core hours (10 am to 4 pm), Monday-Thursday, leaving Fridays free to help staff with family responsibilities. The School operates within wider changes in the structure of society and, to reflect the shift in most professions from socializing at work to socializing at home, we have now also moved the majority of social events to sit inside family-friendly hours, with the School's main weekly social event being coffee and cake on Thursday morning.

(iv) **Culture**.

For all its faults, Higher Education is relatively aware of gender issues; unconscious bias remains, however, and can be displayed by both men and women to the detriment of both. Accordingly, this Gold Award application makes the normalization of both female scientists, and of female approaches to science, a priority (**New Action 2.9**). This is done in four main ways:

First, we have raised the visibility of active female scientists by carefully considering the gender balance of our invited speakers; women now make up 30-40% of our invited speakers, and span all career stages from PhD to FRS (**Action 2.9**).

Second, the School produces a monthly newsletter (SBS News http://www.qub.ac.uk/schools/SchoolofBiologicalSciences/SBSNews/; Fig. 17), which mixes personal and professional information to improve collegiality. Staff are encouraged to submit items and, as Figure 17 shows, equal weight is given to the birth of a Nature paper (by a female staff member) and the latest School baby (to a male staff member).

School of Biological Sciences NEWS

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Contributions to:

sbsnews@qub.ac.uk

SBS papers in press

Harley S, More SJ, O'Connell NE, Hanlon A, Teixeira D, Boyle L. **Evaluating the prevalence of tail-biting and carcass condemnations in slaughter pigs in the Republic and Northern Ireland and the potential of abattoir meat inspection as a welfare surveillance tool.** Veterinary Record.

Thorup K, Ortvad T, Holland R, Rabol J, Kristensen M, Wikelski M. **Orientation of vagrant birds on the Faroe Islands in the Atlantic Ocean.** Journal of Ornithology.

Hart KM, Oppenheimer SF, Moran BW, Allen CCR, Kouloumbos V, Barron L, Simpson AJ,. Kulakov LA, Kelleher B **CO_2 uptake by a soil microcosm.** Soil Biology & Biochemistry

Mahaney B, Fahey B, Allen CCR, Milner M, Bray D. **Coprolites from the Cretaceous Bearpaw formation of Saskatchewan.** Cretaceous Research.

Nature paper suggests a "missing link" in mollusc biology discovered

Julia Sigwart and colleagues recently published a paper in Nature (3 Oct) on molluscan phylogeny, describing a new "missing link" fossil. The fossil *Kulindroplax* is a chiton-like mollusc from the Silurian (425 million years ago), which has shell valves like a chiton, but a worm like body and no foot. A phylogenetic analysis incorporating this new fossil shows that modern worm-like aplacophoran molluscs are secondarily derived from chitons.

The study was led by Dr Mark Sutton, from the Department of Earth Science and Engineering at Imperial College London, in conjunction with researchers from the Universities of Oxford, Leicester, Yale and Queen's University Belfast.

Dr Sutton says: "Most people don't realise that molluscs, which have been around for hundreds of millions of years, are an extremely rich and diverse branch of life on Earth.

Just as tracing a long lost uncle is important for developing a more complete family tree, unearthing this extremely rare and ancient *Kulindroplax* fossil is helping us to understand the relationship between two mollusc groups, which is also helping us to understand how molluscs have evolved on Earth."

New marine society

A new marine biology society has been formed this year at Queen's. We will be running activities such as trips to the beach, bringing in guest speakers, boat trips, cetaceans surveys, pub quizes etc. We hope to provide students with a more active role working in the marine environment and further develop skills and knowledge learnt in their degree, whilst also having a bit of fun!

This society will be open to any student from any degree and we also offer public membership. If you are interested or want to find out more please email: pmayo01@qub.ac.uk.

Alexander ME, Dick JTA, O'Connor N, Haddaway N, Farnsworth K. **The predatory role of amphipod crustaceans on the rocky shore: functional responses of *Echinogammarus marinus*.** Marine Ecology Progress Series.

Alexander ME, Dick JTA, O'Connor N. **Born to kill: predatory functional responses of the littoral amphipod *Echinogammarus marinus* Leach throughout its life history.** Journal of Experimental Marine Biology and Ecology.

Jennings DJ, Elwood RW, Carlin CM, Hayden TJ, Gammell MP. **Vocal rate as an assessment process during fallow deer contests.** Behavioural Processes

Elwood RW, Arnott G. **Understanding how animals fight with Lloyd Morgan's canon.** Animal Behaviour

Magee B, Elwood RW. **Shock avoidance by discrimination learning in the shore crab (*Carcinus maenas*) is consistent with a key criterion for pain.** Journal of Experimental Biology

Hallsworth JE, Timson DJ. **A universal measure of chaotropicity and kosmotropicity.** Environmental Microbiology

Orr R, Kinkead R, Newman R, Anderson L, Hoey EM, Trudgett A, Timson DJ. **FhCaBP4: a *Fasciola hepatica* calcium binding protein with EF-hand and dynein light chain domains.** Parasitology Research.

Russell SL, McFerran NV, Moore CM, Tsang Y, Hoey EM, Trudgett A, Timson DJ **A novel calmodulin-like protein from the liver fluke, *Fasciola hepatica*.** Biochimie.

Baby news

Chris Harrod and Cristina Dorador's baby is Henry Arthur Harrod Dorador; he was born in Chile on 11.10.12 and weighed 3.83 kg. Mum is in great shape and dad is searching for the instruction manual!

Shellfish knowledge transfer workshop

The Marine Lab held the first IBIS Knowledge Transfer Workshop at the Exploris Aquarium in Portaferry from 13-14 September 2012. The theme was Shellfish Regulation and Management with sessions focusing on oysters, mussels and lobsters. Derek Anderson, Chief Executive of the Loughs Agency welcomed everyone to the workshop and Dr Erin Owen from Husson University, USA gave the keynote speech on building a sustainable inshore scallop fishery in Maine. There were further contributions from shellfish producers, the Aquaculture Initiative, DARDNI, AFBI, the Irish Sea Fisheries Board (Bord Iascaigh Mhara (BIM), Loughs Agency, University College Cork, University College Dublin and QUB.

The IBIS project's PhD and Masters students also gave poster presentations of their work. Over 65 people attended from the island of Ireland and Scotland.

NASA recognition

John Hallsworth's recent work on new stress-mechanisms and stress-parameters that limit cellular and biosphere function has received some recognition from NASA, the European Space Agency, and the International Council for Science *Committee on Space Research* (COSPAR). This included an invitation from NASA's Astrobiology Program Director as a Featured Speaker in the 'Limits to Microbial Life' session of the ASM Annual General Meeting (San Francisco, summer 2012).
COSPAR used John's earlier studies in their policy document to designate the 'Special Regions' of Mars where cellular function would be plausible (*Advances in Space Research* [2010] 46:811-829); NASA also invited JEH to a closed meeting of 35 scientists in San Diego (earlier in 2012) to produce a policy document on 'Life Detection in Mars samples' (www/planetaryprotection.nasa.gov/lifedetection2012) that will be retrieved in a future NASA-ESA mission.

Lecture announced

The UIG committee are pleased to announce the forthcoming annual Isla Halliday Lecture:
Prof Veronique Witko-Sarsat, Research Director INSERM, Institut Cochin, will give a talk entitled "New players in the control of neutrophil apoptosis to regulate inflammation" at 12 pm on Thursday 29th November 2012. Venue: Seminar room 2, Ground floor Health Sciences Building, QUB.
The talk will be preceded by the Annual General Meeting at 11am and followed by a reception at 1pm.

The complete UIG seminar programme may be viewed through the UIG website, via the following link:
http://www.uig.org.uk/meetings

Figure 17: The most recent issue of the School newsletter.

Third, our School is moving to a new, single, site in 2016, and the plans of this new building will be designed to encourage communication between School clusters, and collegiality between Research and Academic Staff.

Fourth, and finally, School space is given over and staff and students are encouraged to contribute to gender-specific charity initiatives or celebrations, with recent drives to promote Breast Cancer Awareness month, Movember, and Ada Lovelace Day.

Figure 18: Thursday coffee morning during Movember (several mo's are visible, some edible!).

(v) **Outreach activities**.

Female staff traditionally contribute more to outreach activities than male staff, but these activities can run the risk of being undervalued, despite the tremendous reputational benefit that they bring QUB. Accordingly, and as detailed in Section b)(ii), above, we monitor workloads for overburdening and ensure that contributions are acknowledged (**Action 2.7**).

D) Flexibility and managing career breaks

a) Provide data for the past five years (where possible with clearly labelled graphical illustrations) on the following with commentary on their significance, how they have affected action planning, and any improvements since the department's Silver award.

(i) **Maternity return rate**.

From 2006-2012, a total of five academic and three research staff took maternity leave and returned. Maternity return rate is therefore 100% for this period.

In 2011/12 one woman returned from maternity leave and took up the newly announced opportunity to have no teaching for 6 months, as she wished to concentrate on her new Research Council grant.

(ii) **Paternity, adoption and parental leave uptake**.

From 2009 a total of five academic staff have taken paternity leave. No staff have taken adoption leave, and we are not aware of any staff adopting. We do not have information on how many research staff were eligible for but did not apply for leave, and therefore cannot comment on uptake rates.

(iii) **Numbers of applications and success rates for flexible working by gender and grade.**

Within the last five years two academic staff, both female, have applied for flexible working, and both were fully supported by the School. One other researcher who had previously negotiated flexible working continued on it through the reporting period, and increased her work hours as her children are more independent.

b) For each of the areas below, explain what the key issues are in the department, what steps have been taken to address any imbalances, what success/impact has been achieved so far and what additional steps may be needed.

