

Keynote Presentation

Monday September 3rd

Contributions of Early Cellular Responses to Immune Protection in Fish

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The capacity of fish to defend against infection depends greatly on effective induction and control of cellular immune mechanisms. These are critical to short and long-term health, and since they are energetically costly, also relevant to fish performance. This presentation will summarize recent experiments from our lab looking to define the contributions of white blood cells to the induction and resolution of fish immune antimicrobial programs. Using combinatorial cellular and molecular approaches coupled with *in vivo* self-resolving immune challenge models (zymosan induced peritonitis and cutaneous live *Aeromonas* infection) we have defined key events in immune cell production, transport and function. These studies have also generated novel state-of-the-art tools for evaluation and promotion of fish immunity, setting the stage for valuable downstream applications in the aquaculture industry.



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