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## ***Pax9* Gene Expression in *Moenkhausia sanctaefilomenae***

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Poster Presentation P50

***PAX9* GENE EXPRESSION IN *MOENKHAUSIA SANCTAEFILOMENAE***

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The *Pax* family of genes function as transcription factors, playing an essential role during development, such as migration of neural crest and differentiation of tissues (Lang et al, 2006). *Pax9* is a part of the *Pax* family and is critical in embryonic development in vertebrates, specifically in the cartilages and bones of the vertebrae and craniofacial skeleton (Peters et al, 2008). Our research investigates the expression of *Pax9* in the red-eye tetra, *Moenkhausia sanctaefilomenae*. *Pax9* was first amplified via reverse transcriptase – polymerase chain reaction and subsequently cloned. *Pax9* was then developed into a probe for in situ hybridization in order to view gene expression. Our results have shown that *Pax9* is expressed in the pharyngeal arches, trunk sclerotome, and tail in different development stages of the tetra. Studying expression of the *Pax9* gene provides insight to the specific embryonic development of tetras and allows for further studies such as a detailed, comparative analysis of the skeletogenic genes involved in fish development.