HELLENIC REPUBLIC
National and Kapodistrian University of Athens

EUFORA EUROPEAN FOOD RISK ASSESSMENT FELLOWSHIP PROGRAMME

Εμπειρία του Εθνικού και Καποδιστριακού Πανεπιστημίου Αθηνών (Ε.Κ.Π.Α.) στη δημιουργία σταθερού πλαισίου συνεργασίας με την EFSA

VASILIS VALDRAMIDIS, CHARALAMPOS PROESTOS

12.12.2024

ΕΦΕΤ ΕΝΙΑΙΟΣ ΦΟΡΕΑΣ ΕΛΕΓΧΟΥ ΤΡΟΦΙΜΩΝ

efsa FOCAL POINT

HELLENIC REPUBLIC
National and Kapodistrian University of Athens

Food Chemistry staff

Dr Charalampos Proestos, Professor in Food Chemistry

Dr. Marilena Dasenaki, Assistant Professor in Food Chemistry

Dr Vasilis Valdramidis, Associate Professor in Food Chemistry

Post-doc researchers

K. Pasvanka

K. Tsikrika

F. Roumani

E. Kollia

S. Roufou

Pol Giménez Gil

Administrator
Evi Grekou

PhD candidates
Chalmoukos Grigorios, Dimitros Ioannis, Gerodimou Fotini, Gialouris Loukas, Kopsacheili Anna, Kougia Eleni, Lekka Pelagia, Martakos Ioannis, Mastrotheodoraki Artemis, Ntakoulas Dimitrios, Oikonomou Marvina, Papastauropoulou Konstantina, Beitia González Enrique, Thamsuaidee Arisa

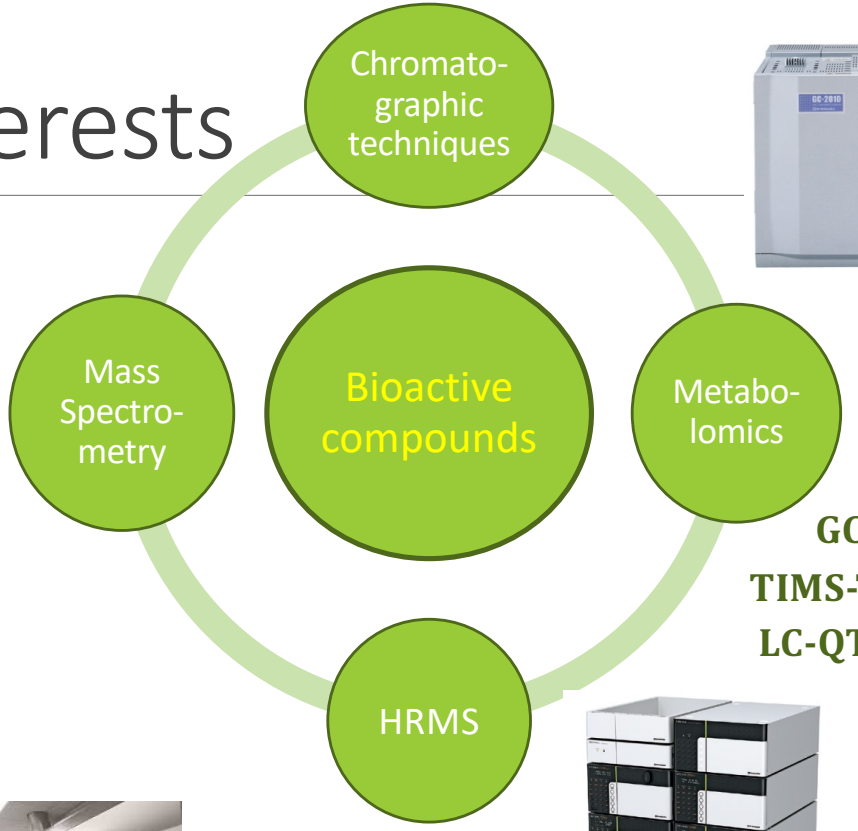
HELLENIC REPUBLIC
National and Kapodistrian University of Athens

Facilities & research interests

- Novel analytical techniques and equipment
- Combination of targeted and non-targeted analysis
- Green processes
- Applied microbiology labs

