Polycelis felina Grows with the Flow

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a) Purpose - To find out if magnetic fields affect the rate of growth in the regeneration of planaria. Because magnetism alters the intracellular calcium distribution in neoblast cells, my hypothesis was that exposure to magnetism would increase the planaria growth in regeneration. The stronger the magnetic field, the faster the growth and regeneration process. b) Procedure - Preparation: Divide the planaria into 3 groups. Groups A-C will be bisected in half, and exposed to various magnetic field intensities. Bisection: (5 each for groups A, B, C) 1. Place the planaria on ice to immobilize and anesthetize the animal. 2. Cut the planaria in half with an X-acto blade. Make the cut midway between the anterior and posterior ends. Care: 1. Keep the petri dishes covered and at the same temperature, in a place that is not exposed to bright light. 2. Do a 10% water change every three days. c) Data -There appeared to be an accelerated effect on growth for the exposure of the stronger magnetic field. d) Conclusion - The results supported a possible link between exposure to magnetic fields and regeneration acceleration. Due to the flexibility of the planaria, it was difficult to accurately measure the planaria, but observations were used for determining visible regeneration. The hypothesis was supported through the regeneration. Planaria studies offer a simpler way to understand stem cell research because of the way they can regenerate.

Awards Won: