



PRESTO'COG

UNDERSTANDING THE EFFECTS OF PRENATAL STRESS ON THE EARLY DEVELOPMENT OF JUVENILES' BEHAVIOUR

The PResto'Cog project will study the effects of natural, artificial and maternal embryonic stress on the behaviour, endocrine system and cerebral plasticity of juveniles at extremely early stages.

Prenatal stress (PS) has been the focus of a dramatic surge in scientific interest over the past twenty years. It is currently a compelling issue for fields as varied as fundamental research, animal wellbeing and species conservation, as well as human health.

PResto'Cog will undertake several studies of suitable, highly innovative models: cephalopod (cuttlefish), fish (zebrafish and trout) and birds (quail and chicken).

The models proposed can be studied at a precocious stage (all being autonomous at birth), meaning that behavioural responses can be analysed from the moment of hatching, avoiding any potential bias resulting from maternal intervention.

Just before laying, the mothers will be subjected to natural stress factors, such as predator alarms and scents, and artificial ones such as handling. Endocrine studies will reveal the physiological responses of the embryo to these stress factors. To assess the capacity of each species of new-borns to adapt their behaviour, tests will be conducted to evaluate their exploratory, defensive and/or feeding behaviours.

By comparing the results obtained in each of these models, which are very different, but which all develop in quite circumscribed and controllable ways, the conclusions of the research can be widened to encompass a large variety of species.

Partners

Research centers

Université de Caen Basse-Normandie (UNICAEN), Groupe Mémoire et Plasticité comportementale, Caen [\[Project Developer\]](#)

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