



Academic and Research Strategy for the Royal College of Pathologists

As part of the continuing conversation around the College's academic and research activities, this strategy was circulated to Research Committee and College Council in May/June 2015 for discussion and comment. In the light of comments received, Council agreed in September 2015 that this strategy should be adopted by the College.

1. Introduction

The objectives of the Royal College as defined in the Royal Charter, Ordinances and By-Laws are:

- To advance the science and practice of pathology
- To further public education in the field of pathology
- To promote study and research in pathology and disseminate the results

The Charter also lays down the specific powers that the College may exercise in delivering against these objectives which include setting professional standards, the design and conduct of training, setting examinations and awarding certificates and diplomas.

Academic activities include teaching, training and research. Teaching and training within and outside pathology are integral to the normal work of all pathologists in all working environments. Research is clearly an important component of academic work and, as the route to the development of future practice and the advancement of knowledge, should be incorporated into the working lives of all pathologists. Pathologists, as experts in the nature and clinical implications of disease, are pivotal to much of modern healthcare research, a position that should only become more important as the increasing knowledge of genetic influences on diseases becomes greater.

This strategy document builds on previous discussion papers (particularly, Quirke P, RCPATH Bulletin 2006; 134, 54-55; and more recent discussion papers produced for the College Research Committee by Prof. F. Cotter and Dr B. Wilkins), seeking to understand progress against the College's objectives and propose areas for development.

Many of the concerns currently expressed about a reduction in activity in academic pathology are reflected more generally in human and veterinary medicine and, for human medicine, are summarised succinctly in the report "[Every Doctor a Scientist and a Scholar](#)" published by the Medical Academic Staff Committee of the British Medical Association [accessed 25 April 2015].

This report states: "Despite the high level of scientific activity amongst some trainees, there was a fall in the total volume of medical research conducted in the UK, as judged by the number of research projects being examined by the IRAS system.⁴ In addition, the House of Commons Science and Technology Committee has commented on the fall in the number of clinical trials based in the UK. One potential reason for the reduction in scientific activity might be the undervaluing of research by a service focussed on immediate clinical activity, with insufficient regard for the needs of the future patient and the long-term strength of UK medical research and its contribution to the economy. If this fall in the volume of research in the UK continues there are potential implications for health based research in the long term. As evidenced by the outcome of the 2014 Research Excellence Framework, the UK currently has a place at the top of world



medical research activity. This, however, is a reflection of past levels of investment and activity which need to be built on for the future.”

Specific concerns on the lack of capacity in academic pathology have been made by the Medical Schools Council publication [“Survey of Staffing Levels of Medical Clinical Academics in UK Medical Schools on 31 July 2013”](#). This describes a 58.8% reduction in Clinical Academic Consultants posts in Pathology between 2000 and 2013.

We should engage and inspire undergraduates and trainees at an early stage and to increase their awareness of the College and what it can do for potential members, as well as to work with Fellows in the academic field. Some of the major issues for many potential academics in pathology are the relative lack of support both financially and in mentoring for research, and the relative isolation and lack of understanding for their potential role in the transition from academic trainee to established Senior Lecturer. The problem is in part compounded by the supporting role that pathology plays in most research. While much clinical research would not be possible without pathology, the current system in the UK tends to distribute credit for research to the primary authors and team leads and provides less acknowledgment of other important members of a research project.

The spectrum of areas of research is wide and includes:

- pure scientific studies of pathophysiology as the basis for understanding tissues and diseases;
- translational studies to develop practical applications, personalised medicine, clinical trials (leading and collaborating in the design and implementation of trials);
- research into pathology education (undergraduate/postgraduate);
- health services research – impact of service transformation.

2. Key components of the College’s strategy

To fulfil the objectives in the Charter, the College should ensure that:

- Learning opportunities to develop research skills are provided for all pathologists through curricula, training programmes and post-graduate education.
- Where appropriate, these skills are assessed and examined in formative and summative assessments, and that academic activities are recognised through credits for continuing professional development and credentialing.
- Research and academic skills are applied by all pathologists in their diagnostic work through the application of evidence-based practice; the corollary is that all pathologists should wish to develop the evidence for effective practice and to disseminate that knowledge.
- All pathologists are able to apply, as appropriate to their jobs, their academic skills for the benefit of undergraduate students and postgraduate trainees in all medical, dental and veterinary healthcare sciences.
- We facilitate the development of the careers of those pathologists who wish to include a substantial academic component to their work, leading to higher research degrees through working with funding organisations and Universities to ensure that there are sufficient funded posts for sustainable career development, and that such opportunities are widely publicised.
- Through working with other organisations, we create opportunities for leadership development in academic areas.
- Working with other organisations, we seek to minimise the barriers to tissue based research e.g. through improving the understanding of ethics committees of the major benefits and minimal risks of using tissues in research.
- We support the appropriate research use of animal models of diseases and encourage the development and use of quality standards in this area.
- The results of the application of academic and research study are published and publicised.

