Career options: Biomedical Science

Graduates of this program are equipped with knowledge and skills in the modern biosciences and clinical sciences, particularly in their application to medicine, biomedical research and health care services. As a pre-medical degree, graduates have the most appropriate training for entry to postgraduate medicine. Those wishing to pursue this path will need to complete the Graduate Australian Medical School Admissions Test (GAMSAT).

The solid foundation this program provides in molecular biology, biochemistry and physiology will also position graduates well for careers in medical research. A range of research projects is often available through the school at the undergraduate, Honours and Ph.D level to facilitate student transitions into this profession. Alternatively, graduates may undertake a masters’ degree which provides professional training & vocational opportunities in medical research, genetic counselling, nutrition & dietetics, clinical biochemistry, clinical physiology, clinical microbiology and forensic science.

In addition to knowledge and skills directly related to your program of study, you will also develop a range of other skills (e.g. teamwork, analytical, communication) through academic study, employment, voluntary work, sporting activities and life experience. Recognising the value employers place on these skills is an important factor in your graduate job search.

Occupations and industries

Biomedical Science graduates are employed in a range of occupations and industries including:

- Government health departments
- Pharmaceutical companies
- Hospitals – private and public
- Community Health Centres
- Biotechnology companies
- Universities
- CSIRO & biomedical research institutes
- Forensic laboratories
- Health promotion & medical foundations
- Regulatory monitoring
- Protection and sustainability
- Processing and manufacturing
- Government policy development
- Food production
- Agribusiness
- Therapeutics
- Medical diagnostics
- Public health programs
- Environmental monitoring
- Science education
- Dentistry
- Toxicology
- Orthotics
- Occupational Therapy
- Pathology
- Counselling (Genetic/Rehabilitation)
- Nutrition and Dietetics
- Bio-ethics
- Radiation Therapy
- Ophthalmic Technician
- Embryologist
- Medical Tourism
- Cardiac Scientist
- Respiratory Scientist
- Occupational Hygienist
- Science writing / publishing
- Clinical Audiology / Audiology
- Speech Pathology
- Epidemiology
- Ergonomics
- Neurophysiology
- Medical Imaging
Infection control
Occupational Health and Safety
Technical Representative
E-Healthcare

Compounding Chemistry
Diabetes Education
Para-medicine
Case Management

Positions and employers

Many graduate employers recruit from a wide range of disciplines. The major directory of graduate recruitment in Australia, Graduate Opportunities, lists employers by the disciplines from which they are recruiting. You might be surprised by the range of employers recruiting from your degree and the sectors of the workplace where you might establish a career.

Examples of graduate positions and employers include:

EEG Technician
Immunology Clinical Officer
Laboratory Assistant
Laboratory Assistant
Laboratory Technician
Medical Laboratory Scientist
Medical Scientist
Microbiologist
Phlebotomist
Phlebotomist
Research Assistant
Research Assistant
Research Officer
Research Officer
Research Scientist
Roadshow Officer
Scientific Assistant
Scientific Officer
Scientist
Scientist
Sleep Scientist Grade One
Sleep Technician
Sleep Technician
Specimen Sorter
Tissue Culture Technician

Gold Coast Neurophysiology
Royal Brisbane Hospital
QML Pathology
Queensland Medical Laboratories
Royal Brisbane Hospital
Veterinary Pathology Service
QML
Food Industry
Princess Alexandra Hospital
S & N Pathology
QIMR
Transgenic Animal Service Queensland
Red Cross Blood Bank
Xenome
West Moreton Health
Queensland Science Centre
Queensland Education
GR Micro Ltd
Queensland Medical Laboratory
Sullivan And Nicolaides
Norquest Pty Ltd
John Flynn Hospital
Snore Australia
Queensland Medical Laboratory
Mater Medical Research Unit

