

The Role of GDE6 in Radial Glial Proliferation and Patterning

Francesca Napoli¹, Tahira Hasan¹, Katherine Beebe¹, Minori Kawano¹,
Stephanie Soriano-Cruz¹, Maria Than¹, Clinton Cave^{1,2}

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Middlebury

1. Neuroscience Program, Middlebury College
2. Corresponding Author, ccave@middlebury.edu

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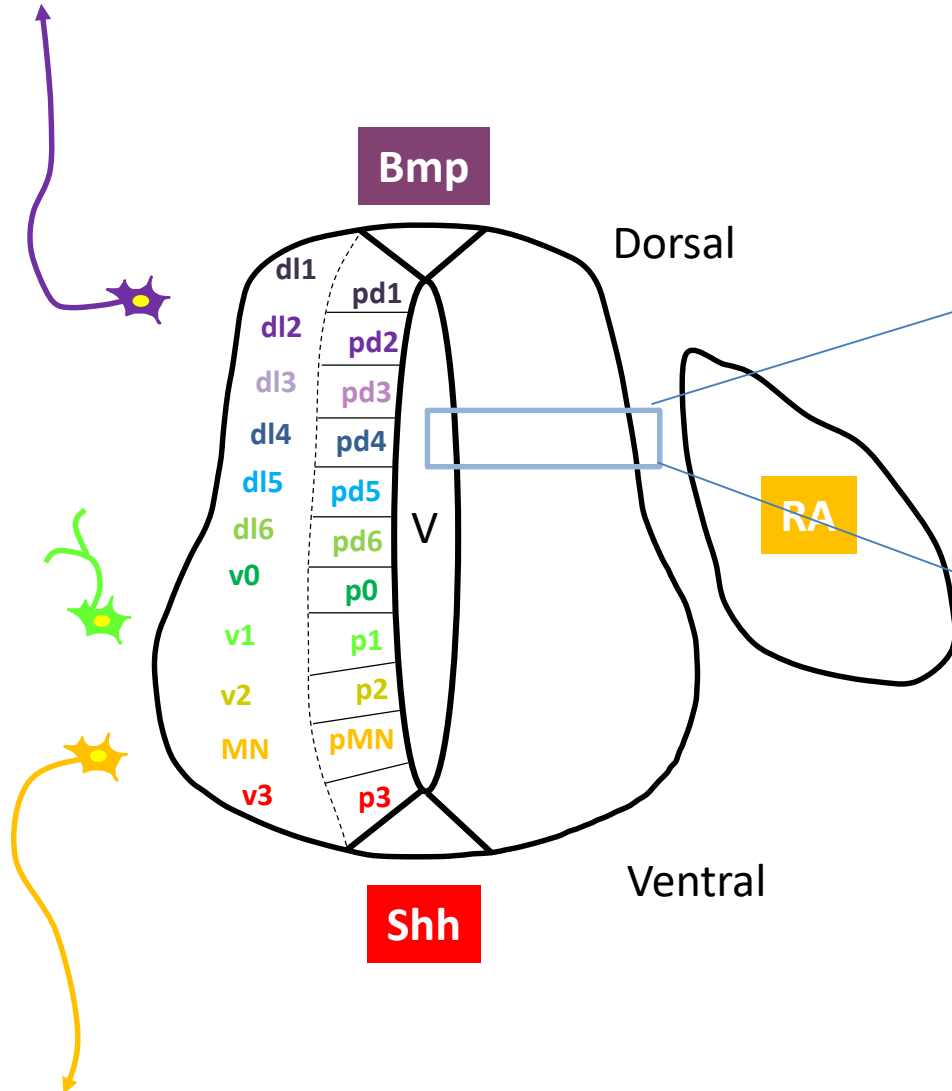
National Science Foundation, MRI # 2018114