HYDROCAVITATOR

Biosafety level 2



GC-MS/MS
TIMS-TOF-Pro
LC-QTOF/MS

HELLENIC REPUBLIC
National and Kapodistrian University of Athens

Current international research projects

FunShield4Med

Shielding food safety and security by enabling the foresight of fungal spoilage and mycotoxins threats in the Mediterranean region under climate change conditions **HORIZON-WIDERA-2021-ACCESS-03-01**

SUPREME

SUstainable nanoPaRticles Enabled antiMicrobial surfacE coatings **HORIZON-CL4-2021-RESILIENCE-01**

NanoCosmos

Nanoencapsulation of bioactive compounds from plant by products to produce sensitive skin cosmetics

MARIE SKŁODOWSKA-CURIE ACTIONS, Staff Exchanges (SE) Call: **HORIZON-MSCA-SE-2021**

EXCEL4MED

Excellence hub in green technologies: Introducing innovation ecosystems in the Mediterranean food value chain **HORIZON-WIDERA-2022-ACCESS-04**

EUFORA EUROPEAN FOOD RISK ASSESSMENT FELLOWSHIP PROGRAMME

efsa

The European Food Risk Assessment (**EU-FORA**) Fellowship Programme (2022-2025)

HELLENIC REPUBLIC
National and Kapodistrian University of Athens

Current international research projects

E-MUSE Life sciences and Artificial intelligence	FAIRification of multiOmics data to link databases and create knowledge graphs for fermented foods. **HORIZON-MSCA-2022 - DN-JD** (FAIROmics)
FAIROmics	Training Network of Sustainable Technologies (2021-2024). Innovative Training Networks (ITN- Marie Skłodowska-Curie Actions) **Call: H2020-MSCA- ITN-2020** (TRANSIT).
TRANSIT	Complex microbial ecosystems multiscale modelling: mechanistic and data driven approaches integration (2021-2024). **Innovative Training Networks** (ITN-Marie Skłodowska-Curie Actions) Call: **H2020-MSCA- ITN-2020** (E-MUSE).
Delicious	Flavour, odour and texture improvements of plant-based dairy products using microbial fermentation products. **HORIZON-CL6-2024-FARM2FORK**-01-9 (DELICIOUS)
NOVISHPAK	Novel biodegradable, antimicrobial and smart packaging and coatings for increased shelf-life of Mediterranean fish filets: **PRIMA programme / Horizon 2020**

HELLENIC REPUBLIC
National and Kapodistrian University of Athens

EU-FORA EFSA

- QCMRA: Integrating quantitative chemical and microbial risk assessments to optimise the disinfection of fresh produce (2024-2025). **Polytechnic University of Cartagena** (UPCT) (2024-2025).

Anthony Luciano

- Q4MRATools: Quantitative tools in microbial risk assessment. **University of Cordoba** (UCO) (2023-2024).

Olga Bonilla Luque

- Quantitative tools in microbial and chemical risk assessment. **Kaunas University of Technology** (KTU) (2022-2023).

Aelita Zabulionė

- Quantitative tools in microbial and chemical risk assessment**. Trakia University** (TRU) (2022-2023).

Deyan Stratev

HELLENIC REPUBLIC
National and Kapodistrian University of Athens

EU-FORA EFSA

Objectives:

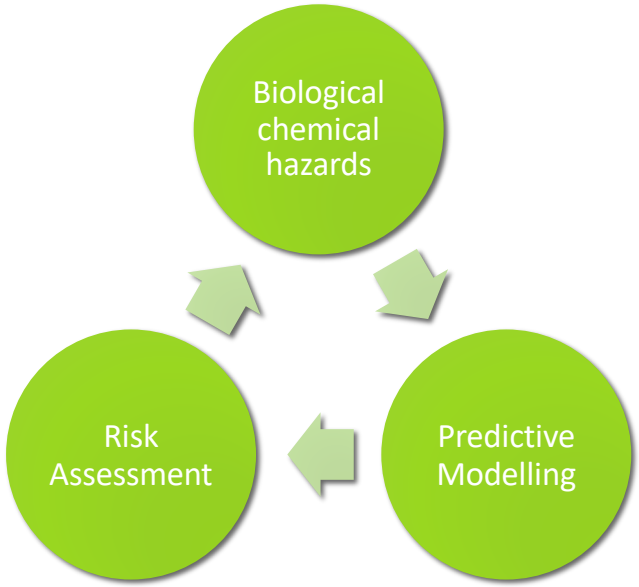
Train fellows in the area of predictive modelling, risk assessment

Subjects related to:

Food chain, risk assessment, statistics, predictive modelling

How?