(i) **Flexible working**.

In general, flexible working is not an issue for our staff because work hours are not fixed, and many academics can work from home when they choose to. Nevertheless, staff who have shown an interest in flexible working have been encouraged to take this opportunity, without impact on their careers. REF has explicitly addressed part-time working with reduced outputs, which reduces the pressure on staff to work full-time.

(ii) **Cover for maternity and adoption leave and support on return**.

A central maternity fund has been created by the University to provide assistance to departments and schools to ensure that the essential work of all members of staff who take maternity leave is covered and that women can enjoy anxiety-free leave. The School has committed to a policy that staff returning from maternity leave should be offered a period of 6 months with no teaching after their return. This offer is intended to offer flexibility and to encourage returning staff to focus on their research. The Head of School meets with staff when she is notified of their requirement for maternity leave, to offer this 6 months of non-teaching time and to discuss any additional support (e.g. flexible working, research assistance) that they might require preparing for their maternity cover, and transitioning back to work. The Head of School and Director of Education are responsible for re-organising the administrative and teaching load of the member of staff. The member of staff is responsible for delegation of their research responsibilities as far as possible, but the School has been able to offer some research support (e.g. has hired research assistants) depending on the nature of the challenges faced.

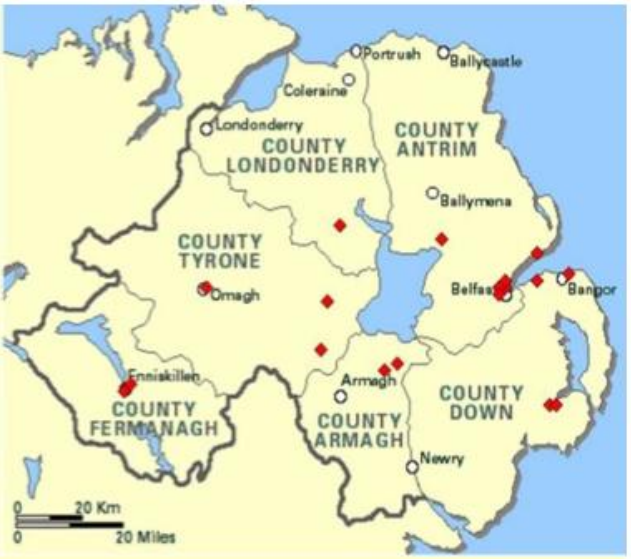
The School covers the costs of maternity leave for research staff whose research grants do not provide maternity cover.

5. Any other comments: maximum 500 words

The proportion of females on our undergraduate courses is over 50%, and we make every effort to encourage applications from both female and male school students. Academic staff visit schools all over Northern Ireland (see figure) to give scientific talks and attend careers days. We also have a very active work placement/work shadowing scheme for school students visiting SBS, and monitor their gender balance. Over the last three years, 50% of the placements (47 school students) were female.

UPDATE - Talks for Schools

The "Talks for Schools" program this year saw a total of 34 biology talks being presented by SBS staff to pupils at 19 secondary schools & Colleges of Further Education across Northern Ireland (right, locations in red) between October 2010 and April 2011. Sixteen SBS staff members were involved, some undertaking up to five visits each. Organiser **Irene Grant** thanks everyone who volunteered a talk title at the outset – especially those who undertook outreach/promotional activity in local schools. The fruit of our labours will hopefully be forthcoming through undergraduate applications.



6. Action plan

Provide an action plan as an appendix. An action plan template is available on the Athena SWAN website.

This should be a table or a spreadsheet comprising plans to address the priorities identified by the analysis of relevant data presented in this application, success/outcome measures, the post holder responsible for each action and a timeline for completion. The Plan should cover current initiatives and your aspirations **for the next three years**.

See Appendix 1.

7. Case study: impacting on individuals. 1491 words (maximum 1500).

Dr Angela Mousley is a full-time Lecturer in Parasitology in the School of Biological Sciences. She was appointed in January 2007 following a 5-year period as a Postdoctoral Research Fellow at QUB. She completed both her undergraduate (1998) and postgraduate studies (2001) in the School. Since her appointment as a lecturer she has had one period of maternity leave (February 2011-September 2011). Her husband is also a full-time member of staff in the University.

Angela says:

"As an ambitious young female scientist I appreciate the support that I have received from the School of Biological Sciences at key transition points in my career. I was mentored under the Queen's Gender Initiative mentoring scheme at the beginning of my academic career, and by both male and female senior members of academic staff in the School of Biological Sciences, and I have greatly benefitted from their advice and positive attitude. Since my return from maternity leave a supportive package, without teaching and administration for six months, has provided me with more flexibility in scheduling my working hours and with the support and time to boost my research profile, as well as providing care for my young baby. I am currently the PI and CI on several Research Council / industrial funded grants including a 4-year BBSRC-funded project that employs a female PDRA who has also made the transition from QUB PhD student; this PDRA is currently on a maternity leave period and her post is being covered by the Central Maternity Fund.