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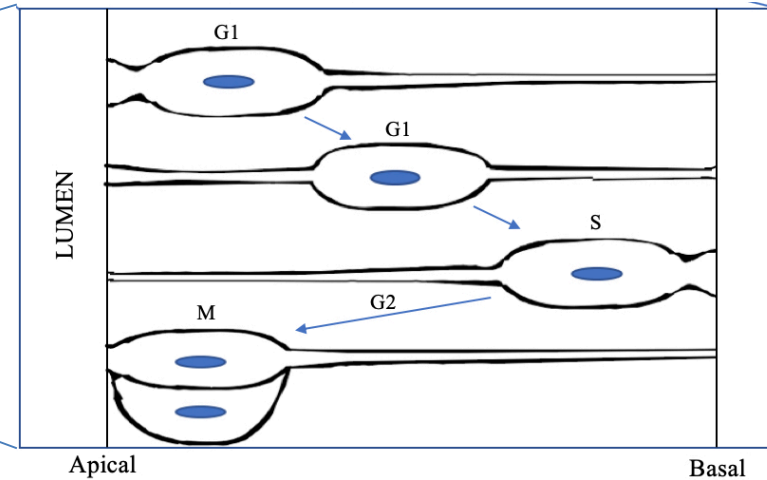
Embryonic Spinal Cord Development

