UNIVERSITA' DEGLI STUDI DI MILANO

Application of the photocatalytic remediation system in Rainbow trout

(RAS fresh water system)

The UMIL unit is composed by two sub-units, the Chemistry Unit and the Veterinary and Animal Scientist Unit.

The Chemistry sub-unit will perform:

• Set up of the photocatalytic remediation system

The Veterinary and Animal Scientist Unit will evaluate the following parameters on trout and seabream:

- Zootechnical parameters: Growth, state of health and well-being incidence of disease, stress, and oxidative state
- Ontogenic development and Histopathology, Muscle morphological analysis, Larval deformities, and skeletal abnormalities
- Water parameters: Physical, chemical, and microbiological characterization
- Ammonia, nitrite, and nitrate concentrations to verify the system efficiency
- Ammonia and greenhouse gases emissions
- Evaluation of filters efficiency

NAME	DEPARTMENT	BRIEF DESCRIPTION
Dr. LUCIA AIDOS	Department of Veterinary Medicine and Animal Sciences (DIVAS) Via dell'Università, 6, 26900 LODI (LO).	Graduated in Zootechnical Engineering, MSC in Aquaculture and Ph.D. in Veterinary and Animal Science. Researcher. Her research interests the muscular development of zootechnical animals, the structural and morpho-functional aspects, and the micro-anatomical study of tissues. Expertise & skills: https://expertise.unimi.it/get/person/lucia-aidos E-mail: lucia.aidos@unimi.it
Prof. CHIARA BAZZOCCHI	Department of Veterinary Medicine and Animal Sciences (DIVAS) Via dell'Università, 6, 26900 LODI (LO).	Graduated in Biological Sciences. PhD in Veterinary Hygiene and Animal Pathology. Associate Professor in Parasitology and Parasitic Diseases of Animals (SSD VET/06). Her research is focused on parasitological molecular diagnostics and the study of gene expression for the evaluation of animal welfare. Expertise & skills: https://expertise.unimi.it/get/person/chiara-bazzocchi E-mail: chiara.bazzocchi@unimi.it

Dr. ELEONORA BUOIO **Prof. GIAN LUCA CHIARELLO**

Department of Veterinary Medicine and **Animal Sciences** (DIVAS)

Via dell'Università, 6, 26900 LODI (LO).

Graduated in Science and Technology of Animal Production (LM-86).

Ph.D. student in Veterinary and Animal Sciences She works on Best Techniques to improve welfare in animal production according to environmental and economical sustainability.

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Department of Chemistry

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Graduated in Industrial Chemistry and PhD in Industrial Chemistry. Associate Professor of physical chemistry (CHIM/02).

His research interests span from the preparation, characterization (including in-situ X-ray absorption spectroscopy at synchrotron facilities) and testing of different types of catalysts for several catalytic, to the design of novel photocatalytic reactors and spectroscopic cells, covering all aspects of heterogeneous catalysis. Expertise & skills:

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Prof. ANNAMARIA COSTA



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Graduated in Animal Sciences and Ph.D. in Animal Husbandry Technologies, Specialization in Animal Nutrition, Qualification in Zoonomics, Expert in advanced biostatistics. Associate Professor in Agricultural Bioengineering (SSD AGR/09).

Her research interests are environmental impact by livestock farming and the application of new techniques for the mitigation of the environmental impact. Patents on automatic cough identification in swine, and on photocatalytic treatment of animal waste. Contributor of GHG emission factor on EFDB of IPCC.

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Prof. ALESSIA DI **GIANCAMILLO**



Department of Biomedical Sciences for Health (SCIBIS)

Graduated in Veterinary Medicine and Ph.D. in Animal Nutrition and Dietetics.

Associate Professor in Anatomy and embryology of domestic animals (SSD Vet/01).

Her research interests animal's products with regard to the structure and development of muscle and fatty tissue in mammals and fish, as well as the development and function of the digestive tract of mammals and fish with particular reference to the study of the enteric nervous system addressed through macroscopic and microscopic approaches.

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Prof. MAURO DI GIANCAMILLO	Department of Veterinary Medicine and Animal Sciences (DIVAS) Via dell'Università, 6, 26900 LODI (LO).	Graduated in Veterinary Medicine and specialization in Small Animal Clinic. Full Professor in Veterinary Clinical Surgery (SSD VET/09) and Head of Department of Veterinary Medicine and Animal Science Department (DIVAS). His main research area is Veterinary Radiology and Nuclear Medicine. Expertise & skills: https://expertise.unimi.it/get/person/mauro-digiancamillo E-mail: mauro.digiancamillo@unimi.it
Dr. SIMONE LIVOLSI	Department of Chemistry Via Golgi, 19 - Corpo B 20133 MILANO (MI)	Graduated in Industrial Chemistry and PhD student in industrial chemistry. He works on the design, synthesis and testing of novel materials for environmental and energetic photocatalytic applications. E-mail: simone.livolsi@unimi.it
Prof. SILVIA MODINA	Department of Veterinary Medicine and Animal Sciences (DIVAS) Via dell'Università, 6, 26900 LODI (LO).	Graduated in Veterinary Medicine and Ph.D. in Biotechnology applied to Veterinary Sciences. Full Professor in Anatomy of Pets (SSD Vet/01) and Head of the teaching board of Veterinary Medicine course of University of Milan. Her research interests the morphophysiology of the reproductive, digestive and locomotor systems of domestic animals, addressed through macroscopic, microscopic and imaging approaches, in vivo and in vitro.

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Graduated in Veterinary Biotechnological Sciences (LM-9). Ph.D. student in Veterinary and Livestock Sciences. Her research is focused on histology and histological analysis, with a formation that also ranges in cell cultures and molecular analysis.

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Prof. RAFFAELLA ROSSI



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Via dell'Università, 6, 26900 LODI (LO). Graduated in Animal Production Sciences and Ph.D. in Animal Nutrition and Dietetics.

Full Professor in Animal Nutrition (SSD AGR/18). Her research concerns the application of sustainable nutritional strategies in livestock, to improve growth performance and health, modulating the immune system, antioxidant status and "gut health".

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Prof. ELENA SELLI



Department of Chemistry

Via Golgi, 19 -Corpo B 20133 MILANO (MI) Graduated in Chemistry and Ph.D. in Physical Chemistry. Full professor of Physical Chemistry (CHIM/02). She is in the Board of the International Conference of Photochemical Conversion and Storage of Solar Energy (2008-2014 and 2016-2022) and member of the Scientific International Committees of the European Conference on Solar Chemistry and Photocatalysis: Environmental Applications and of the International Conference on Semiconductor Photochemistry.

Her research interests kinetic aspects of photoinduced processes, focused on the mechanistic aspects of photocatalysis on semiconductors, the effects of surface modification on the photocatalytic reaction paths and in the development of sensitive and efficient photocatalysts. Expertise & skills:

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