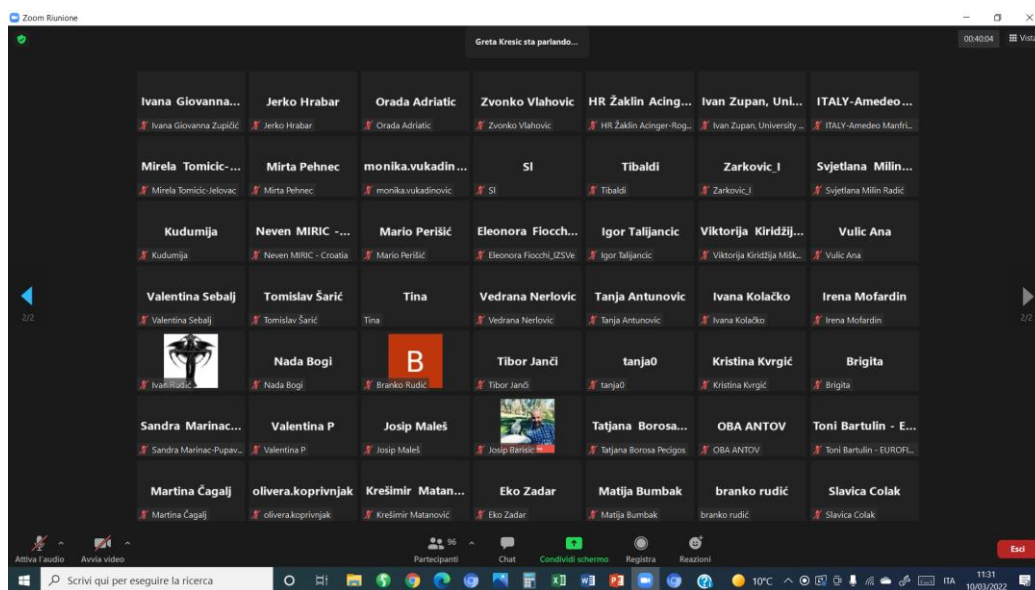


# AdriAquaNet

Enhancing Innovation and Sustainability in Adriatic Aquaculture

WP 4.4 Trainings for veterinarians and SMES

WP4– Training nr. 5, report, March 10, 2022



## Introduction

The fifth training course entitled “SUSTAINABLE MARICULTURE: FARMING, SAFETY AND QUALITY” took place on February 24, 2022 from 11:00 till through the "Zoom platform": <https://us02web.zoom.us/j/82339592913?pwd=enVwZkl3NWVuMkNKbWlqZTBqZ2ZxLdz09.>

The workshop was organised by the Croatian partners the AdriAquaNet consortium, Mariculture cluster **PP7**, the Croatian Institute of Veterinary Medicine (CVI) in Zagreb PP1 with the collaboration of The University of Rijeka with the aim to reach nutritionist, fish producers, breeders, operators, catering services and GDO, in particularly related to Croatian market.