2

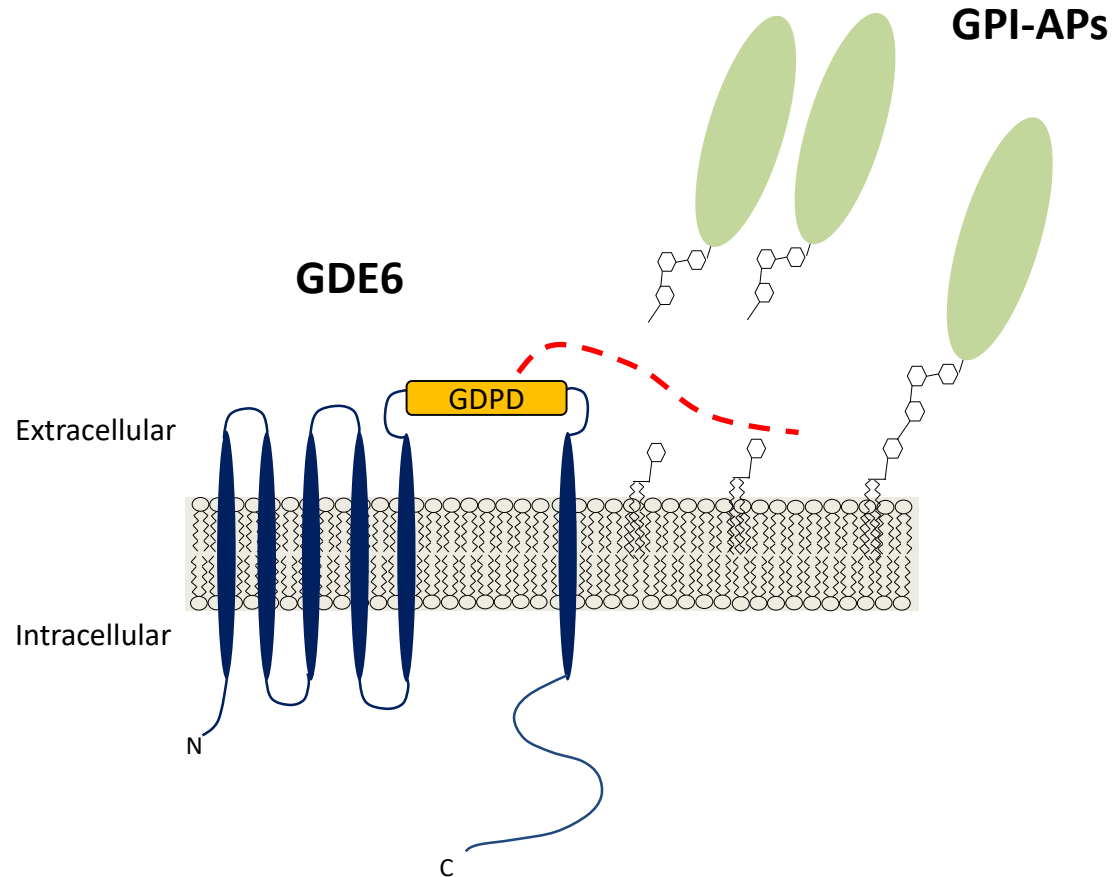
Radial Glia Patterning



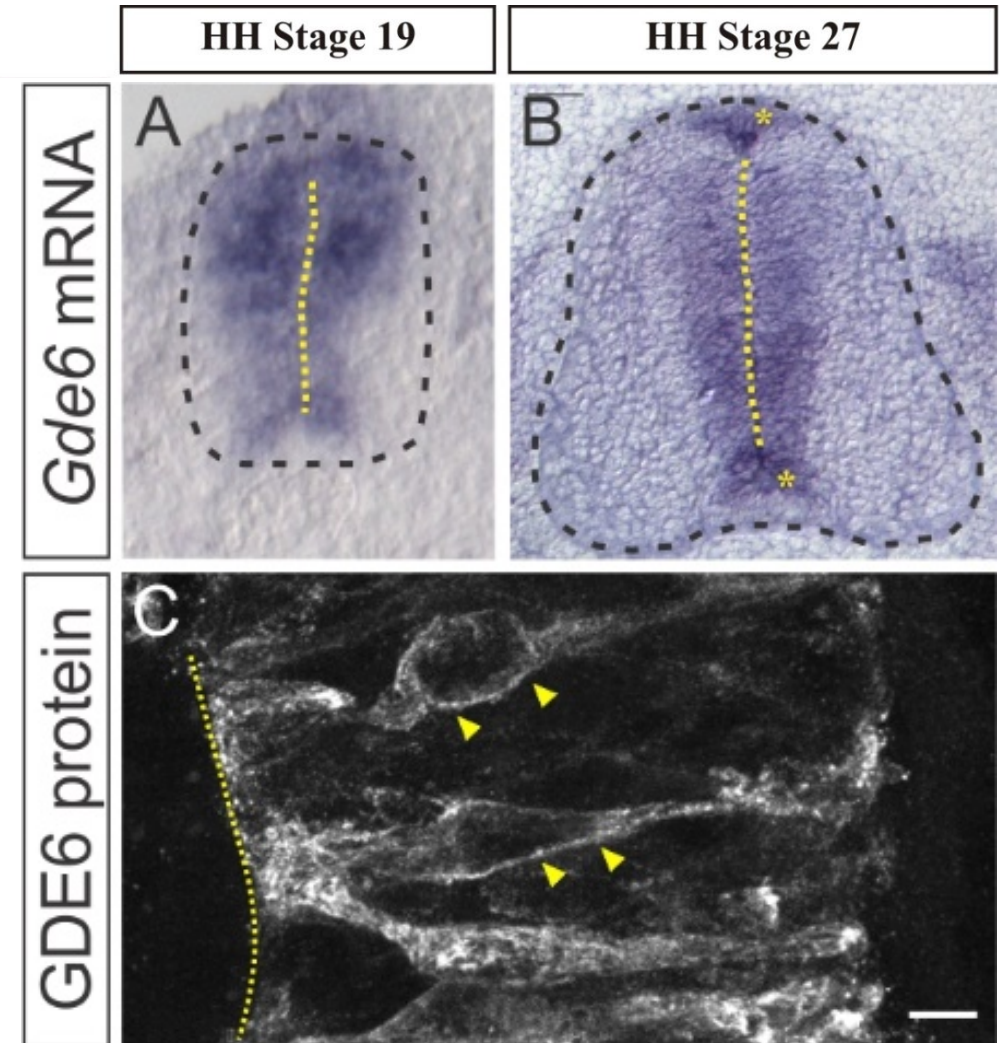
