

ISL1 is required for the development and survival of spiral ganglion neurons

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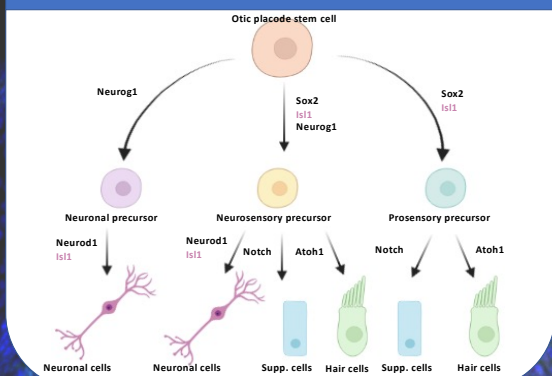
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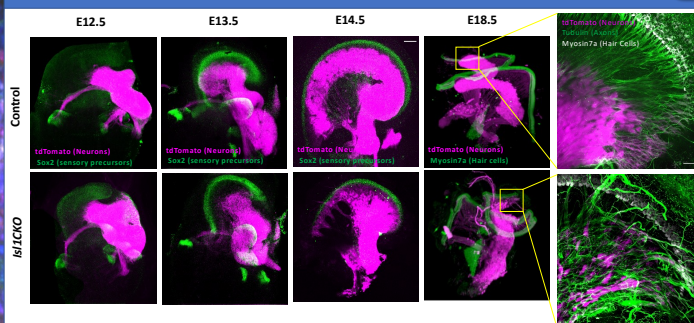
⁵University of Iowa, Iowa City, USA

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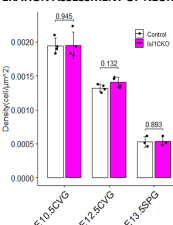
INTRODUCTION



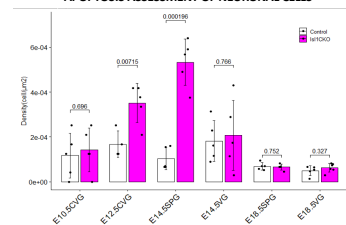
PHENOTYPE OF THE *ISL1CKO*



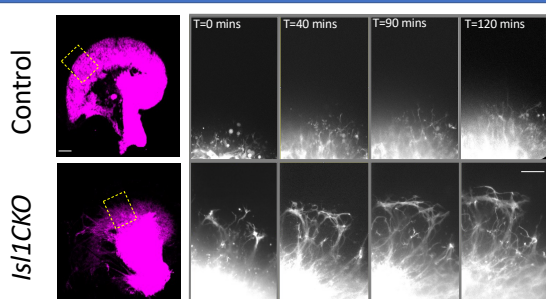
PROLIFERATION ASSESSMENT OF NEURONAL CELL



APOPTOSIS ASSESSMENT OF NEURONAL CELLS

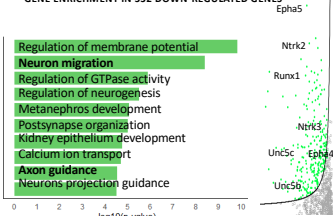


DYNAMIC OF AXONOGENESIS

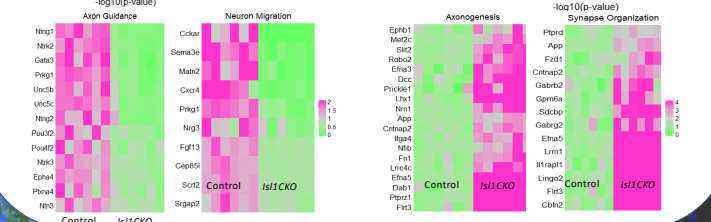
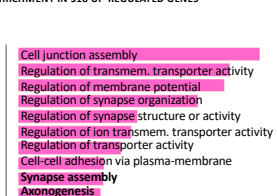


TRANSCRIPTOMIC ASSAY

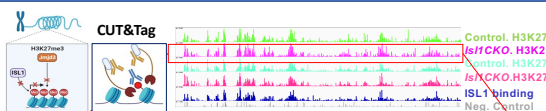
GENE ENRICHMENT IN 332 DOWN-REGULATED GENES



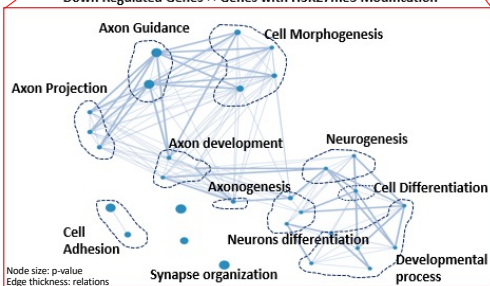
GENE ENRICHMENT IN 318 UP-REGULATED GENES



EPIGENETIC ASSAY



Down Regulated Genes & Genes with H3K27me3 Modification



CONCLUSION

ISL1 controls the development, and survival of neuronal cells in the inner ear through transcriptional regulation of gene expression and/or by epigenetics mechanisms.

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