So you want to be a clinical academic

Introduction

A career as a clinical academic combines the immense rewards of being a clinician with the potential to make groundbreaking discoveries which can deepen our understanding of disease, develop new therapies and impact upon national and international health-care policy through research. As a medical academic, you will regularly engage with a wide range of colleagues at the frontiers of science and clinical practice and have an unparalleled opportunity to travel, to educate others nationally and internationally, and to become a world authority in your discipline.

What does a clinical academic do?

As a clinical academic, you are usually employed by a university with an honorary contract with an NHS hospital. Typically 50% of your time will be spent undertaking clinical activities, which may include outpatient clinics, operating theatre time and inpatient ward work. The remaining 50% of your time is spent undertaking academic work within the university. Academic activities include conducting and publishing research, ranging from basic science to clinical trials, supervising and teaching undergraduate and postgraduate students, and developing research strategies for the department.

What qualities do I need as a clinical academic?

If you are enterprising, resourceful and industrious, and enjoy problem solving, a varied workload and constant intellectual stimulation from students and colleagues of all ages and backgrounds, clinical academia may be for you. Enjoying teaching, writing and 'performing' (in lectures and on conference platforms) also helps. The best clinical academics are those genuinely excited by the research questions they are attempting to answer, the breakthroughs they make and the subject matter they present. To sustain an academic career, it is important to find the domain which you are genuinely passionate about.

Dr Faisal R Ali *is Academic Clinical Fellow in Dermatology and* **Professor Christopher EM Griffiths** *is Foundation Professor of Dermatology, Dermatological Sciences, Salford Royal NHS Foundation Trust, University of Manchester, Manchester Academic Health Science Centre, Manchester M6 8HD*

Correspondence to: Dr FR Ali (faisal.ali@postgrad.manchester.ac.uk)

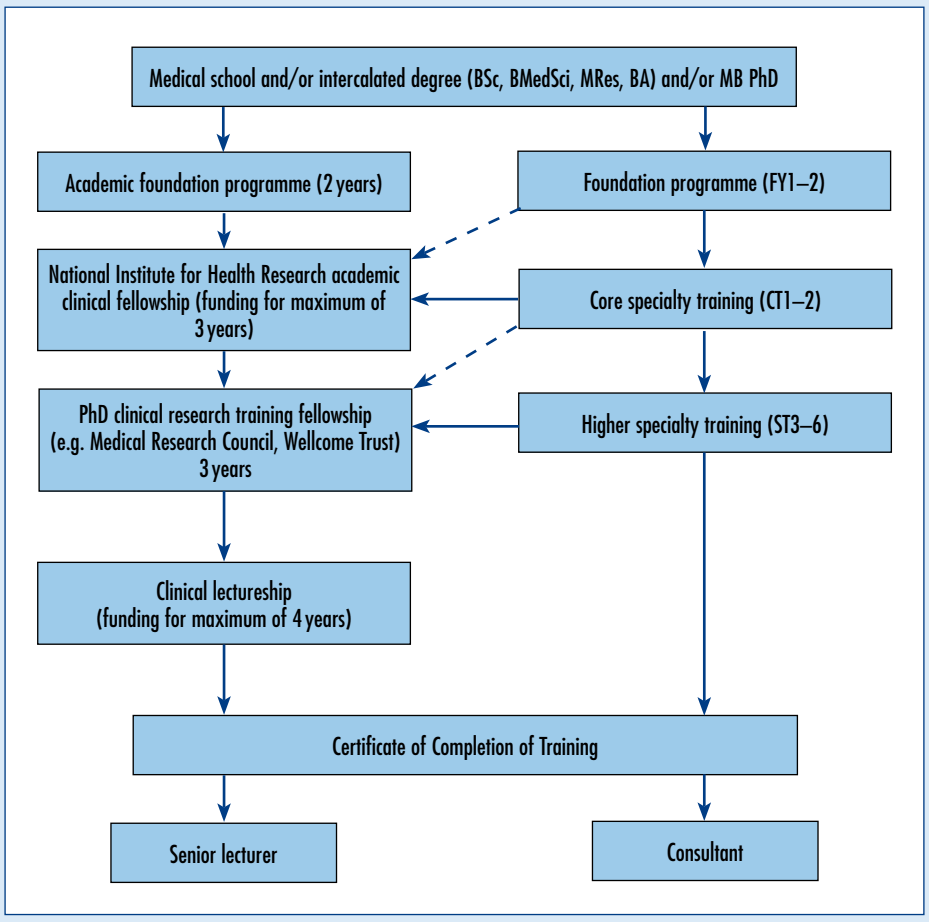
What is the career path of a clinical academic?

Routes into clinical academia are many and varied. New, integrated clinical academic career paths supported by the National Institute for Health Research (NIHR) are popular, as they provide trainees with protected time to perform research while undertaking clinical training in parallel (*Figure 1*).

Following periods of research during an intercalated degree, special study modules or electives, final year medical students can apply for an academic foundation programme, offered throughout the country, which allows the trainee to undertake a short research project during designated time. Research findings may be presented at a national or international conference or published as a short paper. Many foundation schools offer a teaching programme specifically for academic foundation trainees covering principles of evidence-based medicine and data analysis.

