

## The Healthcare Sector

Microbiologists are employed in a range of roles within the healthcare sector. They often work in multi-disciplinary teams alongside people with expertise in a range of fields. Here is a brief guide to the different career pathways.

### Public sector

There are two well-defined career paths for medical microbiologists in the public sector: via the **Biomedical Scientist** route or the **Clinical Scientist** route. Anyone wishing to work in either of these roles must be state registered with the Health Professions Council.

**Biomedical scientists** usually work in hospital and public health laboratories, investigating samples of body tissue and fluids to diagnose the cause of disease, monitor treatments or track disease outbreaks. They also find work in other organisations including the National Blood Authority, pharmaceutical industry, university, Medical Research Council (MRC) and forensic laboratories. Long-term career prospects include laboratory management, research and teaching. Promotion may require further qualifications (e.g. a MSc), but your employer will often help with the costs associated with further study. Entry is restricted to graduates, usually with degrees that have been validated by the Institute of Biomedical Science (IBMS). It is possible to enter the profession with a related bioscience degree but the Institute assesses course content and it is sometimes necessary to undertake additional study. The IBMS awards a certificate of competence, following a period of in-service training in an approved laboratory, which is required for state registration.

**Clinical scientists** generally work in diagnostic labs and pathology departments in large hospitals run by NHS

Trusts and medical schools. In addition to laboratory-based research, they give scientific and clinical advice that has a direct bearing on the management of patients. Training towards state registration in the UK is overseen by the Association of Clinical Scientists (ACS) and is by one of two routes.

- **Route 1**, a four year structured pathway for graduates. It includes a Scientist Training Programme (STP) delivered to staff in dedicated posts in the NHS. Applications to the Route 1 STP close in February each year for courses commencing the following September. Posts are funded regionally and competition is very stiff, with only a handful of microbiology posts each year. Refer to the NHS Careers and NES Education for Scotland websites for further information.
- **Route 2**, a six year pathway which concentrates on achieving state registration by experience. Applicants must gather evidence to support their case for registration.

In addition to the regionally funded posts, individual hospitals may also offer training posts, using their own funds, according to local need. However this type of training post should be checked for accreditation (by ACS) to ensure that the trainee gains the relevant exit qualification.

# Microbiology Careers

[www.sgm-microbiologycareers.org.uk](http://www.sgm-microbiologycareers.org.uk)

Training posts are advertised in *New Scientist* ([www.newscientistjobs.com](http://www.newscientistjobs.com)) and listed on the NHS websites for England and Wales ([www.nhscareers.nhs.uk](http://www.nhscareers.nhs.uk)) and Scotland ([www.nes.scot.nhs.uk](http://www.nes.scot.nhs.uk)).

Public health laboratories are a major employer of clinical microbiologists, some of who work in reference labs or as epidemiologists. Work focuses on disease diagnosis, treatment and surveillance; clinical scientists often collaborate closely with health care professionals. There is some opportunity to carry out research and development projects in the specialisms of bacteriology, virology, mycology and parasitology.

## Medical related research

Work in clinical microbiology is not restricted to state registered Biomedical or Clinical Scientists. There are opportunities for PhD and postdoctoral research posts in public health, university, MRC and hospital laboratories. These are usually short-term contracts but the experience could be used to work towards state registration as a Clinical Scientist by the 6-year route. There are also vacancies for graduate research technicians and assistants.

## Industry

Graduates with qualifications in biomedical sciences or medical microbiology work in the pharmaceutical industry at most stages of the drug development process and in quality control of manufacturing processes. Work may be based in the research and development laboratories, at manufacturing sites, or knowledge and experience can be applied to roles in registration and regulatory affairs or sales and marketing. Further information is available from the Association of the British Pharmaceutical Industry (ABPI). Some posts are advertised in *New Scientist* but many positions are filled by scientific recruitment agencies.

## Further information

- **Institute of Biomedical Sciences** - careers in biomedical science ([www.ibms.org](http://www.ibms.org))
- **Biomedical Science Jobs** - ([www.careerscene.com](http://www.careerscene.com))
- **Health Service Careers** - careers in clinical science ([www.nhscareers.nhs.uk](http://www.nhscareers.nhs.uk))
- **Health Professions Council** - details on state registration ([www.hpc-uk.org](http://www.hpc-uk.org))
- **Association of British Pharmaceutical Industries** - careers in the pharmaceutical industry ([www.abpi-careers.org](http://www.abpi-careers.org))
- **Medical Research Council** - careers in medical research ([www.mrc.ac.uk](http://www.mrc.ac.uk))
- **Health Protection Agency** - information about public health laboratories ([www.hpa.org.uk](http://www.hpa.org.uk))
- **Association of Clinical Scientists** - clinical microbiology training ([www.assclinsci.org](http://www.assclinsci.org))

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