Rohit Joshi obtained his Ph.D. in Life Sciences from NCBS, Bangalore in 2004, where he worked with Gaiti Hasan and studied the role of calcium signaling in Drosophila larval development. In mid 2005, he moved to laboratory of Richard Mann at Columbia University, NY for his postdoctoral research, where he studied the molecular basis of Hox specificity. Rohit joined CDFD in July 2010 as a Group Leader and studies the role of Hox genes in AP axis determination during Drosophila central nervous system patterning and development.

RESEARCH DESCRIPTION

One of the central problems in biology is to understand how a cell obtains its positional identity in a tissue. We study the molecular basis of this phenomenon in context of how Hox family of transcription factors give cells their specific identity along the anterior posterior axis of the central nervous system. Hox genes are known to express in the central nervous system but our understanding of the molecular mechanisms that link them to CNS patterning along the AP axis is very limited. We are using a combination of biochemistry, cell biology and Drosophila genetics to address this problem.

SELECTED PUBLICATIONS

Dissecting the functional specificities of two Hox proteins.