

PARTNER IDENTIFICATION FORM - HORIZON-HLTH-2026-01-ENVHLTH-01	
PIC	999995602
Full legal name	Università degli Studi di Padova (Dipartimento di Biomedicina Comparata e Alimentazione)
Legal name in EN	University of Padua (Department of Comparative Biomedicine and Food Science)
Acronym	UNIPD
Department	Dipartimento di Biomedicina Comparata e Alimentazione (BCA)
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PROFILE	
Type of Organisation	Higher or secondary education establishment
Is the partner organisation a public body?	Yes
Is the partner organisation a non-profit?	Yes
BACKGROUND AND EXPERIENCE	
Please briefly present the partner organization	The Department of Comparative Biomedicine and Food Science (BCA) is the department of the University of Padova that pursues excellence in research and teaching in all disciplines related to veterinary medicine, comparative animal science and food safety . Today, BCA is a flourishing department, rich in ideas and

	<p>specific expertise that has 51 active professors (2022). BCA supports scientific projects integrated with specific needs of the territory, promoting technological transfer of the obtained results. It develops relationships with the business community, public and professional associations.</p>
<p>Fields of research and topics of interest of the organization</p>	<p>With particular reference to the call HORIZON-HLTH-2026-01-ENVHLTH-01, the research activities involve a multidisciplinary team.</p> <p>The integrated research area includes expertise in molecular epidemiology, antimicrobial resistance (AMR), environmental microbiology, pharmaceutical uptake, and advanced analytical chemistry.</p> <p>The team is composed of academic staff, a senior researcher, PhD candidates, a technician specialised in liquid chromatography–mass spectrometry (LC-MS), and a researcher focusing on drug metabolism.</p> <p>Research activities focus on the molecular epidemiology of bacteria of animal and environmental origin, especially zoonotic pathogens and antimicrobial-resistant strains. Participation in initiatives such as EUPAHW strengthens the group’s contribution to surveillance and One Health-aligned risk assessment.</p> <p>Parallel activities investigate the uptake and distribution of human and veterinary pharmaceuticals in different plant species, with preliminary results highlighting species-specific and chemical-dependent differences in absorption. These studies enhance understanding of contaminant fate across soil–plant systems and environmental exposure pathways.</p> <p>Together, these two research lines provide a comprehensive and interdisciplinary approach to environmental health, contaminant dynamics and AMR</p> <p>The department share a strong interest in expanding research on:</p> <ul style="list-style-type: none"> • Understanding and anticipating the impacts of climate change on health, particularly through changes in pathogen ecology, environmental contamination and resistance evolution. • Exploring soil as a reservoir of contaminants and resistance genes, examining how climate-driven environmental changes influence microbial dynamics and contaminant persistence. • Analysing interactions between soil characteristics, contaminants (including pharmaceuticals) and microbial communities, to assess how environmental shifts affect AMR and ecological stability. <p>These research directions enable synergies with experts in soil chemistry, environmental modelling, ecology, plant physiology, water treatment, and climate-health coupling.</p> <p>They also align naturally with interdisciplinary One Health networks focusing on integrated environmental and biological risk assessment.</p>

<p>What are the skills and expertise of key staff/persons of the organization?</p>	<p><u>Regarding the call:</u> The integrated research area provides a broad set of complementary competencies:</p> <p>Microbiology & Molecular Epidemiology</p> <ul style="list-style-type: none"> • Classical and molecular microbiology for identification and full characterization of microorganisms of animal and environmental origin. • Advanced molecular tools such as qPCR, WGS, metagenomics. • Phenotypic and genotypic AMR profiling in bacterial isolates. • Resistome and microbiome analysis of environmental matrices including water, soil and biofilms. <p>Analytical Chemistry & Environmental Contaminant Dynamics</p> <ul style="list-style-type: none"> • Qualitative and quantitative assessment of pharmaceutical absorption, distribution and metabolism. • Hydroponic and soil-based experimental systems to study uptake under controlled conditions. • Development and optimization of extraction protocols for analytes from plant, soil, animal and environmental matrices. • Pharmaceutical and metabolite quantification through LC-MS with high sensitivity and specificity. <p><u>More in general:</u></p> <ul style="list-style-type: none"> • 51 professors and researchers, 35 technicians and administrative employees, • At the moment, involved in 5 UE projects and 12 national/regional projects (ongoing). It has also signed 22 grant agreements for commissioned research activities with private and public bodies (ongoing). • The average number of publications in the period 2017-2021 has been 181 publications per year; • Centre of excellence for aquatic animal health research; • 3 patents in nanotechnology and biosensors, a direct drug patent to the treatment of diseases of the skeletal muscle, and finally a system of living cells of marine mammals for studies of cell biology, toxicological test and application for large-scale research. • ive patents in nanotechnology and biosensors, a direct drug patent to the treatment of diseases of the skeletal muscle and finally a system and method for cognitive assessment and training of an animal. • 2 spin-offs: a system and method for cognitive assessment and training of an animal and a development of products, materials, devices and processes based on nanoparticles.
<p>CONTACT PERSONS</p>	
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European Union granted projects		
Programme	Year	Project identification
Horizon Europe	2022	FishEUTrust: Building trust in EU fish supply chains
Horizon Europe	2022	Improving Green Innovation for the Blue Revolution
H2020	2020	Improving biosecurity compliance in poultry farms
H2020	2019	Advancing European Aquaculture by Genome Functional Annotation
LIFE	2019	LIFE DELFI
H2020	2017	Integrating Innovative Approaches for Competitive and Sustainable Performance across the Mediterranean Aquaculture Value Chain -
H2020	2016	Preventing and Mitigating farmed Bivalve Diseases