

Abstract Submitted
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Expanding the locomotion repertoire of the eigenfish: Study of wildtype and mutant zebrafish larvae escape response MARIA BENITEZ-JONES, REU Student, KIRAN GIRDHAR, Graduate Student, YANN CHEMLA, MARTIN GRUEBELE, Principal Investigator — The zebrafish larva is a thoroughly studied and an extensively used model for behavioral and biomedical research. The Zebrafish Laboratory at the University of Illinois at Urbana-Champaign has applied a mathematical method to describe quantitatively the larva's swimming behavior. By this method, 98% of the complex locomotion of the free swimming behavior of the larva was described using three main components, or three "*eigenfish*." Our focus is on the quantification of a different swimming behavior called escape response in wildtype (WT) and the Space Cadet (SPC) mutant zebrafish larvae. Although more data is required before assuming certainty in our results, the escape response of both WT and SPC larva was also described up to 98% by three eigenfish. However, the eigenfish for the SPC mutant and the wildtype varied from each other.

Maria Benitez-Jones
None

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