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Cholinergic Neurons Regulate and Utilize GDNF Secreted by C2C12 Skeletal Muscle Cells in Culture

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Cholinergic neurons regulate and utilize GDNF secreted by C2C12 skeletal muscle cells in culture

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GDNF in skeletal muscle at the NMJ. This study aimed to examine the role that muscle plays in regulating GDNF production by skeletal muscle. NG108-15 cells were added to skeletal muscle cells (C2C12) and GDNF production was examined. Results from this study suggest that cholinergic neuronal cells regulate GDNF production by muscle cells possibly through acetylcholine receptors.

Aims

1. **Examine GDNF production by skeletal muscle cells in culture.**
2. **Localize GDNF in skeletal muscle and at the nerve-muscle contact.**
3. **Examine the role that muscle cells play in regulating GDNF production by skeletal muscle.**
4. **Examine if cholinergic neuronal cells induce their effect through acetylcholine receptors.**

Results from this study suggest that cholinergic neuronal cells regulate their own supply of GDNF produced by skeletal muscle, in part, via acetylcholine receptor activation.

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References


