CAREERS IN BIOMEDICAL SCIENCE
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# CAREERS IN BIOMEDICAL SCIENCE

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The cover image was supplied courtesy of Monash Micro Imaging.

Intestinal mesenchymal niche cells expressing distinct cellular markers (Nikon C1 confocal microscope).

Thierry Jarde, Dept Anatomy and Developmental Biology, Biomedicine Discovery Institute, Monash University, Clayton.
Studying biomedical science opens up a world of exciting career possibilities. This guide aims to help you get started exploring these. It also provides essential information about programs and resources that will enable you to develop critical transferable skills – those most frequently cited by employers.

Biomedical science students are often drawn to the discipline because they’re interested in combining their love of science with a desire to improve health outcomes for individuals and communities. Many of you will be considering your options after graduating – perhaps you’re interested in going into research or pursuing a career in medicine.

But your options don’t end there. Did you know that your biomedical science degree – possibly combined with further study – can lead to a career where you drive health policy and inform government regulation of the health sector? Or that you might assist companies with commercialising medical research? You could decide to pursue a career where you design medical technology, have a role in an allied health profession, assist in legal cases as a forensic scientist, or work as an educator. These are just a few of the many careers that begin with your Bachelor of Biomedical Science degree. The alumni profiles in this guide are testament to this fact.

Career paths are much less linear than they were in the past, and we know that current students are likely to change their careers many times throughout their working lives, some undertaking roles we have not yet imagined. For this reason, it is important not just to think about the content you will be learning, but to consider the skills you will develop within your course that will prepare you for many different roles in many varied industries.

Many of you are considering a career in medicine, and the Bachelor of Biomedical Science will prepare you for the challenges of graduate medical school. Alternatively, this degree is a good option if you are interested in pursuing careers in the areas of biology, chemistry and allied health.

As part of your biomedical studies, you will have opportunities to be involved in research projects and I encourage you to take advantage of these opportunities. Gaining research experience allows you to develop a skill set that is highly valued by the health and biotechnology industries as well as by non-science industries.

Be inspired by our alumni stories as you start to explore the many career options that stem from studying biomedical sciences.

I wish you all the best in your careers.

Associate Professor Elizabeth Davis
Course Coordinator
Bachelor of Biomedical Science

Acknowledgement

We acknowledge the traditional lands of Indigenous peoples.

The Faculty incorporates the Aboriginal and Torres Strait Islander Curriculum Framework in educating future health professionals. You will learn skills in respect, communication, safety and quality, advocacy and reflection to improve Indigenous health.

Monash is committed to facilitating the entry of Indigenous students into courses. There are a range of pathways, entry points, bursaries, scholarships, accommodation, tutorial support and cadetships. To learn more about entry requirements and our Indigenous Access Interview, contact Gukwonderuk Indigenous Health staff via email at med.indigenoushealth@monash.edu or 03 9905 3628.
EMPLOYABILITY SKILLS

In addition to the knowledge you’ll gain from your Bachelor of Biomedical Science (BBiomedSc), when entering the workforce you’ll need to have a set of transferable skills that will enable you to adapt to the requirements of your role and manage the constantly changing work environment.

Transferable skills are core skills that you can apply across a range of different roles and workplaces, such as your ability to solve problems and to communicate effectively. Your employability will be maximised if you have a good academic record and a set of transferable skills that you can clearly describe to employers and substantiate with examples.

Core employability skills, including both transferable and technical skills, include:
- communication
- critical thinking
- creativity and innovation
- initiative and enterprise
- professionalism
- planning and organisation
- problem identification and solution
- intercultural competence
- teamwork
- use of tools and technology

Many employers consider these transferable skills just as important as your technical knowledge. In the 2015 Graduate Outlook Survey, participating employers nominated the selection criteria they use most when recruiting graduates. Transferable skills came out on top: ‘communication skills’, ‘cultural alignment/values fit’ and ‘emotional intelligence’ were used most often.

This guide provides information about programs and resources offered by the university that will allow you to develop transferable skills. Make the most of these opportunities to ensure that when you graduate you have the skills that employers are looking for.

Biomedical science graduates are highly sought-after in many industries, as employers are aware that the BBiomedSc is a rigorous degree that produces graduates who can think analytically, process complex information and solve problems effectively. This can be seen in our BBiomedSc alumni cohort, with many of them choosing to pursue rewarding careers outside of the biomedical industries where their skills are also highly valued.
Below are some examples of situations in which you may have used employability skills through your university studies and extracurricular activities:

<table>
<thead>
<tr>
<th>SKILLS AREA</th>
<th>SKILLS CLAIMS</th>
<th>POSSIBLE EVIDENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>■ Organising and expressing ideas concisely.</td>
<td>■ Presenting and participating in class discussions.</td>
</tr>
<tr>
<td></td>
<td>■ Adapting your communication style to suit different target audiences.</td>
<td>■ Using customer service skills.</td>
</tr>
<tr>
<td></td>
<td>■ Effectively communicating the findings of scientific experiments.</td>
<td>■ Writing lab reports.</td>
</tr>
<tr>
<td>Teamwork</td>
<td>■ Working in a team to achieve a common goal.</td>
<td>■ Working on group assignments at university.</td>
</tr>
<tr>
<td></td>
<td>■ Sharing information, supporting and empowering other team members.</td>
<td>■ Being involved in a student society, sports team or community organisation.</td>
</tr>
<tr>
<td></td>
<td>■ Responding constructively to the opinions of others.</td>
<td>■ Working in a team for your part-time job.</td>
</tr>
<tr>
<td>Problem identification</td>
<td>■ Researching and selecting relevant information to solve a problem.</td>
<td>■ Working on assessment exercises such as lab work or research projects.</td>
</tr>
<tr>
<td>and solution</td>
<td>■ Analysing issues for underlying causes, assessing options, proposing solutions.</td>
<td>■ Tasks completed as part of Industry Based Learning or a summer research project.</td>
</tr>
<tr>
<td></td>
<td>■ Thinking sequentially, critiquing and synthesising information.</td>
<td>■ Working within a customer service environment and dealing with complaints.</td>
</tr>
<tr>
<td>Initiative and enterprise</td>
<td>■ Easily adjusting to new situations.</td>
<td>■ Obtaining a work placement, vacation employment or internship.</td>
</tr>
<tr>
<td></td>
<td>■ Mapping out ideas to an action plan.</td>
<td>■ Finding better ways to do things in an assignment group, student club or team.</td>
</tr>
<tr>
<td>Planning and organisation</td>
<td>■ Managing timelines and prioritising.</td>
<td>■ Managing your time well such that you participate in extracurricular activities or work part-time alongside your studies.</td>
</tr>
<tr>
<td></td>
<td>■ Allocating and coordinating tasks for yourself and others.</td>
<td>■ Completing multiple exams or assessments and still getting good marks.</td>
</tr>
<tr>
<td></td>
<td>■ Anticipating future needs and forward planning.</td>
<td>■ Planning an event for a student club or society.</td>
</tr>
<tr>
<td>Use of tools and technology</td>
<td>■ Proficiency in using lab equipment and scientific techniques.</td>
<td>■ Lab work conducted for biomedical science units, industry placements or research projects.</td>
</tr>
<tr>
<td></td>
<td>■ Managing information through technology.</td>
<td>■ Sourcing information with electronic databases.</td>
</tr>
<tr>
<td></td>
<td>■ Learning to use new tools or software when required.</td>
<td>■ Using specialised software packages to complete tasks for your course, part-time job or research project.</td>
</tr>
</tbody>
</table>
BUILDING EMPLOYABILITY SKILLS

Extracurricular and course-related activities give you opportunities to develop new employability skills, and provide evidence of skills used in a context that’s often relevant to the workplace. Below are some examples of activities that you may find helpful for developing employability skills.

Industry-Based Learning

The BME2032 Biomedical Industry-Based Learning elective unit will help you gain employability skills and work experience in a biomedical industry. This unit involves a three-week internship in a biomedical workplace, giving you a head-start in learning the professional skills required to thrive in the workforce. During the internship, you’ll work on real projects that will give you valuable insight into the biomedical industries.

