**Department of Biological and Medical Sciences**

**Research and Knowledge Exchange Strategy 2020-2025.**

The Department of Biological and Medical Sciences is committed to delivering current, forward looking research led activities in all areas and to make a world-leading and nationally and locally significant contribution to life sciences research and knowledge exchange. To achieve this we will continue to foster, support and pursue world class research. It is the policy of the Department to increase both the volume and quality of research through increasing the number of successful funding applications, the number of Research Student completions and encouraging publication in journals of high international standing and where appropriate, to exploit the outcomes of that research for commercial, environmental and social impact. It is Departmental policy that all members of staff are encouraged to partake in research and expected to undertake scholarly activity to underpin and inform their teaching. The Department also seeks to promote and support active links with industry, other organisations and stakeholders concerned with the biological and biomedical sciences. Particular emphasis is placed on developing local and regional links, which can involve the provision of courses, student placements and promoting networking activities.

**Research Groupings:**

The Department aims to focus and promote its research in the following 4 main themes:

Genetics and Genomics

Cell and Developmental Biology

Ecology and Evolution

Biomedicine

This strategy will harness the diversity of research expertise in the Department necessary to build and support critical mass in these areas to produce stronger, more collaborative, multidisciplinary research to ensure a greater volume of impactful high-quality research outputs, enhanced competitiveness for external funding, and attraction of external partners from academia and industry. However, it is expected that there will be considerable overlap and collaboration between groups working under these themes. Within these four areas we will continue to support successful topics already represented by groups of researchers including Evolution and Development, Plant Science, Cancer Biology and Parasitology but we will seek to strengthen and build research in other topics such as Neuroscience and Microbiology.

**Research Centres:**

The four research groupings will be embedded in and supported by the Centre for Functional Genomics and the Oxford Brookes Centre for Bioimaging. The remit and aims of these Centres will be also be aligned with strategic priority areas for external funding where possible. Both Centres will have an academic director and co-director(s), and be managed by a representative committee, reporting to the Research Lead and Head of Department, with responsibility for operations, development and implementation of strategy, setting an annual budget, allocating resources and securing external funding.

The Centre for Functional Genomics will continue to be based in the Department of Biological and Medical Sciences, and will provide a centre of research excellence for the interdisciplinary study of genomes and gene expression through the generation and analysis of sequencing data. The Centre will also serve as a multi-purpose unit to further build and enhance and provide internal and external teaching, training and consultancy in this area of the biosciences. The Centre will also foster and build collaborations internally with colleagues in other departments in HLS and in other Faculties, including with researchers in biological anthropology in HSS, as well as external collaborators from other institutions and industry.

The Oxford Brookes Centre for Bioimaging will consolidate and build on our success and reputation in microscopy and imaging by providing world-class facilities and training for BMS researchers and students in light and electron microscopy. This will be complemented by external collaborations and consultancy with external researchers from academia and industry. This Centre will also continue to provide training courses in collaboration with external partners including Zeiss and RMC.

**Collaborative Research:**

Researchers will be encouraged to develop collaborative research programmes, both within the Department, across the Faculty and University, and more importantly with researchers based in external (UK, EU and international being given equal importance) organisations to compete for internal and external funding opportunities. Consistent with this strategy the development of interdisciplinary research themes will be encouraged and supported by QR/ CRF where appropriate.

**Interactions with Industry:**

Researchers will be strongly encouraged to engage with the development and operation of the our BioInnovation Hub. It is also the policy of the Department to continue to support existing partnerships between individual staff and research groups in industry, regionally, nationally and internationally and to strongly promote new strategic collaboration. This will be supported where possible through CRF and studentships.

**Management and Support of Research:**

Research strategy and policy will be overseen by the Departmental Research Lead supported and advised by a Research Strategy Committee of researchers at different career stages as well as staff in the Faculty Research Office. Strategy will be discussed and developed by the Research Committee, in consultation with other researchers at away days and through regular meetings of senior PIs, Readers and Professors. The Research Committee will report to the Department Management Committee.

Research will continue to be supported by dedicated Laboratory Managers in conjunction with technical staff in the Faculty. The policy will ensure day to day support of research activities, laboratories, equipment, ordering, health and safety and other aspects of administration.

To ensure that only high quality competitive applications for external funding are submitted, all proposals for substantial external funding, including from Research Councils, will be evaluated through pre-proposals submitted to the Research Strategy Committee and department Grants Lab.

