



TAFI Media Statement



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Associate Professor Barbara Nowak
TAFI – School of Aquaculture

Salmon parasite identity finally revealed

Scientists from the Tasmanian Aquaculture and Fisheries Institute (TAFI) at the University of Tasmania have made an unexpected discovery that has rewritten 20 years of research. They have identified a new species of parasitic amoeba as the cause of a familiar problem troubling Atlantic salmon aquaculture in Tasmania.

A team based at the School of Aquaculture, led by Associate Professor Barbara Nowak and Dr Richard Morrison, has been studying amoebic gill disease (AGD), a condition of farmed Atlantic salmon in Tasmania as well as other marine fish around the world.

Associate Professor Barbara Nowak said: “AGD is caused by a single-celled marine organism (amoeba) that attaches to the gills and causes thickening of the gill filaments. If untreated, it can cause heavy stock loss. Freshwater bathing is an effective method of treating fish, but this is costly and labour-intensive.”

For about 20 years, it was believed that a certain species of amoeba was responsible for the disease. But now one of her PhD students, Neil Young, has discovered that in fact the disease is caused by a previously unknown but related species, and has named it *Neoparamoeba perurans*.

The study, to be published in the *International Journal for Parasitology*, is the first to show an intimate association between an identified amoeba species and the developing lesions of AGD.

Neil Young said “First we used DNA-based testing methods in the laboratory to distinguish the new amoeba from other related species, and later we cross-matched the new amoeba’s DNA with that of parasitic amoebae in the gills of Atlantic salmon.”

“The most exciting thing is that our discovery will facilitate future development of diagnostics, treatments and vaccines that will be of direct benefit to salmon farmers.”

The study formed part of a project supported by the Australian Government through the Aquafin Cooperative Research Centre and the Fisheries Research & Development Corporation.

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