Radial Glia Proliferation



GDE6 sheds GPI-anchored proteins from the plasma membrane

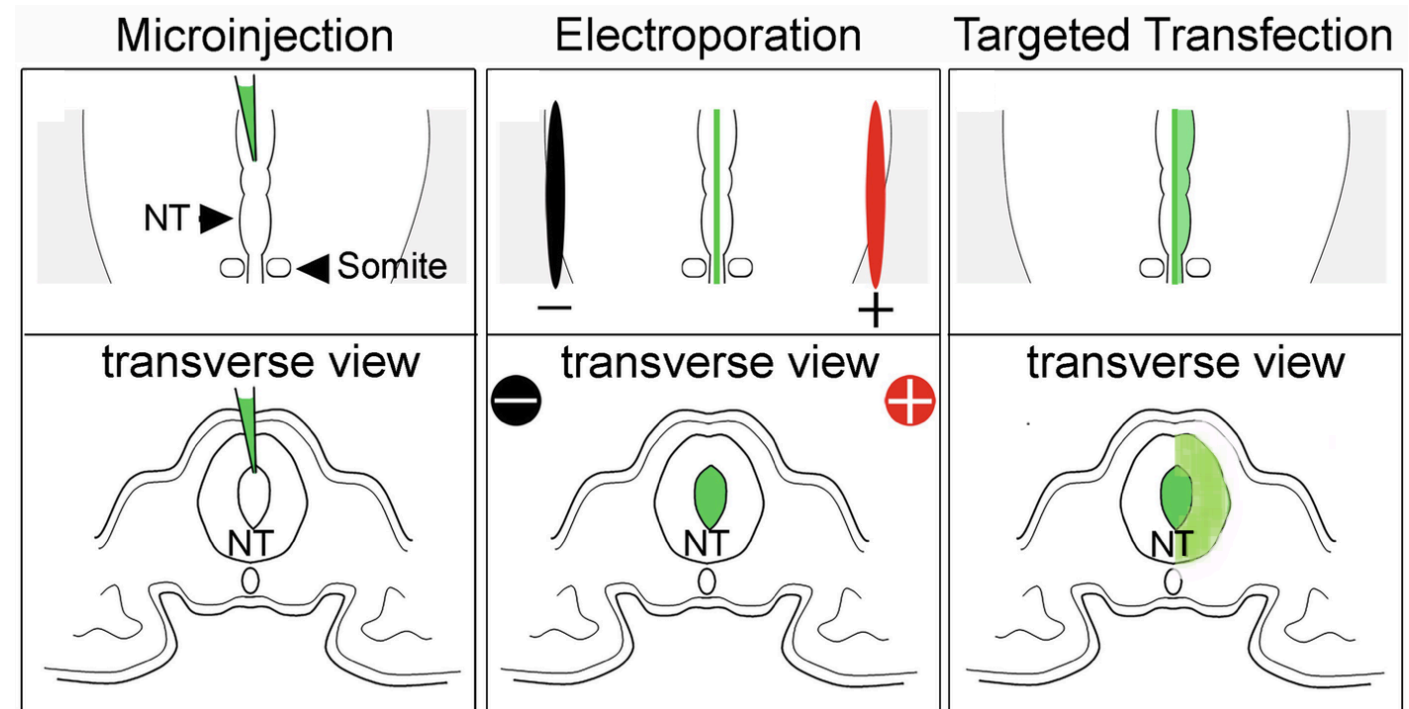


Gde6 is expressed in the VZ progenitor cells during patterning