Whilst I do not necessarily see myself as a role model for other young female scientists who wish to combine motherhood with an academic career, I am often approached by female undergraduates and postgraduates for career advice. I am keen to promote STEM subject careers to young females and am a registered UK STEM ambassador who regularly participates in outreach activities at local secondary level schools. I have applied for academic promotion in the 2012/13 round."

Dr Chris Harrod was appointed as a Lecturer at QUB in 2007, and was confirmed in post in 2010. He has a BSc from Manchester Metropolitan University and DPhil from the University of Ulster. He has worked in industry (Senior Environmental Consultant) and the Environment Agency (Area Fisheries Scientist). He completed Postdoctoral Research Fellowships at the National University of Ireland, Galway, and the Max Planck Institute for Limnology. His partner is an academic and Chilean national. He currently lives in Chile with his partner, where he has recently become a father. Chris is a member of the school Athena SWAN Self Assessment Team.

Chris says:

"I am from a large family (four sisters and two brothers), where gender equality was a reality, not driven by a political stance, but where each individual was expected to fulfil their potential. This has underpinned my personal attitude to life and I have always expected, and pushed for, equality in both work and personal life. Thus, it was quite a shock as an early career scientist to see just how biased things were against female colleagues and friends, many of whom had to compromise promising research and teaching careers in order to combine a family and career aspirations. Whilst working at QUB, I became aware of the real benefits of working in a balanced group as part of the SWAN team that successfully attained a Silver SWAN award in 2009.

When I became a Lecturer in 2007 my partner, Dr Cristina Dorador, a Chilean national also left the Max Planck to take a position in Chile. For the next four years we maintained a long distance relationship. During this period, although I successfully gained funding that allowed me to visit and undertake research in Chile, it became apparent that we were in the 'two-body' problem, a

situation that many scientific couples find themselves in: one where the couple either separate, or a female scientist typically moves to be with the male, stopping or putting their career on hold. Cristina is an Assistant Professor at the Universidad de Antofagasta in Chile, extremely successful in terms of research income, international and national profile, and has a large and active research group. After frank (and extremely supportive) discussions with my previous and current Head of School, and an advisor from the QUB Personnel Department, options ranging from an unpaid career break through to secondment were identified. I applied and won funding to cover a three year visiting professorship from the Chilean Government under their Conicyt MEL scheme to work at Universidad de Antofagasta between 2011-2014, which was supported by the HoS and the University administration. Importantly, I was retained at QUB at 0.1 FTE, allowing me to maintain my position, laboratory, office and research group. I have been able to continue to supervise PhD students via telephone, email and Skype etc., as well as undertaking postgraduate teaching in Belfast during visits. This has been essential to maintain my profile within the UK and has allowed me to concentrate on my work without worrying about my future.

My research and teaching in Chile have been successful: I have been able to further develop my ideas and approaches for both teaching and research, which will aid activities when we return to the UK. Furthermore, I have been able to link both QUB and Chilean universities in grant applications, and these links will continue to be developed in the future. The switch to living in Chile has been invigorating and extremely successful: our son was recently (October 2012) born, and Cristina is currently on maternity leave. We both recognise that without the support from the SBS and QUB, we would not be able to enjoy this amazing and life-changing addition to our lives.

Colleagues and friends in the UK, Chile and across the World have taken note of the flexibility of the SBS/QUB in supporting our family and careers. As academics across the World face similar challenges, many have commented on the fact that if such an approach was extended across the academic system it would allow female scientists and their partners to fulfil their potential".

Dr Nessa O'Connor was appointed as a full time Lecturer in the School of Biological Sciences in 2010. Prior to this she was a postdoctoral research fellow for five years (including two periods of maternity leave) working at University of North Carolina at Chapel Hill, University College Cork, University of Sydney and University College Dublin.

Nessa says:

"I joined School of Biological Sciences to take up a lectureship when my children were aged 3 and 2 years. The first thing the School did to support my transition was allow me 9 months grace to complete field-work associated with my fellowship. I was then facilitated with a very gradual increase in teaching load for the first three years. This has allowed me to complete on-going research and write grant proposals while establishing a new research team and write lectures.

In addition, the administrative tasks that I have been assigned are largely electronic (e.g. school website updates). This means that I can do the majority of this work from home and at any time. School of Biological Sciences has been understanding of my decision to undertake a substantial commute rather than relocate my family. This means that I benefit enormously from a family support network in addition to childcare facilities, which is hugely helpful when children are unwell or when I have to travel to conferences, meetings or residential field courses. I live in Dublin and find my commuting time on the train extremely productive, and a benefit to the school is that it is convenient for me to undertake Outreach activities distant from Belfast.

I believe flexible working time coupled with regular scheduled meetings is the key to balancing your career. For example, I meet my postgraduate students every Monday and we have fortnightly lab group meetings alternating with a publication discussion group. Other school meetings are scheduled during core working hours which is hugely helpful for me. I also aim to work from home each Friday and when possible Wednesdays too.

