BIOCHEMIST

ENTRY LEVEL 6

Qualifications and courses

A degree in biochemistry or a related subject is required for entry to this profession. Many posts also require a postgraduate qualification.

The minimum entry requirements for a biochemistry degree are 2 A levels/3 H grades, including Chemistry and/or Biology, and 5 GCSE/National 5 passes, including science subjects, English and Maths. Some universities offer a Foundation or 'bridging year' as a pre-degree course for applicants who do not have the required scientific qualifications.

Biochemists with a degree and relevant work experience are eligible to join a professional body, such as the Biochemical Society or the Royal Society of Biology.

Biochemists continue their training while working. Those with a first degree are encouraged to study part time for a Master of Science (MSc) or doctorate (PhD) as competition for work is fierce. Accredited MSc degrees in Clinical Biochemistry are offered by several universities across the UK.

If you want to work with the National Health Service (NHS) as a clinical biochemist you will need a First or 2.1 degree and to follow the Scientist Training Programme (STP). The programme is very competitive with many more applicants than there are places. This is a 3-year work-based learning programme that leads to a master's degree in your specialist subject. Upon successful completion, after 3 years of work experience and by attaining the certificate of competence offered by the Association of Clinical Scientists (ACS), you will be able to register with the Health and Care Professions Council (HCPC) and be called a clinical biochemist. The HCPC will require you to undertake continuing professional development (CPD).

What the work involves

You will research a range of living organisms and processes, using specialist equipment. Your work may involve collating detailed information and producing reports.

Biochemists investigate the chemistry of living organisms. They use their investigations to plan experiments and solve problems.

Biochemists can specialise in particular fields, such as endocrinology, toxicology, paediatrics, immunology, and molecular biology, and apply their knowledge and skills in many areas, including food and nutrition, agriculture, medicine, plant research and brewing.

Type of person suited to this work

You will need to be curious about biological organisms and interested in improving systems and products. You will constantly use problem-solving skills in this job. Your excellent observational skills will also be very useful. You should enjoy working as part of a team.

You will be confident in using a range of scientific equipment with a patient and methodical approach for sometimes repetitive but important activities. Your strong communication skills will help you explain and record your work. Confidence in working with numbers and detailed information is also essential.

Working conditions

You would normally work in a laboratory as part of a team. You may also do some of your work in an office environment. In some sectors, biochemists work on a shift system.

The job involves the regular use of specialist equipment which requires good manual handling skills. Protective equipment will also have to be worn.

As you become more senior, it is likely you will be involved with managing staff or projects.

Future prospects

Many of the products you use on a daily basis have been developed by biochemists. Biochemists have an important role in organisations ranging from research institutes to multinational companies.

If you go into research and development, you would start by working as part of a team. With further training and experience you could gain membership of The Royal College of Pathologists (MRCPath), or a PhD, which allows biochemists to advance to higher post-registration positions and consultancy work.

You may choose to undertake academic research and go into lecturing or teaching.

Advantages/disadvantages

You may have to work very long hours in this job.

This type of work is often project based which provides job variety.

Biochemistry offers a wide range of areas in which to specialise.

Money guide

The starting salary on the NHS's Science Training Programme is around £25,000, while post-registration trainees could earn £31,696 (NHS wage band 7), which increases to £41,787 with experience.

Consultant clinical scientists can earn in excess of £55,548.

In industry, a research scientist could earn £23,000–£42,000.

Related opportunities

- Biomedical Scientist/Medical Laboratory Assistant p490
- Biotechnologist p491
- Chemist p493

Further information

Institute of Biomedical Science
www.ibms.org

Biochemical Society
www.biochemistry.org

The Association for Clinical Biochemistry and Laboratory Medicine
www.acb.org.uk