

PROFILE SUMMARY

Dedicated academic and research leader with extensive expertise in aquatic animal health, sustainable agriculture, and biosecurity, driving impactful research, strategic initiatives, and academic excellence. Currently serving as Deputy Head of School at the University of Sydney, managing a \$3M annual bequest strategy, fostering international partnerships, and mentoring mid-career academics. Founding Co-Editor in Chief of *Aquaculture, Fish and Fisheries*, with a strong track record of securing over \$5.5M in competitive research funding, improving global university rankings, and publishing over 50 peer-reviewed articles and book chapters. Skilled in strategic planning, curriculum development, and stakeholder engagement, with a career focused on advancing interdisciplinary collaboration, mentoring future leaders, and delivering innovative solutions to address global challenges in aquaculture and environmental sciences.

SKILLS

- Strategic planning & implementation
- Research leadership & mentorship
- Curriculum development & delivery
- Stakeholder engagement
- Grant writing & funding acquisition
- Academic performance benchmarking
- International partnership development
- Research space optimisation
- Ethical research standards compliance
- Public speaking & event representation
- Workforce planning & recruitment
- Interdisciplinary team management

PROFESSIONAL EXPERIENCE

Deputy Head of School (dHOS) (Interim)

University of Sydney / Sydney, Australia / Apr 2024 – Present

School of Life and Environmental Sciences, Faculty of Science

Key Achievements:

- Developed a strategic plan for \$3M annual bequests, leveraging funds to attract external funding and boost research.
- Represented the University in agriculture delegations, forming international partnerships and advancing collaborative agreements.

Key Responsibilities:

- Planning research space allocation, fostering collaboration, and improving the efficiency of shared research facilities.
- Representing the School in advancing agriculture and veterinary science collaborations through international delegations and partnerships.
- Mentoring mid-career academics, providing guidance on achieving promotions to Associate Professor and Professor levels.
- Advising on recruitment strategies to attract high-quality academic staff and strengthen the School's academic workforce.
- Preparing and presenting research metrics, benchmarking School performance for external reviews and strategic reports.
- Supporting the operational management of a large school across multiple disciplines, campuses, and facilities.
- Leading strategic initiatives to align School objectives with Faculty and University long-term goals and priorities.

Professor (Aquatic Animal Health & Production)

University of Sydney / Sydney, Australia / Jan 2024 – Present

Associate Professor (Aquatic Animal Health & Production)

University of Sydney / Sydney, Australia / Jan 2018 – Dec 2023

School of Life and Environmental Sciences, Faculty of Science

Key Responsibilities:

- Completing and publishing scholarly work advancing research in aquatic animal health and production.
- Providing research training opportunities for students and fostering their academic and professional growth.
- Developing, refining, and delivering the aquatic animal health curriculum across two degree programs for veterinary and animal science students.
- Offering professional expertise in aquatic animal health and biosecurity to address industry and academic needs.
- Engaging with the international aquatic animal health community to strengthen collaboration and knowledge exchange.
- Supervising research staff and supporting their contributions to the field of aquatic animal health.
- Performing professional service to the faculty and university, while actively engaging with community stakeholders.

Associate Head of Research

University of Sydney / Sydney, Australia / Jan 2019 – Dec 2023

School of Life and Environmental Sciences, Faculty of Science

Key Achievements:

- Implemented one-on-one coaching, increasing fellowship awards from 2 (2017–2019) to 15 (2020–2023).
- Established \$500K annual funding scheme, supporting 14 projects and achieving a 10:1 return on investment.
- Recruited two international research fellows, advancing sustainable agriculture research through strategic bequest funding.
- Reviewed campus wide research space, improving efficiency, accommodating more users, and addressing WHS requirements for compressed gases.
- Secured USYD's involvement in the \$30M One Basin CRC, contributing to strategic operations and research planning.
- Improved global rankings to 18th (QS 2025) and 13th for agriculture (ShanghaiRanking 2024) through targeted strategies.

Key Responsibilities:

- Represented the School at Faculty forums, sharing updates, gathering feedback, and supporting informed decision-making processes.
- Developed research strategies and policies for 115 tenured faculty and 100 fixed-term researchers in SOLES, boosting collaboration and research performance.
- Led compliance with animal ethics standards, promoting Replace, Reduce, Reuse principles to ensure ethical research practices.
- Oversaw the School's involvement in grant applications, ERA submissions, and global rankings to strengthen research outcomes.

- Provided regular updates on research metrics and developments, enabling informed decisions and guiding strategic planning initiatives.
- Promoted the School's research achievements at events like Open Day and Info Day to enhance visibility.
- Contributed to academic promotions and performed additional duties as assigned by the Head of School.