Following the foundation years, trainees can apply for an NIHR Academic Clinical Fellowship (280 available nationally in 2011). These comprise a period of core training in medicine or surgery, in which postgraduate examinations (e.g. MRCP) are completed, with 25% of time set aside to undertake pilot studies which form the

Figure 1. Integrated academic career path (left) compared with the conventional clinical path (right). Pathways are not rigid and many successful clinical academics have moved between them.



basis of an application to a funding body for a clinical research training fellowship (e.g. Medical Research Council, Wellcome Trust). These are usually for a period of 3 years (PhD) or, less commonly nowadays, an MD which is 2 years.

Following completion of a higher degree, trainees can apply to complete higher specialty training as a clinical lecturer (50% time dedicated for research; 103 available in 2011), before applying for senior lecturer and clinician scientist posts.

Are there other routes into clinical academia?

The majority of clinical academics elect to engage in research and the academic path after having undertaken clinical work exclusively during their initial foundation and specialty training years. For example, after undertaking a non-academic foundation programme and core medical training, trainees may choose to apply for a higher degree as part of a training fellowship before or during their specialty training years (as time out of programme). By choosing to embark on the academic track later on, the aspiring academic may have the additional advantage of discovering the area of clinical practice he/she finds most fascinating and would like to investigate further. *Table 1* lists numbers of clinical academics in different specialties.

Table 1. Clinical academic staffing levels by specialty 2010

Specialty	Number of full-time equivalent academics
Anaesthetics	56
Emergency medicine	10
General practice	184
Infection or microbiology	83
Medical education	17
Oncology	143
Obstetrics and gynaecology	133
Occupational medicine	11
Ophthalmology	38
Paediatrics and child health	221
Pathology	150
Physicians (medicine)	1282
Psychiatry	288
Public health	163
Radiology	47
Surgery	279
Other	70
Total	3175

Adapted from Fitzpatrick (2011)

Meaningful research requires enthusiasm and designated time free from clinical responsibilities and is facilitated by finding an inspirational mentor and working in an environment which champions academia. One-year fellowships offered by NIHR biomedical research centres and funding bodies (e.g. British Skin Foundation) fund clinicians to undertake research for a set period of time; this allows them the time needed to accrue data which will form the basis of an application for an external clinical research training fellowship.

Following completion of specialist training, while many academics apply for senior lecturer posts, academic health science centres and other institutions nationally actively encourage research-minded NHS consultants to formally dedicate a set number of sessions per week to undertaking research.

How can I obtain a competitive clinical academic post?

Demonstrate your interest in science by seeking opportunities to embark upon periods of research during an intercalated year, electives or special study modules. Throughout your medical training, seek to work with clinical academics, asking if you can contribute to projects which may be presented orally or as a poster at a national or international conference or eventually be published. Show that you have the ability and drive to write peer-reviewed articles by writing up case reports of unusual clinical presentations and reviews of topics, with the support of a senior academic. Finally, ensure that your clinical knowledge and practice are sound, as this will be tested in interviews and throughout your career.

The dark side

Academic medicine is demanding of your time and intellectual capacity, with high expectations from both the higher education sector and the NHS. Morale can be eroded as grant applications and work submitted for publication can be subjected to seemingly endless rounds of rejection. To maintain competitiveness with scientific colleagues, there is a constant pressure to publish work, apply for funding and attract and supervise students of the highest calibre. At the same time, a clinical academic is expected to maintain the knowledge of his/her specialty to the same level as that of clinical colleagues. While you are still training as a clinical academic, former contemporaries will become consultants more quickly with the added earning power that brings and the potential to undertake private practice. As deadlines for conferences, publications and applications approach, work can encroach upon free evenings and weekends.

Conclusions

Academic medicine requires balancing the competing demands of clinical and scholarly activity. Exciting new opportunities for integrated clinical academic training are available, but paths to a clinical academic career are many and varied. The rewards of clinical life coupled with the capacity to

USEFUL WEBSITES

www.foundationprogramme.nhs.uk/pages/academic-programmes/ (information about academic foundation programmes including recruitment)

www.nihrtcc.nhs.uk/intetacatrain/ (provides information about National Institute for Health Research funded Academic Clinical Fellow, Clinical Lectureship and Clinician Scientist programmes, number of available posts in different specialties and timetables for recruitment)

www.mrc.ac.uk/ (Medical Research Council – publicly financed research funding body. Offers clinical research training fellowships – two application deadlines per year)

www.wellcome.ac.uk/ (Wellcome Trust – global charitable foundation providing financial support for research. Offers research training fellowships – three application deadlines per year)

deepen our understanding of diseases and develop treatments for those patients makes a career as a clinician scientist immensely fulfilling. BJHM

Conflict of interest: Dr FR Ali is a National Institute of Health Research Academic Clinical Fellow, Professor CEM Griffiths is an National Institute of Health Research Senior Investigator.

Fitzpatrick S (2011) *A survey of staffing levels of medical clinical academics in UK medical schools.* A report by the Medical Schools Council. Medical Schools Council, London

KEY POINTS

- There are many opportunities to become a clinical academic.
- The pleasures of clinical practice coupled with the capacity to deepen our understanding of disease which translates into better management for patients makes a career as a clinician scientist immensely fulfilling.
- The pathway towards an academic career is more structured than previously, with National Institute for Health Research funding available to support integrated clinical and academic training.
- Academic medicine needs a balance between clinical and academic work which requires excellent time management and resolve.