and neurogenesis

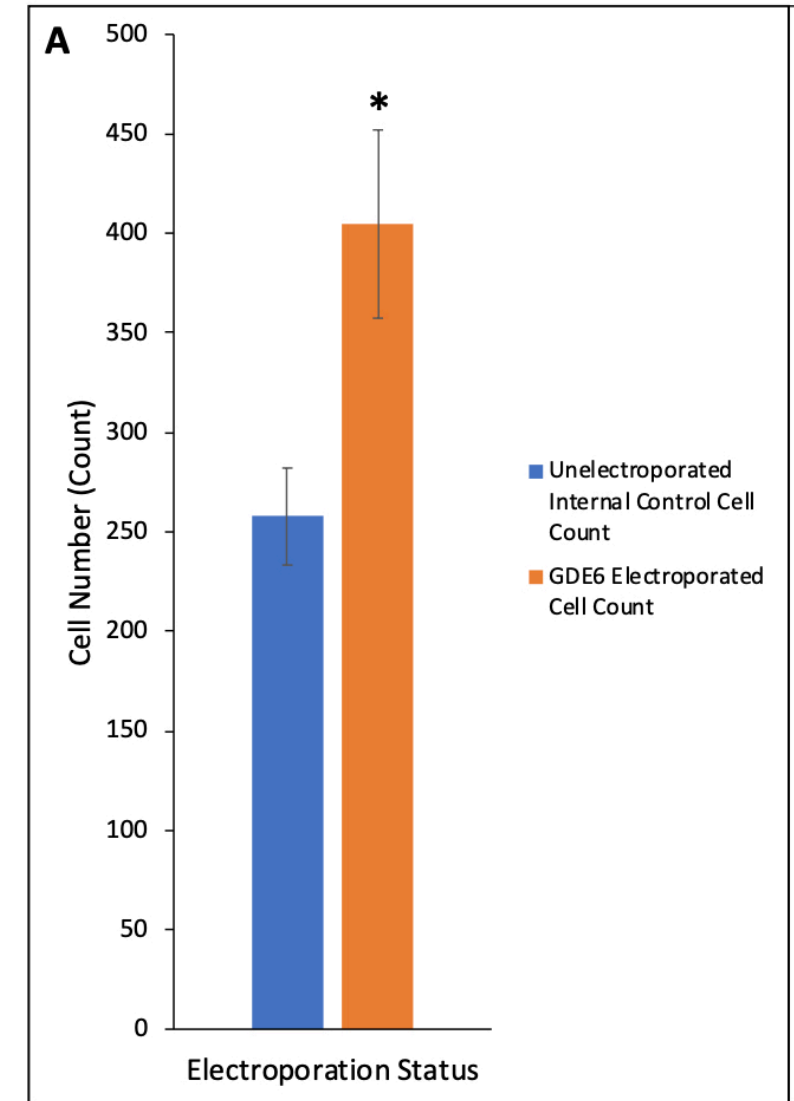
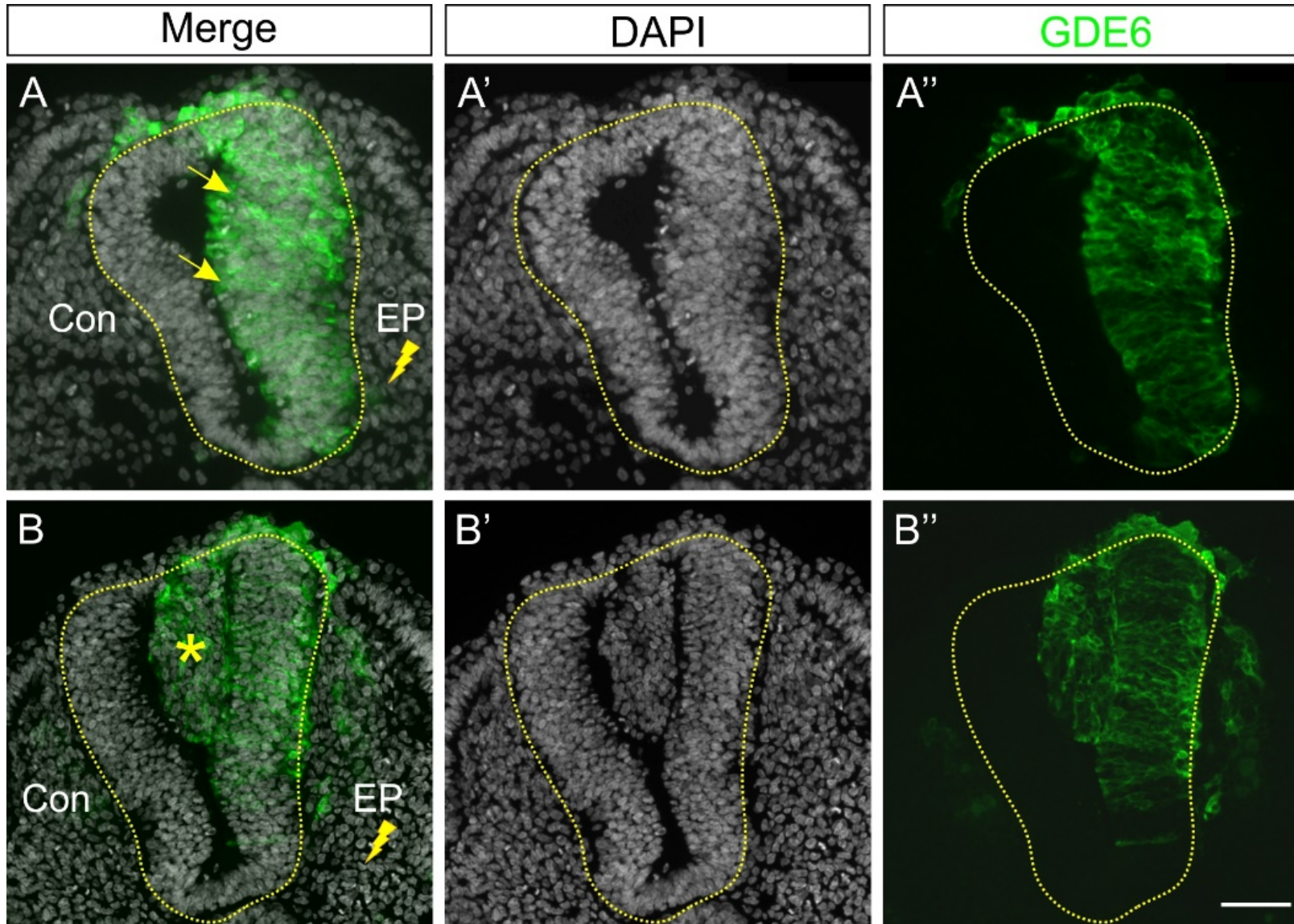