Senior Lecturer / Lecturer (Aquatic Animal Health & Production)

University of Sydney / Sydney, Australia / May 2007 – Dec 2017

Faculty of Veterinary Science, The University of Sydney

Key Responsibilities:

- Taught and coordinated undergraduate and postgraduate courses in aquatic animal health, biosecurity, and production systems.
- Developed and delivered curricula aligned with industry standards and emerging trends in aquatic animal health.
- Served as SubDean for the animal science degree, leading university-wide curriculum revision and guiding the program through faculty mergers (2014–2017).
- Supervised postgraduate students and provided mentorship to support their research and career development.
- Conducted research on aquatic animal health, focusing on disease management and biosecurity in aquaculture systems.
- Published scholarly articles in peer-reviewed journals and presented research findings at national and international conferences.
- Secured external research funding through competitive grant applications to support innovative projects in aquatic animal health.
- Engaged with industry stakeholders to strengthen collaborations and translate research into practical applications.
- Contributed to faculty administration, including curriculum review, academic committees, and program accreditation processes.

Post Doctoral Fellow

University of Tasmania / Hobart, TAS / Sep 2005 – Apr 2007

School of Aquaculture

Post Doctoral Fellow

University of Prince Edward Island / Charlottetown, Canada / Oct 2004 – Aug 2005

Atlantic Veterinary College

Extended career history and references available upon request

E D U C A T I O N

Graduate Certificate in Higher Education / University of Sydney, Australia (2010)

Doctor of Philosophy in Pathology and Microbiology (Fish Health) / Atlantic Veterinary College, University of Prince Edward Island, Canada
Awarded the prestigious Governor General of Canada Academic Gold Medal (2005)

Bachelor of Science in Zoology (Honours) / University of Western Ontario (1999)

R E S E A R C H / E Q U I P M E N T G R A N T S

Career Total: \$5,513,708 (AUD)

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| <p>National Disease Strategy Manual for Megalocytiviruses
Funded by: Australia's Department of Agriculture, Fisheries and Forestry
Role: Sole Investigator
Developed the national emergency disease response plan for government and industry as an invited expert.</p> | 2024 |
| <p>Native Fisheries Research Strategy for the Murray Darling Basin
Funded by: One Basin Cooperative Research Centre
Role: Sole Investigator
Led the development of a strategy supporting native fish recovery across six government jurisdictions.</p> | 2024 |
| <p>Understanding Risks of Climate Change on Infectious Diseases
Funded by: Fisheries Research and Development Corporation (\$519,631)
Role: Project Leader
Evaluating climate change impacts on infectious diseases affecting aquaculture and fisheries industries.</p> | 2024–2026 |
| <p>Future Needs of Aquatic Animal Disease Diagnostics
Funded by: Fisheries Research and Development Corporation (\$323,181)
Role: Co-Investigator
Forecasted future diagnostic needs for industry expansion, mentoring an early-career researcher as project leader.</p> | 2023–2025 |
| <p>Equity Fellowship for Career Interruptions
Funded by: University of Sydney (\$75,000)
Role: Sole Investigator
Fellowship providing relief from teaching duties to extend research at the University of Florida.</p> | 2024 |
| <p>Risk of Subclinical Infections in Ornamental Fish
Funded by: OECD Cooperative Research Program (\$17,750)
Role: Sole Investigator
Conducted 14 weeks of international research at the University of Florida on disease risks in ornamental fish.</p> | 2023–2024 |

Genomic Resources for Stocky Galaxiid	2023
Funded by: Threatened Species Initiative (\$20,000)	
Role: Co-Investigator	
Developed genomic resources to conserve a critically endangered fish species threatened by habitat loss and climate change.	
Sustainable Marine Aquaculture in Sri Lanka	2021–2024
Funded by: DFAT (\$550,000)	
Role: Project Leader	
Developed a plan to establish marine aquaculture industries, improving livelihoods in Sri Lankan coastal communities.	
Aquatic Animal Welfare Review	2020–2023
Funded by: Fisheries Research and Development Corporation (\$209,420)	
Role: Co-Investigator	
Documented and analysed legislative frameworks for aquatic animal welfare across Australia’s commercial, aquaculture, and recreational sectors.	
Impact of Thermal Stress on Recreational Fish Microbiota	2020
Funded by: University of Sydney (\$9,700)	
Role: Co-Investigator	
Investigated changes in gut microbiota of recreational fish species under thermal stress, mentoring an early-career researcher.	
Biofouling and Aquatic Pathogens in New Zealand	2018–2020
Funded by: New Zealand Ministry for Primary Industry (\$179,094)	
Role: Co-Investigator	
Examined vessel biofouling risks as a pathway for introducing exotic aquatic pathogens.	
Ocean Warming and Marine Fish Production	2017–2018
Funded by: World Universities Network (\$14,145) and USYD Southeast Asia Centre (\$6,000)	
Role: Project Leader	
Organised a Singapore symposium on climate impacts on gill health, fostering collaborations for review publications.	
Disinfection Protocols for ISKNV in Aquaculture	2016–2018
Funded by: Fisheries Research and Development Corporation (\$99,992)	
Role: Project Leader	
Developed and tested effective disinfection protocols for emergency disease control in aquaculture facilities.	
Pathogens in Imported Ornamental Fish	2014–2016
Funded by: Fisheries Research and Development Corporation (\$249,838)	
Role: Project Leader	
Conducted surveys identifying pathogens of quarantine significance entering Australia via imported ornamental fish.	