You’ll have the opportunity to:
- expand your network
- enhance your professionalism
- develop key transferable workplace skills.

When you finish your internship, you’ll reflect on your skill development and present your project findings to an audience of peers, industry partners and academics.

Internship features:
- available to domestic and international students
- can be paid or unpaid depending on the industry partner
- available in a wide range of host organisations, including private and not-for-profit organisations
- duration: minimum 80 hours of placement.

Examples of organisations that have been selected due to the quality of their internship opportunities are the Lung Function Lab at The Alfred and the Cardiac Physiology Lab at Monash Health. Please note that some organisations have their own selection processes for interns.

Leadership programs

Student year level representatives

Student representatives make sure that the voices of students in their year levels are heard. Each undergraduate year level (including honours) has representatives who report to the Course Management Committee. Year level representatives gain experience in liaising with a range of stakeholders, and have opportunities to develop communication and leadership skills.

Leap into Leadership Online

Leap into Leadership Online is a series of free modules that allow you to develop your employability and leadership skills at your own pace. They are available for all current Monash students and can be completed at any time. Each module is practical, straightforward and fun, and takes about one to two hours to complete. The modules will help you to hone specific leadership skills, and will be useful evidence of skill development to discuss with employers.

Vice Chancellor’s Ancora Imparo Leadership Program

The Vice-Chancellor’s Ancora Imparo Leadership Program is a unique opportunity available only to second-year Monash University students. Participants will hear from inspiring leaders with a wide variety of backgrounds. Program participants attend a fully-funded three day residential program, a series of seminars and can complete a service learning project. Participants also receive a stipend of $500.

The best thing about being a student rep was being able to talk to the biomedical science students, getting feedback from them and then seeing solutions to their problems being implemented. I loved being the interface between the biomedical science staff and the student body, and I found it rewarding to communicate the students’ thoughts and concerns to the unit coordinators. My communication skills certainly improved in this role, but I also saw improvement in my ability to gather anecdotal data and opinions and turn those into something meaningful for the unit coordinators to work with. I also developed my problem-solving skills as I had to come up with possible solutions to problems students were facing and communicate these solutions to the biomedical science staff.

Karim Sadik, 2nd year student
Bachelor of Biomedical Science Advanced (Honours)
Mentoring programs

Biomedical Science Peer Mentor Program

Students in their second year or higher of a biomedical science degree (including double degrees) can apply to be a peer mentor. Mentoring a group of first-year students will give you valuable opportunities to enhance your leadership and public speaking skills. You'll get to share your experiences and advice about studying biomedical science, and give back by helping younger students successfully transition to university life.

Registrations for the Peer Mentoring Program open in October and full training is provided.

Access Monash Ambassador Program

The Access Monash Mentoring Program pairs experienced and engaged Monash University students with VCE students from under-represented schools to work in a one-on-one mentoring relationship for their final two years of secondary school.

Mentors benefit from the opportunity to develop leadership, public speaking and teamwork skills. They also form valuable connections with senior Monash staff, alumni and community leaders, and are considered for the Monash Community Leaders Scholarship ($4000 per year). In addition, each year 25 mentors are selected to become Mentor Leaders. These students play a key role in training new mentors and providing ongoing support to the Access Monash team, as well as actively working to promote Access Monash through the university and wider community.

Clubs and societies

Joining the committee of a student club or society allows you to develop skills you may not otherwise gain during your undergraduate studies, such as managing a budget, planning events and raising revenue.

Part-time work

Working part-time while you study can be a great way to gain employability skills and workplace experience, as long as you limit your working hours to a manageable amount per week that won’t detract from your studies. A great place to start your job search is Career Gateway, which is a jobs portal available exclusively to Monash students. Log into Career Gateway here: https://careergateway.monash.edu.au/students/login

Volunteering

Volunteering can be one of the most rewarding ways of developing your own skills. Research has shown that volunteer work can improve your chances of finding paid work and has a positive effect on career progression for people under 25. Through volunteering, you’ll be able to develop valuable employability skills from a wide range of positions, but you may like to find an opportunity that is directly relevant to your desired career path. For example, you could volunteer at a hospital or for a public health organisation to gain first-hand industry experience and to expand your professional network.

My time at Monash Children’s Hospital (almost a year) has seen me work in a range of roles, all of which involve working cooperatively with staff to deliver the highest level of care and support to the children at the hospital and their parents. My tasks have included guiding patients and visitors around the hospital, playing games with children in the wards and acting as an assistant in the theatre.

Each of the roles at the Monash Children’s Hospital have enabled me to work on my interpersonal skills through interaction with parents, patients, staff, and other volunteers. Spending time with such amazing staff and children at the hospital fills my heart with a great respect, admiration, and drive to continue working hard in pursuing a career in paediatrics.

I applied for this position because I wanted to gain some exposure in a hospital setting and see how it ran its day-to-day operations. Coupled with my strong desire to pursue a career in paediatrics, I scoured the web for any volunteering positions that aligned with my interests, and applied for this position as soon as I found it. The Monash Children’s Hospital usually has multiple intakes throughout the year, so I would recommend checking hospital websites and emailing Volunteer Coordinators about openings.

Thisun Gunasena, 3rd year student, Bachelor of Biomedical Science

The highlight of being a peer mentor is being able to share my experiences with younger students, as I felt lost in first year and wish I’d had this information. I’ve been able to develop my interpersonal skills and social awareness by chatting to new people and making them feel comfortable and included. I’ve also built on my leadership and teamwork skills through working with fellow committee members, other mentors and staff members. Plus I spoke at Orientation Day in front of many first year students, which was a new experience for me. Definitely apply to be a peer mentor if you want to share your experiences with younger students. Being a mentor teaches you many valuable skills and when you’re helping others, you learn a lot about yourself too. Apply to be a committee member if you want an opportunity to work with a very supportive and open-minded team.

–
Jodie Lynn, 3rd year student, Peer Mentor and Mentor Committee Member
Bachelor of Commerce/Bachelor of Biomedical Science
COMMUNICATING YOUR SKILLS TO EMPLOYERS

It’s likely that you already use a wide range of skills for both your studies and for extracurricular activities, but it’s important that you can identify specific examples of your skill use and effectively communicate these to employers.

Career Development Program

The award-winning Biomedical Science Career Development Program (CDP) integrates reflection on your employability skill development into core biomedical science units. From your first year of study, CDP modules will guide you through the process of identifying and describing your employability skills. In selected units across the three years of your BBiomedSc, you’ll complete modules on topics such as networking and sourcing jobs.

In collaboration with the Krongold Clinic, the CDP also offers students individual career assessment and feedback sessions with a psychologist for a small fee. These sessions are based on career interests, work values and personality, and provide an opportunity to further reflect on your career development.

The CDP will also give you opportunities to:
- build on your ability to effectively communicate with employers
- develop an e-portfolio of your skills and experience, which you can access throughout your degree and after you graduate
- network with representatives from industry, senior researchers and graduates

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The Career Development Program will show you that there are possibilities for careers outside of research and medicine. It will also help you recognise which skills employers are seeking, which transferable skills you’re cultivating, and how to effectively convey this in an interview. You’ll practise these techniques and receive feedback that helps with further improvement. Three years at university is short and before you know it, opportunities have passed by. For this reason, the most beneficial aspect of the program for me is that it got me thinking about the future early!

– Yan Liu, 3rd year student
Bachelor of Biomedical Science
Student Futures

Student Futures is an online tool that helps you track and reflect on experiences and employability skills you develop through your course and through extracurricular activities. You can use Student Futures at any stage of your studies to:

- find opportunities to develop the skills employers are looking for
- track and reflect on your progress
- prepare for job applications and interviews.

Career Success Coaching

Career Connect’s Career Success Coaching program guides you through the process of securing fulfilling employment. It will help you develop your employability edge by:

- increasing your understanding of the employment market in your field of study, or related fields
- equipping you with the skills and confidence to be well prepared to navigate the competitive and often complex recruitment process
- walking you through what you need to do to get the job you want, step by step.

