Jake Ireland

I am a PhD student with a collective two years of commercial laboratory experience and two years of laboratory managerial experience. I have expertise in cardiovascular science and have a strong interest in applying these expertise in business by developing my skills in finance, venture capitalism and business strategy. I have proven innovative and entrepreneurial skills combined with high levels of self-motivation and productivity.

jake.ireland@student.unsw.edu.au | +61 (0)452 343 075 | Sydney, AU | linkedin.com/in/jakeireland

Education

2018-Present

PhD Chemistry
University of New South Wales (UNSW)

Research: Development of cardiac tissue constructs that mirror the conductive anisotropy of the human heart for use in cell therapies.

2015-2016

MRes Tissue Engineering & Regenerative Medicine (Distinction)
University of Manchester

Research: Development and optimisation of a novel cardiac model generated from larval zebrafish and characterisation of electrophysiological responses to arrhythmia inducing drugs.

2012-2015

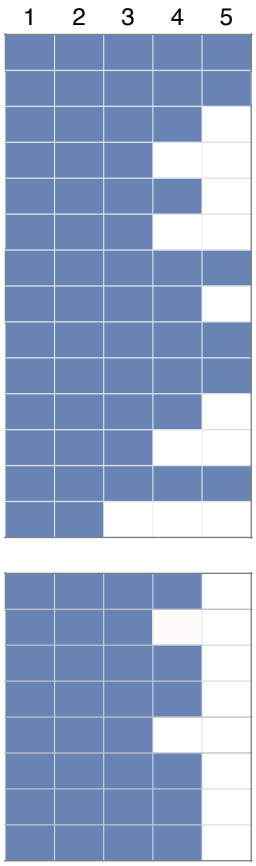
BSc (Hons) Medical Genetics (2:1)
Swansea University

Research: Genome-wide association identity of genetic distinctions between E.coli isolated from a host or a secondary source. Identification of virulence and fitness factors, adapted in a secondary environment causing E.coli pathogenicity in the human gut.

2007-2012

A'Levels: Biology, Chemistry, Physics, Mathematics, and Design technology
Cokethorpe School and Greens Tutorial Collage

Skills & Competences



Career Summary

Mar/2018 - Present — Sydney, AU

Laboratory Manager
University of New South Wales (UNSW)

Tasks

Compliance with university H&S, NSW standards, and regulatory bodies.
Induction, mentoring, and training of laboratory users.
Writing protocols, risk assessments and university procedures.
Appointed research group safety officer.
Delegation of cleaning and maintenance tasks.

Jan/2017 - Sep/2017 — Oxford, UK

Upstream Scientist (Process R&D)
Oxford Biomedica

Tasks

Participation in the development of FDA approved gene therapy (CTL019).
Development and optimisation of viral vector production.
Writing of Process characterisation protocols.
Design and optimisation of failure mode effects analysis (FMEA).
Training in Good Manufacturing Procedures (GMP).
Design and writing of batch manufacturing records.

Jun/2015 - Sep/2015 — Oxford, UK

Laboratory Assistant
Oxford Biomedica

Tasks

Tissue culture of Human Embryonic Kidney (HEK) cells.
Maintenance and servicing of laboratory equipment.
Monitoring of laboratory and PCR equipment and protocols.
Educated in Corrective Action Plans (CAPA) and Deviation management.

Jul/2014 - Sep/2014 — Oxford, UK

Medical Scientific Officer
Cancer Research UK - Oxford University

Tasks

Collection, processing and storage of human tissue samples.
Corresponding with over 100 clinical trials teams.
logistical arrangements for human tissue samples.
Maintenance of centrifuges, Safety Cabinets and -80 Freezers.
Training in Good Clinical Practise (GCP) and medical shipping.

Jun/2013 - Sep/2013 — Oxford, UK

Laboratory and Facilities Assistant
Wellcome trust centre for human genetics - Oxford University

Tasks

Maintenance of Laboratory equipment and machinery.
Operation of autoclave and management of consumables store.
Participation in human genome sequencing and maintenance.

Jan/2011 - Jun/2012 — Oxford, UK

Laboratory Assistant and Theatre Runner
Oxford Musculoskeletal biobank - NHS

Tasks

Collection, Screening, allocating, and storage of human tissue samples.
Pathology analysis and preparation of tissue samples for storage/research.
Educated in joint replacement surgeries.
Assistant for biobank relocation from Guy's hospital to Oxford University.
Mentored in clinical and surgical pathology by orthopaedic surgeons.

