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**Expression of the myosin light chains 1 and 2 in the developing fast muscle of gilthead sea bream (*Sparus aurata*)**

(Die Expression der Gene der leichten Ketten 1 und 2 des Myosins in der Entwicklung der schnellen Muskulatur der Goldbrasse (*Sparus aurata*))

Myosin, the major component of striated muscle, is a complex molecule of heavy and light chains, which undergo continuous replacement to meet developmental and environmental demands. A range of myosin isoforms are expressed in early developmental stages and are of special interest as they offer information about muscle formation and function early in life. In addition, they can act as markers for the study of prenatal events with an effect on postnatal growth performance. In this study, the spatial and temporal expression of embryonic myosin light chains 1 (MLC1) and 2 (MLC2) was studied in sea bream larvae post-hatch by *in situ* hybridization using riboprobes. The expression pattern of the transcripts was studied in transverse sections (5µm) of whole larvae samples, 4, 8, 10, 15, 20, 25, 34, 51 and 80 days post-hatch. MLC1 and MLC2 exhibited overlapping expression patterns at the early stages of sea bream development. Both MLCs were expressed exclusively in white muscle and no expression was observed in the superficial red muscle layer. On day 4 the expression of both transcripts was strong throughout the epaxial and hypaxial musculature. From day 10 onwards two distinct germinal zones appeared in the dorsal and ventral side of the larvae, characterized by small diameter muscle fibers, while fiber diameter gradually increased from the lateral germinal zones towards the horizontal myoseptum. An increase in fiber diameter of the deep white muscle layers next to the notochord was observed, indicative of high hypertrophic activity. At the same time, MLCs' expression became restricted to the periphery of the maturing muscle fibers and it was predominant at the germinal zones. This pattern persisted up to day 51, when the germinal zones disappeared and expression of MLCs was observed only in cells situated between the mature white fibers, most probably satellite cells.

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