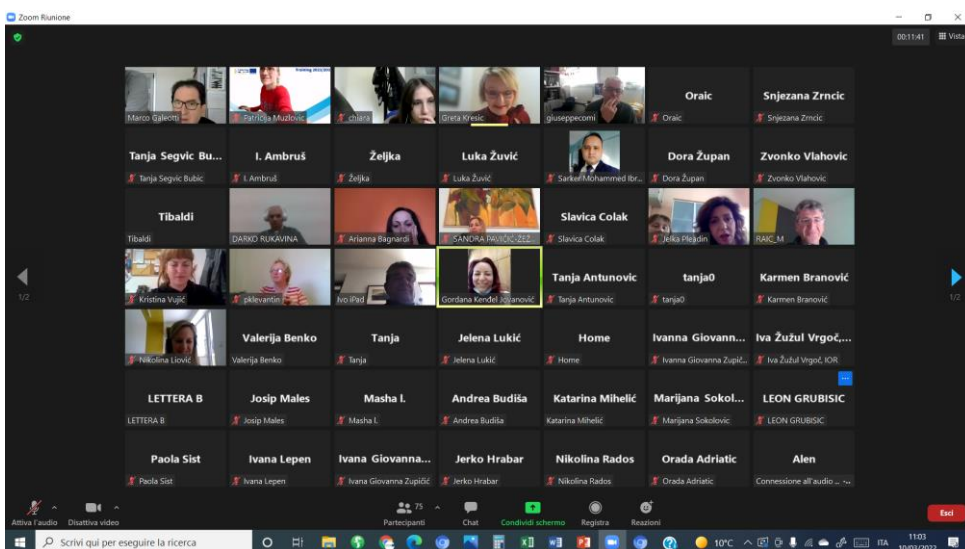
1

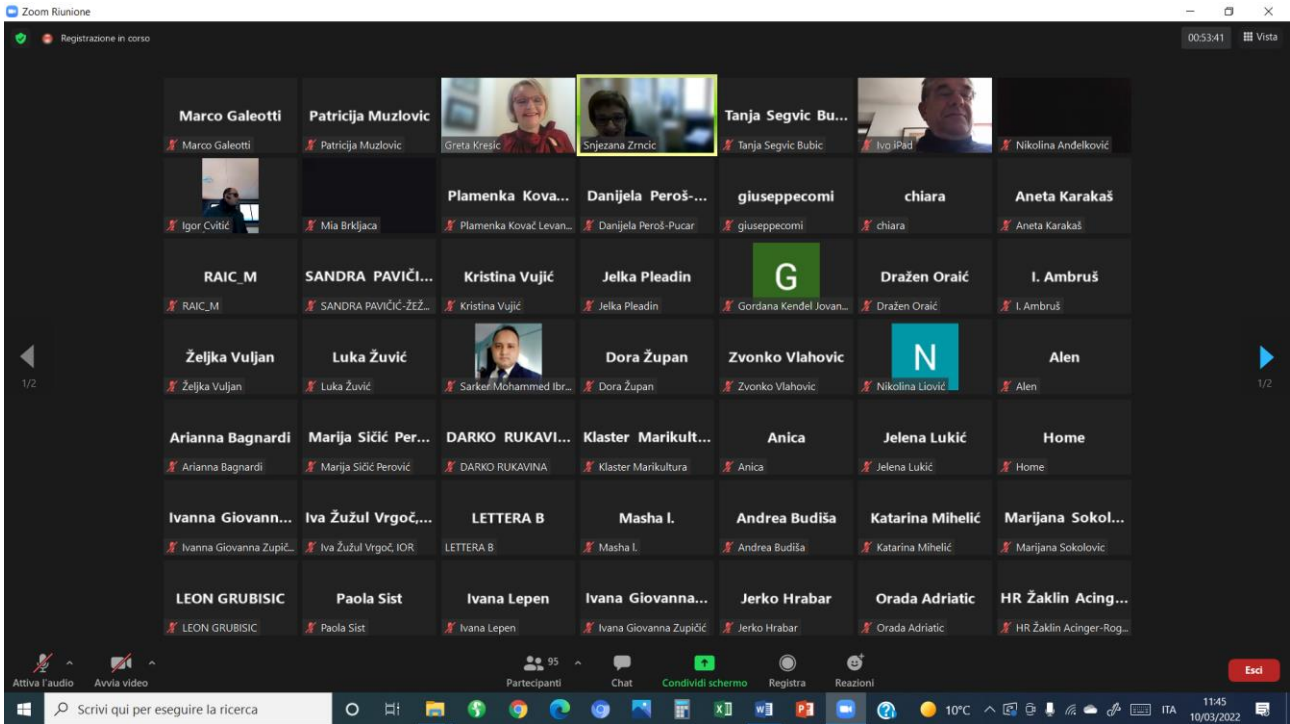
Maximum number of people attending on line were 96 persons, of which 89 participants followed the complete training Cycle of WP3,4,5 activities and got the AAN certificate of attendance.

The programme involved 7 presentations of which:

- 1 lesson related to WP3
- 1 lesson related to WP4
- 4 lessons related to WP5

The lessons were held in English and Croatian. Translation was provided. After the registration of the participants, M. Galeotti (LP) introduced the project to the attendees. LP external services LETTERA B was in charged for the zoom connection, PP1 coordinator Snježana Zrnčić and PP5 coordinator Greta Krešić were moderators of the whole course.