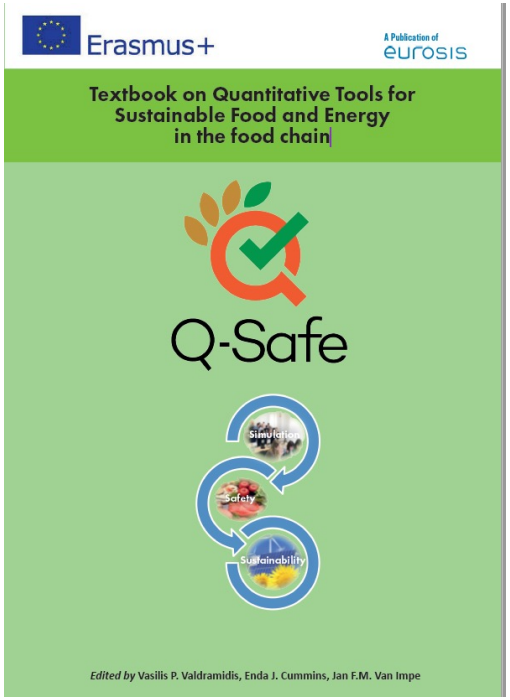
Integrating knowledge of food science, microbiology, statistics



HELLENIC REPUBLIC
National and Kapodistrian University of Athens

EU-FORA EFSA

Textbook used



Contents

PART 1 Modelling in Bioscience and Food

PART 2 Risk Assessment

PART 3 Life Cycle Analysis

- Theoretical background
- Tutorials (e.g., @Risk, Matlab)
- Exercises
- Solutions
- Electronic material (in USB)

Q-Safe
Quantitative Tools for Sustainable Food and Energy in the Food Chain

HELLENIC REPUBLIC
National and Kapodistrian University of Athens

Case study I: Exploring the role of pH on the microbial responses of foodborne pathogens

1. Search strategy

Data sources: www.combase.cc & www.symprevius.net

2. Data extraction

- Source / ID
- Replicates
- MO species
- Food
- pH
- Temperature (<45˚C)
- a_w
- Time /concentrations (log cfu/g or mL)

Exclusion Criteria

3. Modelling

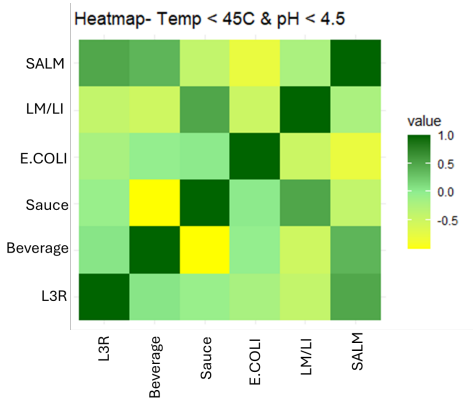
Data generation (Log-3-reduction /L3R)

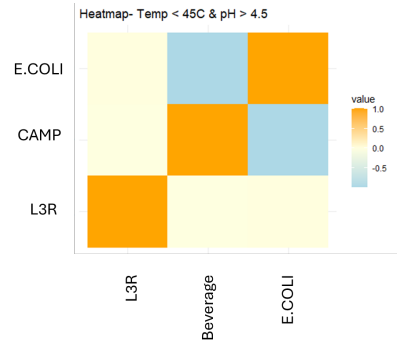
- Log linear
- Geeraerd Shoulder
- Geeraerd Tail
- Geeraerd Shoulder Tail

GInaFit (Excel) /MATLAB

4. Statistical analysis

No time extrapolation done!

