

Opening up research internship opportunities

INDUSTRY ENGAGEMENT CASE STUDY

At Macquarie University, our higher degree research (HDR) candidates are bright thinkers, highly skilled and adaptable. Internships offer them the opportunity to apply their research solutions to real-world challenges. This case study, featuring Macquarie PhD candidate **David Handler**, highlights the benefits and outcomes of an internship collaboration with Macquarie, APR. Intern (Australian Postgraduate Research Intern) and Inventia Life Science.

HIGHER DEGREE RESEARCH CANDIDATES

We aim to be in the top research-intensive universities in the world. To drive our ambitious research agenda, we deliver exceptional HDR programs that are globally competitive and prepare candidates for the challenges ahead. Our HDR candidates are key to enhancing our reputation and building our capacity to carry out world-changing research.

Mentored by world-leading experts, our HDR candidates also have access to excellent research facilities and are part of a supportive community that encourages innovation and discovery.

APR.INTERN

The University partners with Australian Postgraduate Research Intern (APR.Intern) – Australia's only PhD internship program spanning all sectors, disciplines and universities – to connect our PhD candidates with industry.

The program does this through short-term research projects, empowering students to thrive in a practical research environment. For businesses, APR.Intern is a platform to access some of Australia's brightest research minds and new worlds of innovation.

aprintern.org.au/

INVENTIA LIFE SCIENCE

Inventia Life Science is revolutionising 3D cell culture with its development of RASTRUM™, the world's first high-throughput 3D bioprinting platform designed for cell biology. Inventia Life Science aims to inspire scientific progress towards better health by re-engineering biology.

inventia.life/



PHD INTERN AT THE FRONTLINE OF PROTEOMICS AND BIOINFORMATICS

In partnership with APR.Intern, Inventia Life Science placed Macquarie PhD student David Handler, whose postgraduate research is in proteomics and bioinformatics, into a five-month tailored internship.

Dr Cameron Ferris, Chief Operating Officer, Inventia Life Science is a strong advocate of the program and the value HDR candidates can bring.

“There are so many increasingly complex challenges to solve in the world today, and I think that the skill set of a PhD student has never been more relevant. We get to work with some really smart students to solve problems that are critical to us as a business.”

DR CAMERON FERRIS CHIEF OPERATING OFFICER
INVENTIA LIFE SCIENCE

As part of the five-month project, David was given the opportunity to apply his technical skills to a real-life challenge. Working closely with his supervisor (Dr Aidan O’Mahony, Chief Technology Officer), David was tasked with applying machine learning processes to help with automated image analysis to look for patterns within the 3D cell printouts.



“As a growing Australian biotech start-up developing a revolutionary 3D bioprinting product, we need bright minds like David helping us build this technology if we are to be successful on a global scale. David’s machine learning experience garnered from his PhD at Macquarie University was applied with great success to develop tools for quantifying our 3D printed cell cultures. This success demonstrates the importance of programs like the APR.Intern program.”

DR AIDAN O’MAHONY CHIEF TECHNOLOGY OFFICER
INVENTIA LIFE SCIENCE

During the internship David was supported and guided by his principal supervisor Professor Paul Haynes. David’s project led to significant outputs and commercial outcomes for Inventia Life Science. Since completing his internship in August 2019, David is now working full-time at Inventia Life Science.

The internship collaboration has built a stronger industry relationship between Macquarie and Inventia Life Science.

“My APR experience was incredible. I got to work with a dedicated and passionate team on a project that reads like the premise of a sci-fi novel. The APR program is a win-win for students and industry: We as students get invaluable work experience and employers get a worker with years of specialised knowledge, ready to apply themselves. The internship was the highlight of my PhD.”

DAVID HANDLER PHD CANDIDATE
MACQUARIE UNIVERSITY



COLLABORATE WITH MACQUARIE

Our HDR candidates are passionate and ambitious leaders with expertise across a diverse range of fields and industries. Their world-class research environment has given them the freedom to break through traditional boundaries to solve the big issues of our time.

Tap into our best and brightest minds by hosting an internship. They’ll bring a fresh perspective, new skills and innovative approaches to your workplace, while giving you the chance to promote your organisation and profile future graduates.

HOW IT WORKS

Employers can engage in internships for our Master of Research candidates and PhD candidates. The duration of internships ranges from 100 hours to longer-term placements, from three to five months.

For more information on how to engage with HDR candidates at Macquarie, visit: mq.edu.au/connect/engage-hdr

“I was very happy to support David doing this industry internship, his unique skill set is a great fit with Inventia Life Science’s strategic goals. He has also done well in combining his studies with this opportunity, and to be now working full time at Inventia is a great career outcome for him.”

PROFESSOR PAUL HAYNES
DEPARTMENT OF MOLECULAR SCIENCES, MACQUARIE UNIVERSITY

FIND OUT MORE

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