

Zebrafish: A Model to Study Human Diseases and Behavioural Changes

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Zebrafish *Danio rerio* is a bony fish species belonging to the carp family and native to freshwater rivers in north-eastern of India and Bangladesh. This fish is known as an aquarium fish and has a group-social life in the world. This species has many advantages in terms of laboratory studies, including easy maintenance, high reproductive rate, body transparency in embryonic and larval stages, high density and low maintenance cost. Another advantage of this species is the possibility of extensive study of egg, embryonic, larval and adult stages in various scientific studies. Nowadays, zebrafish is a well-known and prominent model in the sciences, including neurology, toxicology, genetics, endocrine disorders, vertebrate biology, biological evolution, human disease, and also well-known in behavioural studies. Here, in this review, firstly we report the importance of using zebrafish as a model and pioneer species in the study of a broad range of human diseases. As a follow up, we examine the validity of this species in behavioural studies and their behavioural responses to environmental stimuli using chemical senses, hearing and visual sensory modalities. Finally, investigators of fish behaviour should take into account animal welfare issues and consider the potential for multi modal effects on laboratory tests.

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