Behavioral Neuroscience Group at Binghamton University

BINGHAMTON UNIVERSITY
STATE UNIVERSITY OF NEW YORK

The Behavioral Neuroscience Group at Binghamton University is comprised of experienced faculty and research scientists committed to translational neuroscience. Our laboratories are headed by international experts with established in vivo animal models that span a wide range of behavioral and neural functions. We are uniquely situated to provide partners with cost-efficient models and tools necessary to move novel concepts and compounds from bench to bedside. Specific expertise and models currently employed with application toward pharmaceutical development, intervention and translation can be found on this page.

Areas of specialization: Stress, depression and anxiety; development of memory and drug abuse; learning and memory; developmental psychopharmacology; movement disorders; taste and ingestion; and developmental neuroendocrinology.

Research scientists:

Christopher Bishop, movement disorders

Nicole Cameron, developmental neuroendocrinology

Terrence Deak, stress, depression and anxiety

Patricia Di Lorenzo, taste and ingestion

Lisa Savage, learning and memory disorders

Linda Patia Spear, developmental psychopharmacology

Norman Spear, development of memory and alcohol abuse

For more information visit:

go.binghamton.edu/BNS

BEHAVIORAL TESTS COMMONLY EMPLOYED:

Motor Tests
- Open Field Locomotion
- Rotarod
- Forepaw Adjusting Steps Test
- Cylinder Test
- Dyskinesia (AIMs) Ratings

Cognitive Tests
- Radial Arm, T-Mazes and Runways
- Ultrasonic Detection
- Spontaneous and Delayed Alternation
- Non matching-to-sample
- Discrimination learning

Stress Tests
- Acute and Chronic Stress
- Immune Challenge
- Hypoglycemia and Glucoprivia
- Restraint
- Social Defeat

Anxiety and Depression Paradigms
- Forced Swim Test
- Fear Conditioning and Models of Anxiety
- Models of Behavioral Despair
- Learned Helplessness
- Elevated Plus Maze

Drug Self-Administration

Acute Illness Tests
- Adipsia
- Aphagia
- Fever
- Social Interaction

Analgesic Tests
- Tail-Flick
- Paw-Lift

Tests of Olfaction and Ingestion

SURGICAL TECHNIQUES:
- Lesions and Cannulations
- Single and Multiple Cell Recording
- In Vivo Microdialysis
- Embryo Transplant

MOLECULAR AND BIOCHEMICAL ASSAYS:
- ELISA/EIA
- HPLC
- Immunocytochemistry
- In Situ Hybridization
- Radioimmunoassay
- Real Time Quantitative RT-PCR
- Western Blot