



**Temple  
University**

**College of Liberal Arts**

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**Psychology and  
Neuroscience**

**Independent Study & Collaborative  
Research Faculty Contact List**

**Fall 2023 - Spring 2024**

Lisa Briand, PhD, Assistant Professor - Department of Psychology & Neuroscience

**Behavioral Neurophysiology Lab**  
**Temple University**

**General research interests:** Our laboratory utilizes a variety of techniques including behavioral pharmacology, mouse genetics, molecular biology, and electrophysiology to study how the brain responds differently to stress and cues after cocaine self-administration experience.

**Current projects:** Current work, funded by the National Institute on Drug Abuse, utilizes mutant mouse models and electrophysiology to study the role of the scaffolding proteins GRIP and PICK in the ability of cues and stress to elicit relapse.

**Email:** lbriand@temple.edu

**Lab website:** <http://www.briandlab.com/>

Jason Chein, PhD, Professor Department of Psychology & Neuroscience - Imaging Center (TUBRIC)

**Cognition and Adaptive Behavior (CAB) Lab**  
**Temple University**

**General research interests:** Cognitive control and working memory

**Methodologies used:** Behavioral experimentation, fMRI

**Current projects:** Working memory training effects on short-term memory to yield more benefits; adolescent risk-taking vs. adult risk-taking; investigations of reasoning /decision making. Current work, funded by the National Institute on Drug Abuse, utilizes mutant mouse models and electrophysiology to study the role of the scaffolding proteins GRIP and PICK in the ability of cues and stress to elicit relapse.

**Email:** [jason.chein@temple.edu](mailto:jason.chein@temple.edu)

**Lab website:** <https://sites.temple.edu/neurocognitionlab/>

David M. Devilbiss, PhD, Assistant Professor - Department of Cell Biology and Neuroscience

**School of Osteopathic Medicine**  
**Rowan University**

**General research interests:** Concussion and mild traumatic brain injury, Mechanisms of cognitive enhancement

**Methodologies used:** Microdialysis-High performance liquid chromatography, electrophysiology, behavior, neuroanatomy, computational neuroscience

**Current projects:** Mechanisms underlying cognitive impairment after mild traumatic brain injury

**Email:** devilbiss@rowan.edu

**Lab website:** <http://users.rowan.edu/~devilbiss/>

Bojana Gligorijevic, PhD, Associate Professor – Bioengineering  
Department & Fox Chase Cancer Center

### **Cancer Microscopy & Mechanobiology Lab** **Temple University**

**General research interests:** Our laboratory utilizes molecular and cell biology, and bioengineering approaches to analyze impact of different tumor microenvironment components (nerves, blood vessels, extracellular matrix, immune cells) on cancer cell migration, invasion and metastasis.

**Current projects:** Current work is funded by the National Cancer Institute, American Cancer Society and Fox Chase Cancer Center. We utilize 3D cultures, microfluidic chips and mouse models to visualize and analyze molecular mechanisms of neuron-cancer cell interactions in breast cancer. We use confocal and multiphoton fluorescent microscopy combined with fluorescent proteins, injectable dyes and light-controlled probes.

**Email:** bojana@temple.edu

**Lab website:** <http://www.gligorijeviclab.org>

Tania Giovannetti, PhD, Associate Professor - Department of Psychology &  
Neuroscience

### **Cognitive Neuropsychology Lab** **Temple University**

**General research interests:** The breakdown of everyday functioning in people with brain damage/disease. Interventions and rehabilitation techniques to improve functioning of people with brain damage/disease.

**Methodologies used:** Behavioral studies of healthy people as well as people with brain damage/disease

**Current projects:** Examining the efficacy of executive function training on everyday action performance in people with schizophrenia; examining everyday action performance in healthy older adults, examining everyday action knowledge in people with Alzheimer's disease vs. Parkinson's disease.

**Email:** tgio@temple.edu

**Lab website:** <https://sites.temple.edu/cogneuropsychylab/>

Ames Sutton Hickey, PhD, Assistant Professor - Department of  
Psychology & Neuroscience

### **Neurobiology of Feeding and Motivation Lab** **Temple University**

**General research interests:** Neural circuits of food-related decision making

**Methodologies used:** Rodent behavioral models, optogenetics, chemogenetics, *in vivo* fiber photometry, open source neuroscience technology, immunohistochemistry (IHC), microscopy

**Current projects:** Identifying neural circuits driving susceptibility to feeding dysregulation; characterizing hypothalamic-mediated prioritization of food intake over hyperactivity in food deprived rodents

**Email:** ames.sutton@temple.edu

**Lab website:** [www.theashlab.org](http://www.theashlab.org)

*Pronouns:* she/her/hers

**\*\*\*Accepting students Spring/Fall 2023\*\*\***

Mohammad F. Kiani, PhD, FAHA, Professor - Mechanical Engineering

**Biofluidics Lab  
Temple University**

**General research interests:** Targeted drug delivery to tumors and post-infarct cardiac tissue, tissue engineering, design and development of biofluidic devices, effects of radiation on brain tissue, and microcirculatory blood flow.

