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**TrkB receptor antagonism inhibits stab injury induced proliferative response in adult zebrafish (Danio rerio) brain****Surendra Kumar Anand and Amal Chandra Mondal**  
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The Tropomyosin related kinase B (TrkB) receptor, is known to promote neuronal maturation, differentiation, maintenance and survival through its cognate ligands Brain derived neurotrophic factor (BDNF) and neurotrophin 4 (NT4). BDNF, NT4 and TrkB are highly conserved proteins among vertebrates. Although the role of TrkB during brain development is well established, its role in adult neurogenesis and brain regeneration awaits thorough investigation. In this study, we used the zebrafish stab wound injury model to determine whether the injury induced regeneration response in the telencephalon region is governed by TrkB or not. We induced stab wound injury in the mid-dorsal region of telencephalon of ANA-12 (selective TrkB antagonist) treated and nontreated zebrafish brain and examined the proliferation activity in selected brain regions using immunohistochemistry. We found that proliferation activity was significantly low in ANA-12 injected injured fishes as compared to vehicle control injured fishes. Other major findings of the study include the temporal pattern of proliferation activity after an injury and activation of adult neural stem cells (aNSCs) situated distantly apart from the injury site in the adult zebrafish brain.

**Biography**

Surendra Kumar Anand completed his MSc from School of Life Sciences (SLS), Jawaharlal Nehru University (JNU), Delhi, India in 2016. Currently, he is pursuing his PhD from Laboratory of Cellular and Molecular Neurobiology (Lab 215), SLS, JNU under the supervision of Dr. Amal Chandra Mondal, Associate Professor, SLS, JNU. He is interested in studying the fundamental cellular and molecular mechanisms that orchestrate the brain regeneration process in the zebrafish model, especially the role of neurotrophins. He has published a review article and a research article in reputed international journals. Besides he has four poster presentations, one oral presentation and volunteering experience in national and international conferences and symposia.

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