Dr Maria Bergsland  
Dept. of Cell and Molecular Biology  
Karolinska Institutet  
Sweden

**TRANSCRIPTIONAL CONTROL DURING NEURAL LINEAGE PROGRESSION**

The transcription factor Sox2 is expressed in all neural stem cells (NSCs), in both the embryonic and adult CNS, and has been shown to maintain stem cell features by binding and regulating a large set of genes expressed in NSCs. In addition to regulation of these NSC-specific genes, Sox2 also binds to regulatory regions (enhancers/promoters) of genes expressed in mature neurons. That is, even though Sox2 is expressed mainly in stem cells, it binds to enhancer regions neighboring genes that first become activated when the stem cell undergoes neurogenesis, a cell-state when Sox2 expression is lost. Thus, the Sox2 binding in NSCs defines regulatory regions that are both active and inactive, suggesting a role for Sox2 in preparing for gene expression during later cellular stages by keeping specific genes prepared for activation.

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