**Methodologies used:** Intra-vital Microscopy; Nanotechnology; Microhemodynamics

**Current projects:** Biofluidic devices; targeted drug delivery.

**EMail:** mkiani@temple.edu

**Faculty Profile:** <https://engineering.temple.edu/about/faculty-staff/mohammad-kiani-mkiani>

Lynn Kirby, PhD, Associate Professor - Anatomy and Cell Biology

**Center for Substance Abuse Research  
Lewis Katz School of Medicine, Temple University**

**General research interests:** Dr. Kirby's research focuses on the effects of stress and stress hormones on the serotonin (5-HT) system.

**Methodologies used:** The laboratory uses a combination of behavioral, neurochemical, electrophysiological and anatomical techniques in rodents.

**Current projects:** One current project is an investigation of the effects of chemokine immune molecules in the brain and their interactions with traditional neurotransmitter (5-HT, dopamine) and neuropeptide (opiate) systems.

**EMail:** lkirby@temple.edu

**Faculty Profile:** <https://medicine.temple.edu/lynn-kirby>

Dr. Archana Kumari, Assistant Professor - Biomedical Science and Engineering

**Kumari Lab  
Rowan University School of Osteopathic Medicine**

**General research interests:** Tongue homeostasis, identification of mechanisms causing taste alterations due to variety of insults, Hedgehog signaling regulation of taste organ

**Methodologies used:** Cryosectioning, Immunostaining, Fluorescence microscopy, genotyping including animal tail snipping, isolation of DNA, PCR, and gel electrophoresis, isolation of single cells.

**Current projects:** Defining gene expression and regulation in tongue lingual epithelium, exposure of opioids in animal models and alterations in tongue.

**EMail:** kumari@rowan.edu

**Faculty Profile:** <https://research.rowan.edu/research-areas/biomedical/kumari/index.html>

T. Dianne Langford, PhD, Professor - Neuroscience, Neurobiology and &  
Center for Substance Abuse Research  
Associate Dean of Research

**Lewis Katz School of Medicine  
Temple University**

**General research interests:** Dr. Langford's research focuses on insult-driven changes in the brain. Her work revolves around two main areas of investigation, both of which examine cellular and biochemical responses to challenge. The areas of investigation include traumatic brain injury (TBI) and HIV infection of the central nervous system (CNS).

**Email:** [tdl@temple.edu](mailto:tdl@temple.edu)

**Faculty Profile:** <https://medicine.temple.edu/t-dianne-langford>

Victor Luna, PhD, Assistant Professor - Alzheimer's Center, Department of  
Neural Sciences

**Laboratory on Synaptic Aging  
Lewis Katz School of Medicine, Temple University**

**General interests** - We study the physiology of synapses in the aged brain. Our goal is to identify and target mechanisms that could rejuvenate the aged brain to rescue memory impairments related to advanced age and Alzheimer's disease. Through our collaborations, we have also been using synaptic physiology to understand stress resilience and sex differences related to it.

**Methodologies used** - Our multidisciplinary approach combines patch clamp electrophysiology, optogenetics, calcium imaging, immunohistochemistry, fluorescence imaging, targeted gene manipulation using viruses, and pharmacology, and behavioral assays in aged mice (18-24 months old). We are also undertaking anatomical and molecular studies of human postmortem tissue of aged and Alzheimer's patients.

**Current projects** - 1) understanding how contextual fear discrimination (CFD) changes with age and pathological signals of Alzheimer's disease; 2) elucidating the synaptic basis for these changes, specifically the role of glutamate receptors and transporters; 3) targeting these synaptic and extrasynaptic mechanisms to rescue CFD in aged mice and mouse models of Alzheimer's disease; 4) assessing glutamate receptors and transporters in postmortem human tissue of aged and Alzheimer's patients

**Lab website** - <https://medicine.temple.edu/victor-luna>

**Email** - [victor.luna@temple.edu](mailto:victor.luna@temple.edu)

**\*Accepting students starting Spring 2023**

Nadine Martin, PhD, CCC-SLP, Professor - Communication Sciences and  
Disorders

**Aphasia Rehabilitation Research Lab  
Temple University**

**General research interests:** Aphasia (executive functions), STM in lexical processing, Computational Modeling, Aphasia Treatment

**Methodologies used:** Cognitive tests of language, short-term memory and executive function. Theoretically motivated behavioral treatment programs to improve language and verbal STM abilities.

