

## One Postdoctoral Fellow Position

Position available	Postdoctoral Fellow (PDF)
Principal Investigator	Dr. Virupakshi Soppina
Location	Indian Institute of Technology Gandhinagar
Discipline	Biological Engineering
Duration	1 year
Email application material to	<a href="mailto:vsoppina@iitgn.ac.in">vsoppina@iitgn.ac.in</a> (single PDF file please)
URL	
Application deadline	Until filled
Broad area	Intracellular transport and human diseases
Specialization	Our lab is looking for extremely interested, scientifically motivated and humble postdoc with good writing and verbal communicated skills. Strong experimental background in cell biology, biochemistry (protein handling, and purification), molecular biology and some microscopy knowledge.
Minimum Qualification	Ph.D in Biology or related area
Research Description	<p>Our lab is interested in understanding the cytoskeletal systems and their roles in intracellular trafficking in mammalian cells. Molecular motors of the kinesin and dynein families are mechanochemical enzymes that convert the chemical energy derived from ATP hydrolysis to mechanical energy to generate force and motion along microtubule tracks to carry cargoes (e.g. proteins, mRNA, vesicles, endosomes) towards the plus (kinesins) and minus ends (dyneins) of the microtubules, a process termed "intracellular transport".</p> <p>Research at IITGN is focused on major cellular and neuronal transporter of kinesin-3 family motors. In particular, I am passionately interested in understanding the molecular mechanisms of kinesin-3 based neuronal cargo trafficking, regulation and their physiological significance. The mammalian kinesin-3 family is one of the largest of the kinesin superfamily and consists of five subfamilies. Kinesin-3 motors have been found to play important roles across species in intracellular and neuronal transport, development, cell signaling, and cytokinesis. Defects in kinesin-3 transport have been implicated in diverse genetic, developmental, neurodegenerative and cancer diseases. Despite their widespread functions and clinical importance, the mechanisms of kinesin-3 mediated intracellular transport, regulations and their deficiencies in the context of human diseases are largely unknown.</p> <p>The project will continue to investigating the members of this family at cellular, molecular, structural and single molecule level to gain fundamental insights into molecular mechanisms of neuronal transport systems and the implications for various neurodegenerative diseases caused by the defects in microtubule based transport system. We will use cultured hippocampal neurons and <i>Caenorhabditis elegans</i> as model systems.</p>

Interested candidates may send a 'one page letter of motivation, complete CV, list of publications directly, one page summary of doctoral research and one page future research proposal to the Principal Investigator ([vsoppina@iitgn.ac.in](mailto:vsoppina@iitgn.ac.in)).

Please also arrange for three letters of recommendation to the email address [vsoppina@iitgn.ac.in](mailto:vsoppina@iitgn.ac.in) (no need to send any hard copy). Any kind of queries related to this position may be directed to Dr. Virupakshi Soppina ([vsoppina@iitgn.ac.in](mailto:vsoppina@iitgn.ac.in)).