

# Advancing European Aquaculture by Genome Functional Annotation

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Call:	H2020-SFS-2018-2
Start date:	1 <sup>st</sup> May 2019
Duration:	48 months
Coordinator:	NMBU

## **D7.1 AQUA-FAANG Website Launched**



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Deliverable Name	AQUA-FAANG website launched						
Deliverable No	D7.1						
Work package number(s)	7						
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<b>Responsible Partner</b>	EFFAB						
Author(s) Name and Organisation	Cagla Kaya, EFFAB						
Reviewer(s)	Ross Houston, Elisabeth Tangstad						
Dissemination level	PUPublicXCOConfidential, only for members of the consortium						
	(including the Commission Services)						
Short description	A dedicated AQUA-FAANG website will be designed and launched (M3) as a wide-reaching medium to communicate the project to a global audience, providing information and regular updates on objectives, outcomes, impact, publications, news, and lists/profiles of project partners with dedicated pages targeting different audiences.						

Change Ree	Change Records								
Version	Date	Changes	Author						
1	01/07/2019		Cagla Kaya						
2	08/07/2019	Minor suggestions on text	Ross Houston						
3	09/07/2019	Comments and suggestions to the draft has been added	Elisabeth Tangstad						
4	10/07/2019	Changes and corrections were made	Cagla Kaya						
5	31/07/2019	Finalising deliverable	Mirjam Spoelstra						

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## 1 Executive summary

This section includes the purpose of the document, and a summary of the main outcome. The objective of the deliverable (under task 7.3) is to ensure awareness of AQUA-FAANG and its activities related to European aquaculture breeding among AQUA-FAANG stakeholders, end-users, general public and policy makers. A key tool for assuring this awareness is the website which is an important information channel and a one-stop portal for AQUA-FAANG, a project with partners and stakeholders across a broad range of Europe.

## Background:

The AQUA-FAANG website is a dynamic medium which will be adapted during the course of the project. News, events, media and project results will be added over time. The website is an important first contact point of the project with the target audiences. It should be informative, up-to-date, inspiring and inclusive, and invite visitors to further engage with the project. The AQUA-FAANG website will be maintained for two years after finalizing the project, which will facilitate longer-term impact.

The project website is available on <a href="http://www.aqua-faang.eu">http://www.aqua-faang.eu</a>

The website is set up to cover the following content:

- Project aim, objectives, structure, partners and impact
- News items and press releases
- Project media like brochures, newsletters, video materials
- Agenda of important public events regarding the project
- Description and contact details about partners and collaborators involved in the project
- Links to scientific publications and presentations
- Public project results

## **Objectives:**

To communicate up-to-date information on the project, the partners involved, the background of the project and on the project activities, the outcomes and the meaning of the outcomes.

### Methods:

A website is designed using the web-hosting service 'Weebly', with an online website creator. The AQUA-FAANG website will be further developed during the project lifetime by gathering and publishing information from its work packages.

## **Results & implications:**

An AQUA-FAANG dedicated website that informs the project members, stakeholders and the wider public about project activities. It will serve as an important first contact point for the targeted audience.





## 2 General outline of the website and page details

The website consists of a home page and link to other relevant pages. The map of the website is given in Figure 1.

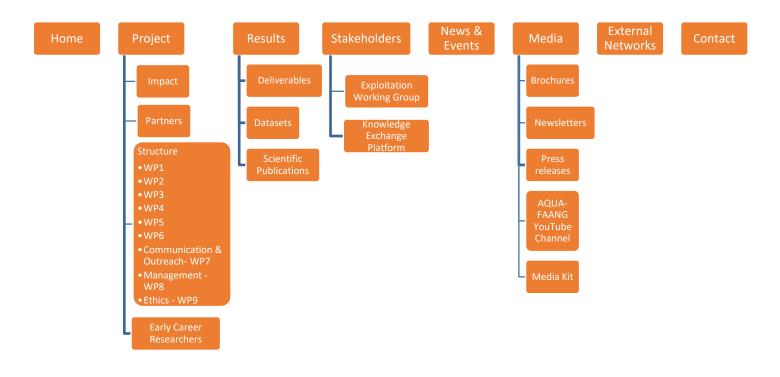


Figure 1: Map of the AQUA-FAANG website

### Homepage:

Home page includes a brief overview of the whole project website. It shows the most recent updates to the website and AQUA-FAANG Twitter accounts in different sections. It also includes subscription button to AQUA-FAANG mailing list.

