



Funded by the
European Union
- Project
101079467



green innovation strategies for animal health
management: towards sustainable aquaculture

Increasing researcher's skills on the use of omics tools workshop

16th and 17th of March 2023
Auditório Infante D. Henrique
Marina de Leça, Leça da Palmeira (Portugal)

Free but limited to 30 attendants

**GRINNAQUA AIMS
TO STRENGTHEN THE
PERFORMANCE OF CIIMAR
IN AQUACULTURE
AND ANIMAL HEALTH.**

The synergy between Research
institutions that integrate the
GRINNAQUA consortium will boost the
Scientific excellence and innovation
capacity at CIIMAR, which can then be
transferred to the portuguese
aquaculture sector.



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Thursday 16th March

8:30-8:45	Welcome	Tim Bean & Diego Robledo
8:45-9:15	Genetic and genomic technologies in aquaculture research	Tim Bean & Diego Robledo
9:15-9:30	RNA-Seq workshop overview	Diego Robledo
9:30-9:45	RNA-Seq – definition and technologies	Tim Regan
9:45-10:30	Sample types, RNA extraction and library preparation	Tim Bean
10:30-11:00	<i>Coffee break</i>	
11:00-11:30	Introduction to linux *	Clemence Fraslin
11:30-12:30	Quality control of RNA-Seq raw data *	Diego Robledo
12:30-14:00	<i>Lunch</i>	
14:00-14:30	Alignment and quantification pipelines	Diego Robledo
14:30-15 :30	Quantification using Kallisto *	Diego Robledo
15:30-16:00	<i>Coffee break</i>	
16:00-17:00	Alignment using STAR *	Diego Robledo
17:00-17:30	Visualization using IGV *	Tim Regan
17:30-19:00	Open session and reception	

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Friday 17th March

9:00-9:15	Recap: the workshop so far	Tim Bean & Diego Robledo
9:15-9:45	Experimental design	Tim Bean
9:45-10:15	Introduction to R *	Jennifer Nascimento Schulze
10:15-11:00	Differential expression analysis *	Diego Robledo
11:00-11:30	<i>Coffee break</i>	
11:30-12:30	Visualization *	Diego Robledo
12:30-14:00	<i>Lunch</i>	
14:00-15:30	Beyond differential expression	Diego Robledo
15:30-17:00	<i>Farewell drinks and impressions about workshop</i>	

* denotes practical work – the participants are expected to bring their own laptops

Registration form:

https://docs.google.com/forms/d/e/1FAIpQLSfQO_JhEDdXjxkqju3tgAJGQEIYJRLz2Jai5pkdf6G1t9zYQA/viewform?usp=sf_link

Meals and coffee breaks are included

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Training team:



Diego Robledo. Group leader at Roslin Institute with interest on sex determination in turbot as well as other traits and species, generally developing genomic resources and studying immune responses to pathogens.



Tim Bean. Group leader at Roslin Institute working to improve the productivity and success of bivalve aquaculture in the UK by using the most appropriate technologies to deal with issues such as disease and environmental health.



Clemence Fraslin. Postdoctoral researcher at Roslin Institute working to implementation of genomic selection to improve rainbow trout resistance to columnaris disease



Tim Regan. Postdoctoral researcher at Roslin Institute working on the application of genome editing, screening assays and metagenomics to better understand host immunity and disease susceptibility - resistance in humans, bees and various terrestrial livestock species.



Jennifer Nascimento. Postdoctoral researcher at Roslin Institute. Oceanographer interested in ecophysiology and genomics of marine organisms. Application of statistics and bioinformatic approaches to investigate the implications of climate change in marine bivalves.

Where?

Auditorio Infante Dom Henrique, Leça da Palmeira



How to arrive?

From CIIMAR (Rua do Godinho stop) – Bus 105,106 and 507
(around 20 min.)

