Pharmacologists seek to understand how chemical substances interact with the body. They carry out controlled scientific experiments to explore the effects of drugs and other chemicals on biological systems. Their aim is to gain a better understanding of diseases, develop new drugs to treat them, and to promote the safe use of existing drugs. Other substances such as poisons and toxins are also studied by pharmacologists to try to understand how those substances can harm the body.

While most work with pharmaceutical companies, some pharmacologists focus exclusively on animal medicines. This is a huge industry in the UK as people are willing to spend a lot of money on their pets, livestock and race horses. Pharmacologists play a vital role in the industry, delivering high quality products to help keep animals healthy. Neuro- and psycho-pharmacologists, on the other hand, study how drugs affect human behaviour, the brain and the rest of the human nervous system. Toxicology pharmacologists (or toxicologists) look at non-food substances that adversely affect human health, such as hazardous chemicals used for industrial applications or household products. Cleaning and cosmetics firms, as well as other manufacturing organisations, employ pharmacologists to ensure that their products are not harmful to consumers.

**Work activities**

- Designing and carrying out controlled experiments substances and their effects on organisms.
- Employing cutting edge technology and sophisticated laboratory equipment to collect and analyse data.
- Keeping up to date with technological advancements and industry-standard procedures.
- Drawing up proposals for future tests.
- Attending conferences to deliver papers and meet with other pharmacologists.
- Liaising with regulatory officials and working in compliance with legal standards.
- Disseminating the results of the tests to others in the form of written reports, articles to be published in journals, and presentations.
- Analysing the results of patient drug interactions to identify trends. Deciding on the success of the trial and whether the dosage needs to be modified.
- Working closely with colleagues, industry officials and other professionals.

(continued overleaf)
Pharmacologist (continued)

Entry requirements and training

Postgraduate study

A pre-entry postgraduate qualification is not a requirement though further qualifications may be needed for certain positions.

Specific entry requirements

Normal colour vision is generally as requirement.

Skills and qualities

• Ability to work accurately in an organised manner.
• Ability to carry out a written methodology in a laboratory context.
• Data gathering, validation, analysis and interpretations skills.
• Excellent communication skills.
• Ability to work independently and as part of a team.
• Excellent problem solving skills.
• Excellent report writing skills.
• Excellent time management, self-discipline and ability to work without close supervision.
• Excellent information technology skills.