### Project:

Project page includes a brief overview of the project and it summarizes the AQUA-FAANG objectives. It has 4 subpages; impact, partners, structure and early career researchers.

- Impact page summarizes the expected outcomes of the project in particular on the European aquaculture breeding sector.
- Partners page give the list of partners in the consortium with links to their websites.
- Structure page gives information on the project work plan and its work packages.
- Early career researchers page gives the profiles of the PhD and post-doc researchers working on the project.



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### **Results:**

Results page consists of 3 pages giving access to deliverables, website with datasets and scientific publications. This page will be developed and improved as the project results are produced.

#### Stakeholders:

Stakeholder page informs about the stakeholder inclusion and engagement strategy of AQUA-FAANG. It will have two subpages; Exploitation Working Group (EWG) and Knowledge Exchange Platform (KEP).

#### News & Events:

These pages are intended to inform about the project progress and events.

#### Media:

This page aims to provide the different targeted audiences with the right communication and dissemination material. It will cover all the publications whether technical, scientific or popular. Different media tools will be used during AQUA-FAANG project including informative brochures, newsletters, press releases, fact sheets, videos, webcasts, and practice abstracts.

#### External networks:

AQUA-FAANG website will be linked to other websites for related initiatives, namely FAANG, FAASG and DANIO-CODE, and to the Ensembl genome browser, which will host data access and visualization tools for AQUA-FAANG datasets (WP2 deliverable). The website will also host a page that visually summarizes the datasets that have been generated to date.

#### Contact:

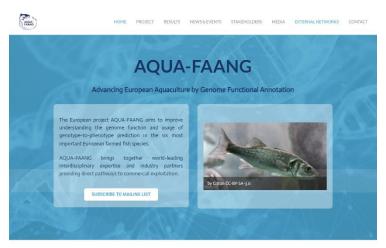
Contact page includes an online contact form and the contact information of the project coordinator, manager and AQUA-FAANG Communication team.





#### 3 Annexes

#### Screenshots website:



#### AQUA-FAANG has started!



AQUA FANNO project has started on May 1, 2019. Its Kick off Meeting took place on May 28 29, 2019 in Oslo, Norway. There were 23 participants from the partner organisations. Introduction of the project, explanations on the project management WP procentations were explained during the 2 day meeting. A sport estation was a strain the partner of the providence of the project resential and informal WP meetings were erganised cleated to Risk management group work where risks where identified and presented. It was a good opportunity to meet with all the other partners and production and expected activities and tasks of the project. project.



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Tweets woodule FAANG Calua-FAANG QUAFAANG project partners x-off Meeting in Oslo, Norway

- AQUA-FAANG in a nutshell
- Project duration: 48 months
- Type of action: Research and Innovation
  Start date: 1st of May 2019
- Coordinator: NMBU Sigbjørn Lien
- Countries: Norway, United Kingdom, France, Spain, Italy, Poland, The Netherlands, Greece, Germany



"Overall objective: to generate genome-wide functional annotation maps for the six commercially most important fish species within European acuaculture and cuploit their contribution to variation in traits of commercial relevance, focusing on improved resistance to disease."

Project Coordinator	Project Manager	Communication & Dissemination
Sigbjørn Lien	Lise Marie Fjellsbø	Çağla Yüksel Kaya Kuyu'ulu
Professor - NMBU	Project Manager - NMBU	Project Manager - EFFAB
sigbjorn.lien[at]nmbu.no	lise (jellsbojat)nmbu no	Cagla Kayajatjeffab.info

The AcQUA (RANK) project has excellent funding from the European United Horizon 2000 research and Instruction program under Grant Agreement No 877923. This publi reflects the views only of the withouted for European United to European United to European State (Figure 1).

