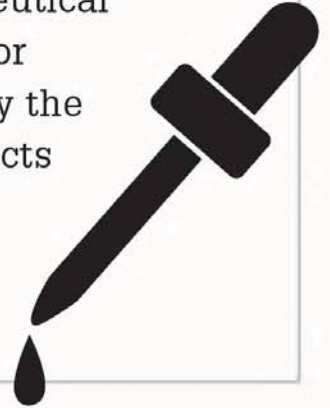


PHARMACOLOGIST



JOB DESCRIPTION

Pharmacologists conduct experiments on chemicals that have medicinal properties in order to research their effects on people, animals, and the environment. Working for pharmaceutical companies, universities, hospitals, or government laboratories, they study the beneficial and possible harmful effects of these substances, using their data to develop new drugs and treatments that are safe to use.



SALARY

Newly qualified ★★☆☆☆
Senior pharmacologist ★★★★★

INDUSTRY PROFILE

Highly competitive field • Growing sector due to advances in research and increased human life expectancy • Opportunities in pharmaceutical industry, hospitals, and universities

CAREER PATHS

An advanced degree is required to enter this scientific profession; many senior researchers hold a PhD and have experience of conducting related research at college level. Pharmacologists usually specialize in developing drugs in a specific area, such as those that work on the heart, or the nervous or digestive systems.

GRADUATE While having a degree in pharmacology is preferable, other subjects such as biochemistry, biomedical sciences, physiology, and toxicology can provide an entry into this career. Work experience with a pharmaceutical company during your studies is also an advantage.

POSTGRADUATE Many pharmacologists hold both a PhD and a PharmD—a doctor of pharmacy degree.

TOXICOLOGIST Carries out clinical and laboratory studies to identify toxic chemicals and substances for a range of purposes such as new product development in the pharmaceutical or petrochemical industries.



PHARMACOLOGIST As a pharmacologist, you might be involved in non-laboratory work such as sales and marketing or product licensing for new drugs. With experience, you can expect to move into more senior roles with increased managerial responsibilities.

SKILLS GUIDE



Good communication skills for preparing reports and presenting the results of experiments.



The ability to lead and motivate others in a team, and supervise or train junior team members.



Sharp analytical skills to interpret data from experiments and peer-reviewed publications.



Strong problem-solving skills for improving medicines during the drug-development phase.



Excellent computer skills to record test results and analyze complex data.



Acute observational skills and an attention to detail in carrying out precise scientific work.



NEUROPHARMACOLOGIST Studies how nerve cells and human behavior are affected by drugs, and develops new medicines to treat conditions such as depression and bipolar disorder.



CLINICAL PHARMACOLOGIST Drafts guidelines for how and when medicines should be prescribed, runs clinical trials of new drugs, and monitors the effectiveness and possible side effects of medicines.



UNIVERSITY RESEARCHER Works in a university pharmacology department, leading teams undertaking research projects and experiments, teaching and supervising students, and performing administration and management tasks.

RELATED CAREERS

- ▶ **MICROBIOLOGIST** *see pp. 138–139*
- ▶ **FORENSIC SCIENTIST** *see pp. 146–147*
- ▶ **MEDICAL DOCTOR** *see pp. 276–277*
- ▶ **PHARMACIST** *see pp. 284–285*
- ▶ **BIOCHEMIST** Conducts scientific research into chemical reactions that take place inside living organisms. Biochemists study DNA, proteins, and cells to observe the effects of drugs, foods, allergies, and diseases.
- ▶ **BIOMEDICAL RESEARCH SCIENTIST** Performs clinical trials and laboratory tests to research new treatments for diseases and other health issues.

AT A GLANCE



YOUR INTERESTS Chemistry • Biology • Physics • Mathematics • Information Technology (IT) • Health and medicine



ENTRY QUALIFICATIONS An advanced degree, such as a doctor of pharmacy degree, is required in order to work as a pharmacologist.



LIFESTYLE Working hours are regular, but weekend or shift work may be required to monitor experiments. Part-time hours may be available.



LOCATION Pharmacological work is primarily laboratory- or office-based, but traveling to scientific conferences is a common part of the job.



THE REALITIES Laboratory analysis may be repetitive and involve working with hazardous chemicals. Some roles involve animal testing.