All students have access to group workshops and career conversations. During these sessions, you’ll hear from specialist coaches who have extensive industry knowledge and experience. Group workshops cover topics including:

- career development fundamentals
- the skills that employers value
- how to network as a student
- preparing for your post-study job search.

Answering interview questions with the STAR method

In interviews for jobs, internships or other roles, you’ll often be asked questions that will prompt you to respond with specific examples from your experiences. These questions are used because employers believe past behaviour is a good indication of future behaviour.

The behaviours employers are looking for are usually based around employability skills such as teamwork, communication, problem solving and initiative. These questions often start with a phrase such as, ‘tell me about a time when you...’, or ‘describe a situation when you...’.

To answer, use the STAR approach. This stands for Situation, Task, Action and Results, and is a way of structuring your answer to show what you have learned from your experiences.

See the example below:

### Describe a recent work or study-related problem. Tell me about the action you took to solve the problem. What was the outcome?

<table>
<thead>
<tr>
<th>Section</th>
<th>Objective</th>
<th>Sample answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>S = Situation</td>
<td>Briefly describe the situation or scene.</td>
<td>I was working in a large retail hardware store as a customer service assistant.</td>
</tr>
<tr>
<td>T = Task</td>
<td>Say what needed to be done to address the situation and what your role and responsibilities were.</td>
<td>Our shift team had the worst safety record in the store and we needed to improve it.</td>
</tr>
<tr>
<td>A = Action</td>
<td>Say what you did and how you did it. Include your reasons if they are useful.</td>
<td>I volunteered to be the safety representative and used my science studies background to explain to people good safety practices and why they were important. I arranged for safety to be a regular item on the agenda of staff meetings. I worked with my team on posters, which we placed in common staff areas to raise awareness.</td>
</tr>
<tr>
<td>R = Results</td>
<td>Say what happened as a result of your action.</td>
<td>People became more aware of safety. Compliance improved and the number of incidents dropped. Management noticed and gave us an award to acknowledge our improvement.</td>
</tr>
</tbody>
</table>
GRADUATE CAREERS

It’s a great time to be a biomedical science graduate as the biomedical industries are experiencing high growth in Australia, and employers are seeking candidates with scientific skills and knowledge. Australia is ranked as one of the world’s top five countries for biotechnology innovation, and the medical technology and pharmaceutical sector is our tenth largest export*. The Victorian Government has identified medical technologies and pharmaceuticals as one of the state’s six future industries, which are priority sectors that are set to experience economic growth and create high-wage jobs for highly skilled employees.

*MTPConnect.org.au, 2018

Below are some examples of fields related to the biomedical sciences in which you could find work without needing to complete further study.

**Pharmaceutical industry**

In the pharmaceutical industry, you could find work that relates to medical services, the marketing and selling of drugs, clinical development, business development or regulatory affairs.

Examples of job opportunities:
- GlaxoSmithKline Commercial Management (Pharmaceutical) Future Leaders Program
- Roche Pharma Graduate Program
- CSL Behring Graduate Program (Commercial Operations Stream)

**Commercialisation and biotechnology**

In this field, you could be involved in transforming biomedical research into marketable products and services. Opportunities exist in both the government and private sector.

Examples of job opportunities:
- Australian Defence Force Graduate Program
- Department of Industry, Innovation and Science Graduate Program – Australian Government

**Health promotion and policy**

Health promotion and policy could see you apply your knowledge of biomedical sciences to prevent disease and improve the health of communities and populations. Some jobs in health promotion and policy don’t require further study, such as State or Federal Government graduate programs.

Examples of job opportunities:
- Department of Health Graduate Development Program – Australian Government
- State government policy generalist graduate programs – Victorian Government or other state governments
Research management

If you’re interested in biomedical research but don’t want to work in a lab yourself, a career in research management could be for you. Research managers strategically plan and coordinate research projects, manage budgets and identify research priorities.

Employers of research managers include universities and research institutes. Work experience in a biomedical related industry is generally required.

Health insurance

The private health insurance industry is essential to the Australian health system, providing insurance coverage for almost half of the population. Working in this industry could give you opportunities to educate customers and promote health and wellbeing, as well as managing relationships with customers and other stakeholders.

Examples of job opportunities:
- Medibank Private Graduate Program
  (Health Management stream)

Laboratory and facilities management

Laboratory and facilities managers combine scientific expertise with managerial skills to ensure that lab operations run efficiently and effectively. Their tasks often include strategic planning and coordination of lab activities and managing staff. Laboratory and facilities managers can find work in private or university labs.

Food technology

Food technologists use their knowledge of biological and chemical sciences to research, develop and manufacture food products that meet consumer needs. They may also be involved in quality control and food safety.

Examples of job opportunities:
- Coles Graduate Program (Product Technology stream)
- Woolworths Graduate Program (Product Development and Quality Assurance stream)
- Mars Graduate Program
  (Research and Development stream)
I work in the strategic partnerships team at IQVIA, which is a small and specialised team that provides consulting solutions for strategic domestic businesses. We also identify and develop new opportunities to support the pharma industry by linking and commercialising data.

IQVIA is a new company resulting from the merger of both the world’s largest pharmaceutical market data company and human clinical trials organisation. My workplace provides opportunities to work on projects across the full life cycle of pharmaceutical development for almost all pharmaceutical and biotech companies. It gives me exposure to broad networks of global expertise as well as data across all segments of health science, which I leverage to create commercial insights for our clients.

Before I took on my current role I worked as a consultant in a range of roles developing business plans for therapeutics across the full life cycle of commercial development (invention, capitalisation, product development, clinical development, licensing, market access, marketing and loss of exclusivity).

How I got here

By studying biomedical science, I gained exposure to ambitious and rigorous thinkers from a range of fields. This provided opportunities to challenge myself with complex problems that are important to the world, reflect on my interests and strengths, and gave me confidence to tackle difficult challenges. I did everything I could to find opportunities to move towards a commercialisation role. I went to biotech events, asked anyone for industry contacts who I could reach out to, followed up those contacts and showed them my knowledge of and enthusiasm for biotechnology commercialisation. I attended every networking function I could and volunteered wherever there was a good opportunity to build my network and learn about biotechnology commercialisation.

But it’s hard: there are very few roles in Australia in biotech commercialisation, and there is no clear pathway to enter the industry. I attended investor briefings and struck up a relationship with a highly commercial ex-law firm partner (think corporate raider/vulture) where I helped him understand biotechnology to facilitate transactions around failed ASX listed biotech stocks. It was 100% commission (unpaid) and was eye-openingly commercial, but gave me credibility when taking my next step.

My advice for current students

- Your passion amplifies your value, so start by looking for opportunities in the field you’re passionate about.
- If you’re interested in the commercial side of science, start working in a job or undertaking research that gives you exposure to the industry, so you can build your people skills and knowledge of the commercialisation process. Your ability to read people, inspire confidence, focus on the commercial need, and execute targets will be critical to your success.
- Look for opportunities for projects involving a Cooperative Research Centre, human clinical trials, health economics, epidemiology or health data science. Try to find work in consumer health, technology (i.e. even mobile phones) or therapeutics companies that are marketing products in Australia. The front door into pharma is via roles as a GP sales rep or Medical Science Liaison.
I look after a group of about 30 researchers based offsite at the Baker Institute. My role ensures the smooth running of the laboratories so that staff can conduct their research as effectively as possible.

I originally chose to work in medical research because I was interested in cancer research. My career path has taken me in different directions and I have gradually built on my knowledge and skills which I now apply in my current job.

Facilities and laboratory coordination is never boring and is always changing. You also never stop learning and it involves interacting with a large number of different people. It’s also very rewarding to work in a field that makes a difference to people’s lives.

My current position is part-time, so allows me to have a good balance between work and family. It also requires me to use my strengths of being organised and working with a diverse range of people, all while being involved in exciting research projects.