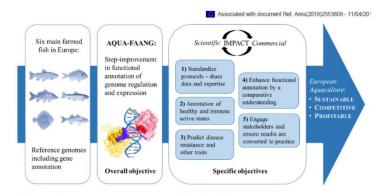


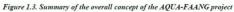
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Recent developments in genomics have advanced innovation in European aquaculture. However, despite the creation of reference quality genome sequences for the main species, our understanding of genome functions remains limited. AQUA-FAANG will deliver a step improvement in the understanding of genome function and exploitation of genotype-to-phenotype prediction in the six most important European farmed fish species. The project brings together world-leading interdisciplinary expertise and industry partners providing direct pathways to commercial exploitation. AOUA-FAANG will functionally annotate the genomes of all six species, employing standardized experimental assays and analysis pipelines defined by the FAANG initiative. AQUA-FAANG datasets will be shared and coordinated with other FAANG initiatives via the FAANG data coordination centre, and made available through the Ensembl genome browser. As infectious disease is of paramount concern for sustainable aquaculture, the project focuses on understanding functional genomic regions in both healthy and immune-challenged fish. This will improve knowledge of the genomic basis for disease resistance and is complemented by novel approaches to increase understanding of immune cell heterogeneity. Standardized comparative analyses will provide essential insights into genome functions that cannot be gained from study of single species. Functional assays will be used to study intermediate phenotypes and prioritise causative genetic variants in trait-associated genomic regions to accelerate selection of disease-resistant stocks. Functionally-enriched marker panels will be developed to improve accuracy of genomic selection. An active programme of stakeholder engagement and dissemination will ensure uptake of project outputs by industry, academia, the public and in policy. The outputs will enhance precision breeding, drive competitiveness within the aquaculture sector, and enhance food and nutrition security in Europe.



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AQUA	HOME	PROJECT RESULTS	NEWS & EVENTS	STAKEHOLDERS ME	DIA EXTERNAL NETWORKS	CONTACT
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AQUA-FAANG will create an internationally leading consortium for excellence and innovation in fish genomics. The cluster of world experts from both academia and industry, combined with extensive training and dissemination activities, will create a long-term interactive hub expected to outlast the duration of the project. This hub aims to be world-leading within basic genome biology research targeting aquaculture fish species, and for applied research targeted towards tackling industry and stakeholder issues of importance for sustainable industry expansions.

#### SHORT TO MEDIUM TERM IMPACT

- AQUA-FAANG will deliver comprehensive high-quality genome functional annotation maps for the six most economically important fish species in European aquaculture, providing insight into variation across tissues, lifestages and experimental conditions using a range of core FAANG functional annotation assays
- Pave the way for subsequent use of annotated genomes to improve precision breeding in farmed animal production, by linking genome to phenotype and improving means to measure/record phenotypes.
  - The project will test and optimize approaches for prioritizing functional variations in QTL regions across several species, and harness those variants to improve genomic selection.
  - The project will deliver a computational pipeline that academic and commercial researchers can use to prioritize functional variants in candidate regions of the genome (e.g. QTL/GWAS regions) which will facilitate direct exploitation of functional annotation datasets for marker assisted and genomic selection application.
  - The project will develop novel approaches to characterize and measure immune cell heterogeneity in fishes defining immune cellular
    phenotypes at an unprecedented level of accuracy, which can be used in the future to improve precision breeding by enhancing the
    information-content in recorded phenotypes in terms of host defence mechanisms responsible for disease resistance.
- Progress in understanding genotype per environment interactions and deciphering the mechanisms by which some effects induced by environment/stressors can be transmitted across generations
- AQUA-FAANG will contribute strongly to international coordinated actions aiming to achieve standardized genome functional annotation in domesticated animals and fishes.

