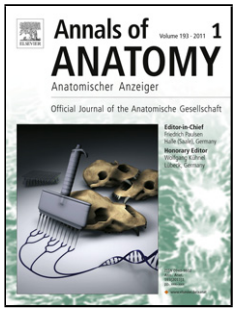

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Micro-anatomical structure of the first spine of the dorsal fin of Atlantic bluefin tuna, *Thunnus thynnus* (Osteichthyes: Scombridae)

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Abstract

The first spine of the first dorsal fin (FS) of the Atlantic bluefin tuna (ABFT), *Thunnus thynnus*, is customarily used in age determination research because its transverse sections display well-defined growth marks. In this paper the FS structure was studied to explain its known dramatic age- and season-related morphological modifications, which are evidently caused by bone remodeling. Cross sections of samples from six adult ABFT were in part decalcified to be stained with histological, histochemical and immunohistochemical methods, and in part embedded in methyl-methacrylate to be either observed under a linear polarized light or microradiographed. FS showed an external