Julien Bobe, Ph.D.

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Current positions

- Research director in **functional genomics and evolution**. Main interest: Role of non-genetic inheritance and non-coding RNAs in fish reproductive biology and behavior.
- **Director of the Fish Physiology and Genomics Laboratory** INRAE UR1037 (Rennes, France).

Formation

- PhD university of Rennes (2001) (***PhD training at the University of Notre Dame (Indiana, USA) under the supervision of Pr. FW Goetz between Jan 1998 and Sept 2000***).
- Master in biological sciences, University of Rennes (1997)
- Engineer Bordeaux Science Agro (1996)

Professional experience

Since 2016 **Director of the Fish Physiology and Genomics Laboratory INRAE UR1037 (Rennes, France).**

Since 2016 Research director in fish **functional genomics and evolution**.

Main research interests:

- Regulation of fish reproduction by miRNAs
- Non genetic maternal effects shaping progeny behavior
- MicroRNA gene evolution
- Fish models of human diseases

2009-2015 **Group leader** « Sex differentiation and Oogenesis » INRAE LPGP and principal investigator in fish reproductive biology.

2001-2008 **Principal investigator** in fish reproductive biology.

1998-2000 **Visiting research student**, University of Notre Dame, Indiana, USA. Doctoral work under the supervision of Pr FW Goetz.

Group members

- Sarah Janati Idrissi (Post-doctoral reseacher)
- Marzieh Abbasi (Post-doctoral researcher)
- Constance Merdrignac (PhD student)
- Camille Largarde (PhD student)
- Dorine Sévère (Master student)
- Thaovi Nguyen (Technician)

Project coordination

- Coordinator (ANR MicroHippo – AAPG2021) Hippo pathway-mediated regulation of micropyle formation by microRNA 202 (miR-202) in the fish oocyte. 2022-2025
- Coordinator (FEAMP PhenomiR – Non-invasive phenotyping using circulating miRNAs in rainbow trout) 2018-2020
- Coordinator (ANR EggPreserve ANR-16-CE20-0001- Proteomic identification of ovarian fluid components able to extend fish egg viability) 2016-2020
- Coordinator (ANR Blanc SVSE7 Maternal Legacy – Molecular portrait of a developmentally competent fish egg) 2014-2017
- Coordinator (ANR GENOM-BTV PhyloFish - RNASeq-based phylogenomic analysis of gene duplications in teleost fish) 2011-2014
- Work package leader (COST AQUAGAMETE - Assessing and improving the quality of aquatic animal gametes) 2012-2016
- Coordinator (Marie Curie FP7-PEOPLE-2013-IEF – Proteomic Profiling and Knock-out Analysis of Key Components of the Zebrafish Egg 2014-2016

- Coordinator (ANR GENOM-BTV OSCILE – Oocyte-somatic cells interactions, lessons from evolution) 2008-2012

Participation in research projects

- ANR (AAPG2021) CAVEMOM : Maternal control of phenotypic evolution. (2022-2025).
- COST EELSUPPORT: Solving bottlenecks in eel reproduction to support sustainable aquaculture (2023-2027)
- EU H2020: AQUA-FAANG (Advancing European Aquaculture by Genome Functional Annotation) 2019-2023.
- FEAMP miSS : microARN, Sex & Stress (2020-2022)
- FEAMP NutriEgg : New feeding strategies to optimize rainbow trout egg production (2017-2019).
- Norwegian Science Foundation InnControl : Innate Control of Early Embryonic Development (2018-2023).
- ANR (AAPG2019) DynaMO : Molecular basis of fish fecundity.
- ANR (AAPG2016) GENOFISH : Evolution of genes and genomes after whole genome duplication.
- Work package leader COST AQUAGAMETE: Assessing and improving the quality of aquatic animal gametes (2012-2016).
- ANR (GENOM-BTV) GENOTROUT: rainbow trout genome sequencing (2008-2012).
- EU FP7 LIFECYCLE : Building a biological knowledge-base on fish lifecycles for competitive, sustainable European aquaculture (2009-2013)

Active collaborations

- Hervé Seitz, CNRS, Montpellier, France (regulation of gene expression by miRNAs)
- John Postlethwait & Thomas Desvignes, University of Oregon, USA (genome evolution and miRNA gene evolution)
- Denis Jabaudon, University of Geneve (neurodevelopmental plasticity under maternal influence)
- Sylvie Jaillard, Rennes University Hospital (fish models of premature ovarian insufficiency)
- Daniel Zarski, Polish Academy of Sciences, Poland (non-genetic maternal factors in aquaculture)
- Martin Psenicka, Université of South Bohemia, Czech Republic (gamete biology)
- Daniel Macqueen, Roslin Institute, Edinburg, Scotland (functional annotation of fish genomes)
- Igor Babiak, Nord University, Norway (early development and RNA modifications)
- Henrik Nielsen, University of Copenhagen, Denmark (SNORDs)

Publications

120 scientific publications in international scientific journals including Nature Communications, *Nature Genetics*, *Science*, *Molecular Biology and Evolution*, *Nucleic Acids Research*, *Genome Research*, *PLoS Genetics, BMC Biology and Autophagy. ORCID ID : orcid.org/0000-0002-9355-8227*