The College will therefore look to deliver on a strategy that inspires undergraduates, trains postgraduates and develops the academic skills of those with the aptitude to be the research leaders of the future.

The following sections describe how the College delivers and might develop its influence in a range of overlapping themes. The College acknowledges that it works closely with other organisations,

particularly the Pathological Society, the British Division of the International Academy of Pathology, the British Society for Haematology and key organisations in other specialties to achieve some of the objectives for improving the profile of pathology research in the UK.

The options for development will inform the priorities for the increased administrative support to be provided in the College.

3. Undergraduate medical, dental and veterinary education

Many undergraduates in the health sciences find the pathological specialties of interest. They come from a scientific background and are curious to know how they can learn more about mechanisms of disease. Undergraduate curricula may provide limited exposure to pathology and, as a consequence, the students may feel that they are 'missing something'. While short student selected modules are useful as tasters of what might be done, the lack of staff time (due to clinical commitments) and the paucity of scientific support for projects will often limit opportunities for practical research to those centres with research-active Academic Departments.

Options for development:

- The model undergraduate medical curriculum was published in 2014 and launched in June 2015. A strategy for engagement with medical schools, particularly those with 'non-traditional' courses, should be developed to support local pathologists in contributing effectively with the curricula.
- Enhanced exposure of medical, veterinary and scientific undergraduate students to pathology research. The Summer School provides an opportunity to encourage interest. The College considers what research opportunities (e.g. intercalated degrees) the students attending the School would like to see. Pathology clubs have been formed in some medical schools; this is an activity that could be encouraged and might incorporate links with veterinary schools.
- Through conversations with medical, dental and veterinary schools we can assess how widely undergraduate research opportunities could be made available – many training centres will not have sufficient research active scientists/pathologists.
- The College will promote formal intercalated BSc programmes, MSc programmes and PhD programmes and consider how bursaries for students might be funded.

4. Postgraduate pathology training curricula

This is an area which, for most specialties, is within our control and the College should ensure that postgraduate trainees in all specialties are exposed to research methodologies and have the opportunities to participate in research. For haematology and immunology, the College should work with the Joint Training Board to ensure that similar principles apply.

[The Shape of Training Review Report \(2013\)](#) has highlighted a pathway for clinical academic training, and gives some support to the need for flexibility in this training. The report does not highlight the need for all medical postgraduate training to include an academic or scientific component.

Options for development:

- Working with CSTC Chairs and the Veterinary Pathology SAC, review the research components of each of the curricula. The breadth and depth of the research curriculum will vary between specialties and should be reviewed regularly to ensure that it is appropriate for the future development of the specialty. Once research is included in the curriculum, it will need to be part of the assessment of progress.
- The Histopathology curriculum (2015) and the veterinary pathology curriculum have explicit expectations for trainees to develop their research skills and may be a useful model for core research skills in other specialties.
- Working through the Trainees' and Research Committees we should seek to understand why specialties vary in their success in promoting the research activities of their trainees. Although the reasons are likely to be multifactorial, there may be opportunities to share good practice.

- Working with the Healthcare Professions Council, ensure that the research component of Higher Specialist Scientific Training continues to be developed and appropriately assessed so that Clinical Scientists contribute fully to the research activities in the College.
- The College workforce data should be able to recognise the capacity for research supervision and mentoring.
- Research metrics should provide us with a baseline of activity and allow us to assess whether College's (and other) initiatives are having an impact, for example through collating and publishing:
 - Number and quality of abstracts submitted to national and international meetings involving UK trainees and/or UK Departments.
 - How many articles in UK journals are from UK laboratories.
- Exploring options to fund trainers and projects through the training schools.
- Research taster experiences (secondments, targeted training) for those with some interest.
- Develop eLearning in education on research methods, ethics, critical appraisal, etc. Module developers have been recruited via the Pathological Society.
- Consider, through Research Committee, the development of a mentorship programme and trainees' forum.
- Working with the NCRI (and other organisations) to develop and support proposals to support academic posts in all pathology specialties.
- Research activity by more senior staff needs to be valued, and the College might consider criteria for recognising research training centres.

5. Postgraduate pathology training in all healthcare specialties

To a greater or lesser extent, all healthcare professionals (including scientists and oral and veterinary pathologists) who are engaged in innovation and development require some understanding of the mechanisms of disease. Requests to pathologists for advice and assistance with research projects indicate the value of pathology and pathologists in providing quality assurance to aspects of projects with which investigators are unfamiliar. Scientists and clinicians who are used to handling tissue samples and body fluids, and to optimising the results of investigations on such material are invaluable.