I have also benefited from having a keen mentor, who also has a young family and recognises the associated stresses but never fails to encourage me to pursue more ambitious career goals. It also helps me that my partner (an academic in another university) also has flexible working arrangements and his colleagues are understanding of both our careers and family arrangements.

Since joining the School of Biological Sciences I have observed management supporting flexible working patterns and this is very encouraging. My work-life balance is not perfect but I think I am getting better as I find my feet and being confirmed in post recently provided a massive stimulus towards my next set of goals. Although I find the environment at the School of Biological Sciences competitive, as a Mum, I view my career as a marathon not a sprint and I will get there".

Appendix 1. Action plan for gender in School of Biological Sciences

Three themes in recruitment and progression of females in our School that were identified in 2007/8 are addressed by this action plan.

We report the results of a suite of actions in enhancing recruitment and career progression by women and we include future measures of success.
New actions, additional to our 2009 action plan, are highlighted in grey

No.	Description of action (in 2009 action plan unless otherwise indicated)	Action taken already	Further action planned at Nov 2012	Responsibility	Timeline	Success achieved to date and targets for new actions
1	**Theme addressed:** Lack of applications by women for academic positions in the School of Biological Sciences **Target:** increase number and percentage of applications by females **NOTE**: some actions concerning postdocs in our 2009 Action Plan under Theme #1 have been moved to #3 to avoid duplication					
1.1	The "desirables" for posts to include "demonstrated ability to work as a group/in a team/co-operatively" or equivalent phrase. This does not disadvantage male applicants but encourages the appointment of women and more collegial-spirited men. Demonstrated during interview in response to a suitable question and included in scoring criteria	**In 2008/9**: Put into place during recruitment for 6 posts **To 2012**: continued; interview questions included "what does collegiality mean to you?" and "what are the benefits of team-working?"	**Continue action** for all academic appointments	HoS, DRs, appointments panels.	**From 2008/9** recruitment campaign onwards; continual	**From 2009/10** this group of measures has been very successful: there was a marked increase in the proportion of women being recruited. **(Figure 12).**
1.2	Ensure that any breaks for maternity during applicant's career are explicitly and systematically taken into account at shortlisting and interview stages.	**From 2008/9**: Put into place during recruitment for 6 posts and continued	**Continue action** for all academic appointments. **From 2012**: Appointments panels include consideration of periods of additional care-related leave and career breaks	HoS, DRs, Director of IGFS, appointments panels.	**From 2008/9** recruitment campaign onwards; continual	**In 2008/9 and 2010/11** this resulted in bringing female applicants up to a higher position in the rankings. **From 2009/10** explicit consideration of these factors for all applicants by appointments panels raised profile of these issues with senior staff members. **From 2012**: Possible impacts of approved periods of absence to be taken into account by appointments

						panels. **(Figure 12)**
1.3	Make the School more attractive to female applicants by greater visibility of women among existing academic staff	**In 2009** generic university images of academics on School homepage were replaced with real females in different categories of staff. **In 2010** removal of some images due to new QUB web template was rectified. **In 2010** School newsletter **SBS News** was founded and prominently features School females and families. **In 2012** Global Food Security recruitment brochure included 50% female senior staff. Photos of female students were added to image bank.	**From 2013**: Organise additional official photos for staff, research groups, committees and other units within the School. Continue to produce and promote SBS News	School website co-ordinator (Dr Nessa O'Connor); editor SBS News (Dr Chris Allen)	**From 2009**; continual	**From 2009** Female students, researchers, and staff are highly visible in photographs on the website **From May 2011:** Females and families have featured prominently in 5 of 11 issues of the School's SBS News to date. http://www.qub.ac.uk/schools/SchoolofBiologicalSciences/SBSNews/ **2012**: Global Food Security recruitment campaign attracted females: 43% of c. 60 applicants; 67% of 9 shortlisted; 75% of 4 appointments. **Target**: by 2015 aim to have women comprising 50% of *shortlisted* applicants for all posts
1.4	Make the School more attractive to female applicants by publicizing SWAN Silver award on website and job advertisements	**In 2009** added award and documents to School website	**From 2012**: Increase SWAN information and links to new SWAN website on School website – continue to link to postdoc forum, SBS News etc	School website co-ordinator (Dr Nessa O'Connor)	**From 2009**	Discussions with one female appointee (2010) and one interviewee (2012) suggested that the visibility of our SWAN, indicating our commitment to gender equality, had been influential in their decisions to apply and (in one case) accept the offer.
1.5	When possible, the School contacts for advertised positions should be female, and can use the opportunity to emphasize the good quality of life in Ireland, in	**In 2008/9**, put into place during recruitment for 6 posts. **In 2011,**	**Continue action**	HoS, DRs, Director of IAFLU/IGFS	**From 2009**; continual	From 2009/10, there was a marked increase in the proportion of women being recruited. **(Figure 12)**

