



CICLO

**CONFERÊNCIAS 18|19**

ISPA - INSTITUTO UNIVERSITÁRIO

# THE ROLE OF DEVELOPMENTAL SOCIAL COMPLEXITY ON ADULT ZEBRAFISH BEHAVIOUR



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The social brain hypothesis (SBN) posits that cognitive and brain evolution is driven largely by the social environment. Although this relationship between social environment and cognitive abilities has been shown in primates (group size as a measure of complexity, and relative brain size of the neocortex as an indicator of cognitive skills), violations of this hypothesis have been reported when trying to generalize it across vertebrate taxa. Moreover, the use of the relative volume of a brain region of interest as a proxy of cognitive abilities has been the focus of much debate, and the number of neurons rather than volume of brain tissue has been proposed to be the best proxy for information processing. Thus, in the present work, we are raising zebrafish in environments with different social complexities (i.e. group size and group stability) and test them in adulthood for their social abilities, as well as their neuronal numbers. Our results indicate that group cohesion is influenced by group size, while shoal preference is influenced by group stability. At the cognitive level, a short-term memory test suggests that different developmental environments lead to different investigation times in familiar versus novel individuals, indicating that different aspects of the social environment (group size and stability) affects differentially adult social competence.

**25 MARÇO 2019**

12H30 | SALA DE ATOS

HOST

**RUI**

**OLIVEIRA**

**ENTRADA LIVRE**



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