

# Dr. Thomas Frederick Bishop

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## Education

Ph.D. in Genetics, 2018  
University of Otago, Dunedin, New Zealand

B.Sc. Honours (Class 1) in Biochemistry, 2013  
University of Otago, Dunedin, New Zealand

## Skills

- Molecular biology techniques including Western blotting, DNA manipulation and cloning.
- Gene editing construct design and production of transgenic organisms.
- Animal handling, breeding and surgical procedures.
- Mammalian cell culture.
- Bovine embryo production, electroporation and microinjection.
- Avian blastoderm microinjection.

## Experience

Research Assistant, Lamont Lab - Molecular basis of infectious disease 11/2012 - 11/2013  
Department of Biochemistry, University of Otago, Dunedin, New Zealand

Research Assistant, Lokman Lab - Eel hormone injections and care 05/2014 - 06/2014  
Department of Zoology, University of Otago, Dunedin, New Zealand

Animal Carer 12/2014 - 01/2015  
Department of Psychology, University of Otago, Dunedin, New Zealand

Visiting Scholar, Reier Lab - Testing a molecular intervention for promoting spinal cord repair 01/2016 - 07/2016  
McKnight Brain Institute, University of Florida, FL, USA

Postdoctoral Scholar, Van Eenennaam Lab - Gene editing mice for *in vivo* sperm selection 06/2018 - Present  
Department of Animal Science, University of California, Davis, CA, USA

## Publications

Bishop, T.F. (2012) Identification of the cytoplasmic protease involved in the pyoverdine-dependent signal transduction pathway in *Pseudomonas aeruginosa*. Honours Dissertation, Department of Biochemistry, University of Otago, Dunedin, New Zealand

Bishop, T.F. (2017) The molecular mechanism of *Xenopus* regeneration and its activation in mammals. Ph.D. Thesis. Department of Zoology, University of Otago, Dunedin, New Zealand

Bishop, T.F., Martin, L.W. and Lamont, I.L. (2017) Activation of a cell surface signaling pathway in *Pseudomonas aeruginosa* requires ClpP protease and new sigma factor synthesis. *Front Microbiol.* 8: 2442

Bishop, T.F. (2019) Method for reducing dephasing during cluster DNA sequencing. USPTO patent number 10329615

Bishop, T.F. and Van Eenennaam, A.L. (2020) Genome editing approaches to augment livestock breeding programs. *J Exp Biol.* 223: jeb207159

Bishop, T.F. and Beck, C.W. (2021) Bacterial lipopolysaccharides can initiate regeneration of the *Xenopus* tadpole tail. *iScience.* 24: 103281

Bishop, T.F. and Beck, C.W. (2022) A molecular mechanism of larval regeneration. *In review.*

## References

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### **Assoc. Prof. Caroline Beck**

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### **Prof. Paul Reier**

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**Dr. Alison Van Eenennaam**

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