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TargetFish brings together leading European research groups that are experts on the fish immune system and enterprises from the Biotech and Veterinary sectors that aim to commercialize fish vaccines for European fish farming. By developing a targeted vaccination strategy, TargetFish will prevent important fish diseases in European aquaculture industry.

This highlight is part of monthly progress updates by the TargetFish consortium.

targetfish.eu

Effects of adjuvant Montanide™ ISA 763 A VG in rainbow trout injection vaccinated against *Yersinia ruckeri*

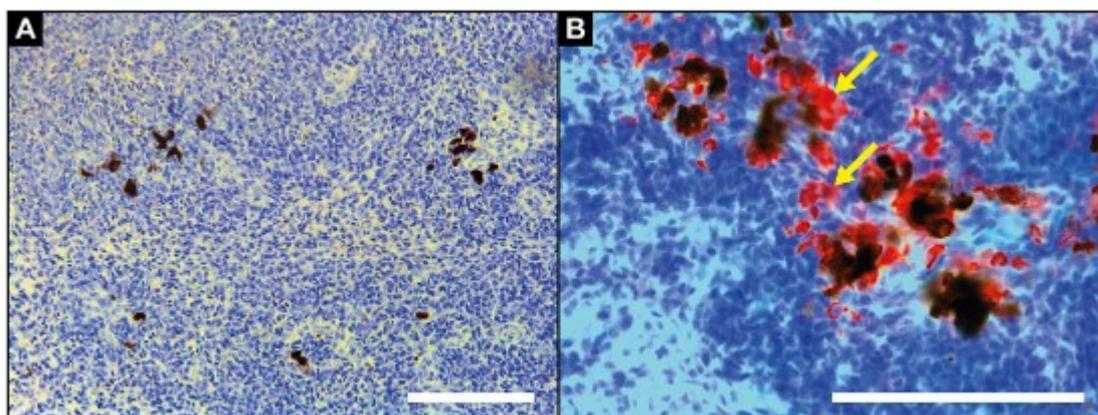
Enteric Redmouth Disease (ERM) caused by the bacterium *Yersinia ruckeri* is representing a major threat to salmonid aquaculture in Europe. It was recently shown that immersion vaccination of small rainbow trout is a satisfactory method for protecting very small fish. However, it was also shown that the duration of immunity is

This vaccine design – used even without addition of adjuvant - proved to be significantly more effective than commonly used commercial ERM vaccines. This holds promises for an improved health status of European aquacultured salmonids. However, the TargetFish researchers improved the vaccine efficacy even more by adding

relatively short-lived unless fish receive a booster vaccination. This re-vaccination can be performed by immersion but injection vaccination will provide a much better protection. In this latest study by TargetFish researchers from the University of Copenhagen in Denmark it has been demonstrated that the injection vaccination can be improved if the vaccine is combined with an adjuvant (immune-stimulating substance) provided by the company Seppic from France. First of all, the researchers designed a special vaccine based on two types of bacterial strains (called biotype 1 and 2 of *Yersinia ruckeri*) which had been isolated from Danish farmed trout.

the Montanide adjuvant. The immune-stimulating additive was so strong that it protected the rainbow trout against extreme *Yersinia ruckeri* exposure. Aquaculturists involved with the TargetFish project are currently working with the Danish TargetFish partner Rossi who develops vaccination machines for high throughput of vaccinated fish of small size. Thereby this is an excellent example of how researchers and industry found each other within the TargetFish community and joined efforts for improvement of fish health in European aquaculture.

[Fish & Shellfish Immunology 47: 797-806](#)



TargetFish 2nd Industry Workshop

The 2nd TargetFish Industry Workshop held during the 17th

International Conference of the European Association of Fish Pathologists (EAFP) in Gran Canaria, Las Palmas in September 2015, where TargetFish highlights and achievements were discussed, was a great success. The significance of these developments for the aquatic animal health industry and how they may be taken forward into commercial applications were discussed with representatives from both, Academia and Industry. A Workshop Report has just been published in the Bulletin of the European Association of Fish Pathologist [Volume 36 \(1\), 2016, page 52-55](#)



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