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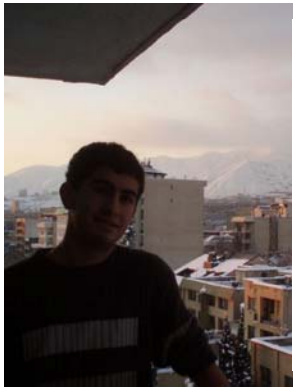
The transcription factor Olig2 in the developing mouse thalamus

The thalamus is located in the middle of the brain, and it is the site of integration of the sensory and motor information. In an embryonic brain, progenitor neurons (cells that are continually dividing) possess several transcription factors that help regulate gene expression. Olig2 is a transcription factor that is normally expressed in a gradient , with a higher level in the rostral thalamus. Based on this expression pattern and on the role of Olig2 in the specification of motor neurons in the spinal cord, we hypothesize that Olig2 play a role in specifying rostral neuronal populations in the thalamus. We have started to analyze mice in which the Olig2 gene is replaced by EGFP, a fluorescent marker that would help trace the lineage of progenitor cells expressing Olig2. We will show preliminary data on the marker expression in the thalamus of Olig2 knockout mice compared to the control animals.



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