

# Abstract

The neural crest is a vertebrate-specific embryonic cell population emerging during neurulation in a neuroectoderm. Its cells are highly migratory and differentiate into a wide scale of cell types and tissues ranging from skeletal tissues through pigment cells to neurons and endocrine gland. The neural crest research had been focused on a cranial subpopulation for a long time probably due its apparent skeletogenic activity rather than in the trunk. In this diploma thesis and for a first time I present a data about trunk neural crest cells of basal fishes, Senegal bichir (*Polypterus senegalus*), sterlet (*Acipenser ruthenus*) and tropical gar (*Atractosteus tropicus*). It contains a data about spatio-temporal emergence of trunk neural crest cells of basal fishes, their site of delamination from neuroectoderm, pathways of migration, link between their migration and somite development, segmentation during ventro-medial migration and their early differentiation. Herein I also bring out as first an insight on the trunk neural crest derivatives of the Senegal bichir from *in vivo* staining experiments using CM-DiI.

**Key words:** trunk neural crest, migratory pathways, exoskeleton, basal ray-finned fishes