



Dr. Govind Singh
Assistant Professor (Pharmacology)

Qualifications:

- B. Pharmacy from Guru Jambheshwar University of Sciences and Technology, Hisar, Haryana.
- MSc (Pharmacology) from All India Institute of Medical Sciences. New Delhi.
- PhD from King George's Medical University, Lucknow (UP).
Research work done at Indian Institute of Toxicology Research, Lucknow (UP)

PhD Research work:

- Developed *in vitro* model of cerebral stroke using oxygen-glucose-deprivation (OGD) in PC-12 cells.
- Evaluated neuroprotection potential of various drugs in OGD model of cerebral stroke in PC-12 cells using different parameters, viz. intracellular calcium, mitochondrial damage, mitochondrial membrane potential, LDH release, PGE₂ release, lipid peroxidation, SOD, GSH, catalase, nitrite level, ROS generation, receptor analysis, mRNA and protein expression studies for c-fos, c-jun, bcl-2, bax, GAP-43 etc.
- Validation of the *in vitro* model using middle cerebral artery occlusion (MCAo) model of cerebral stroke in rats using the parameters, neurological scoring, motor activity, oxidative stress analysis, receptor analysis, brain infarction analysis

Research Areas:

The research activities are targeted to the benefit of society. In this effort many points are focused, viz.

- Exploration of pathophysiological cascade (of neurological disorders).
- New use of the approved drugs based on their properties/actions.
- Evaluation of pharmacological potential herbal drugs.
- Reduction in disease management cost.
- Reduction in drug dose and frequency to minimize adverse effects and to increase patient compliance.

With consideration of the above focused points pharmacological studies are conducted using cell lines, *Drosophila melanogaster*, and rodent models of following diseases:

- Cerebral stroke
- Traumatic brain injury

- Parkinson's disease
- Alzheimer's disease
- Epilepsy
- Depression
- Diabetes
- Hypertension
- Cardiomyopathy
- Cancer

Research Guidance:

- Ph.D. 2 (pursuing)
- M. Pharm. 40 (completed), 10 (pursuing)

Research Projects:

- *In vitro* models of cerebral stroke: Tool for evaluation of neuroprotective potential of drugs. Sponsored by DST, Govt. of India.

Membership of professional bodies:

- Indian Pharmacological Society
- Indian Academy of Neuroscience

Publications: 19

Conferences attended: 25

Lectures delivered: 14