

Academy of Medical Sciences: promoting advances in health science and biomedical research

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ABSTRACT – The Academy of Medical Sciences has matured quickly and found a distinctive niche amongst leading opinion formers and policy makers in healthcare and biomedical research. The Academy's 800 Fellows are the UK's leading medical scientists from hospitals, academia, public service and industry, and it is their expertise that gives the Academy its authority. The Academy campaigns vigorously to put science at the heart of the UK's public policy agenda in health, and to ensure that rapid advances in knowledge are translated as quickly as possible into benefits for patients. This paper briefly describes the work of the Academy and highlights the key achievements of the early years, particularly the Academy's role in drawing Government attention to the plight of academic medicine. The failure of clinical research to keep pace with scientific advances is now fully recognised and steps are being taken to establish new structures and to rebuild capacity in the UK.

KEY WORDS: academic medicine, biomedical research, clinical research collaboration, clinician scientist, healthcare, innovation, national academies, partnerships

Background and purpose

It was perhaps ambitious to create a new Academy on the eve of the twenty-first century but the founders had no doubts that the UK needed an expert, authoritative and forward-looking body to represent the broad constituency of biomedical science – and so the Academy of Medical Sciences came into being in 1998. The Academy is one of the five learned academies in the UK, alongside the Royal Society, the Royal Academy of Engineering, the British Academy and, in Scotland, the Royal Society of Edinburgh. It is now home to 800 distinguished biomedical scientists, clinical researchers and leaders in professions allied to medicine and it is their knowledge, influence and resources that are the Academy's most powerful assets. Election to the Academy Fellowship is recognition for achievement at the highest levels and Fellows are entitled to use the suffix FMedSci.

The Academy's prime purpose is to bring together

medical scientists from laboratories and clinics so that advances in knowledge can be converted as quickly as possible into innovations that prevent disease and improve patient care. Here the Academy has much to offer – and there is much to do. The formation of the Academy in 1998 reversed a trend of increasing fragmentation and specialisation within the medical sciences by establishing an integrated, interdisciplinary, national body, outside the framework of government, with the expertise and authority to deal with public policy in health in a wide scientific and societal context. Though still young, it is fast becoming the UK equivalent of the Institute of Medicine in the USA.

Partnerships

The Academy recognises that it cannot attempt to cover all the issues of the day – nor should it. It can, however, play a significant role as a catalyst, urging others into action, forming strategic partnerships to achieve specific goals, and sharing expertise and experience where appropriate. It is perhaps important to state here that the Academy has a distinctly different mission from that of the Medical Royal Colleges: it does not directly concern itself with matters of accreditation, standard setting, continuing professional development, examinations, training programmes, clinical guidelines and the like. There may be overlap where there are common concerns, for example, with the career pathway for clinical academics¹ and the need for protected research time, but the Academy's position is likely to be broader than the needs of one specialty. In one respect, it could be said that the Academy, with its focus on academic issues, is also narrower. The Academy greatly values its working links with the Colleges, including the Royal College of Physicians, which are sustained through cross-representation on committees and through the all-important human links between colleagues and friends.

The Academy and the College have worked jointly on measures to revive academic medicine (the annual meeting with the Medical Research Society is a good example), and to establish mentoring programmes for doctors and scientists. These joint activities could be developed further. An area of

common concern is the need to increase awareness of the place of medical research in healthcare delivery and to promote public confidence in research and its innovative applications. All front-line healthcare professions, but doctors especially, could play a powerful role here through their one-to-one contact with patients.

Careers in academic research

With health issues very much at the forefront of the political and public agenda, the Academy's early work focused on securing improvements to the institutional structures that underpin clinical research and on expanding capacity to ensure a supply of appropriately trained clinical scientists to support them. The Academy's first report, *The tenure-track clinician scientist*,² set the tone for its continuing work on academic clinical research. This influential report convinced the Department of Health (DH) to establish a number of advanced training posts for clinical scientists and so begin to create a new generation of clinical investigators for the UK. This has been an important initiative (particularly when viewed in the context of the rising number of new doctors who will require clinical training in the future) and one that deserves continued support if it is to achieve its targets.

The Academy set up its own Clinician Scientist programme in 2002 and, thanks to the generosity of the Health Foundation,³ has appointed a number of senior and mid-career Fellows in surgery, anaesthesia and radiology. To date, the Academy has raised over £6 million to fund research awards, thereby supporting young individuals (future leaders in their fields) who would not have been funded via other schemes. Other research funders have joined the Clinician Scientist programme: the Medical Research Council, Leukaemia Research Fund, Arthritis Research Campaign and the Primary Immunodeficiency Association.

This has been just one step in a longer programme of support. In the knowledge that the award of a Clinician Scientist Fellowship is just the beginning of a long and complex training process, the Academy has established a professional mentoring service for clinicians in training. The programme is currently funded by the DH and includes regular workshops for mentors and mentees, networking meetings for young scientists, and an evaluation of the mentoring process so as to produce better career advice. In autumn 2004, the Academy will launch a new website dedicated to research careers. Through its links to the Colleges and funding agencies, the site will provide a one-stop shop for information about medical research careers accessible to people of all ages and backgrounds.

