DAY PROGRAM

THURSDAY, JUNE 4th, 2026

THE CONGRESS
SPEAKERS & TOPICS

1

Maria Giuseppina Strillacci & **Prof. Stefano Paolo Marelli**

DAY PROGRAM

BIO:

Stefano Paolo Marelli is an Associate Professor at the Department of Veterinary Medicine and Animal Science (DIVAS) of the University of Milan with a PhD in Small Animal Production, including a period as visiting PhD student at the Scottish Agricultural College in Ayr Scotland, and a Master of Science degree in Animal Science. Stefano works on canine biodiversity and genetic since the nineties. His research topics are phenotyping and genotyping of canine and poultry breeds and population both under a morphological and behavioural point of view. His expertise is focused on ethnology, morphometrical analysis, behavioural characterization and welfare relate genes expression in small species. Stefano is author in more than 55 publications in peer reviewed indexed journals, he coordinates and participates in funded research projects. He is one of the founders of the VEtoGene (Veterinary for Ethology and Genetic) spin-off of the University of Milan. He is member of the Scientific Committee of ASPA and EAAP Companion Animals Commissions. He is Technical Consultant of ENCI (Ente Nazionale della Cinofilia Italiana) and member of the ENCI Scientific Committee and of the ENCI Central Technical Commission (ENCI, Academic Delegate, Ministry of Agriculture, Ministry of Health). Stefano is FCI judge for Jack Russell Terrier, Dachshunds and some herding breeds in group I, he is judge for CAE1 (good citizen dog) behavioural test.

GENETIC CHARACTERIZATION OF IRISH WOLFHOUND DOGS: A WORLDWIDE STUDY OF GENETIC VARIABILITY AND INBREEDING

Abstract: Unraveling the Genetics of the Irish Wolfhound

The Irish Wolfhound (IW) is a canine breed characterized by phenotypic traits that differ significantly from the normotype of Canis lupus familiaris. Its giant size is one of its most distinctive features and, as noted in scientific literature, is associated with a shorter lifespan. This unique breed also carries a history of genetic bottlenecks, which have impacted its health and reduced its genetic diversity.

In our study, we analized 96 Irish Wolfhounds from 23 countries using high-density genomic tools to investigate their genetic variability and levels of inbreeding. We examined how similar or different these dogs are at the DNA level, focusing on genomic regions that are identical due to shared ancestry—known as “runs of homozygosity” (ROHs).

Here’s what we found so far/first results?

Genetic diversity is relatively low, with average heterozygosity around 0.3;

there is no clear genetic sub-structuring within the population;

some genomic regions were shared by 100% of the dogs, likely as a result of selection and mating practices over time;

no ROHs longer than 16 Mbp were detected, which may reflect historical, rather than recent, inbreeding;

genomic inbreeding levels (FROH) ranged from 11% to 41%, indicating moderate to high inbreeding. We are now investigating potential links between causes of death and pedigree/genomic data. By connecting genetic insights with health outcomes, we aim to support better breeding strategies that prioritize genetic diversity and long-term health for this breed.