

## **Gcn5 Regulation of Cranial Neural Crest Development**

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Bone and cartilage of the head and neck provide the structural framework for tasks like eating and breathing. Cranial neural crest cells (cNCCs) are capable of differentiating into bone and cartilage of the craniofacial skeleton, among other tissue types; however, the epigenetic mechanisms that regulate cNCC differentiation are not well understood. We are interested in GCN5, a histone acetyltransferase, and its epigenetic roles in neural crest cell development. We hypothesize that GCN5 acts as a chromatin modifier during cNCC and is required for the proper differentiation into bone and cartilage. We expect to identify neural crest genes that are regulated by GCN5 and identify how cranial neural crest differentiation is epigenetically regulated.