#### LONG-TERM IMPACT

OTHER IMPACTS (NOT MENTIONED IN THE WORK PROGRAMME)



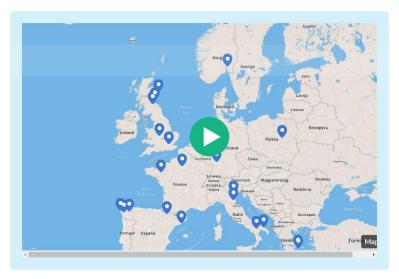
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ANNO	HOME	PROJECT	RESULTS	NEWS & EVENTS	STAKEHOLDERS	MEDIA	EXTERNAL NETWORKS	CONTACT
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#### ACADEMIC PARTNERS

The Norwegian University of Life Sciences (NMBU) located in Ås, Norway, seeks to contribute to the well-being of the planet through interdisciplinary research generating innovations in food, health, environmental protection, climate and sustainable use of natural resources. The Genome Biology research group (also known as the Centre for Integrative Genetics; CIGENE) is organised within the Department of Animal and Aquacultural Sciences, Faculty for BioSciences. CIGENE is a multidisciplinary genome biology research group possessing expertise in genetics, evolutionary and comparative genomics, bioinformatics and systems biology. We have a strong aqua- and agri- research profile with key strengths in the application of 'omics' data to understand the genetic architecture of complex traits and possess excellent wet and dry lab facilities for automated high-throughput omics, and bioinformatics.

Main tasks in the project: NMBU is the Coordinator of the AQUA-FAANG project, and is responsible for the scientific and administrative management. In addition, NMBU leads WP1 *Functional annotation assays* and co-lead WP7 *Dissemination, exploitation and communication.* NMBU is also contributing to WP2 and WP6. Key personnel:



The University of Edinburgh (UEDIN) is consistently ranked in the top 20 among the world's universities, and was rated 4th overall for 'research power' in the most recent Research Excellence Framework in the UK (REF2014). Embedded within The Royal (Dick) School, The Roslin Institute (RI) aims to enhance the lives of animals and humans through world class research in animal biology. The Roslin Institute is the UK's leading centre for farm animal genetics and genomics, with a growing team focussed on genetics and health of major aquaculture species. Our research programme involves developing and applying genomic resources to advance selective breeding, enhance disease resistance, improve animal welfare, and reduce environmental impacts in aquaculture. Much of this research is in collaboration with a range of external academic and industry partners.

Main tasks in the project: The University of Edinburgh leads two work packages in AQUA-FAANG, one exploiting functional annotation to improve breeding for disease resistance (WPS) and the other using comparative approaches to enhance functional annotation (WP6). We also have key deliverables within other work packages, for example coordinating the delivery of developmental maps within WP 1, and dissemination and communication activities within WP7. Key personnel:





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AQUAD	HOME	PROJECT	RESULTS	NEWS & EVENTS	STAKEHOLDERS	MEDIA	EXTERNAL NETWORKS	CONTACT
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roject specific bjectives:	WP1 Functional annotation assays	EMBL-EBI WP2 Bioinformatics and data analysis	WP3 Genomic basis of immune phenotypes	WP4 Novel approaches to reveal disease resistance	WP5	WP6 Comparative analyses	<b>WP1</b> Functional
Standardize protocols and share data	<ul> <li>Image: A second s</li></ul>	~	~				annotation
Annotation of healthy and immune active states	~		1	~	~	~	assays
Predict disease resistance and other traits				~	~	× )	WP2
Enhance functional annotation by a comparative understanding	<ul> <li>Image: A second s</li></ul>	1	~		1	~	WP3
Engage stakeholders and ensure results are converted to practice	~	~	~	1	~	~	
,			Y				WP4
		<b>WP7</b> :	Dissemination, explo	pitation and comm	nunication		WP5
	WP8	Management and	coordination	M Nersegie in	thereafty 🙀 THE UNIVERSET	Y	WP6
							WP7
							WP8
							WP9



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AQUA	HOME	PROJECT	RESULTS	NEWS & EVENTS	STAKEHOLDERS	MEDIA	EXTERNAL NETWORKS	CONTACT
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## AQUA-FAANG has started!



