

## WHAT IS DEMYO?

To meet increasing demands for high-value proteins, broiler selection programs driven by growth rate led to the development of wooden breast (WB), white striping (WS), and novel emerging and unexplored myopathies such as spaghetti meat (SM). In light of the current situation DEMYO project will address important questions in today's myopathies research: Is it possible to detect myopathies in birds early age? Are there early differences between animals that will show myopathies at slaughter and the others or not? What's the difference among animals developing WS, WB and SM? The novelty of the present proposal lies in the innovative application of advanced methodologies based on omics platforms to understand the molecular mechanism involved in the development of broiler myopathies in both sexes. The added value of the project is in assessing of certain feeding strategy to decreases the occurrence of these muscle abnormalities. Results from this multidisciplinary project will have a scientific impact with novel information about myopathies to be adopted in the practice while meeting SDG 1, 3, 5, and 12, improving animal welfare, meat quality, and mitigating economic losses.

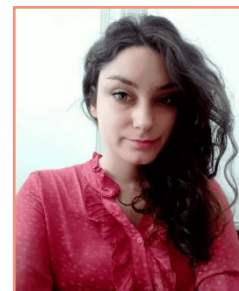
## WHO IS WHO IN THE DEMYO?

**PI: Dr. Marija Bošković Cabrol** obtained her Ph.D. at Faculty of veterinary medicine, the University of Belgrade in Serbia, followed by postdoctoral studies at the Instituto Superior de Agronomia, University of Lisbon in Portugal. During her postdoctoral formation at LEAF (Linking Landscape, Environment, Agriculture and Food) Department, she participated in studies using microalgae as a sustainable protein source in animal feed and assessing its impact on meat quality, nutritional profile, and in vitro digestibility of such meat. Over the following ten years while working as a senior researcher at the University of Belgrade, she published more than 100 journal and conference papers and three book chapters on animal science, meat quality, safety, innovation, and functional food. She is one of the scientific coordinators of the PhAgroWaste project, dedicated to repurposing agricultural waste by transforming it into added value and functional meat products.

**Supervisor: Prof. Dr. Angela Trocino** recently developed a key project in broilers myopathies. Main research topics are rabbit science, poultry science, aquaculture; effect of rearing system on welfare of rabbits and poultry; factors affecting product quality. Author and co-author of more than 200 original scientific documents (104 Scopus publications; H-index 26; 2006 citations; June, 2023). Scientific responsible and participant in national and European research projects and research contracts/consultancies with public Institutions and non-academic partners.

**Host institution:** Department of Agronomy, Food, Natural Resources, Animals and Environment (DAFNAE), University of Padova

Dr. Marija Bošković Cabrol



Prof. Dr. Angela Trocino



## OUR VISUAL IDENTITY



### OBJECTIVES

- Evaluation of transcriptome of normal and SM, WB/SM, WB, and WS breasts in broilers.
- Assessment of the occurrence of SM and other myopathies in females and males of fast-growing hybrids.
- Effect of different dietary treatments on the occurrence of myopathies and performances of broiler chickens.
- Determination of the chemical composition, quality, and histology of normal meat, SM, WS, and WB breasts.
- Evaluation of the possible changes in chicken gut microbiome composition according to the experimental diets and, possibly, myopathy occurrence.

### PREVIEWED SECONDMENTS

- University of Bologna, Italy-Prof. Dr. Massimiliano Petracci
- University of Vrije, Brussel, Belgium-Prof. Dr. Frédéric Leroy
- The Regents of the University of Michigan US- Prof. Dr. Guilherme Rosa

### DURATION

- 24 months

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### BUDGET

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### UP TO DATE RESULTS:

- Boskovic Cabrol M., Huerta A., Trocino A., Birolo M., Bordignon F., Pirrone F., Xiccato G. 2023. Dietary supplementation with sodium butyrate: live performances, carcass traits and myopathy occurrence in female and male broilers. The 23<sup>rd</sup> European Symposium on Poultry Nutrition – ESPN 2023, June 21-24, 2023, Rimini, Italy. Book of Abstracts p.372.
- Trocino A., Boskovic Cabrol M., Bordignon F., Birolo M., Pascual Guzmán A., Radaelli G., Ballarin C., Xiccato G. 2023. Growth performance and gut response of broiler chickens fed diets supplemented with a grape pomace extract. The 23<sup>rd</sup> European Symposium on Poultry Nutrition – ESPN 2023, June 21-24, 2023, Rimini, Italy. Book of Abstracts p.332.
- Boskovic Cabrol M., Huerta A., Bordignon F., Birolo M., Xiccato G., Trocino A. 2023. Dietary inclusion of *Chlorella vulgaris* and heat-stress in broiler chickens: effects on growth performance and product quality of broiler chickens. XXV European Symposium on the Quality of Poultry Meat. September 7-9, 2023, Kraków, Poland.
- Boskovic Cabrol M., Huerta A., Bordignon F., Birolo M., Xiccato G., Trocino A. 2023. *Chlorella vulgaris* microalgae as a sustainable feed ingredient: effects on meat quality and myopathy occurrence in broiler chickens. The 69<sup>th</sup> International Congress of Meat Science and Technology, August 20-25, 2023. Padova, Italy.
- Boskovic Cabrol M., Petracci M., Trocino A. 2023 Wooden breast, white striping and spaghetti meat: chemical composition, technological quality, microbiological profile and sensory attributes of broiler breasts. 62nd International Meat Industry Conference - MEATCON2023, October 1-4, 2023, Kopaonik, Serbia.

### CONTACTS

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### MORE INFORMATION

<https://cordis.europa.eu/projects/en>  
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