How I got here
The Bachelor of Biomedical Science degree was very broad which has been useful in my career as I have worked in several different areas in the field. I switched between immunology and cancer research before moving into my current position. My current role involves interacting with a range of scientists working on all aspects of eye research, so it makes use of the broad base of knowledge I gained during my degree.

My advice for current students
Get out there at research days and talk to researchers about their work, particularly if it’s an area of research you’re interested in. I also highly recommend summer research placements, as they give you a chance to experience lab work and to find out what day-to-day life in the lab is really like.
As the Chief Operating Officer of European Molecular Biology Laboratory (EMBL) Australia I work in research management, which is the business side of research. This involves managing budgets, attracting funding and the strategic planning of priorities and activities that support research.

Research management allows me to think about the bigger picture of biomedical research by using my skills in connecting people to help scientists progress their research. I also help researchers to communicate their discoveries and to engage with people outside of the research community.

The scientists I work with are passionate about what they do, and it’s rewarding to see the impact that the EMBL model of funding and independence has on their research. Enabling researchers to make advancements in science motivates me – which is particularly important when I have boring administrative processes to get through!

How I got here

While doing two Research in Action units during my undergraduate studies, I quickly realised that although I had a passion for science, I wasn’t passionate about driving research myself. I didn’t care where the meniscus sat!

My studies of biomedical science disciplines at Monash also taught me how to work with different personalities, which has been a crucial skill in each one of my roles throughout my career. Although group assignments weren’t always fun at the time, they reflect the workplace in that you can’t always choose who you work with. I gained an understanding of how different people approach challenges and opportunities, and how you can work with them to make the most of your group assignment or long-term projects in the workplace.

My advice for current students

My advice to BBiomedSc students is to speak to people who currently have jobs that interest you. Find out what they did to get where they are, and which skills they believe are important in their chosen profession. You might find – as I did – that the reality of working in a certain profession isn’t what you’d expected. It’s better to discover this sooner rather than later, while you can still shift the focus of your studies and career goals relatively easily.
A career in research

By working in research, you can tackle the big questions in the biomedical sciences and make real progress in improving human health. This rewarding career path allows you to make innovative and novel contributions to the existing body of knowledge in the biomedical sciences. You’ll continually learn new things and challenge yourself intellectually. If you later decide that you want to work in the commercial sector or biomedical industry, a research degree will leave you well placed to enter a high-level position.

Research at the Monash Biomedicine Discovery Institute (BDI)

The Monash BDI is part of one of the largest and most successful medical research hubs in Australia and the world. By pursuing research in biomedical science at Monash, you’ll be part of the Monash BDI and have access to the exciting opportunities it has to offer. The Monash BDI is home to world-renowned labs that undertake groundbreaking research on a range of areas within the biomedical sciences. You could join one of more than 120 internationally-renowned research teams and work on exciting projects such as stem cell research or the development of bionic eyes.

Your BBiomedSc will equip you to pursue a research degree in any of the Monash BDI’s six disciplines:

- Cardiovascular Disease
- Infection & Immunity
- Cancer
- Metabolism, Diabetes & Obesity
- Neuroscience
- Development & Stem Cells

Roles in tertiary education

A research degree can also be a pathway to education-focussed roles in tertiary institutions. For example, you could work as an education designer, lecturer or a teaching associate for a biomedical science course. In these roles you can help to improve the quality of tertiary teaching and course design, which ensures that students graduate with a high standard of skills and knowledge. In a tertiary education role, you can stay up-to-date with innovations in the biomedical sciences without needing to solely focus on conducting research yourself. You can also teach students directly, which allows you to use your knowledge of and passion for the biomedical sciences to inspire future leaders in the field.
MONASH BDI AT A GLANCE

- 700 Researchers
- 120+ Research Groups
- 700+ Publications per year
- $50m Annual Research Income
- $14m Industry Funding
- Approximately 270 PhD Students
- 200+ International Research Collaborators
- TOP 50 Times Higher Education World Ranking 2019/20
Graduate research opportunities

Honours
The Biomedical Science Honours program is one year in length and allows you to gain a broader understanding of the biomedical sciences and contribute new knowledge to the field.

The program consists of a significant research project and a coursework component. For your research project, you’ll select and undertake a research topic from an area of biomedical science, working within a team and with ongoing support. At the end of the year, you’ll report your findings to school or departmental staff and write a research thesis. If you have completed a BBiomedSc, you’ll be able to choose an area of research from any of the biomedical science disciplines.

The Honours program will enable you to develop oral communication and data analysis skills, as well as advanced knowledge in your chosen research area. It can increase your employment opportunities, and you’ll develop valuable skills including time management, working independently and effective communication. Completing Honours also helps you to determine if you want to pursue a career in research.
Master’s degrees

Master of Biomedical and Health Science
Discover how to conduct and commercialise your research with the Master of Biomedical and Health Science, and gain a highly sought-after professional skillset that can be applied in research and industry.

This course is unique in that it provides you with comprehensive, postgraduate-level knowledge of multiple disciplines within the biomedical sciences, while simultaneously allowing you to specialise in one of five areas:
- cancer biology and therapeutics
- cardiovascular disease
- infectious diseases and population health
- neuroscience
- regenerative medicine and stem cells.

With an employability focus from day one, you’ll be trained in collaboration, professionalism and entrepreneurship. You’ll also have opportunities to network with leaders in biomedicine and health sciences, and engage with industry.

A three-month internship will allow you to develop valuable professional skills and apply your knowledge in a research or industry-based workplace. You can choose from a selection of internship opportunities available exclusively to Master of Biomedical and Health Science students.

Master of Biomedical Science
The Master of Biomedical Science is a research degree that will see you make a significant contribution to existing knowledge and understanding in a biomedical science discipline. You’ll do this by completing a research project under the supervision of an academic staff member. This course will allow you to develop high-level research skills, including the application of relevant research techniques to your chosen field of study and critical evaluation of both your own and others’ written work. You’ll write and present high-quality written work that is suitable for publication in scholarly journals, making this Master’s degree a pathway that will prepare you well for a PhD in biomedical science.

PhD
A PhD in biomedical science at Monash enables you to make significant contributions to the field through original research. At the core of the program is an extensive, independent research project on an agreed topic, supported by at least two expert academic supervisors. This research component is enhanced by professional development activities or coursework units, which provide you with the skills required to make an impact in academia, government or the wider community. Completing a PhD can also open doors to high-level roles in biomedical industries.

Research pathways

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<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Year 6</th>
<th>Year 7</th>
<th>Year 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor of Biomedical Science</td>
<td>Bachelor of Science (major in a biomedical science discipline)</td>
<td>+</td>
<td>Master of Biomedical and Health Science (1.5–2 years)</td>
<td>+</td>
<td>Master of Biomedical and Health Science (1.5–2 years)</td>
<td>+</td>
<td>Master of Biomedical Science (2 years)</td>
</tr>
</tbody>
</table>
ALUMNI PROFILE

DR DASUNI ALWIS
Lecturer
Monash University

With a bit of perseverance and a willingness to adapt, a career in research can be extremely rewarding. It’s a career that will ensure that you are always learning about new things and always growing.

In my current role I’m mostly involved in teaching, but I also get to stay involved in research! At the moment, I’m involved in research into changes in neuronal function after traumatic brain injury. I’m also a Learning Coordinator for the Master of Biomedical and Health Science degree at Monash, so I’m involved in developing units and teaching students about research. It’s great being surrounded by other scientists and academics with diverse backgrounds in both teaching and research, because everyone has an interesting take on solving problems.

It’s also important to note that it can be a very tough career, so being passionate about your research is really essential. Being a scientist is sometimes frustrating when things don’t go your way, such as experiments or grants. All research depends on funding, which is difficult to obtain. If you or your lab don’t have money, it can mean that you might have to look elsewhere for work.