	particular the excellent education systems and good healthcare.	recruitment of two new posts involved two women (one in each Research Cluster) as contact person.				
1.6	Consider including welcome statement encouraging applications from females as they were under-represented in this category of employment (permitted under Sex Discrimination (NI) Order 1976 (as amended).	Personnel agreed it would be possible to change the welcome statements that accompany job adverts **where appropriate**. Has not been used to date as advertisements have included a range of posts so not justified.	**From 2012:** This will be put into place in future when we advertise professorial positions specifically	HoS, Personnel, Equal Opportunities Unit, QUB Swan Steering Group.	**From 2009**, as appropriate	**In 2009/10**, as chair of the SWAN champions group in QUB, the Biological Sciences champion encouraged other Schools with lower percentages of females to use this measure when appropriate. This measure is being piloted in 2013 in association with HR.
1.7	Advertise academic posts in multiples of at least two positions where possible, to mitigate what we identified in 2009 as the main deterring factor in Northern Ireland. The majority of applicants for academic posts come from Britain or abroad and females are differentially affected by mobility issues (e.g. partner's employment or family responsibilities including care of elderly and children).	**2012**: Success in attracting women applicants to Global Food Security positions (4 posts advertised) suggests that grouping posts is beneficial for women - spousal hire is not policy in QUB but multiple posts give scope for a couple to be hired together. Two other positions were advertised together (in October).	**2012 onwards** To be continued whenever possible; expectation is that we will have at least three opportunities over next three years. This will require changes in university post approval processes.	HoS, DRs, Director of IGFS	**From 2012 onwards**	**2010-12**: Multiple posts enable both members of an academic couple to apply successfully. We have already appointed both members of two couples to separate positions. **October 2012**: Two positions advertised together attracted applicants (two couples each specifically seeking two positions together). **Target**: By 2015 all posts will be advertised in multiples of at least two as a matter of routine.

No	Description of action	Action taken already	Further action planned at Nov 2012	Lead responsibility	Timeline	Success achieved to date and success targets for new actions
2	**Theme addressed:** Under-representation by women at senior academic levels in the School of Biological Sciences **Target:** Double number and percentage of women at AC4/Professor levels					
2.1	Ensure that staff are familiar with the criteria for promotion.	**From 2007/8** staff were made aware of promotion criteria by email and during annual staff appraisals **2012:** Promotion process explained in detail in updated Staff Handbook.	Continue to encourage attendance at QGI promotions seminars. Continue to update staff handbook in line with new procedures and profiles for promotion.	HoS	**2007/8 onwards**; continual. **From 2012/13**: Inclusion of explicit preparation for promotion in appraisal	**2007/8 to date:** 6 of the 7 females at Lecturer grade eligible for promotion (i.e. probation completed plus at least 2-3 years; applicants are very rarely successful prior to this) had applied for promotion. 2 were successful; 1 unsuccessful; 3 applied in 2012, with results pending. **4A(ii)**
2.2	Ensure that all staff make as rapid progress as possible by regular review of potential for early confirmation in post; large proportion (currently 45%) of probationary lecturers are women so this will benefit women in particular	**From 2010:** Progress of probationary staff closely monitored by HoS and in Probation Committees' annual reviews, seeking opportunities for early confirmation in post	Continue annual monitoring of probation to ensure that all qualified staff are confirmed in post early	HoS, directing Mentors, Probation Committees	**From 2010**; continual	**Since 2010**: Early confirmation in post achieved by one male and one female probationary lecturer; **2012:** female currently recommended for early confirmation in post.
2.3	Encourage female staff who have the required profile for promotion to apply.	**2010**: Appraisal process reviewed and strengthened to ensure all staff are appraised by well-trained and well-informed appraiser	Specifically include preparation and encouragement for promotion as part of the appraisal process	HoS, DRs.	**From 2008/9** recruitment campaign onwards; continual	**2007/8 to date**: A higher proportion of females than of males have applied for promotion. 6 (86%) of 7 eligible females at Lecturer grade had applied compared to 6 (67%) of 9 eligible males at Lecturer grade (see 2.1 above) **Target**: By 2015 there will be at least one additional female professor and at least 3 females at AC4 **4A(ii)**