**Allocation of QR funds:**

The Department expects the University and Faculty to fairly distribute QR funding to the Department to reflect the GPA, Research Power and Research Intensity of the Biological Sciences UofA submission. QR funds will be used to support and drive the Department Research Strategy by investment in people, infrastructure (equipment and support staff) and where appropriate specific projects. Through its annual review processes, the Department will seek to ensure that the allocation of resources for research and knowledge exchange support our strategic aims. The Department recognises that securing Full Economically Costed (FeCd) external funding is essential for the future of its research and will therefore prioritise support for activities, which lead to, or have the potential to lead to, securing such funds.

**Employment Policy:**

The Department will prioritise employment of academic staff with competitive research track-records that enhance our research groupings. Research active staff will be encouraged to maximise their esteem through external activities such as examining, committee membership, editing and refereeing and work for Research Councils. It is the policy of the department that where possible all academic staff should teach as well as carry out research to provide our students with genuine research-led teaching.

**Early Career Researchers:**

The Department will continue to be committed to supporting the career development of all researchers and will adhere to the principles of the Concordat on Research Careers and of Athena Swan. Wherever possible we will provide fellowship and tenure-track opportunities for our best early-career researchers. It is accepted that external appointments can refresh and stimulate research programmes, it will however be the policy to prioritise retention of “home grown” researcher particularly Vice Chancellor’s and David Fell Research Fellows who demonstrate outstanding potential as internationally competitive researchers.

**Infrastructure:**

The Department will always seek to maintain, develop and enhance its laboratories, equipment and research facilities at a level appropriate with pursuing international level research. Investment will be focussed on key areas such as molecular biology, bioimaging, and bioinformatics, and will be reviewed at regular intervals to ensure alignment with researcher’s three year plans. Collaboration or external service providers will be sought to ensure access to other major facilities such as next generation sequencing and proteomics. Mechanisms will be put in place to ensure staff have access to adequate short and long-term data storage facilities aligned with the policies of funders. The Department will ensure the necessary computational power for bioimaging and genomics in consultation with the two respective Centres and this will be reviewed annually. The Department will monitor external capital funding opportunities in order optimise rapid responses to any infrastructure initiatives.

**Postgraduate Students:**

The Department will run an annual research PhD studentship scheme funded from Groome Royalty income, QR and other funding streams as appropriate. We will also partner Oxford University in the Oxford BBSRC Doctoral Training Partnership grant and all staff are encouraged to obtain external PhD funding such as Research Council CASE awards. Studentships will continue to be awarded strategically and competitively to ensure we support key successful areas of research with the best students available. To help ensure this, where appropriate, priority for studentships will be given to supervisory teams of researchers especially for interdisciplinary research projects.

To help better attract the best students to our PhD programmes and enhance the quality and volume of our research, we will also develop new Masters programmes associated with our four main research areas and aligned with our two Centres. We envision these new programmes will be in areas such as Genome Biology, Parasitology and Cancer Biology and thus complement existing MSc courses in Conservation Ecology and Medical Genetics and Genomics.

**Monitoring Research Performance:**

Members of staff will carry out their research guided by individual rolling three year research plans (revised annually where appropriate), the progress of which are discussed either in an interview with the Department Research Lead and this will inform the PDR and allocation of research hours as per University policy. These annual reviews will also guide allocation of CRF and studentships.

**Exploitation of Research and Impact:**

It is the policy of the Department, wherever possible maximise the impact of its research, to protect its intellectual property, to exploit the findings of its research in a commercial environment and to generate income for the Department, Faculty and University from such exploitation. It is expected that such exploitation will be in the form of individual consultancy, the establishment of consultancies, licensing and the spinning out of independent companies. The Department expects the Faculty and University to support its endeavours in such areas by offering the appropriate efficient and professional advice and support to researchers carrying out these activities. It is expected that a proportion of profits from such enterprise activity will be invested back into the originating research group for the development and support of existing and new research programmes. When possible, funds will be made available for pump-priming new research projects. Exploitation and commercialisation will not be carried out to the detriment of pre-existing or the establishment of new research programmes. Research areas showing potential REF impact will be identified, monitored and nurtured in the years preceding REF assessment.

**Public Engagement and Outreach:**

The Department recognises the importance of dissemination of research to the public at large. As such all research groups will be encouraged to participate in public engagement events, schools visits and other appropriate outreach activities.

**Enhancing the Visibility and External Profile of Research in the Department**

The Department will continue to run a weekly research seminar series inviting leading researchers from the UK and, where possible, internationally. We will also seek to improve the visibility of our research achievements outside the University through a new social media strategy and, in consultation with the University marketing team, we will develop a more effective strategy to profile our research excellence and communicate our research findings to the national and international media outlets. To help support this staff will be encouraged to enrol in public engagement courses.