How I got here

I actually started down my current research track (due to unforeseen circumstances!) in my Honours year, when I had to change supervisors at the last minute. After hearing about the work my new supervisors did, I was really keen to get involved and learn more about the field. This led to me continuing on in that field for my PhD.

Upon completing my PhD, I was keen to go out into the ‘real world’ of science and experience working in a research lab as a postdoctoral research fellow. I later decided that I also wanted to get involved in teaching at a university level. Throughout my PhD, I was able to demonstrate for undergraduate practical classes, and my love for teaching grew. This helped give me enough confidence and experience to apply for my current role, and I’m loving it so far!

My advice for current students

Some of the skills you’ll require to be successful in research include:

- Teamwork: collaborations are essential in science, whether they’re with your fellow lab members or people from other research groups or universities.
- Communication: effectively communicating your work is a key part of being a scientist.
- Organisational skills and time management: in most occupations, you’ll need to manage multiple tasks or projects at the same time.

Some more advice:

- Participate! Whether it is in prac classes/tutes/lectures/labs. Always ask questions.
- Try to gain experience in a couple of labs by doing summer research programs and Research in Action (3990) units. This will give you an idea of the different kinds of research being conducted at the university and will help you decide on the topics that interest you.
- Although your technical skills will be important in whichever field you go into, it’s also crucial that you build on your soft skills, such as the ones mentioned above. Soft skills are transferable and will help you in any career path you choose.
Research opportunities for undergraduate students

Gaining research experience through a short-term program allows you to find out whether pursuing research is the right direction for you, before committing to an Honours year or Master’s degree.

Research in Action units

Through the suite of Research in Action units, you can get a taste of the real research that takes place at the Monash Biomedicine Discovery Institute. These elective units involve a research project undertaken over 12 weeks. You’ll develop skills in project management, oral and written communication, and critical thinking and analysis. You’ll also experience what it’s like to work as part of a research team in a professional laboratory.

Summer and winter research programs

Monash summer and winter research scholarships

Summer and winter research scholarships involve a placement in a Monash research lab. This is a great way to gain first-hand insight into a career in research during the university holidays.

School of Public Health and Preventative Medicine Summer Vacation Scholarship Program

This summer scholarship program allows you to engage with and gain experience in research in the field of public health and preventative medicine during the university summer vacation period. The four week program gives you insight into the growing area of public health research. You’ll work with a senior researcher and their team to undertake a small research project, or contribute to current research in applied clinical and public health.

UROP

The Undergraduate Research Opportunities Platform (UROP) is a prominent research program available to biomedical science students. The program provides undergraduate students with first-hand experience of research in the biomedical sciences, through paid casual employment in research teams. UROP will see you undertake a project which is part of the research program of a biomedical research laboratory. You’ll work alongside other research staff and students in the team, and under the supervision of a research scientist.

As part of the School of Public Health and Preventative Medicine (SPHPM) Summer Vacation Scholarship Program, I worked on two systematic reviews with a supervisor at Cochrane Australia; a quantitative review about the effects of eating breakfast on weight loss, and a qualitative review about the experiences and perceptions of people living with shoulder pain.

The highlight of this experience for me was meeting all the amazing public health researchers at SPHPM and being inspired by their work. I was fortunate enough to have one-on-one meetings with many of the researchers at Cochrane during the program, and to hear about their career trajectories and experiences in health research, communication and policy – this cemented my desire to work in these areas of public health in future.

By working side-by-side with my supervisor on the reviews, I was able to develop my communication and teamwork skills in the context of the workplace. I also gained exposure to the tools and programs used by public health researchers in their work. These transferable and technical skills are likely to be valuable in enhancing my employability. Furthermore, I had the opportunity to network with many people at SPHPM during the program, and these connections may come in handy in future for finding a job or gaining further research experience. Even if you don’t think that research is for you, a summer research project is still worth doing. If you enjoy it, you’ll know that it’s a path you want to pursue in future, and if not, you’ve narrowed down your career options. Also, the skills you gain in the process will likely be applicable to many other jobs, so you have nothing to lose.

– Mary Malek, 3rd year student
Bachelor of Biomedical Science (Scholars Program)
CAREERS IN NON-BIOMEDICAL INDUSTRIES

Studying a Bachelor of Biomedical Science double degree allows you to develop high-level analytical and problem-solving skills that qualify you for a wide range of graduate careers. There are opportunities in each double degree discipline for careers that will combine your two areas of interest and allow you to draw on knowledge gained in both degrees.

**Commerce**

For BComm/BBiomedSc double degree students, there are numerous opportunities for graduate careers in commerce disciplines that will also allow you to pursue your interest in health and biomedical science. For example, you could work in roles in marketing for a pharmaceutical company, or business development related to the healthcare sector.

Many commerce graduate programs also accept applications from students who have completed an undergraduate degree in a discipline other than commerce, meaning that you can apply with a BBiomedSc single degree. In many commercial careers, such as strategy or management consulting, you’ll be able to apply the problem-solving skills you’ve gained in your studies of biomedical science.

**Law**

There are several areas of law in which your degree in biomedical science will be an asset, or even a prerequisite. These areas may include patent law, public health law and forensic law. Pharmaceutical companies, government regulatory bodies like the Therapeutic Goods Administration (TGA) and law firms specialising in patents for medical technology will all be interested in your skillset. To practise as a lawyer, you’ll need to follow the process for admission by the Supreme Court of Victoria.

**Engineering**

The intersection of engineering and biomedical science is an area of high job growth that offers opportunities to develop biomedical innovations that improve lives. Advances in biological sciences and demand for technological solutions are creating new opportunities for engineers. In the coming decades, engineering will be transformed as it fuses with developments in biomedical science.

The work of biomedical engineers is varied. For example, they might design, test and develop a range of medical devices such as artificial internal organs and prosthetic limbs. They may also design software that runs medical equipment, or carry out computer simulations to test new drug therapies. To work as an engineer, you’ll need to follow the process for accreditation.

My role is in healthcare information technology which is heavily interconnected with the Australian healthcare system. It involves analysing clients’ workflows and configuring, implementing and conducting training for electronic medical record software for healthcare providers.

I chose this job because it allows me to draw on my interests in both biomedical science and commerce. What I like most about my job is the opportunity to communicate with clinicians on a daily basis to see how Cerner’s electronic medical record software can best be customised for their needs. I am sure in the near future the work I have done will impact people’s lives.

The highlight of my career so far has been travelling to Cerner’s Headquarters in Kansas City for five weeks as part of the Consulting Academy. It was an awe-inspiring experience to see the technologies a market-leader has developed and the new technologies it is currently developing.

– Cody Yuen, Associate Consultant, Cerner Corporation
Bachelor of Commerce (Economics)/Bachelor of Biomedical Science (2017)
I chose to pursue a career in law because I enjoyed my clerkships and thrive on the challenging and fast-paced nature of the work.

I enjoy working on large commercial deals and transactions for big clients. In my role I’m exposed to a wide variety of complex matters and do a lot of different pieces of work. The work and the teams are very collaborative and my work also involves working with clients and negotiating with other parties.

My background in biomedical science was particularly relevant while I worked in the Intellectual Property Litigation team for six months. In this group I worked on a lot of large pharmaceutical litigation matters, and having a knowledge of biomedical science was really important to understand the technology and science behind the patents involved in the dispute.

How I got here
Participating in extracurricular activities during my time at Monash helped prepare me for my career. I was involved with the Monash Law Students Society (LSS) and participated in a number of competitions and moots including the LSS Contract Moot, the Michael Kirby Contract Moot, the client interview competition and the negotiation competition. I was also a member of the Monash International Affairs Society, a law student peer mentor and an Access Monash Mentor.

My advice for current students
Have a wide variety of interests and experiences on your resume including work as well as volunteering and interests. Show your personality!
Working as a Project Engineer for one of the largest Australian biotechnology companies has allowed me to combine both my passion for engineering and interest in the biomedical sciences in a way that provides a real benefit to people.

