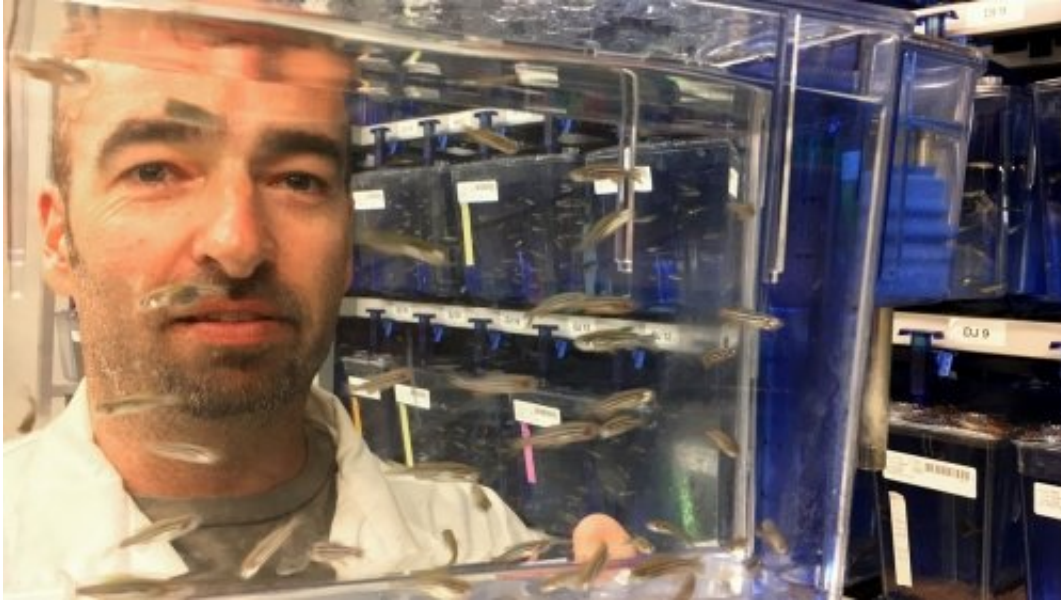


Tiny fish leading the way in a cure for gout

March 28 2018, by Anna Kellett



Dr Chris Hall and his zebra fish. Credit: University of Auckland

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Gout is the most common inflammatory arthritis in Aotearoa/New Zealand. Inflammation associated with it leads to extreme pain, disability

and poor health related quality of life. At present there is a clinical need for new anti-inflammatory treatments for gout as current therapies have limited success.

Acute gouty inflammation is triggered when urate crystals build-up in and around joints, activating the immune system and causing extreme [joint inflammation](#) and pain. Because this inflammation occurs in the joints under the skin, researchers have traditionally relied on examining tissue samples that only provide a static 'snapshot' of the disease process.

Utilising highly specialised microscopy, researchers at the University of Auckland have exploited the transparency of tiny zebrafish embryos to make dynamic movies of the immune system responding to urate crystals, for the first time within a whole animal.

Dr. Chris Hall of the University's Faculty of Medical and Health Sciences lead the study, recently published in the *Journal of Clinical Investigation*, with several of his colleagues, including Professor Nicola Dalbeth, an academic rheumatologist in the faculty and an internationally recognised expert in gout research.

"Through this approach we have uncovered a previously unrecognised mechanism through which the immune system responds to urate crystals to drive inflammation," Dr. Hall says.

"We have also shown that our discovery translates to the human disease and that blocking this mechanism of immune cell activation represents a new strategy to alleviate gouty inflammation. This work directly addresses an unmet need to find new ways to treat the debilitating [inflammation](#) associated with gout." Dr. Hall says.

Dr. Hall says the study is of particular significance to Aotearoa/New Zealand, as Māori and Pacific people have the highest prevalence of

gout worldwide.

This work also recently received funding from the Health Research Council of New Zealand in the 2017 funding round to exploit these new findings and identify new anti-inflammatory treatments for gout.

Provided by University of Auckland

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