

Development and Functioning of the Cardiovascular System

Research-related Question that will be addressed:

- How does the cardiovascular system develop during the embryonic and larval stages of development?
- What are the developmental milestones?
- What is their relevance to potential cardiovascular diseases, and what methods can be used to characterize them in animal models?

Methods used:

- Oximetry X homeostasis
- Larval (zebrafish) experiments
- Microscopy
- Experiments on simulations of stress response related to oxygen availability (with students)

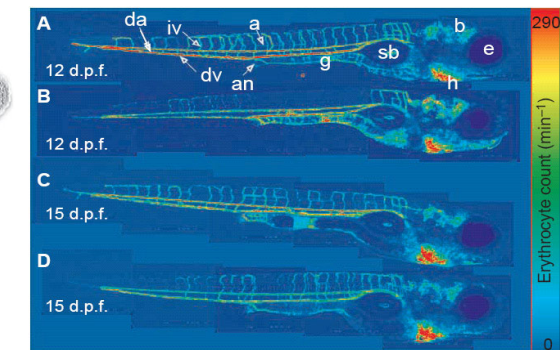
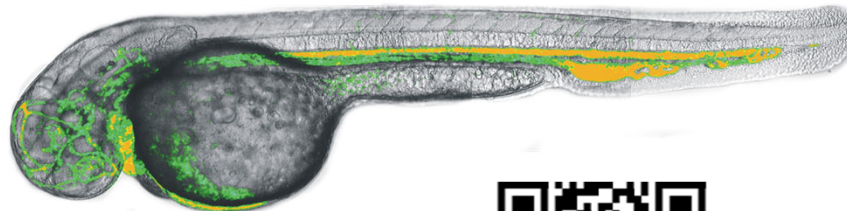
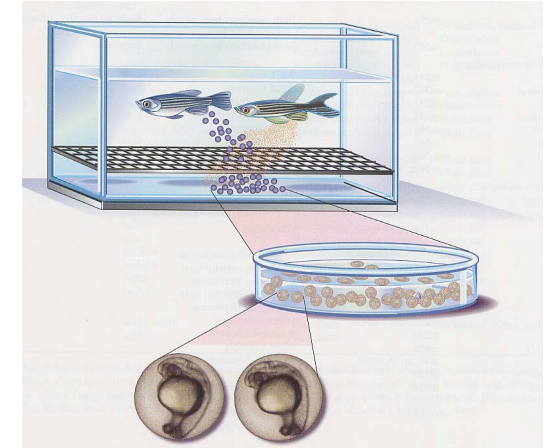


Fig. 4. Typical changes in red blood cell perfusion in zebrafish under chronic hypoxic (A,C) and normoxic (B,D) conditions. Red blood cells were counted per minute at every position of the tissue, and represented in colour according to the calibration bar on the right. d.p.f., days post fertilization; a, anastomosis; an, anus; b, brain; da, dorsal artery; dv, dorsal vein; e, eye; g, gut; h, heart; iv, intersegmental vessel; sb, swimbladder.