My interest has always been to work in industry in a role that is “hands on” and involves the latest technology on a large scale rather than in research. I’m currently working on the design and construction of new facilities in Victoria specialising in plasma fractionation. My team recently completed an expansion project to double the capacity of a facility specialising in the production of immunoglobulin products for intravenous injection in humans.

The most satisfying thing about my job is knowing that I’m able to enjoy what I do whilst also making a difference in the lives of others. Being part of a team that helps deliver life-saving medicines to people all around the world motivates me and gives me pride in what I do.

In addition, working in the biotechnology industry provides a strong career foundation and good job security, due to high levels of investment in the industry. Another added benefit is that there are opportunities to work all over the world, such as in Europe or the USA.

How I got here

Having a background in biomedical science gives you a significant advantage when entering this industry. It allows you to understand a lot more about the design elements in pharmaceutical production processes which are critical to protecting product quality and patient safety.

I was also involved in the committee of SMUCE (Society of Monash University Chemical Engineers) as a 4th year level representative in my final year at university. This exposed me to a wide range of different experiences, such as liaising with companies, which helped me to develop key skills that I still use today.

My advice to current students

My advice to current students is to start investigating the biotechnology industry and to keep an eye out for companies that specialise in the areas of biomedicine that most interest you.

A lot of people assume that a biomedical science degree is just a pathway to research but there is a lot of potential to apply what you know in industry. Make sure to attend career fairs and industry seminars, and reach out to companies to see if they can offer a graduate position or internship. However, it’s most important to first identify what you are passionate about and then to find a job in that area.
GRADUATE STUDY OPTIONS

As a biomedical science graduate, you have access to a range of graduate pathways, both at Monash University and at other universities. A sample of options is provided below.

Monash postgraduate pathways

Please note that all details are correct at the time of writing but are subject to change. To see the most recent course details, please visit monash.edu.au/study/courses.

Bioethics policy advisor

Is the genetic enhancement of humans ethically justified? Should we proceed with research trying to clone people? As a bioethics policy advisor, your work could involve giving healthcare professionals or policymakers advice about perplexing ethical questions like these.

Years | 3 | 1.5 | Industry experience
--- | --- | --- | ---
Bachelor of Biomedical Science | Master of Bioethics | Industry experience

Years | 3 | 1 | 1
--- | --- | --- | ---
Bachelor of Biomedical Science | Honours | Master of Bioethics | Industry experience

Biotechnology entrepreneur

Biotechnology entrepreneurs translate scientific breakthroughs into products or services. They are often involved in obtaining research funding and identifying gaps in the market where there is demand for new biotechnologies. As a biotechnology entrepreneur, you can make lasting changes to human healthcare by commercialising research and making biomedical innovations accessible to the public.

Years | 3 | 2 | Years | 3 | 1 | 1
--- | --- | --- | --- | --- | --- | ---
Bachelor of Biomedical Science | Master of Biotechnology | Bachelor of Biomedical Science | Honours | Master of Biotechnology

Clinical embryologist

Clinical embryologists assist in treating fertility problems in laboratories. By completing a Master of Clinical Embryology, you will be trained to use all assisted reproductive technologies, such as IVF. A clinical embryologist’s tasks often include sperm and embryo handling and assessment, as well as IVF and cryopreservation techniques, including vitrification of gametes and embryos.

Years | 3 | 1 | 1 | Years | 3 | 1 | 1 | Years | 3 | 1 | 1
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
Bachelor of Biomedical Science | Honours | Master of Clinical Embryology | Bachelor of Biomedical Science | Graduate Diploma of Reproductive Sciences | Master of Clinical Embryology

Dietician

As a dietician, you can use your knowledge of the biosciences to help people to understand the relationship between health and nutrition. Dieticians educate both individual patients and the general public about optimising dietary intake, which can improve health and wellbeing on a large scale. You could work as a private practitioner, a medical and surgical dietician or in public health nutrition.

Years | 3 | 2
--- | --- | ---
Bachelor of Biomedical Science | Master of Dietetics

*must include NUT1011 as an elective

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CAREERS IN BIOMEDICAL SCIENCE
Epidemiologist

Epidemiologists research, monitor and analyse the prevalence of diseases within populations. They often educate the public about diseases, and may work to identify environmental and genetic risk factors that lead to certain diseases. Epidemiologists also provide insights to government departments and policy makers about how infectious outbreaks can be contained and prevented.

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<thead>
<tr>
<th>Years</th>
<th>3</th>
<th>1.5</th>
<th>Years</th>
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<th>2</th>
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<tbody>
<tr>
<td>Bachelor of Biomedical Science (public health elective pathway)</td>
<td>→</td>
<td>Master of Public Health</td>
<td>OR</td>
<td>Bachelor of Biomedical Science</td>
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Forensic scientist

At the intersection of medicine and the law, forensic science allows you to apply your knowledge of biomedical science in the interests of justice. Forensic scientists can prove the existence of a crime or the identity of its perpetrator by examining and interpreting physical evidence.

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<tr>
<th>Years</th>
<th>3</th>
<th>1</th>
<th>2</th>
<th>3 (part-time)</th>
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</thead>
<tbody>
<tr>
<td>Bachelor of Biomedical Science</td>
<td>Honours</td>
<td>Two years experience in relevant lab</td>
<td>→</td>
<td>Master of Forensic Medicine</td>
</tr>
</tbody>
</table>

Health promotion manager

A career in health promotion management could see you tackling today’s greatest problems in population health. You could improve human health on a large scale by working in a leadership role at a hospital, for a government health department or for a non-government organisation like the World Health Organisation or the Red Cross.

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<tr>
<th>Years</th>
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<th>1.5</th>
<th>Industry experience</th>
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<tbody>
<tr>
<td>Bachelor of Biomedical Science (public health elective pathway)</td>
<td>→</td>
<td>Master of Public Health</td>
<td>→</td>
<td>Industry experience</td>
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</table>

<table>
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<tr>
<th>Years</th>
<th>3</th>
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<th>Industry experience</th>
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<tbody>
<tr>
<td>Bachelor of Biomedical Science</td>
<td>→</td>
<td>Master of Public Health</td>
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</table>

Nurse

Nurses are an integral part of any health system. Typical nursing duties include providing pre- and post-treatment care, monitoring and administering medication and supporting patients and relatives through the treatment process. You can choose to work in a number of specialty areas – such as acute care, paediatrics and medical-surgical nursing.

<table>
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<tr>
<th>Years</th>
<th>3</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor of Biomedical Science</td>
<td>→</td>
<td>Master of Nursing Practice</td>
</tr>
</tbody>
</table>
Occupational therapist
As an occupational therapist, you can help people of all ages to overcome barriers preventing them from fully participating in everyday life. You could work in private practice, at a school or for social services to help people overcome issues caused by illness, ageing, developmental delay or psychological difficulties.

Radiation therapist
Radiation therapists design and deliver treatments using ionising radiation for patients with cancer or benign conditions. They use advanced computer systems to maximise dose to the affected area and minimise radiation to surrounding healthy tissues. A career as a radiation therapist allows you to use your scientific and technological expertise while also being involved in patient care.

Sonographer
Sonographers conduct diagnostic medical ultrasound examinations using a range of equipment to produce records of anatomical structures and pathophysiological data, which can be used for a wide range of clinical applications. Sonographers plan and tailor the ultrasound examinations depending on their findings and the purpose of the examination.

Teacher
Do you want a career that allows you to share your expertise in biomedical science to inspire future generations? Teaching is a rewarding career path that will allow you to use your knowledge of biomedical science (or another discipline) to educate students. You can choose to specialise in early childhood, primary or secondary education – or a combination of these.
Radiation therapy incorporates both my interest in science and technology and my desire to work with people.

It’s a very rewarding profession, as I frequently get to see patients’ gratitude that the treatment I deliver is curing their cancer or relieving their symptoms. In addition, the equipment used for radiation therapy is continually being enhanced and refined, so I’m always learning. I also enjoy the multidisciplinary nature of the profession and working in a team environment.

How I got here

My studies of biomedical science helped me to develop strong analytical and organisational skills. I also gained a firm understanding of scientific methods and evaluation criteria, which are applicable to the radiation oncology field.

