AQUA EXCEL project news
Issue 4

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TNA project: Genetics for LC-PUFA increase

Current position: Senior Researcher

Aquaculture RI accessed: UR 1067 NuMeA Nutrition, Mètabolisme Aquaculture, INRA Saint-Pée-sur-Nivelle (INRA – ST PEE)

What type of research were you carrying out?

The research was set up to study the possible correlation of a polymorphism in the fatty acid desaturase 2 gene and the ability of rainbow trout to utilise dietary n-3 long-chain PUFA precursors, as D6-desaturase is the rate-limiting enzyme in the production of EPA and DHA from α-linolenic acid. After the genomic characterisation, fish have been fed a fish meal and oil deprived experimental extruded diet for ten weeks and the D6 expression and activity indicators and rainbow trout muscle LC-PUFA composition will be evaluated. The results could, by using marker-assisted selection, allow an improvement in the utilisation of dietary vegetable oils and meals, rich in n-3 precursors, while providing human consumers a healthier fish product with a high content in LC-PUFA, namely EPA and DHA.

Has AQUAEXCEL's call to access been beneficial for your project? If so, please outline why.

The **AQUAEXCEL** call has been very useful because it has allowed us to benefit from optimal culture conditions to carry out the experimental trial. Special thanks to the INRA staff who kindly and warmly assisted during the experience. The project is still ongoing and the on-field phase has just ended, but the energy and the enthusiasm for further work is still very high. The exchange with our colleagues was intense and useful and I undoubtedly hope this experience is another step to continue further collaborations in R&D projects and other research activities.

AQUAEXCEL team at INRA facilities