A C A D E M I C A W A R D S

Total Career Value: Over \$245,000 AUD

University of Sydney Equity Fellowship, supporting career research expansion at the University of Florida (\$75,000)	2024
University of Sydney Early-Mid Career Academic Network Good Mentor Award	2022
Faculty of Science Outstanding Teaching and Research Award, recognising excellence in combined academic contributions	2021
OECD Fellowship, Cooperative Research Programme, for international research on ornamental fish disease risks (\$17,500)	2020
Faculty of Veterinary Science Award for Excellence in Research (\$1,000)	2015
Journal of Fish Diseases Book Award for most popular paper downloaded (\$300)	2011
Natural Sciences and Engineering Research Council of Canada (NSERC) Post Doctoral Fellowship (\$95,000)	2006
Governor General of Canada Academic Gold Medal	2005
Best Student Oral Presentation, Aquaculture Canada Annual Conference (\$295)	2002
Best Paper Presentation Award (Aquatic Animal), AVC, GS&R Days (\$100)	2001
G. Murray and Hazel Hagerman Scholarship (\$2,950)	2000
AVC Graduate Student Scholarship Competition (\$29,545)	2000
Dept. of Pathology and Microbiology Stipend Award (\$19,500)	1999
NSERC Undergraduate Summer Student Research Award (\$4,135)	1999
Dr. Melvin Corrin Scholarship Award (\$590)	1995

GOVERNANCE / LEADERSHIP

Deputy Head of School, School of Life and Environmental Sciences	2024 – Present
Chair, Promotion Committee for Level B LCP, Faculty of Science	2023 – Present
Mentor, formal programs (e.g., SPAM, Sydney Women’s Mentoring Program)	2018 – Present
Associate Head Research, School of Life and Environmental Sciences	2019 – 2023
Academic Representative, National One Basin Cooperative Research Centre	2022 – 2023
Member, Promotion Committee various levels and faculties	2018 – 2021
Academic Leader, Work Integrated Learning, Faculty of Science	2017 – 2021
Member, Faculty of Science Teaching Workload Working Group	2019 – 2020
School Representative, Faculty of Science Entry Scholarships Committee	2018 – 2021
Postgraduate Coordinator, School of Life and Environmental Sciences	2017 – 2018
Degree Coordinator / Sub Dean, Bachelor of Animal and Veterinary Bioscience / Bachelor of Veterinary Biology	2014 – 2017
Member, Research Development Committee, Faculty of Veterinary Science	2014 – 2017
Member, Research Space Allocation Committee, Faculty of Veterinary Science	2015 – 2017
Member / Coordinator, Year 4 Course Work, Bachelor of Animal and Veterinary Bioscience	2007 – 2014
Faculty Representative, University of Sydney Academic Board	2010 – 2011

POSTGRADUATE THESIS SUPERVISION

- J. Sutton (2027): Assessing the effect of novel preventive strategies for sea lice on Atlantic salmon health and welfare (Co-Supervisor).
- R. Sullivan (2026): Evaluating host immune responses of aquaculture species to opportunistic bacterial pathogens under environmental stressors (Lead Supervisor).
- S. Cohen (2026): Developing a practical framework to improve animal welfare outcomes and attitudes (Lead Supervisor).
- C. Fusianto (2021): Applications of epidemiology and molecular technology for managing megalocytivirus infections in aquaculture (Lead Supervisor).
- A. Trujillo-González (2018): Parasites of ornamental fish (James Cook University) (External Co-Supervisor).
- B. Sah Putra (2016): Identifying infectious diseases causing production losses in grouper nurseries in North Sumatra, Indonesia (Lead Supervisor).
- J. Go (2015): Pathobiology of megalocytiviruses in euryhaline fish species (Co-Supervisor).
- A. Rimmer (2014): Optimisation and application of molecular diagnostics for megalocytivirus in quarantine and native fish risks (Lead Supervisor).
- M. Jones (2009): Influence of diet and metabolism on gill diseases in Atlantic salmon (Co-Supervisor).
- R. Florent (2008): Oral treatments for amoebic gill disease (AGD) in Atlantic salmon (Co-Supervisor).
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HONOURS THESIS SUPERVISION

Throughout my academic career, I have maintained a strong focus on supervising undergraduate and veterinary students as they complete the capstone research projects for their degrees. This passion stems from my commitment to inspiring curiosity and fostering academic growth in students. Due to career interruptions and part-time work, I have prioritised undergraduate and professional student supervision over PhD candidates, consistently guiding an average of 3-4 honours and DVM students per annum through diverse and impactful research projects. This approach has allowed me to contribute significantly to student development, resulting in projects that address key challenges in aquaculture, biosecurity, and sustainability.

