

GIANINA UNGUREAN, MSc RAPID IRIS MOVEMENT DURING REM SLEEP IN PIGEONS: A NEW WINDOW INTO THE SLEEPING BRAIN

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Sleep is a time of reduced responsiveness when animals are vulnerable and unable to express behaviors essential for their survival, like eating, foraging or reproduction. Yet, it occurs to some extent in all animals, suggesting that it must serve an important function, or functions, which cannot be easily bypassed. Although various theories exist, the existence of a universal role for sleep is still under debate.

The comparative-based approach is a powerful method for refining our understanding of sleep and opening new avenues of investigation. In this respect, birds are of particular interest because, besides mammals, they represent the only taxonomic group exhibiting unequivocal NREM and REM sleep.

Moreover, during our previous experiments with pigeons (*Columbia livia*), we discovered that when they slept close to a camera, we could actually see their pupil through the closed eyelid. In my project, we use this translucent aspect of the eyelid to examine for the first time state-related changes in pupil diameter in birds. In this talk, I will present my initial results and discuss their implications for investigating the proposed role sleep plays in regulating emotions.

Gianina Ungurean obtained a Masters of engineering in Biotechnologies at the National Institute for Applied Sciences in Lyon, France. She started studying sleep during the last year of her Masters, working on the mechanisms of sensory transmission and gating during REM sleep. Currently she is a PhD student in the Avian Sleep group at Max Planck Institute for Ornithology in Germany (Seewiesen) where she investigates the functions of REM sleep using a comparative approach.