

INTERDISCIPLINARY PROGRAM IN NEUROSCIENCE (IPN)

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Administration

- Saleet Jafri, Director
- Ted Dumas, Graduate Program Director
- Greta Ann Herin, Undergraduate Coordinator

The Interdisciplinary Program in Neuroscience (IPN) at George Mason University is grounded in systems biology, biochemistry, bioengineering, and psychology. Research and education within the IPN is coordinated under the efforts of faculty participating from a number of colleges across the university.

The IPN administers the Neuroscience Minor (<https://catalog.gmu.edu/colleges-schools/science/neuroscience-program/neuroscience-minor/>), Neuroscience BS (<https://catalog.gmu.edu/colleges-schools/science/neuroscience-program/neuroscience-bs/>), and the Neuroscience PhD (<https://catalog.gmu.edu/colleges-schools/science/neuroscience-program/neuroscience-phd/>). Participating neuroscience faculty comprise a unique blend of traditional, experimental, and computational scientists with research spanning a spectrum of key topics in neuroscience including: behavior, anatomy, physiology, neuropharmacology, computational modeling, and informatics. Key research initiatives currently underway within the IPN are:

- Plasticity mechanisms underlying neurological development
- Identifying and characterizing protein interactions for the dopamine and nicotinic acetylcholine receptors in the brain
- Biochemical dynamics in disorders of the basal ganglia
- Computational methods for simulation of complex biological systems
- Description and generation of neuronal morphology
- Adaptive control for stabilization of epilepsy
- Role of metals in memory and Alzheimer's disease
- Biochemical/metabolic simulations at the organism level
- Network, cellular, and sub-cellular models of associative learning
- Experimental and computational models in calcium signaling
- Synaptic plasticity

Programs

- Neuroscience Minor
- Neuroscience, BS
- Neuroscience, PhD

The IPN also co-administers the Neuroscience Concentration in the Biology, MS (<https://catalog.gmu.edu/colleges-schools/science/systems-biology/biology-ms/#requirements-text>).

Faculty

Program Faculty

Professors

Ascoli, Barreto, Cebral, Jafri, Klimov, Olds

Associate Professors

Brielmaier, Cressman, Dumas, Fryxell, Herin, Kabbani, Krueger, McDonald, Peterson, Thompson

Assistant Professors

Dannenberg, Guerriero, Ullah