PUBLICATIONS

Selected Peer-Reviewed Articles

1. Campbell, M.A., & **Becker, J.A.** (2024). Hierarchical population genetic structure and signatures of adaptation in *Lates calcarifer*. *Marine and Freshwater Research*, 75, MF24227.
2. Bailey, C., Calado, R., & **Becker, J.A.** (2024). Talking the talk and walking the walk: *Aquaculture, Fish, and Fisheries* will continue to support the blue revolution and beyond. *Aquaculture, Fish and Fisheries* (Editorial), DOI: 10.1002/aff2.202.

3. Samsing, F., Sullivan, R., Truong, H., et al., & **Becker, J.A.** (2023). Replacement of fishmeal with microbial single-cell protein induced enteropathy and poor growth outcomes in barramundi (*Lates calcarifer*) fry. *Journal of Fish Diseases*, e13985.
4. Fusianto, C.K., **Becker, J.A.**, et al. (2023). Genotypic characterization of infectious spleen and kidney necrosis virus (ISKNV) in Southeast Asian aquaculture. *Transboundary and Emerging Diseases*, DOI: 10.1002/tbed.14725.
5. Koda, S.A., Subramaniam, K., et al., & **Becker, J.A.** (2023). Validation of a qPCR assay for ISKNV detection. *PLoS One*, 18(2), e0281292.
6. Fusianto, C., Hick, P.M., et al., & **Becker, J.A.** (2021). Investigating ISKNV-related mortality in farmed grouper (*Epinephelus* spp.) in Indonesia. *Aquaculture Reports*, 20, 100723.
7. Trujillo-González, A., **Becker, J.A.**, et al. (2020). Can environmental DNA support biosecurity in the aquarium fish trade? *Biological Invasions*, 22, 1011–1025.
8. Johnson, S.J., Hick, P.M., et al., & **Becker, J.A.** (2019). Surveillance sensitivity for ISKNV using pooled samples. *Transboundary and Emerging Diseases*, 66, 2318–2328.
9. **Becker, J.A.**, Gilligan, D., et al. (2019). Geographic distribution of EHNV in Australian freshwater fish. *Viruses*, 11(4), 315.
10. Rimmer, A.E., Whittington, R.J., et al., & **Becker, J.A.** (2017). Susceptibility of Australian freshwater fishes to dwarf gourami iridovirus. *Journal of Fish Diseases*, 40, 293–310.

Selected Book Chapters

1. Hick, P.M., **Becker, J.A.**, Whittington, R.J. (2024). *Iridoviruses of Fish*. In: *Aquaculture Virology* (2nd Ed.), Elsevier, pp. 139–164.
2. Fuhmann, M., **Becker, J.A.**, Zadoks, R. (2024). *Aquatic Food Safety*. In: *Aquatic Food Security*, 5M Publishing.
3. **Becker, J.A.** (2022). *Farmed Fish*. In: *Management and Welfare of Farm Animals* (6th Ed.), Wiley-Blackwell, pp. 441–462.

Impact Highlights

- Published over 30 peer-reviewed articles between 2024 and 2015, showcasing significant contributions to aquatic animal health research.
- Work frequently cited in biosecurity, aquaculture, and fisheries management policy, reflecting real-world applicability.
- Collaborated with interdisciplinary teams globally to address emerging challenges in aquatic biosecurity and sustainability.

Extended publications history available on [Google Scholar](#)

ADDITIONAL PROFESSIONAL CONTRIBUTIONS

Founding Co-Editor in Chief: *Aquaculture, Fish and Fisheries* (Wiley), establishing a platform for impactful research in aquaculture science.

Associate Editor: Leading aquatic animal health and veterinary journals, demonstrating international expertise and leadership in the field.

Scientific Expert for Australia's National Aquatic Animal Health and Biosecurity Programs:

- Member, National Carp Control Scientific Advisory Board (2017–present), advising on ecological and biosecurity strategies.
- Invited expert for the establishment of Australia's list of notifiable environmental diseases, ensuring robust environmental health standards.
- Expert reviewer for the draft National Aquatic Animal Biosecurity Policy, shaping national biosecurity frameworks.
- Advisor on Australia's response to the Aquatic Animal Standards for the World Organization for Animal Health (WOAH), aligning national practices with global standards.