2

**Snjezana Zrnčič, PP1 coordinator, was involved also as a speaker and she participated in the activity 4.4 and presented a lesson entitled “Fish health and welfare”.**



Zoom Riunione

Stai visualizzando lo schermo di Dražen Oraić


Opzioni della vista

01:31:20

Registrazione in corso

### Održivo upravljanje zdravljem

- U hrvatskoj marikulturi najčešći uzročnici bolesti su **bakterije** i **paraziti**
- Najvažniji bakterijski uzročnici su iz porodice Vibrionaceae, i to *Vibrio anguillarum*, *Photobacterium damsela* subsp. *piscicida*, te u posljednjih desetak emergentni *V. harveyi* te infekcije vrstama *Tenacibaculum* spp. postale su vrlo važne kao uzročnici bolesti, a česte su koinfekcije
- Nametničke bolesti su škvržni metilji (*Sparicotyle* sp. i *Ceratomyx* sp.)
- Bolesti se najčešće suzbijaju primjenom antimikrobnih supstanci ili kemikalijama za liječenje parazita (formalin ili sintetski piretrini)
- Liječenje antibioticima smanjuje gubitke ali učestalo ponavljanje liječenja rezultira razvojem antimikrobne rezistencije, nakupljanjem rezidua u tkivu riba i morskom okolišu jednako kao i antiparazitici



Interreg Italy - Croatia AdriAquaNet

Partecipanti: 98

Attiva l'audio

Avvia video

Scrivi qui per eseguire la ricerca

11°C

ITA

12:23

10/03/2022

3

Zoom Riunione

Registrazione in corso

00:54:39

Partecipanti (94)

Q Trova un partecipante

Marco Galeotti	Patricija Muzlovic	Greta Kresic	Snjezana Zrnec	Tanja Segvic Bubic	Ivo IPad	Nikolina Andelkovic
Igor Cvitic	Mia Brkijaca	Plamenka Kovač Levan...	Danijela Perol-Pucar	giuseppecomi	chiara	Aneta Karakaš
RAIC_M	SANDRA PAVIČIĆ-ŽEŽ...	Kristina Vujić	Jelka Pleadin	Gordana Kendel Jovan...	Dražen Oraić	I. Ambruš
Željka Vuljan	Luka Žuvić	Sarker/Mohammed Ibr...	Dora Župan	Zvonko Vlahovic	Nikolina Liovid	Alen
Arianna Bagnardi	Marija Silić Perović	DARKO RUKAVINA	Klaster Marikultura	Anica	Jelena Lukić	Home
Ivanna Giovanna Zupić...	Iva Žužul Vrgoč, IOR	LETTERA B	Masha I.	Andrea Budiša	Katarina Mihelić	Marijana Sokolovic
LEON GRUBISIC	Paola Sist	Ivana Lepen	Ivana Giovanna Zupić	Jerko Hrabar	Orada Adriatic	HR Žaklin Acinger-Rog...

Attiva l'audio

Avvia video

Partecipanti

Chat

Condividi schermo

Registra

Reazioni

Scrivi qui per eseguire la ricerca

10°C

ITA

11:46

10/03/2022

Zoom Riunione

Stai visualizzando lo schermo di Dražen Oraić

Opzioni della vista

01:34:47

Registrazione in corso

### Radni zadatak 4.2 – LJEKOVITE TVARI/ PROBIOTICI/ PRIRODNE TVARI IZ MORA (UNIUD)

Iz morskih organizama je ekstrahirano više od 130 prirodnih morskih tvari (PMT) te iz kukaca 14 antimikrobnih peptida (AMP) (PP6) i testirano *in vitro*:

- Vibrio anguillarum* O1 izolat 326/ITT/15. (PP4)
- Photobacterium damselae* subsp. *piscicida* izolat 104/ITT/18.1 (PP4)



Gastropteron meckeli    Crambe crambe    Apis mellifera    Hyalophora cecropia



Zoom Meeting controls: Attiva l'audio, Avvia video, 97 participants, Chat, Condividi schermo, Registra, Reazioni, Esci