Through active engagement with research programmes in other disciplines and the development of relevant eLearning packages in education on research methods, ethics, critical appraisal, etc., the College may improve the quality of research in many areas.

6. Continuing professional development of academic and research skills

Technological advances will continue to improve our ability to understand the basis for, and implications of, the mechanisms of disease. Pathologists at all stages of their careers are likely to benefit from some structured learning in research and teaching skills.

- The College should promote the value of eLearning in education, on research methods, ethics, critical appraisal, etc. and, where appropriate, develop eLearning modules to cover relevant topics.
- Through national or regional meetings, the College could support teaching programmes to bring trainees and more experienced pathologists up to date in aspects of research which, although possibly tangential to their normal work, may impact on their abilities to provide useful information for patient management. Trainees in academic posts may benefit from regular courses to share and develop their skills.

7. Promotion of research opportunities

Through the newsletter produced by the Regional Coordination Manager, the College is now well placed to disseminate information to trainees and Fellows about opportunities to become involved in research and funding opportunities.

The College website will provide an efficient and effective way for Fellows to access this information in a timely manner. Where possible, through contacts with funding organisations, it

would be useful to promote awareness of opportunities that are likely to emerge 3-6 months ahead of the call for applications.

Training and mentoring may be required to ensure that trainees and Fellows who are applying for competitive funding do so with a good chance of success.

8. Support for ongoing research

The College should be able to demonstrate its role in supporting ongoing research through the promotion of research mentoring, through providing funds to pump prime research projects, developing research collaborations and assisting members of the College in publicising the results of their research.

- Build a senior mentoring/collegiate grouping of current senior academics who could encourage those coming through the training programmes.
- Encourage peer group mentoring.
- Provide specific practical advice to the post-PhD/potential Lecturer/Senior lecturers.

Direct financial support from the College is likely to be limited without increased income. Some limited support is possible through the use of restricted funds. The College will continue to work to influence other organisations, such as the MRC, BBRC, Wellcome Trust, in creating substantial programmes of support for research in pathology.

The College will consider how additional funds might be raised for research projects through a proactive strategy of engagement with medical charities and other organisations (ACP, ACB, Pathological Society, etc.).

9. Dissemination of research and public education

The College should consider how it will provide a greater range of opportunities to disseminate the findings of pathological research to its members, to healthcare professionals, public policy makers and the public.

Opportunities will arise through the website, through the journal and through the established routes for public engagement. These might include:

Enhanced research profile and public information

- Meetings with major funding bodies
- Departmental open days for schools – research/practice/trainees posters
- Public lectures on the pathological sciences (within or outside main pathology conferences)
- Press strategy – feed of stories to media supported by network of experts, briefing papers, hot topics on major publications – how quickly could we comment on publications in major journals?
- Role of lay governance group
- Patient driven communication appears to be effective in some circumstances. If we can develop a network of expert patients who are interested in the output of pathology, they could be advocates for the profession and drive the provision of informed, understandable public information.

Meetings/symposia/courses

- Organising, sponsoring or co-sponsoring research meetings and symposia within other national and international meetings
- Links to other societies within/outside pathology
- Meetings on research methods – multidisciplinary/genomics/biostatistics
- Joint meetings with the other Royal Medical Colleges to discuss coordinated initiatives for academic medicine and research.

[Pathogenesis](#) is an open access journal which aims to raise the profile of the College by publishing and promoting pathological research. The College Council receives regular reports from the editor

on the progress of the journal and the directions for its development as a significant means of disseminating research in the pathological disciplines.

10. International dimensions

The College recognises the value of supporting the research and academic activities of its members who work outside the UK. These opportunities will vary across specialties and within and outside Europe.

- Expert support/mentoring for research in developing countries.
- Sponsoring symposia at international meetings.
- Bursaries for international pathologists.

11. Role of the College Research Committee

The Terms of Reference of the Research Committee are reviewed regularly to ensure that they remain fit for purpose. The College's specialty advisory committees are the coordinating groups for all specialist activity within the College. The links between the Research Committee and SACs should be reviewed in order to promote the types of research activity considered in this document. The roles of the research/education leads in each SAC should be periodically reviewed so that they become effective ambassadors for the College's academic work.

12. Research Planning

The College forward plan suggests several ways in which academic work can be developed over the next three years and the key people involved in developing and delivering this work. Of particular importance, are the development of administrative support for the research infrastructure and the development of a plan to increase the funding available to support academic and research activity.

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