Developmental and Regenerative Biology

1. Staffs and Students (April, 2008)
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2. Purpose of Education
Our goal is to define the molecular basis for the mechanism of organ formation and regeneration using knockout mice and mutant fishes. To accomplish this goal, we have focused on defining signaling molecules and pathways that regulate liver formation and stress responses. Moreover, we are trying to establish a cell therapy for intractable diseases such as liver failures using self-bone marrow cells. Our study will provide new insights into understanding the precise molecular mechanisms that underlie organ failures found in human disease and will lead to the development of new rational therapy for the diseases.

3. Research Subjects
1) Activation mechanism and physiological roles of stress-activated MAP kinase signaling pathway
2) Molecular mechanism of mouse liver regeneration
3) Mutations affecting liver development and function in Medaka, Oryzias Latipes

4. Publications
Original Article