Scrive qui per eseguire la ricerca

11°C 12:26 10/03/2022

4

Zoom Riunione

Stai visualizzando lo schermo di Dražen Oraić

Opzioni della vista


01:35:28

Registrazione in corso

PMT*	Vrsta	Organizam	Tvar	<i>V. anguillarum</i> O1	<i>P. damselae</i> subsp. <i>piscicida</i>
CBC3A_X	<i>Crambe crambe</i>	spužva	Sirovi ekstrakt	MIC <sub>CBC3A_X</sub> > MIC <sub>Oxy</sub>	MIC <sub>CBC3A_X</sub> < MIC <sub>Oxy</sub>
CBC3A_B	<i>Crambe crambe</i>	spužva	Obogaćena frakcija	MIC <sub>CBC3A_B</sub> > MIC <sub>Oxy</sub>	MIC <sub>CBC3A_B</sub> < MIC <sub>Oxy</sub>
CBC3A_C	<i>Crambe crambe</i>	spužva	Obogaćena frakcija	MIC <sub>CBC3A_C</sub> > MIC <sub>Oxy</sub>	MIC <sub>CBC3A_C</sub> < MIC <sub>Oxy</sub>
CBC3A_C_E	<i>Crambe crambe</i>	spužva	Obogaćena frakcija	nd	MIC <sub>CBC3A_C_E</sub> = MIC <sub>Oxy</sub>
CBC3A_C_F	<i>Crambe crambe</i>	spužva	Aktivni metaboliti	nd	MIC <sub>CBC3A_C_F</sub> = MIC <sub>Oxy</sub>
CBC46B_10B/O	<i>Gastropteron meckeli</i>	školjkaš	Aktivni metaboliti	MIC <sub>CBC46B_10B/O</sub> > MIC <sub>Oxy</sub>	MIC <sub>CBC46B_10B/O</sub> < MIC <sub>Oxy</sub>
CBC46B_10B/R	<i>Gastropteron meckeli</i>	školjkaš	Aktivni metaboliti	MIC <sub>CBC46B_10B/R</sub> > MIC <sub>Oxy</sub>	MIC <sub>CBC46B_10B/R</sub> < MIC <sub>Oxy</sub>
CBC46B_10B/Z	<i>Gastropteron meckeli</i>	školjkaš	Aktivni metaboliti	MIC <sub>CBC46B_10B/Z</sub> > MIC <sub>Oxy</sub>	MIC <sub>CBC46B_10B/Z</sub> < MIC <sub>Oxy</sub>
CBC46B_10H	<i>Gastropteron meckeli</i>	školjkaš	Aktivni metaboliti	MIC <sub>CBC46B_10H</sub> > MIC <sub>Oxy</sub>	MIC <sub>CBC46B_10H</sub> < MIC <sub>Oxy</sub>
AMP **	Vrsta	Organizam	Tvar	<i>V. anguillarum</i> O1	<i>P. damselae</i> subsp. <i>piscicida</i>
Cecropin A Mellitin CA(1-7) M (2-9) Protiličen	<i>Hyalophora cecropia</i> - <i>Apis mellifera</i>	Insekt	Sintetski hibridni peptid	MIC <sub>CAMP</sub> > MIC <sub>Oxy</sub>	MIC <sub>CAMP</sub> < MIC <sub>Oxy</sub>
Cecropin A Mellitin CA(1-7) M (2-9) Neprotičen	<i>Hyalophora cecropia</i> - <i>Apis mellifera</i>	Insekt	Sintetski hibridni peptid	nd	MIC <sub>CAMP</sub> < MIC <sub>Oxy</sub>

\*PMT - prirodna morska tvar  
\*\*AMP - antimikrobni peptid

MIC, Minimalna Inhibicijska Koncentracija  
Oxy, oksitetraciklin kao referentni antibiotik



Zoom Meeting controls: Attiva l'audio, Avvia video, 97 participants, Chat, Condividi schermo, Registra, Reazioni, Esci

Scrive qui per eseguire la ricerca

11°C 12:27 10/03/2022

## Topics

The following presentations regarding WP4 was discussed among the participants and all relators present. They debated about:

1. How to guarantee healthy farmed fish to consumers
2. How to manage and guarantee health sanitary conditions on farms (the most common bacteria and parasites in the Croatian fish farms)
3. Vaccinations – new autologous vaccines developed by the AAN project against *Vibrio harveyi* and *Tenacibaculum maritimum*
4. Probiotics and natural marine substances - AAN tests
5. Parameters in the everyday fish farming and the EU normative
6. Innovation used in AAN labs test and exams in tracking the welfare of farmed fish

5

**The following deliverables were produced and put in SIU:**

- 1. Agenda in EN and CRO**
- 2. Participant's attendance certificates on zoom**
- 3. Minutes of discussion with attendees**
- 4. Presentation of lessons and training materials**

## Conclusions and Next Steps

The following training will be organized in Italy and probably in hybrid version - in person and online due to sanitary situation on May 6 and 7, 2022 by Italian partners.