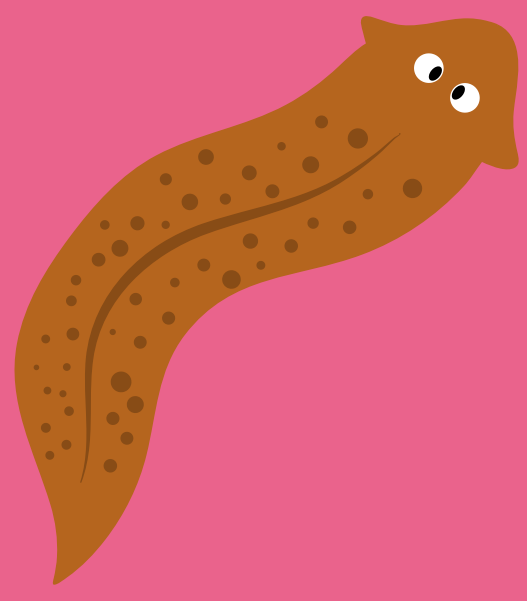
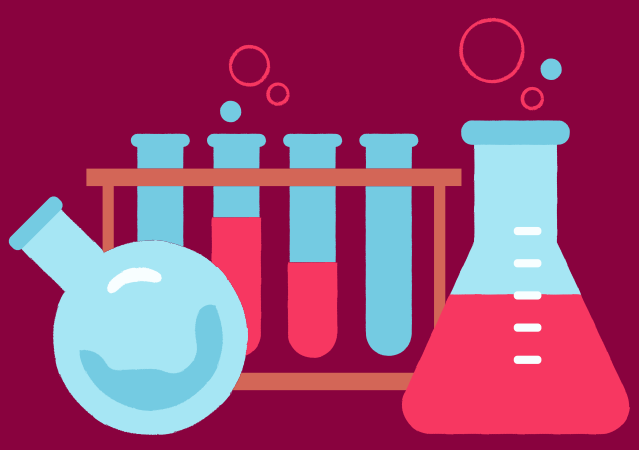
METHEDOLOGY & PROCEDURE

Equipment & Materials

The study used *Schmidtea mediterranea* as a model organism to study the effects of 0.4 mM lithium chloride (LiCl) and 10 ng/mL basic fibroblast growth factor (bFGF), prepared following standard dilution procedures (Farooq et al., 2021; Molano, 2024). A compound microscope and a Celestron digital imager and Celestron S-Viewer Software were used to examine the regeneration rate.



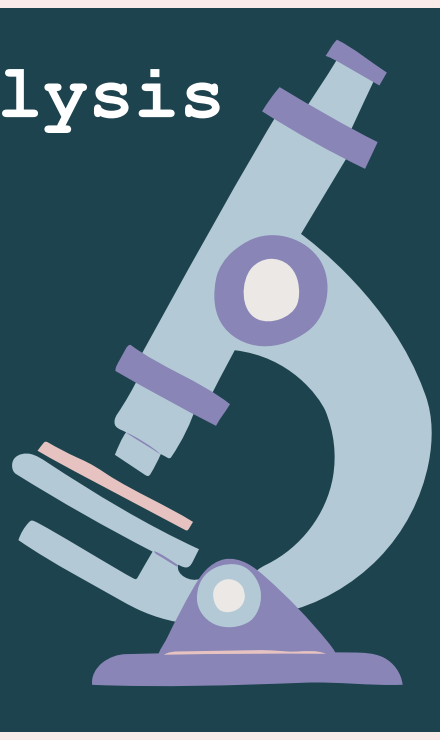
Chemical Treatment & Tissue Amputation



Planaria were maintained in distilled water under standard laboratory conditions. Experimental groups were exogenously fed either LiCl or a combination of both LiCl and bFGF, while a control group was maintained in untreated water. *S. mediterranea* specimens were then transected anterior to the pharynx using a fine scalpel to induce regeneration. Post-amputation, the specimens were placed into sterile well plates containing water..

Microscopy & Imaging Analysis

Regeneration was monitored using the Celestron digital imager and Celestron S-Viewer Software by measuring the blastema growth in the amputated area. Images were captured daily for up to nine days post-amputation (dpa). The Celestron S-Viewer software was then used to analyze the area of regrowth, standardising the measurements by normalising to the initial wound size.



One-way ANOVA Statistical Test

To determine whether treatment had a statistically significant effect on regeneration, a one-way ANOVA statistical test was conducted to compare mean regeneration rates across all experimental groups. Since the ANOVA indicated a significant effect ($p < 0.05$), Student's t-tests were performed to compare individual treatment groups against the control and each other.