

## Dr. Govinda Sharma

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Dr. Govinda Sharma grew up in Nepal where he completed his undergraduate studies in Pharmacy at Kathmandu University in 2008. Following this, he worked as a quality assurance officer at a couple of pharmaceutical companies before pursuing an MSc in South Korea. During his MSc research at Chosun University, Dr. Sharma's focus was on natural product chemistry, where he performed high-throughput screenings to identify bioactive molecules with antiviral and anticancer properties. In 2013, Dr. Sharma was awarded the prestigious MEXT scholarship by the Government of Japan to pursue a PhD in Molecular Neuroscience at Tokyo Metropolitan University. Under the supervision of Prof. Shin-ichi Hisanaga, he investigated the role of a neuronal kinase LMTK1 in intracellular vesicle trafficking in neurons.

After earning his PhD in 2016, Dr. Sharma continued his research in neurodegenerative diseases as a postdoctoral researcher in the same lab. He developed a Phos-Tag SDS-PAGE based method to identify differential phosphorylation pattern of tau in various tauopathies such as Alzheimer's disease and Pick's disease, which can be used for the differential diagnosis of these diseases. Additionally, he evaluated the Marmoset brain as a non-human primate model for studying Tau-associated neurodegenerative diseases. As part of this work, Dr. Sharma isolated, cloned, sequenced, and deposited the Marmoset tau gene in the NCBI database for the first time.

In 2018, Dr. Sharma joined the University of Calgary as a postdoctoral researcher in the Prion lab and studied the effect of prion infection on intracellular trafficking. Then he investigated the role of mitochondrial dynamics in neuropathy. He established a screening method using confocal fluorescence microscopy to identify molecules that can enhance the intercellular mitochondria transfer from mesenchymal stem cells to patient derived fibroblast with dysfunctional mitochondria. After spending a couple of years at the University of Calgary, Dr. Sharma transitioned to Enveric Biosciences as a scientist. This biotech company is dedicated to developing small-molecule therapeutics for anxiety, depression, and addiction disorders, synthesized based on the chemistry of the active molecule psilocybin found in psilocybe mushrooms, also called magic mushrooms. Dr. Sharma and his team are working on characterizing the pharmacological profile of synthetic psilocybin analogues, with the aim of



developing therapeutics that offer better therapeutic responses with fewer side effects than psilocybin itself.

Dr. Sharma is highly passionate researcher who have published several papers in renowned journals. For Dr. Sharma, the thrill of discovery and the novelty of his work are the best aspects of research. The satisfaction he receives from new discoveries, and a hope that his work might someday affect lives in a good way motivate him to continue his career as a scientist. Dr. Sharma emphasizes the importance of personal relationships and networking for those starting a career in the biotech industry. He also appreciated the opportunities provided by the CREATE BioActives program for graduate students to network with professionals in the field.