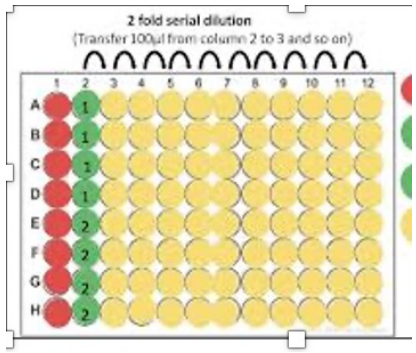




HELLENIC REPUBLIC
National and Kapodistrian University of Athens

Case study II : Growth variability of selected *Vibrio parahaemolyticus* strains from seafood

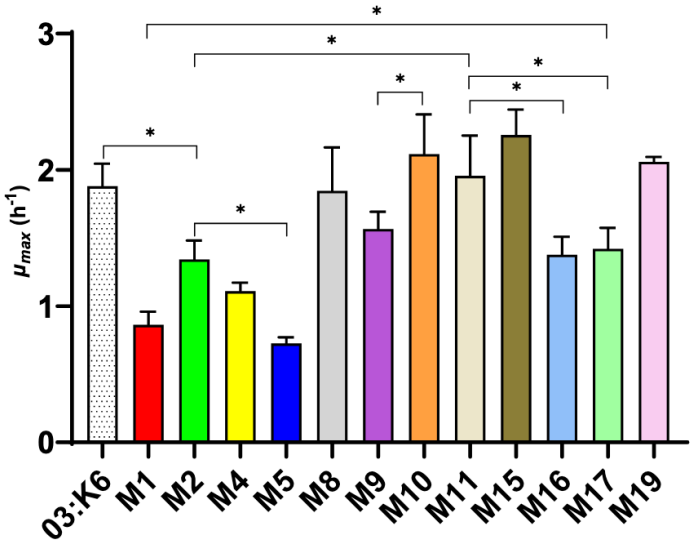
Quantify the growth and assess the strain variability of *V. parahaemolyticus* strains isolated from seafood



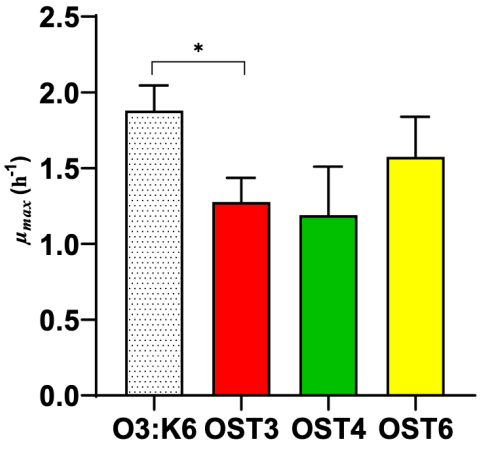
AQUATIC RESEARCH
E-ISSN 2618-6365
Aquatic Research 8(1), 60-** (2025) • https://doi.org/10.3153/AR25006 Short Communication

Growth variability of selected *Vibrio parahaemolyticus* strains isolated from seafood

Deyan STRATEV[1], Rumyana FASULKOVA[1], Aelita ZABULIONE[2], Uvasilis P. VALDRAMIDIS[3]



V. parahaemolyticus strains from Mediterranean mussels



V. parahaemolyticus strains from oysters

HELLENIC REPUBLIC
National and Kapodistrian University of Athens

Dissemination

Publications

Growth variability of selected *Vibrio parahaemolyticus* strains isolated from seafood

Deyan STRATEV[1], Rumyana FASULKOVA[1], Aelita ZABULIONE[2], Uvasilis P. VALDRAMIDIS[3]

APPROVED: 15 September 2023

doi: 10.2903/j.efsa.2023.e211016

Quantitative tools in microbial and chemical risk assessment

Deyan Stratev[1] and Vasilis P Valdramidis[2]

EFSA J. 2023 Nov 30;21(Suppl 1):e211017. doi: 10.2903/j.efsa.2023.e211017

Quantitative tools in microbial and chemical risk assessment

Aelita Zabulionė [1,✉], Vasilis P Valdramidis [2]

Presentations at conferences

2023 IAFP European Symposium on Food Safety

Aberdeen, Scotland, 3-5 May 2023

HELLENIC REPUBLIC
National and Kapodistrian University of Athens

Εμπειρία του Εθνικού και Καποδιστριακού Πανεπιστημίου Αθηνών (Ε.Κ.Π.Α.) στη δημιουργία σταθερού πλαισίου συνεργασίας με την EFSA

VASILIS VALDRAMIDIS, CHARALAMPOS PROESTOS

12.12.2024