Ontogeny of the GH/IGF system mRNA during embryonic development in rainbow trout (Oncorhynchus mykiss)

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ONTOGENY OF THE GH/IGF SYSTEM mRNA DURING EMBRYONIC DEVELOPMENT IN RAINBOW TROUT *(Oncorhynchus mykiss)*

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In fish, the GH/IGF system has been shown to be important for growth. In rainbow trout, we have studied its development during the first embryonic stages, as defined by Ballard, 1973 (J. Exp. Zool., 184,7-26). The presence of the different molecules (IGF-1, IGF-2, IGF-RIa, IGF-RIb and GH) of this system was examined by using whole *in situ* hybridization. Concerning GH, a strong signal was observed from stage 17 (around 20 pair of postanal somites). At this stage around 5 cells were visualized and the number increased until hatching, stage 23 (around 50 cells). On the other hand, at stage 17 the GH protein was not detected by using either an homologous radioimmunoassay or immunocytochemistry, while it was possible at stage 23. This result seems to show that there is probably a delay between the transcription and the translation of the GH genes during rainbow trout ontogenesis. Concerning the other molecules (IGF-1, IGF-2, IGF-RIa, IGF-RIb), the whole *in situ* hybridization technique did not allow to evidence them without ambiguity while their presence was detected during rainbow trout embryogenesis by other authors, using RT-PCR and RPA techniques. These observations suggest that the expression of these different molecules is low and probably ubiquitous at this period of development.