2.4	Encourage mentoring for those considering submitting an application for promotion, including use of the QGI's drop-in scheme for particular queries related to career hurdles.	**Annual**: QGI email all female staff annually; School SAT checked that mailing lists included School staff	**From 2012:** ensure all females eligible for promotion have considered QGI mentoring; include discussion of mentoring in appraisal interviews.	HoS, DRs	**From 2007/8**; continual **From 2012**: Strengthen measures.	**By 2012**, 3 of 7 females eligible for promotion (43%) had taken up mentoring opportunities in the QGI Women's Mentoring Scheme. 2 of the 3 had subsequently applied for promotion but results are not yet known.
2.5	Offer work shadowing of university senior staff by women in academic positions to help women understand senior management roles in QUB and encourage applications for academic management positions.	New action	Offer work shadowing experience within QUB as widely as possible	HoS	From 2013	New action. **Target**: at least one female will take up the offer in each of the next three years.
2.6	Ensure that each female applicant has sufficient administrative experience for promotion, by reviewing the organization and distribution of administrative responsibilities.	**From 2010** School Management Board co-opted female to gain management experience. **From 2010**: New formal management roles include: Schools Liaison Officer; website co-ordinator; internationalization champion. **From 2011**: WAM included admin tasks e.g. pastoral care	**Continue** to include one co-opted female as member of SMB Include School SWAN Champion as member of SMB	HoS, SMB	**From 2007/8**; continual	**In 2007/8** promotions, explicit recognition of administration, particularly in pastoral roles, contributed to promotion of one woman to Senior Lecturer. **2011/12**: Female co-opted to SMB was promoted to Senior Lecturer. **2012/13:** Current co-opted female applied for promotion. **4b(ii)**

2.7	Emphasize the likelihood that candidates with all-round contributions to the School can achieve promotion (not just research stars).	The example of several promoted women in SBS who better fit the profile of all-round high quality than research stars has been used in Promotions panels to evaluate other applicants.	Continue to discuss this with appropriate candidates but acknowledge that need strong research awards and papers are needed for promotion; **In future (2013-16)** keep female candidates informed of changes in university policy and practices.	HoS, DRs	**From 2009** onwards	Promotion of one female in 2011/12 was based on all-round contribution, including administration and teaching as well as research grants and publications.
2.8	Female academic staff returning from maternity leave to been allowed to concentrate on their research for six months	**2011/12:** This policy was put into practice for the first baby born to a female academic in our School in five years; support was also provided to another woman returning from maternity leave	This policy will be continued	HoS, liaising with SMB, QGI	From 2008; continual	**In 2011/12** one woman returned from maternity leave and took up this opportunity to concentrate on her new Research Council grant. The School provided financial assistance to bridge a gap in technical staff support following QUB-funded maternity cover for a second female. **4D.b(ii).**
2.9	Increase visibility of role models for successful women in academia from outside QUB by inviting female speakers, where possible to present to wider audiences (e.g. national and international conferences). Provide opportunities for staff and students to meet speakers (e.g. at coffee/tea/lunch before or after the presentation).	**From 2010:** Monitor visiting speaker gender. From 2007 to date, visiting speakers to both seminar series have included a high proportion of women: in Molecular Biosciences, 33% of 30 visiting speakers were female, and included three female professors. In the Ecology & Evolution	**Actions to be continued:** Monitor visiting speaker gender; invite senior women when possible.	HoS, DRs, Director of IGFS, organizers of seminar series	**From 2010, continuous**	**From 2007**, 33% and 44% of presentations in our School in the two research clusters were given by successful female academics. **In 2011**: Distinguished researcher Prof. Caroline Dean FRS gave a keynote research presentation to 50 plant scientists from Ireland, explicitly linked to the gender promotion activities of QGI and SBS, to an audience including female gardeners from the local Botanic Gardens.

		cluster 40% of visiting speakers were female.				**In 2011**: International conference of the Systematics Association included Presidential address by Prof Juliet Brodie (Natural History Museum London). **From 2012**, Prof. Rita Colwell (former Director of NSF) became member of School's newly formed International Scientific Advisory Board (ISAB). **Target**: By 2014, one of the males on the ISAB will be replaced by a female, as turnover opportunities arise.

No	Description of action	Action taken already	Further action planned at Nov 2012	Lead responsibility	Timeline	Success achieved to date and success targets for new actions
3	**Theme addressed:** Lower female representation among permanent than among fixed-term contract research staff in School **Target:** Fixed-term contract staff enabled to make transition to academic positions (QUB no longer appoints permanent research staff) NOTE: Some 2009 actions have been moved from Problem/Theme 1 to avoid duplication					
3.1	Encourage **postdoctoral researchers** to continue careers in academia	**In 2008 and 2009** the HoS addressed all research staff on career development. **In 2010** School Postdoctoral Forum was established **In 2011** Forum held grant writing and fellowships meeting. **In 2012** it organized a coach-led Focus Group meeting on women's careers to tease out ideas for practical coaching support and skills based workshops that will make a difference in career confidence and resilience.	**For 2013** the Forum has arranged two new workshops: Research Excellence Framework; Career Development **2013 onwards:** the Forum has ambitious plan for workshops supported by School funding.	Co-Chairs of Postdoctoral Forum	**From 2008**; continual	**2011/2012**: Four of the School's female postdocs obtained permanent academic positions in Schools of Biological Sciences, Nursing, and Chemical Engineering at QUB and Biomedical Sciences at University of Ulster **2012:** Chair of Postdoc Forum Susan Clarke gave an invited presentation on SWAN at the Sanger Institute in Cambridge as part of their Sex in Science series **Target**: our postdocs continue to obtain permanent academic posts, at least one post per year.
3.2	School to encourage **postdocs** to take up Queen's Gender Initiative mentoring for postdoctoral staff.	**2008/9 to 2011/12** QGI postdoc mentoring offered	Continue measure	Co-Chairs of Postdoc Forum, in liaison with QGI	**From 2008/9** onwards; continual	Several women postdocs in Biological Sciences have participated in QGI mentoring, and one has obtained a permanent academic position.
3.3	Encourage **postgraduates** to consider careers in academia	**From 2008/9 to date** two SBS-SAT members from Biological Sciences including Chair of	PGRs will be included in the workshops mentioned in 1.6 above.	HoS and Co-Chairs of Postdoctoral Forum	**From 2008/9**; continual	**2008/09 to date**: Strong interest was shown by postgraduates across the university in symposium on juggling an academic career with a family. High demand led to