AQUA-FAANG project has started on May 1, 2019. Its Kick-off Meeting took place on 28-29 May in Oslo, Norway. There were 23 participants from the partner organisations. Introduction of the project, explanations on the project management WP presentations were presented and internal WP meetings were organised during the 2 day meeting. A specific session was dedicated to Risk management group work where risks where identified and presented. It was a good opportunity to meet with all the other partners and having to learn more about Norwegian salmon production and expected activities and tasks of the project.



### Archives

July 2019

## Categories

All

🔝 RSS Feed



AQUA-FAANG @AQUA\_FAANG #AQUAFAANG project

partners met at the Kick-off Meeting in Oslo, Norway. Work packages and the tasks were discussed in detail in plenary sessions as well as group work. Aqua-Faang family is excited to start working!



♡ [→ May 29, 2019

AQUA-FAANG @AQUA\_FAANG AQUA-FAANG has officially started on May 1st, 2019. You can follow the latest news and updates from 1ls facebook, Linkedin and ResearchGate accounts and soon from its website aquafaan\_eu .



Embed View on Twitter



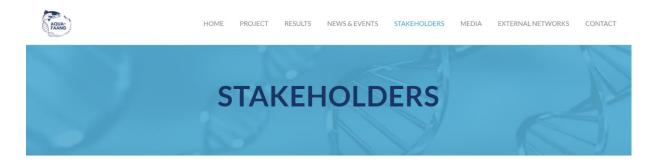
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A key strength of AQUA-FAANG is industrial engagement across a portfolio of the six most important European farmed fish species. This engagement will allow co-development of commercially relevant outputs with lasting impacts in European aquaculture. An important general route to commercial impact will be through these project partners, including breeding and genetics services companies. The target audience consists of academic and non-academic stakeholders including researchers, aquaculture breeding industry, biotechnology, vaccine and pharmaceutical companies, industry organisations, trade bodies and pan-European networks, policymakers, media, public and consumers.

#### Exploitation working group

The Exploitation Working Group (EWG) is a unique platform for cooperation and collaboration between AQUA-FAANG and relevant stakeholder groups including the aquaculture breeding and other relevant industry that would uptake the results of the project. The group will have three physical meetings to broadly discuss the possibilities for uptake of project results, and giving opportunity for non-academic stakeholders to shape the direction of the project.

#### Knowledge exchange platform

The Knowledge Exchange Platform (KEP) consists of project coordinators from other projects to facilitate coordination of relevant activities across the different consortia. The project managers from other funded projects will meet and discuss how to maximize knowledge exchange, encourage collaboration and facilitate standardization of functional annotation. This knowledge exchange platform enables communication between relevant EU projects and initiatives, and coordinate knowledge and data exchange. The KEP also aims to organize joint communication and dissemination events to increase the uptake of results by joint stakeholders outside the projects.

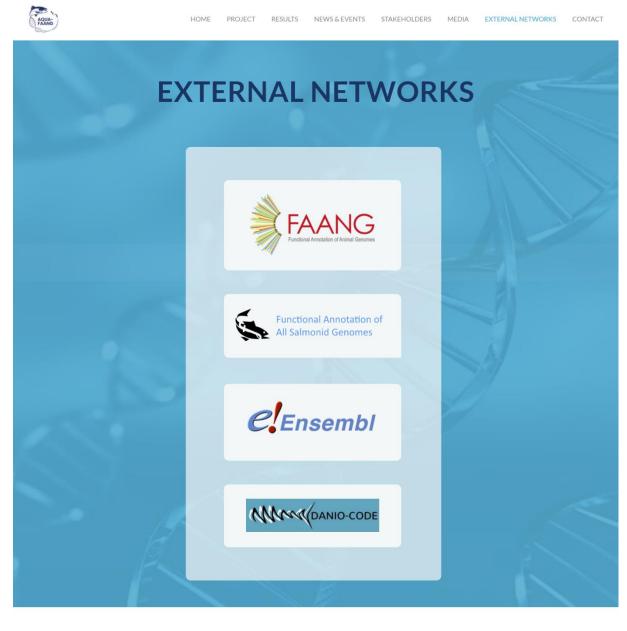


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