Jan/2011 - Jun/2012 — Oxford, UK

Data Entry Clerk
Botnar Research Centre - NHS

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Other Qualifications

- Chartered Financial Analyst Foundation Course - CFA Institute (2019-present)
- Certificate for Leading in Finance - Harvard University (2019)
- Certificate for “Writing in Science” - Stanford University (2018)
- Certification in “Dinosaur Paleobiology” - Alberta Uni (2015)

Achievements & Certificates

- Co-Founder of artisan cosmetics company (Smelly Bear).
- Founder of artisan leather company (Bear’s Leather Co.)
- Winner of the 2014 Terry Matthews start up challenge for best social enterprise with my app, NoteShare.
- Swansea University employability award
- Good Laboratory, Manufacturing and Clinical Practise Training
- Animal handling training -Zebrafish & Mouse (PIL-A, PIL-B, Module-K)
- Emergency First response (CPR/First aid –primary/secondary)
- Biological Substance Shipping training
- National pool lifeguard qualification (NPLQ)
- Advanced PADI open water diver (50+ dive experiences)
- Duke of Edinburgh bronze award
- RYA/MCA costal skipper & yacht master offshore theory
- RYA/MCA yacht master power and sail craft (practical)
- Maritime radio operator certificate (short range)

Commendations

Dr Holly Shiles, Senior Lecturer, Division of Cardiovascular Science, University of Manchester.

“Jake has displayed a mature attitude to becoming a research scientist, this is not only displayed in the excellent research he has performed this year but also in the ways he approaches his work”.

Dr George Johnson, Associate Professor, Swansea University Medical School.

“Jake is a very entrepreneurial individual and received numerous accolades for his start up company based on e-learning. Swansea University and Sir Terry Matthews commended this project”.

Conference Presentations

UNSW PhD Second Year Symposium 2020
Sydney
Cardiomyocyte Maturation: A Universal Improvement.
The NIH PCTC Cardiovascular Bioengineering Symposium 2019
Sydney
Compatibility of Porous chitosan scaffold with isolated mesenchymal stem cell *in vitro*
Physiology Symposium 2016
Dublin
3D heart cell culture models from Zebrafish larva for cardiac research
Northern Cardiovascular Research Groups Meeting 2016
Leeds University
Generating an in vitro 3D heart cell culture model from zebrafish larvae for cardiac research
The “Heart” Symposium 2016
University of Manchester
3D heart cell culture model from Zebrafish larvae for cardiac research
Institute of Life Sciences Undergraduate showcase 2015
Swansea University
Genomic and phenotypic comparison of Eschericia coli isolated from host and environmental sources

Publications

- Zeglio, E., Ireland, J., Wang, Y., Travaglini, L. Yue, W., Micholich, A., Lauto, A., Kilian, K., Herland, A., Mawad, D., 2020. Bio-functionalized organic electrochemical transistors. Wiley (In Draft).
- Hodgson, P., Ireland, J., Grunow, B., 2018. Fish, the better model in human heart research? Zebrafish Heart aggregates as a 3D spontaneously cardiomyogenic in vitro model system. Progress in Biophysics and Molecular Biology.
- Ruprai, H., Romanazzo, S., Ireland, J., Kilian, K., Mawad, D., George, L., Wuhrer, R., Houang, J., Ta, D., Myers, S., Lauto, A., 2019. Porous Chitosan Films Support Stem Cells and Facilitate Sutureless Tissue Repair. ACS Appl. Mater. Interfaces 11, 32613–32622.
- Islam, M. S., Molley, T. G., Ireland, J., Kruzic, J. J., & Kilian, K. A. (2021). Magnetic Nanocomposite Hydrogels for Directing Myofibroblast Activity in Adipose-Derived Stem Cells. *Advanced NanoBiomed Research*, *1*(4), 2000072.
- Srivastava, P., Romanazzo, S., Ireland, J., Molley, T. G., Nemec, S., Jayathilaka, P., Pimanda, J., & Kilian, K. (In Draft). *Defined synthetic microenvironments trigger in vitro gastrulation in*

Society Membership

- British Cardiovascular Society
- Tissue Engineering & Regenerative Medicine Society
- The Manchester University Alumni Society
- The UNSW Chemistry Society
- The Cokethorpe Society