附件2

中文摘要参考模板

**真骨鱼类肌间刺的发育与进化**

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**摘要：**肌间刺是真骨鱼类特有性状之一，也是我国淡水养殖鱼类深加工的一个主要障碍，目前已培育出一些无肌间刺的鲤科鱼类，对于淡水养殖鱼类深加工有重要意义。肌间刺发育关键基因已逐渐明确，但对于真骨鱼类肌间刺发育的调控机制和进化机制的理解仍不清晰。针对肌间刺的类型，肌间刺在真骨鱼类的分布，肌间刺在鱼类游泳中的作用,不同游泳方式鱼类肌间刺的产生模式，肌间刺发育的细胞学基础，肌间刺发育的分子调控机制,真骨鱼类肌间刺的进化机制等方面研究进展进行了系统综述，提出了针对真骨鱼类肌间刺发育和进化的初步解析，希望进一步推动真骨鱼类肌间刺的深入研究。

**关键词:** 真骨鱼类；肌间隔；肌间刺；发育；进化

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英文摘要参考模板

**The development and evolution of intermuscular bones in teleosts**

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**Abstract:** Intermuscular bone (IB) is one of three morphological characters of teleosts, and is becoming an obstacle for fish processing. Recently, some cyprinid fish without IB have been generated by CRISPR/Cas9 technology, will be very helpful for our fresh fish culture in China. So far bmp6 and runx2b have been determined as key genes for the development of IBs, however, upstream signal pathway to regulate the development is not sure, and the complex evolution of IBs in teleost is in lack of understanding. This review first gives us a basic introduction on the IB types, distribution, and the role in swimming, then focuses on the research advance on IB developmental model, cellular origin, and upstream regulation factors. Finally, a preliminary hypothesis is proposed in this review to explain IB evolution in teleosts, indicating IB evolution potential associations between axial muscle diversification and locomotion adaptive radiations that generated modern teleost lineages.

**Keywords:** teleost; myosepta; intermuscular bone; development; evolution

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