It wasn’t until the final year of my Bachelor of Biomedical Science degree that I was involved in some biomedical research, which really gave me a feel for a career in research. I realised that while I enjoyed the scientific and technical side of research, working in a laboratory for extended hours didn’t appeal to me as it involved limited contact with people.

It was at this time that the new Master of Radiation Therapy course was being advertised at Monash. I didn’t know a whole lot about the profession and to gain more of an insight into radiation therapy, I spent a day at a cancer institute. This experience left me with an appreciation of the important role a radiation therapist plays in managing and treating cancer patients and helped me decide that this was the career I wanted to pursue.

My advice to current students

My advice to current students would be to keep an open mind, be true to yourself and embrace opportunities as they arise. Attend open days, ask lots of questions and follow the path that gives you the most satisfaction.
As a Clinical Embryologist, I use the skills I learnt in my degree every day to help people achieve their dreams of having a family.

I work at the Royal Women’s Hospital in the In Vitro Fertilisation (IVF) lab, where we treat couples suffering from infertility. My role is predominantly lab based, where my daily roster can vary from oocyte collection to embryo vitrification. No two days (and no two patients) are ever the same. Some of my tasks include gamete preparation, oocyte insemination or Intracytoplasmic Sperm Injection (ICSI) and embryo transfer.

How I got here

I originally became interested in reproductive science during the third year of my Bachelor of Science. Studying biomedical science disciplines sparked my interest in reproductive science, which evolved into a dream of working in embryology. My studies of biomedical science gave me an extensive insight into all fields of science and medicine. The variety of subjects and content enabled me to find and follow my passion which lead me to my job now. The lab and research work was so interesting and gave me a rare set of skills.

After finishing my Master’s, I worked as a Skills Assessment Officer for migration purposes at VETASSESS for two months, while seeking a job in my area of training in embryology. Working in this role reaffirmed my desire to work in a lab again. My first job in embryology was with the Queensland Fertility Group at the Sunshine Coast for six months, before I returned to Melbourne to my current position at the Royal Women’s Hospital.

After I qualified as an embryologist, I emailed an expression of interest to the lab at the Queensland Fertility Group which included information about my research projects and skills learnt over my degrees. Six months later, a job at the Royal Women’s Hospital in Melbourne came up. I applied and got it!

My advice for current students

- Study what you love: you’ll find a career you love by studying subjects you enjoy.
- Decide on your career goals and then choose the subjects that will best prepare you for these.
- Don’t just study the course content, but live and learn the content – it’s not just for an exam!
- Don’t be afraid to talk to the academic staff about what you’re thinking about doing – they are real people too and are very advanced in their field – you never know who they could introduce you to.
- Do as many varied lab tasks as you can to develop a wide variety of skills.
Accelerated pathway to the Master of Public Health

A Monash Master of Public Health (MPH) equips you with the knowledge and practical skills in research, analysis and communication that are vital to solving global health challenges. Whether you want to work in health promotion and policy, epidemiology, medical research or the pharmaceutical industry, the MPH will help you excel and progress.

The accelerated pathway to the MPH tailors your BBiomedSc towards public health, allowing you to gain credit towards the Master’s degree during your undergraduate studies. By choosing the elective units outlined in the course map below, you’ll set yourself up for an accelerated 72-point entry pathway that reduces your MPH to one and a half years full time.

<table>
<thead>
<tr>
<th>Year 1 Semester 1</th>
<th>BMS core unit</th>
<th>BMS core unit</th>
<th>BMS core unit</th>
<th>Elective</th>
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<tbody>
<tr>
<td>Year 1 Semester 2</td>
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<td>BMS core unit</td>
<td>BMS core unit</td>
<td>Elective</td>
</tr>
<tr>
<td>Year 2 Semester 1</td>
<td>BMS core unit</td>
<td>BMS core unit</td>
<td>BMS core unit</td>
<td>Public health elective</td>
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<tr>
<td>Year 2 Semester 2</td>
<td>BMS core unit</td>
<td>BMS core unit</td>
<td>BMS core unit</td>
<td>Public health elective</td>
</tr>
<tr>
<td>Year 3 Semester 1</td>
<td>BMS core unit</td>
<td>BMS core unit</td>
<td>Public health elective</td>
<td>Public health elective</td>
</tr>
<tr>
<td>Year 3 Semester 2</td>
<td>BMS core unit</td>
<td>BMS core unit</td>
<td>Public health elective</td>
<td>Public health elective</td>
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</table>
Graduate Entry Medicine

Our BBiomedSc prepares students for a successful career in medicine. Emerging from the degree with a sound understanding of the human body, excellent scientific practice skills and a strong work ethic, our graduates are well placed to handle the challenges of a graduate entry medicine course. In addition to the Monash Graduate Entry Medicine program, BBiomedSc graduates are eligible for medicine programs offered at other universities in Victoria and interstate.

Monash Graduate Entry Medicine

The Monash BBiomedSc offers a direct pathway into the Monash Graduate Entry Medicine program. There are 50 places in the program that are reserved for BBiomedSc graduates, and these places are highly competitive. Successful applicants do not need to sit the GAMSAT.

Pathway from BBiomedSc to Graduate Entry Medicine*

3rd year Bachelor of Biomedical Science students with a WAM of at least 70% can apply for graduate entry medicine at Monash

Approximately 200 students with the highest WAMs** are invited to sit the MMI*** and SJT****

50 places offered

*Information correct at the time of printing
** Weighted Average Mark
***Multi-Mini Interview
****Situational Judgement Test

Medicine is hard work, but an extremely rewarding career. You will see things you’ve never dreamed of seeing and feel like you’re constantly learning. If you have the drive and passion, it’s a path well worth pursuing. Medicine isn’t difficult conceptually -- I would honestly say the course content is nowhere near as challenging as biomedicine, however the amount of content can be overwhelming. Stick it out and you’ll be rewarded!

Thanks to my biomedical science degree, I already had a strong foundation in the core elements of medicine: pharmacology, physiology and anatomy. I also developed invaluable professional skills, such as presenting and academic writing.

The more you broaden your horizons, the more ready you will feel to enter the wonderful but often daunting world of medicine. What I love so much about medicine is that I meet people from all walks of life. By participating in extracurricular activities such as the Access Monash Mentoring Program, I gained experience working with people from a diverse range of backgrounds, which has enriched my learning experience.

Along with medicine, I was also considering a career in management consulting. Biomedical science students are highly sought after in this field. It seemed like a great option to me because just like medicine, it requires taking a logical, systematic approach and strong interpersonal skills, which have always been two things I really want in my career.

– Namrata Prasad, 2nd year student, Graduate Entry Medicine, Monash University
Bachelor of Commerce/Bachelor of Biomedical Science (2016)
Other postgraduate pathways

Please note: as these professional pathways are not offered by Monash University, this guide can only provide a general indication of the length and details of the relevant postgraduate courses. To find specific entry requirements and course details, please visit the websites of universities around Australia where relevant courses are offered.

Clinical audiologist

Clinical audiologists examine and evaluate patients’ hearing ability and balance. They identify causes of hearing problems, as well as planning and delivering treatments to assist patients to manage, improve and preserve their hearing. Clients can range from the very young to the very old. Clinical audiologists may work in a variety of settings such as hospitals, private clinics or education centres.

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<tr>
<th>Years</th>
<th>Bachelor of Biomedical Science</th>
<th>Master of Clinical Audiology</th>
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Dentist

Dentists prevent, diagnose and treat diseases and injuries of the teeth, jaws and mouth. Their tasks may include repairing tooth decay, preventing tooth and gum disease, extracting teeth and educating patients about oral hygiene. There are opportunities to work in public or private practices, and to specialise in fields such as orthodontics, endodontics and prosthodontics.

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<th>Years</th>
<th>Bachelor of Biomedical Science</th>
<th>Doctor of Dental Surgery</th>
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Genetic counsellor

Genetic counsellors work in multidisciplinary teams to diagnose, manage, predict and screen for genetic disease. As a genetic counsellor, you’ll use your communication skills to support patients affected by genetic conditions and their families. You’ll use your knowledge of human genetics to interpret test results and explain these to patients. A genetic counsellor’s tasks also include analysing family history information and assessing the risks of inheriting or passing on a medical condition.

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<th>Years</th>
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Veterinarian

If you love animals and want to improve the standard of healthcare they receive, a career as a veterinarian could be for you. Veterinarians diagnose, prevent and treat the illnesses and diseases seen in animals. This can include conducting tests, prescribing medication or therapy and performing surgery. Veterinarians also work closely with owners to ensure that the care they provide is of a high standard, and have the option of specialising in a particular field of veterinary medicine.

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<th>Years</th>
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Optometrist
Optometrists detect, diagnose and treat eye diseases. Optometry is a primary healthcare profession, meaning that optometrists work closely with patients and the community. Their main focus is generally to prescribe glasses and contact lenses, and to educate patients about maintaining their optical health.

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<th>Years</th>
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<th>Doctor of Optometry</th>
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Physiotherapist
Physiotherapists identify, diagnose and treat musculoskeletal conditions. They primarily use techniques to strengthen muscles and manipulate joints to improve mobility. Physiotherapists can work in a range of environments such as hospitals and private practices, and have opportunities to specialise. Their tasks could include helping a patient relearn to walk or treating players from a sporting team.

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<th>Years</th>
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Speech pathologist
Speech pathologists assess, diagnose and treat various communication disorders in both children and adults. They commonly address issues of speech, language, fluency and using voice. Speech pathologists often work with children who have failed to develop normal communication, adults who have acquired communication difficulties as a result of disease or injury, and people with certain disabilities that affect their ability to communicate.

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<th>Years</th>
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<th>Master of Speech Pathology</th>
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I have always been interested in healthcare and science, as well as doing something hands on. I’m not someone who would be happy to be cooped up in an office all day, so dentistry allows me to interact with people on a daily basis, and to build long-term relationships with patients. Dentistry is also very creative – sometimes it seems like an art class, which makes it a fun and innovative career choice because every day and every patient is different.

I would definitely urge you to consider dentistry, especially if you feel like the medicine pathway isn’t really your thing. It’s quite similar in many regards but is more hands on, especially in the early stages. We start seeing patients quite early on, which gives you a chance to see whether dentistry is definitely for you. If you’re really interested, it might be a good idea to find a casual job as a dental nurse or assistant in a private practice, as this would give you an idea of what a career in dentistry is like.

Biomed helps enormously for a lot of the background information that we learn in the first couple of years of dentistry. You don’t learn a huge amount about teeth specifically in biomed, but learning the underlying basics, such as anatomy, cardiology, pharmacology and nutrition, definitely gave me an advantage. An undergraduate degree also gives you the skills to study efficiently and have a good work-life balance, which is really important for dentistry as it can be quite full on.

— Natasha Nichols, 2nd year student, Doctor of Dental Surgery, University of Melbourne
Bachelor of Biomedical Science (2016), Monash University
GLOBAL CAREERS

Your BBiomedSc opens up a range of possibilities for international work and study. During your studies, you can go on exchange for a semester or do a short-term international study program, all while earning credit towards your degree. After graduating, you might choose to work in another country or to pursue a Master’s degree, PhD or postdoctoral research at a university overseas.

As part of the Career Success Coaching program, Career Connect runs workshops on finding a job in the following regions:
- Asia
- North America and Canada
- the UK, Europe, Middle East and Africa.

Exchange and study abroad

Going on exchange during your undergraduate degree can help you build an international network and increase your awareness of work and study opportunities overseas. If you already have a country or region of interest, look into relevant exchange or study abroad opportunities and start planning early!

Postgraduate study overseas

As a Monash biomedical science graduate, you’ll be eligible for a wide range of postgraduate study options at institutions overseas. Many universities around the world offer high-quality programs, which are increasingly taught entirely in English. Degree types, eligibility requirements and application processes vary among countries, so you’ll need to refer to university or country-specific websites.
ALUMNI PROFILE

DR STEPHANIE TANAMAS
Epidemiologist
World Mosquito Program, Monash University

Working as an epidemiologist involves a good mix of operational work, such as helping research studies run smoothly, and data analysis.

My current role is to assess the impact of the World Mosquito Program’s Wolbachia intervention on reducing the number of people who are infected with dengue fever, chikungunya or Zika in the countries in which we operate.

One of the things I like most (and sometimes least) about my current job is that I’m required to travel to the 12 countries where our program operates. Working with international collaborators and stakeholders allows me to experience and learn from different cultures and different ways of thinking, and to build on the soft skills that are necessary for such interactions. However, the long waits at airports and sitting on planes is less fun.

Prior to my current role, I held a position as a Visiting Fellow at the National Institutes of Health in the USA. It was a fantastic experience that allowed me to learn from leading scientists in the field of diabetes epidemiology.

How I got here
During my Bachelor of Biomedical Science I decided that I didn’t enjoy working in a lab, so when the time came to choose what to do for my Honours year, I decided to try epidemiology. I’ve now been working as an epidemiologist since 2011. Biomedical science exposed me to a wide range of disciplines from which I was able to learn what I did and did not like, and this eventually landed me on my current career path. I learned that it’s OK to not always know where you want to go, as long as you are open to trying new things.

My advice to current students
I recommend that students who want to have a global career start networking early. Go to career nights and chat with people from the industry you want to work in. Also talk to your lecturers, tutors and research supervisors. They may have international collaborators with whom they can connect you, or they might keep an eye out for suitable opportunities for you. Doing a Master’s, PhD or postdoc overseas is also a good way to start.

General tips:
- Network! Make yourself known to your lecturers, tutors and people working in areas you potentially want to work in. These people can help you launch your career.
- Academia is not the only career option.
- Build on as many skills as you can. You never know what will be useful later and how. For example, presenting in class is something most students hate, but it’s good practice for becoming an effective communicator, which is a very important skill for scientists.
- Monash provides a lot of resources to help you through your studies and there are a lot of people who you can go to for support and advice. Get to know them.
- Lastly, enjoy yourself!
RESOURCES

Core employability skills
Monash Career Connect – improving employability:
monash.edu/career-connect/jobs/employability

Building employability skills
Leap into Leadership Online:
monash.edu/students/leadership/leap
Vice-Chancellor’s Ancora Imparo Leadership Program:
monash.edu/students/leadership/ancora-imparo
Access Monash Mentoring Program:
monash.edu/access/mentoring
Monash Career Gateway job search portal:
https://careergateway.monash.edu.au/students/login
Volunteering at Monash portal:
monash.edu/volunteer

Communicating your skills to employers
Monash Student Futures platform:
monash.edu/student-futures
Monash Career Success Coaching:
monash.edu/career-connect/jobs/plan/coaching
Monash Career Connect – preparing for job interviews:
monash.edu/career-connect/jobs/apply/interviews-assessment

Research opportunities for undergraduate students
Monash Summer and Winter Research Scholarship Program:
monash.edu/students/scholarships/current/research-projects
School of Public Health and Preventive Medicine Summer Vacation Scholarship Program:
monash.edu/medicine/sphpm/teaching/summer-vacation-program
Undergraduate Research Opportunities Platform (UROP):

Global careers
Monash Career Gateway – browse and register for workshops:
https://careergateway.monash.edu.au/students/login
Monash Abroad – information about exchange and study abroad:
monash.edu/study-abroad
Australian Government Study Overseas website:
studyoverseas.gov.au
FURTHER INFORMATION

Monash Biomedicine Discovery Institute
monash.edu/discovery-institute
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twitter.com/MonashBDI

Faculty of Medicine, Nursing and Health Sciences
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Email: future@monash.edu

International Students
monash.edu/international
Phone: 1800 181 838 (within Australia)
Phone: +61 9903 4788 (outside Australia)
Email: future@monash.edu

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