

## **Asymmetrical Lateralization in Zebrafish (*Danio rerio*)**

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### *Oral Presentation Abstract:*

Zebrafish (*Danio rerio*) is a model organism that is well-suited for investigating changes in the visual system. Lateral asymmetry, the dominance of one side or eye over the other, has become an interesting area of study in vertebrate behavioural science comparable to human handedness. Zebrafish have been found to display lateral asymmetry causing a bias in turning behaviour while swimming. In this experiment two methods were used to test zebrafish lateral asymmetry. The experiment was set up in a T-shaped swim chamber in which the fish swam up the bottom leg till the branching point requiring the fish to make a left or right turning choice. The first method used was a countercurrent water flow of 0.1m/sec, with no visual stimulus given to the fish. The second method used a dummy predator at the branching point, giving a clear visual stimulus to induce faster turning behaviour. Five male and five female fish were tested with both methods daily over a twenty-nine day trial period. Observations supported a faster turning response time in fish tested with a dummy predator than in fish tested with no visual stimulus. Furthermore, a right-turning preference, suggesting left-eye dominance, was observed. The preliminary results are consistent with comparable values in the literature, supporting the validity of using zebrafish as a model organism for behaviours based on lateral asymmetry.

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