



Biochemist

Biochemists study the way living organisms work. They study the chemistry of living cells at all levels, from viruses and bacteria to plants, animals and human beings. If working in the area of human health, they are also called clinical biochemists or clinical scientists.

What does the job involve?

- researching DNA and the ways in which it can be modified to benefit people
- researching the effects of drugs, hormones and other medical substances on the human body
- researching the effects of nutrition, or pollution, on the body chemistry of plants or animals
- testing and analysing samples, such as blood, to diagnose disease
- developing new products and checking the production process for safety and quality
- setting up and carrying out complex experiments, collecting and analysing specialist data
- writing reports and making recommendations based on the results of experiments and observations
- developing new ideas and new products for medicine or agriculture such as pest resistant and high yield crops
- working as part of a team of scientists and other staff, perhaps leading and planning projects.

Routes and choices while at school:

You will need to try to get at least five GCSEs at grades 9 to 4 (A* to C), or equivalent qualifications. These should include English, maths and science. Other relevant subjects include biology, chemistry and physics.



Skills You'll need:

- knowledge of biology
- knowledge of chemistry including the safe use and disposal of chemicals
- maths knowledge
- analytical thinking skills
- to be thorough and pay attention to detail
- excellent verbal communication skills
- thinking and reasoning skills
- concentration skills
- to be able to use a computer and the main software packages competently



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How to get into this role:

You can get into this job through:

- a university course
- working towards this role
- specialist training with the NHS

University

You'll usually need a relevant science degree, like:

- biochemistry
- biotechnology
- biopharmaceuticals
- chemical and molecular biology
- microbiology genetics
- molecular biology

If you do not meet the entry requirements for one of these subjects, you may be able to do a foundation

Laboratory experience

It's important to get experience of working in a laboratory during your degree course.

You can do this through a:

- placement
- internship
- year in industry scheme
- Summer Vacation Studentship

Further information

Career tips

You could train to be a clinical biochemist in the NHS through the NHS Scientist Training Programme (STP).



Career path and progression

With experience, you could:

- develop a specialism
- manage a team, department or project
- move into product sales, marketing or science communication
- become a freelance consultant

Rates of Pay

Registered clinical scientists (biochemistry) in the NHS are generally on Agenda for Change Band 7, £46,244 to £53,789 a year. Principal clinical biochemists are on Band 8a, £56,992 to £61,522 a year and Band 8b, £67,285 to £71,978 a year. Pre-registration trainees are on Band 6, £37,831 to £46,100 a year.

You could also work as a specialist biomedical scientist (biochemistry) within the NHS on Band 6, £37,831 to £46,100 a year.

Pay rates in the private sector vary.

Salaries for research posts at universities range from around £30,000 up to £45,000 a year.