Vacancy websites

Australia

- AusBiotech directory of recruitment agencies
- Australian Healthcare and Hospitals Association vacancy listings
- Australian Defence Force Recruiting
- Australian Public Service recruitment
- Australian Job Search
- Careers at CSIRO
- Careerone
- Graduate Opportunities (the major directory of graduate recruitment in Australia)
- Health and Community Jobs (HACjobs)
- Kelly Scientific Resources
- Adzuna
- New South Wales Government jobs
- Pharmaceutical Jobs (healthcare, medical, scientific and pharmaceutical vacancies)
- Queensland Government Jobs
- Recruitment consultants in Australia (Searchable by industry sector or alphabetically)
- Research Jobs (vacancies in Australia & New Zealand)
- Science People
- Careerjet employment search engine
- TechStaff
- Unijobs (Vacancies of all types in Australian universities)
- Unigrad (specialist Australian graduate recruiter)
- Your World Healthcare

### International

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<td>United States</td>
<td>United Nations Headquarters graduate internships</td>
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### Targeting potential employers

Many work opportunities are not advertised. It is common practice for jobseekers to search out these opportunities. When approaching potential employers, conducting research to identify links between your selling points (your skills, experience, interests and qualifications) and an employer’s needs, increases your chances of success. Research will also reduce the number of approaches you need to
make, saving you time in the end. Developing and using your personal and professional networks is also a valuable tool in finding these ‘hidden’ opportunities.

- Australian Universities
- Federal and state health departments & agencies in Australia
- Medical and health research organisations in Australia
- Patent Offices worldwide
- Medicines industry companies in Australia
- Private hospitals in Australia
- Public hospitals in Australia
- Queensland biotechnology industry
- Life Sciences Queensland
- Scientific Supply Companies in Australia
- Scientific testing facilities and labs

**Employment prospects and starting salaries**

*Grad Jobs and Dollars* provides information on employment rates and median starting salaries by field of study, for Australian university graduates surveyed four months after graduation. Information on occupations Australia-wide, such as the size of the workforce, employment prospects and average weekly earnings is available from *Job Outlook*.

**Professional associations**

Joining a professional association is a great way to meet people in your field, who can assist you to explore your career options and potentially find employment opportunities. These associations exist in every field of employment and hold regular professional development and networking events. Students are welcome to join, and membership and can cost as little as $60 per year.

- AusBiotech
- Australasian Association of Clinical Biochemists
- Australasian Society for Immunology
- Australasian Society for Human Biology
- Australian & New Zealand Forensic Science Society
- *Australia & New Zealand Society for Cell & Developmental Biology*
- Australasian Society of Clinical & Experimental Pharmacologists & Toxicologists
- Australian & New Zealand Society of Respiratory Science
- Australian Institute of Medical Scientists
- Australian Physiological Society
- Australian Science Communicators
- Australian Society for Biochemistry & Molecular Biology
- Australian Society for Medical Research
- Australian Society for Microbiology
- Epigenetics Society
- Genetics Society of Australasia
- Haematology Society of Australia & New Zealand
- Health Informatics Society of Australia
- Human Genetics Society of Australasia
- International Society of Forensic Toxicologists
- Public Health Association of Australia
- Royal Australian College of Medical Administrators
Other career-related links for Biomedical Science students

- Bioscience careers
- Careers in chemistry
- Careers in forensic science
- Careers in genetics and molecular biology
- Pathways to careers in health
- Careers in science, microbiology and biochemistry
- Careers in health information management

Sample job advertisements

**Production Scientist**

We are an evolving international company which develops manufactures and markets a wide range of specialized bio-research reagents that simplify, accelerate and improve life sciences research.

Responsibilities may include:

- Manufacturing of microbiological reagents under ISO 9001 conditions.
- Offering technical support to clients and sales reps.
- Manufacturing microbiological reagents on weekly basis in conjunction with the production team.
- Supervising junior production staff
- Employing SOPs and ASOPs for the manufacturing process.
- Ensure all activities are conducted to approved timelines according to production and QMS schedules
- Work with the Sales Director, Marketing Manager & R&D Director to support technical sales for the entire range of products
- Ensure all activities are carried out in accordance with current approved and compliant procedures and to the requirements of relevant QMS, local SOPs, EHS and regulatory requirements
- Recording of technical customer complaints
- Aiding with the production of validation/marketing literature
- Attendance of relevant trade-shows/seminars

Qualifications required:

- MSc in Microbiology or equivalent
- 2 years relevant experience

Desirable Skills:

- Experience in mammalian cell culture
- Experience in raising competent cells, performing transformations
- Good understanding of PCR/QPCR
- Familiar with ISO 9001

**Research Technician – CSIRO**

CSIRO Biosecurity Flagship seek a solutions oriented Research Projects Officer. This position is part of a collaborative project to develop double stranded RNA (dsRNA) knockdown gene candidates for mosquito population suppression as part CSIRO’s Biosecurity Flagship’s work on vector biology. The project is a collaboration between the CSIRO, University of Queensland, QIMR Berghofer Institute, James Cook University and University of Manitoba.
Your duties will include:

- Identify gene candidates, develop and express dsRNA and perform RNA interference experiments on mosquitoes in cage experiments;
- Utilise recombinant DNA technologies to develop double stranded RNA-based tools for target genes from genome/transcriptome/proteome databases;
- Perform cage and field experiments with mosquitoes;
- Communicate effectively and respectfully with all staff, clients and suppliers in the interests of good business practice, collaboration and enhancement of CSIRO’s reputation;
- Work as part of a multi-disciplinary, often regionally dispersed research team, to carry out tasks under limited direction in support of scientific research;
- Work collaboratively with colleagues within your team, the business unit and across CSIRO, to reach objectives.
- To be considered you will hold a relevant Bachelors/Masters Degree &/or equivalent experience in molecular biology or molecular entomology.

You will also have:

- Demonstrable experience in molecular biology including PCR, bacterial cloning and expression systems;
- Experience with sanger DNA sequencing, editing and analysis and gene target searching using nucleotide and amino acid sequences;
- The ability to work effectively as part of a multi-disciplinary, regionally dispersed research team, and carry out tasks under general direction from Scientific Researchers;
- The ability & willingness to contribute novel ideas and approaches in support of scientific investigations.

**Biotechnology Manufacturing Associate**

CSL Limited is a company that fosters a work culture emphasising Superior Performance, Innovation, Integrity, Collaboration and Customer Focus with a commitment to support, train and grow its people. As a genuine leader in the biopharmaceutical industry, CSL is a multinational ASX Listed Company that is actively growing its Australian based manufacturing operations to support global growth. CSL develops, manufactures and markets products to treat and prevent serious human medical conditions and is globally one of the largest manufacturers of plasma-derived therapies.

The Opportunity

The CSL Biotechnology Manufacturing Facility is part of the CSL Behring group. In the facility we use mammalian cells and DNA technology to manufacture drugs that will be used to treat life-threatening diseases. In the Biotechnology Manufacturing Facility, we work in collaboration with Process Development, Quality, and other Technical and business functions in order to ensure efficient and safe drug substance manufacturing processes for the production of multiple recombinant proteins.

The position

We are responsible for cell culture and purification process monitoring and analysis, receiving new processes from Process Development or other manufacturing sites, process performance troubleshooting and maintenance of the process validated state. We pursue scientific and manufacturing excellence and employee development in achieving its goals. The open position is for an Engineer or Scientist within the cell culture group to focus on production activities and production equipment and areas maintenance.

The duties

Under direction, participate in cell culture activities in a cGMP area. Safely maintain production in full cGMP compliance. Ensure production activities are completed in a safe, compliant, professional and productive manner. Utilizes CSL Values to ensure production areas and processes are effective at delivering to short and long term site and department operational goals.

- Write, review and approve technical documents
- Comply with regulations to ensure safe working environment
- Ensure cGMP and TGA compliance of operating areas
- Participate in the development and revision of SOPs and other process related documentation
• Evaluate current processes/procedures and recommend changes to management to optimize production
• Participate in investigations
• Ensure proper gowning is followed
• Assist in maintaining department goals
• Ensure proper maintenance of process equipment

To be successful in this role you will have a tertiary degree in Science. You will have the drive and capability to maintain world class compliance standards and coordinate with the team. The position requires standing for long periods and working in a clean room so it is expected you are resilient and able to cope with the associated physical stresses. We are looking for a strong degree of initiative with a focus on high quality products for our patients.

Applications must address the selection criteria above and include a current CV and covering letter.