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**Title: Dendrite Growth and the Effect of Ectopic Rheb Expression on Cortical Neurons**

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**Highlights:**

- -Neuron soma and dendrite growth rates differ across cortical regions
- -mTOR activity as assessed by pS6 is abundant in neuroblasts and maturing neurons
- -Rheb overexpression is sufficient to induce cortical focal cortical dysplasia-like lesions comprised of cytomegalic neurons with hypertrophic dendrites

**Abstract**

Ras homology enriched in brain (Rheb) is a GTPase that activates the protein kinase mammalian Target of Rapamycin (mTOR). Rheb mutations cause intellectual delay and megalencephaly. mTOR hyperactivation causes a constellation of neurodevelopmental disorders called “mTOR-opathies” that are frequently accompanied by hyperexcitable cortical malformations.

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