

Microbiology (healthcare scientist)

Microbiology is the study of organisms (bacterial, viral, fungal and parasitic) that cause infections.

As a healthcare scientist working in microbiology, a large part of your work will be the identification and classification of these organisms.

You'll play a key role in preventing, diagnosing and controlling infections

Working life

In addition to identifying important organisms, you'll provide support and advice on the most effective drug to use for treatment. Examples of clinically important organisms include:

- MRSA
- *Clostridium difficile*
- norovirus infections

You'll therefore play a key role in preventing, diagnosing and controlling infections, both for individual patients and, more generally, within a hospital or community.

In your work, you'll:

- work in diagnostic laboratories and pathology departments in hospitals
- use a range of specialist culture and non-culture technologies and platforms, including molecular techniques, such as polymerase chain reaction (PCR) and sequencing
- prepare cultures of micro-organisms
- use a variety of tests and procedures to identify and classify organisms to help analyse and support the response to infection
- help to develop and improve tests to diagnose infectious disease, through ongoing improvement and innovation

[Public Health England](#) ^[1] is also a major employer of healthcare science staff specialising in microbiology and [epidemiology](#) ^[2]. The work focuses on disease diagnosis, treatment and surveillance.

Want to learn more?

- [Find out more about the entry requirements, skills and interests required to enter a career in microbiology](#) ^[3]
- [Find out more about the training you'll receive for a career in microbiology](#) ^[4]

• Pay and conditions

Most jobs in the NHS are covered by the [Agenda for Change \(AfC\)](#) ^[5] pay scales. This pay system covers all staff except doctors, dentists and the most senior managers. As a healthcare scientist working in microbiology, your salary will typically be between AfC ^[6] bands 6-9, depending on the precise role and level of responsibility. Trainee clinical scientists train at band 6 level, and qualified clinical scientists are generally appointed at band 7. With experience and further qualifications, including [Higher Specialist Scientist Training](#) ^[7], you could apply for posts up to band 9.

Staff will usually work a standard 37.5 hours per week. They may work a shift pattern.

Terms and conditions of service can vary for employers outside the NHS.

• Where the role can lead

With further training or experience or both, you may be able to develop your career further and apply for vacancies in areas such as further specialisation, management or teaching.

Healthcare science staff often work at the forefront of research and innovation, so that patients are continually receiving the very best healthcare. There is opportunity for research in the specialist areas of bacteriology, virology, mycology and parasitology, often in collaboration with clinical colleagues or those working in industry.

• Job market and vacancies

Job market

In November 2018, there were 6,123 clinical scientists registered with the [Health and Care Professions Council](#) ^[8].

The [NHS Scientist Training Programme \(STP\)](#) ^[9] and [Higher Specialist Scientist Training \(HSST\)](#) ^[7] attract many more applicants than there are places and so there is considerable competition for places.

Finding and applying for jobs

Check vacancies carefully to be sure you can meet the requirements of the person specification before applying and to find out what the application process is. You may need to apply online or send a CV for example.

For the [STP](#) ^[9] and [HSST](#) ^[7], there is an annual recruitment cycle and applications should be made through the [National School of Healthcare Science's website](#) ^[10], where you can also find information about the programmes and the recruitment process.

Key sources relevant to vacancies in the health sector:

- vacancies in organisations delivering NHS healthcare can be found on the [NHS Jobs website](#) ^[11]
- opportunities in the Civil Service can be found on the [Civil Service Jobs website](#) ^[12]
- vacancies in local government can be found on the [Local Government Jobs website](#) and the [Jobs Go Public website](#) ^[13]

As well as these sources, you may find suitable vacancies in the health sector by contacting local employers directly, searching in local newspapers and by using the [Universal Jobmatch tool](#) ^[14].

[Find out more about applications and interviews](#) ^[15].

Volunteering is an excellent way of gaining experience (especially if you don't have enough for a specific paid job you're interested in) and also seeing whether you're suited to a particular type of work. It's also a great way to boost your confidence and you can give something back to the community.

[Find out more about volunteering and gaining experience](#) ^[16].

• Further information

For further information about a career as a healthcare scientist in microbiology, please contact:

- [Association for Clinical Biochemistry and Laboratory Medicine - Microbiology Group](#) ^[17]
- [Academy for Healthcare Science](#) ^[18]
- [Health and Care Professions Council](#) ^[19]
- [National School of Healthcare Science](#) ^[10]
- [Public Health England](#) ^[1]

Other roles that may interest you

- [Biomedical science](#) ^[20]
- [Clinical immunology](#) ^[21]
- [Experienced paramedic](#) ^[22]

- Emergency care assistant [23]

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Links

[1] <https://www.gov.uk/government/organisations/public-health-england> [2] <https://www.healthcareers.nhs.uk/glossary#Epidemiology> [3] <https://www.healthcareers.nhs.uk/explore-roles/life-sciences/microbiology/entry-requirements-skills-and-interests> [4] <https://www.healthcareers.nhs.uk/explore-roles/life-sciences/microbiology/training-development-and-registration> [5] <https://www.healthcareers.nhs.uk/about/careers-nhs/nhs-pay-and-benefits/agenda-change-pay-rates> [6] <https://www.healthcareers.nhs.uk/glossary#AfC> [7] <https://www.healthcareers.nhs.uk/i-am/working-health/nhs-higher-specialist-scientific-training> [8] <http://www.hcpc-uk.org> [9] <https://www.healthcareers.nhs.uk/i-am/considering-or-university/not-studying-health-related-degree/nhs-scientist-training-programme> [10] <http://www.nshcs.hee.nhs.uk/> [11] <http://www.jobs.nhs.uk> [12] <https://www.civilservicejobs.service.gov.uk/csr/index.cgi> [13] <http://www.jobsgopublic.com/> [14] <https://www.gov.uk/jobsearch> [15] <https://www.healthcareers.nhs.uk/career-planning/offering-career-support/training-and-teaching-resources-young-people/application> [16] <https://www.healthcareers.nhs.uk/i-am/secondary-school-or-fe-college/gaining-experience> [17] http://www.acb.org.uk/whatwedo/micro_group_homepage.aspx [18] <http://www.ahcs.ac.uk> [19] <http://www.hcpc-uk.org/> [20] <https://www.healthcareers.nhs.uk/Explore-roles/healthcare-science/roles-healthcare-science/life-sciences/biomedical-science> [21] <https://www.healthcareers.nhs.uk/explore-roles/healthcare-science/roles-healthcare-science/life-sciences/clinical-immunology> [22] <https://www.healthcareers.nhs.uk/explore-roles/ambulance-service-team/roles-ambulance-service/experienced-paramedic> [23] <https://www.healthcareers.nhs.uk/explore-roles/ambulance-service-team/roles-ambulance-service/emergency-care-assistant>