

## From Lgi4 to Adam22: Novel Players in Peripheral Nervous System Development and Function

1. Lgi4 is an extracellular regulator of Schwann cell function and differentiation, and is mutated in claw paw mice. (this thesis)
2. Adam22 expressed on the axonal surface acts as the receptor for Lgi4 in peripheral nerve development. (this thesis)
3. Lgi4<sup>clp</sup> is a hypomorphic allele. (this thesis)
4. Non-Schwann cell derived Lgi4 contributes to myelination in the peripheral nervous system. (this thesis)
5. The behavioral and hypomyelination aspects of the claw paw phenotype are separable. (this thesis)
6. The observation that secreted Lgi1 prevents rapid Kv channel inactivation via the intracellular Kvβ1 subunit in *Xenopus* oocytes exogenously expressing these proteins, suggests that Adam22 or a protein with similar function is endogenously expressed on these cells. (Schulte et al., Neuron, 2006, 49, 697-706)
7. Negative results from well controlled experiments contribute to the progress of science, and should be made widely accessible.
8. The generation of life from non-living matter may seem improbable, but is certainly not impossible. (Mansy et al., Nature, 2008, 454, 122-125)
9. The recent advances in the synthesis and transplantation of whole bacterial genomes will facilitate the engineering of a fully artificial organism. (Gibson et al., Science, 2008, 319, 1215-1220 and Lartigue et al., Science, published online August 20, 2009)
10. Generating bacterial species through directed evolution, like those capable of efficiently degrading nylon oligomers, could save many aquatic organisms as well as the rest of the food chain. (Negoro S., Appl. Microbiol. Biotechnol., 2000, 54, 461-466)
11. "A sad spectacle. If they [other stars] be inhabited, what a scope for misery and folly. If they not be inhabited, what a waste of space." (Thomas Carlyle)

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