Characterization of Thymic Signaling Cascades in Transgenic Mice

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This study examined where Notch and Wnt signaling are found in the thymus of two reporter mouse strains, CBF:H2B-Venus and TCF/Lef:H2B-GFP. Mouse thymi at ages five weeks and two days postnatal (P2) were both dehydrated and fixed with paraformaldehyde before being sectioned. Tissues were either paraffin embedded or cryosectioned. Slides were stained using secondary antibody staining techniques to identify where in the thymus Notch and Wnt signaling are found, as well as what types of cells signaling was found in. Stains identifying T cells, thymic epithelial cells (TECs), medullary thymic epithelial cells (mTECs), Wnt signaling in the CBF:H2B-Venus thymi, and progenitor cells were used to identify the type of cells signaling was found in. Stains tagging medullary and cortical regions were used to locate where in the thymus these regions are found. It was thought that Notch would play a role in the maturation of the TECs and aid in the maturation of mTECs. The hypothesis was supported with stains showing evidence of Notch in both the medulla and the cortex, as well as it being found in mTECs and in progenitor cells.

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