



Faculty of Sciences

BIO1332 Animal embryology

[25h+15h exercises] 3 credits

This course is not taught in 2005-2006

This course is taught in the 1st semester

Language: French

Level: First cycle

Aims

To understand the unity of the animal kingdom, through the analysis of the basic mechanisms of embryonic development shared by distinct animal phyla. These mechanisms are considered in an evolutionary perspective.

To approach the diversity of the animal kingdom, through the description of remarkable and distinctive peculiarities of developmental processes representative of different animal phyla. The link between evolution and development is emphasized.

To acquire a more detailed knowledge of the embryonic and fetal development of Vertebrates. A particular focus on Mammals is provided.

Main themes

The course begins with the analysis of the basic mechanisms of embryonic development (morphogenesis, induction, cellular differentiation, apoptosis, axis determination, gene development, asexual and sexual reproduction, etc..) These mechanisms are illustrated by the knowledge acquired from model animals. This is then followed by a step-by-step and comparative description of the mammalian and avian development (gametogenesis, fertilization, cleavage, gastrulation, neurulation, implantation, placentation, organogenesis, #).