Working with industry

The healthcare sector is highly complex with numerous players and, at an early stage in its development, the Academy recognised the need to work with biomedical scientists in industry and find ways of increasing the involvement of the industrial sector in the Academy's activities. To this end, in March 2003, the Minister for Science, Lord Sainsbury, officially launched the Academy Forum, an interdisciplinary network of biomedical

Key Points

The Academy derives its authority from its 800 Fellows, drawn from laboratories and clinics across the UK

Academic clinical practice is responsible for translating complex scientific discoveries into routine patient care; today's discoveries are tomorrow's advances in healthcare

The Academy of Medical Sciences report, *Strengthening clinical research*, had a powerful impact on Government which now recognises academic research as a front-line activity

Medical research will receive increased funding, but there is still more to do in strengthening academic research

scientists drawn from pharmaceutical companies, research councils and academia. There are now 24 subscribing members, an advisory board of senior representatives, and an activity programme that is developing well. Sir Tom McKillop, Chief Executive of AstraZeneca, delivered the 2004 annual Forum lecture entitled 'Can Europe compete in biomedical research?'⁴ The provocative title was chosen to convey a genuine concern about the serious decline of biomedical research in Europe and a worrying lack of direction in European policy-making to tackle it. Sir Tom praised the Forum for providing a setting where such issues could be discussed.

Investment and innovation in health science

The publication of the NHS Plan in July 2000, and the ensuing consultation documents, set the agenda for many of the Academy's activities during 2001–2002. A series of consultation documents were released, but none contained any serious reference to the value of academic medical research. In 2002, the Academy published *Clinical academic medicine in jeopardy*⁵ describing the crisis facing the future of academic medicine. The report called for concerted action from all stakeholders (Government, universities, Medical Royal Colleges and others) to tackle the many deterrents against the recruitment and retention of clinical academic staff: prolonged training, early financial disincentives, and tensions between the responsibilities of teaching, research and clinical service. The latest figures from the Council of Heads of Medical Schools⁶ point to a 17% decline in clinical researchers since 2000.

But times change: contrast the above with the words of the Secretary of State for Health, Dr John Reid, in his speech during the budget debate on 22 March 2004: 'To us, science and research constitute a front-line service, as they too reduce distress and pain and save lives', or the chapter in the Chief Medical Officer's annual review 2003⁷ on academic medicine which talks of 'preserving a precious national resource'. This dramatic sea change owes much to the Academy's influential report, *Strengthening clinical research*,⁸ published in October 2003, which, along with a report from the Bioscience and Innovation Growth Team (BIGT),⁹ emphasised that the NHS

needed to speed up the development of new medicines and treatments from bench to bedside. The Academy proposed that the Government should build on the success of the National Cancer Research Networks, using these as a model for the development of a clinical research infrastructure and the expansion of trials and other clinical research activity.

The impact of the Academy report was swift and profound. A high-level working group, the Research for Patient Benefit Working Party, under the chairmanship of Sir John Pattison, was charged with drawing up practical proposals for the implementation of the Academy and BIGT reports in time to influence the spring budget. The outcome was the announcement by the Chancellor and the Secretary of State for Health of substantial increases in research funding, with combined government spending on medical research to reach £1.2 billion a year by 2008. The announcement also called for the establishment of the UK Clinical Research Collaboration (UKCRC) and for new research networks to be developed in medicines for children, stroke, diabetes, Alzheimer's and in mental health capability. The Academy of Medical Sciences will continue to have a role and will be part of the Collaboration.

Coordinated strategic management is at the heart of these projects and it is hoped that the UKCRC will provide focus and inspiration to the all-important human endeavour of professionals across the health sciences. These changes mark the beginning of a period of great promise for academic medicine but they bring with them opportunities and challenges in equal measure. The clinical academic community must play its part, and be seen to do so, in meeting the ambitious plans for healthcare in the UK.

Along with these major developments came a further announcement from the Minister in June 2004 that the Department of Health, in recognition of the Academy's achievements to date and in the expectation that the Academy would continue to campaign for a research-led environment within the NHS, would provide a grant-in-aid to meet the core running costs of the Academy. The Minister paid tribute to the Academy as a source of information and authoritative advice, recognising the lead it gives to the academic community, the efforts it has made towards building important partnerships across sectors, and the innovative work it does in supporting young clinical scientists. For an organisation that had until recently enjoyed the resources of a local corner shop, this was welcome news indeed. This award is testimony to the hard work of the Academy in the early years and particularly to the dedication and commitment of the many Academy Fellows who have contributed so generously to the reports and policy documents.

This brief paper provides merely a snapshot of the organisation that is today's Academy of Medical Sciences. Substantial

reports on the use of alcohol,¹⁰ academic bacteriology,¹¹ the neurosciences,¹² and the problem of short-term contracts for non-clinical scientists¹³ have all added value and breadth to the Academy's portfolio of work in the past five years. Anyone wishing to know more about the Fellowship, structure, funding or governance of the Academy should refer to the website (www.acmedsci.ac.uk).

A Chinese proverb warns, 'Be not afraid of growing slowly; be afraid only of standing still'. The Academy has neither stood still nor grown slowly but it has been careful about the selection of projects it has undertaken. For the foreseeable future it will encourage, promote and exploit the current climate of positive support for academic medicine in order to retain the UK's place as a world-class centre for biomedical research. The Academy has been fortunate in its friends, among them the Royal College of Physicians, and looks forward to long and enduring partnerships for many years to come.

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