Method: In-ovo Electroporation

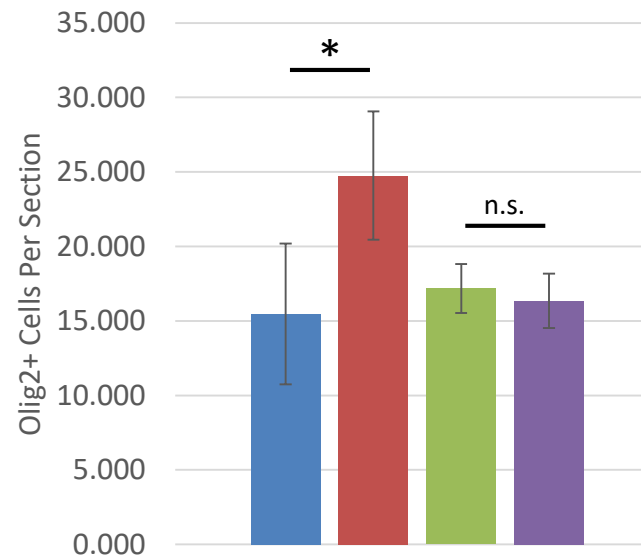
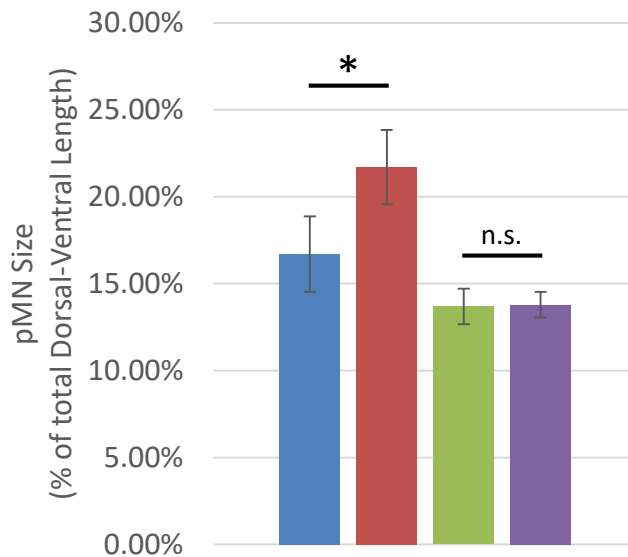
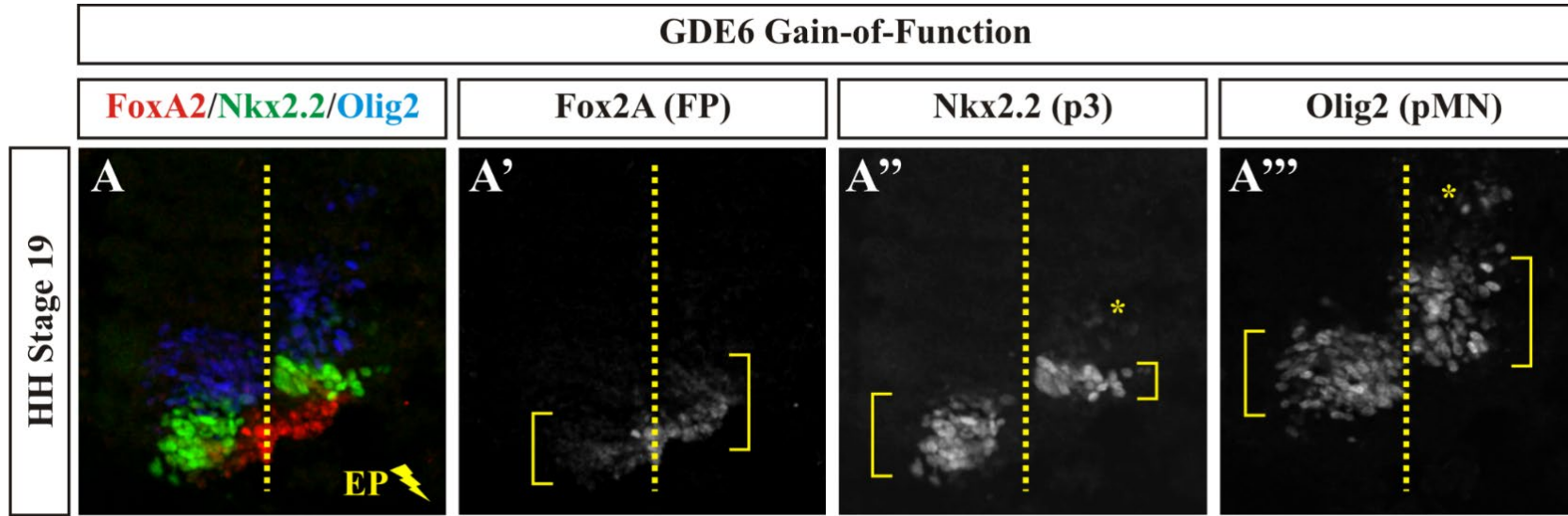
1. Egg Incubation for 48 hours to HH Stage 12
2. Windowing → DNA Injection → Electroporation
3. Egg Incubation for 24 hours to HH Stage 20
4. Dissection → Paraformaldehyde fixation
5. Embedding → Cryo-sectioning at 15μm
6. Immunostaining
7. Imaging
8. Quantification



GDE6 Overexpression Promotes Neural Tube Hyperplasia



Gde6 Overexpression Alters Ventral Patterning Domains



- GDE6 Unelectroporated Side
- GDE6 Electroporated Side
- Control Unelectroporated Side
- Control Electroporated Side