		School Postdoctoral Forum led annual PGR Skills Training promoting women in science. **In 2012** HoS presented "What is so great about an academic career" to PhD students (male and female) in Postgraduate Week.				extra sessions being scheduled. **In 2012** the HoS's presentation at QUB's Postgraduate Week "What is so great about an academic career" resulted in strong engagement in discussion by males as well as females.
3.4	Provide a supportive environment for postdoctoral staff, through successive contracts, including preparing them for transition to academics if desired, by regular monitoring of *curricula vitae,* meetings, etc.	Supportive monitoring of research staff is encouraged during appraisal of academics.	**2012-2016** New, more specific actions to emphasize the needs of staff for mentoring are now being explored by the Postdoc Forum during coaching sessions and will be applied over the next three years	HoS with support from DRs, all employers of contract staff, SBS-SAT	**From 2008/9** recruitment campaign onwards; continual; **2012-2016** for new actions	In 2011/12 following mentoring and guidance, four female postdocs within the School gained lectureships (in Schools of Biological Sciences, Nursing, and Chemical Engineering at QUB and Biomedical Sciences at University of Ulster) **Target**: our postdocs continue to obtain permanent academic posts, at least one post per year.
3.5	Ensure PIs employing contract staff meet their responsibilities for detailed, comprehensive appraisal including mentoring, by general communications and targeted communications from Head of School	**2010**: Initiated.	**Continue** strongly to encourage a comprehensive detailed annual appraisal process across School	HoS, DRs.	**From 2010**; annual	As 3.4
3.6	Encourage contract staff to apply for grants as "researcher Co-I", and for fellowships as "PI".	**In 2008 and 2009** the HoS addressed all research staff on making grants.. **In 2011** Postdoc Forum organized School-specific training for PGRs (run	**2013**: The Post Doctoral Forum has organised another grant writing training day.	Co-Chairs Postdoc Forum, with assistance from HoS, DRs	From 2010; annually	Several postdocs including females made applications for competitive independent fellowships. Pamela Walsh obtained a Marie Curie Fellowship. **Target**: By 2015, at least three females will have applied for independent fellowships annually.

		by Staff Training and Development Unit) **In 2012** Postdoc Forum Grants and Fellowships workshop also involved postdocs/PGRs from Schools of Pharmacy and Geography, Archaeology & Palaeoecology.				
3.7	Try to identify why postdoctoral staff have not made the transition from research to academia.	**In 2012**, Postdoc Forum ran questionnaire survey to determine concerns of postdocs and blocks to their career transition	**2013-2016** New postdocs will be surveyed annually by the Postdoc Forum and results included in annual coaching sessions	Co-Chairs of Postdoc Forum	**From 2012**, annual survey	Results of 2012 survey were used to inform and shape Focus Group meeting with career coach.
3.8	Give good feedback to unsuccessful applicants for positions to help them with future applications	Feedback has been provided informally and formally to unsuccessful applicants, under guidance from HR.	**In 2013**: explore with HR whether more detailed feedback can be provided if requested	HoS, HR	**From 2009**; continual	In 2011/12 a female PDR within the School gained a lectureship in our School, following feedback from previous applications

4	**Theme addressed:** Potential drop in proportion of female students on our undergraduate courses **Target:** Identify future changes and analyse causes where identified					
4.1	Monitor and analyse data	New action	**Continue** to monitor data and analyse it annually, with focus on Foundation degree and UG pathways	HoS, Director of Education	**From 2013,** annual	**Target**: any changes in female proportions will be rapidly identified and causes identified if possible, so that further actions can be formulated if necessary.

Co-I = Co-investigator
DR = Director of Research
HoS = Head of School
HR = Human Resources
IGFS, Institute for Global Food Security (formerly IAFLU, Institute for Agri-Food and Land Use)
PGR = Postgraduate Researcher
PI = Principal Investigator
QGI = Queen's Gender Initiative
SBS-SAT = School of Biological Sciences Athena SWAN Self Assessment Team
SMB = School Management Board
WAM = Workload Allocation Model