**Current projects:** Sentence processing, Syntactic Priming, New word learning after acquired brain damage, Bilingual (Spanish) aphasia study, STM and executive functions in aphasia.

**EMail:** nmartin@temple.edu

**Faculty Profile:** <https://cph.temple.edu/about/directory/nadine-martin>

Daniel Manvich, PhD, Assistant Professor - Department of Cell Biology & Neuroscience

**School of Osteopathic Medicine  
Rowan University**

**General research interests:** Preclinical models of substance abuse and relapse; neurobiology of stress coping; behavioral pharmacology of psychostimulants and opioids

**Methodologies used:** Behavioral assays to measure drug-taking and drug-seeking behaviors, anxiety-like and depressive-like behaviors, and stress-coping strategies. Immunohistochemical and cutting-edge fluorescence microscopy techniques.

**Current projects:** Identify brain regions/circuits that mediate drug-seeking triggered by psychosocial stress. Determine behavioral and neurobiological differences between animals that exhibit different stress-coping strategies, and how these differences relate to neuropsychiatric disease.

**EMail:** manvich@rowan.edu

**Additional Resource:** <https://research.rowan.edu/research-areas/biomedical/manvich/index.html>

Peter J. Marshall, PhD, Professor & Chair- Department of Psychology & Neuroscience

**Developmental Science Lab  
Temple University**

**General research interests:** Developmental cognitive neuroscience

**Methodologies used:** Electroencephalogram (EEG)/Event Related Potentials (ERP), autonomic, Electromyography (EMG)

**Current projects:** Interested in the development of body representations, including self-other correspondences in infancy, embodiment and development, and aspects of human-robot interaction.

**EMail:** pjmarsh@temple.edu

**Lab website:** <https://sites.temple.edu/devscilab/>

Vishnu Murty, PhD, Assistant Professor - Department of Psychology & Neuroscience

**Adaptive Memory Lab  
Temple University**

**General research interests:** Influence of Affect and Motivation on Human Memory

**Methodologies used:** Functional Neuroimaging, Behavioral Modeling, Clinical Populations, Computational Modeling

**Current projects:** Threat-related distortions in memory. Consolidation of Valuable Information, Information Seeking and Exploration

**Email:** vishnu.murty@temple.edu

**Lab website:** <https://sites.temple.edu/adaptivememorylab/>

Nora S. Newcombe, Ph.D, Laura H. Carnell Professor of Psychology -  
Department of Psychology & Neuroscience

**Research in Spatial Cognition (RISC) & Temple Infant and Child Laboratory (TICL)  
Temple University**

**General research interests:** cognition, development, spatial thinking, memory, and STEM education

**Methodologies used:** behavioral approaches, and with collaborators, fMRI, structural MRI, and white matter analyses

**Email:** newcombe@temple.edu

**Lab Websites:** <https://sites.temple.edu/risc/> & <https://templeinfantlab.com/>

Iyad Obeid, PhD, Associate Professor - Electrical & Computer Engineering

**Neural Instrumentation Lab  
Temple University**

**General research interests:** Neural prostheses, Neural engineering, neural signal processing, medical devices

**Methodologies used:** Signal processing theory, analog and digital circuit design

**Current projects:** Functional neural-muscular modeling, hardware implementations of neural signal processing

**Email:** iobeid@temple.edu

**Faculty profile:** <https://engineering.temple.edu/about/faculty-staff/iyad-obeid-iobeid>

Karen Palter, PhD, Associate Professor - Department of Biology

**Temple University**

**Methodologies used:** Using real time PCR of shaker RNA and examining whether any of the sialic acid pathway transcripts are also up-regulated in response to stimulation

**Current projects:** Post translational modification of a shaker channel, the addition of sugars to two conserved sites on the shaker protein that affect the voltage sensing of the channel.

**Email:** palter@temple.edu

**Faculty profile:** <https://bio.cst.temple.edu/people/>

Vinay Parikh, PhD, Associate Professor - Department of Psychology &  
Neuroscience

## **Neurochemistry and Cognition (NECO) Lab Temple University**

**General research interests:** Neuromodulation of cognition and systems adaptation in health and disease.

**Methodologies used:** In vivo extracellular electrochemical/ electrophysiological recordings in rodents; Operant behavioral paradigms in rodents to assess cognitive capacities; protein biochemistry, vector-based genetic approaches

**Current projects:**

- 1) How dynamic interactions between genes and environment shape the vulnerability and resilience to age-related decline in cognitive and mental capacities.
- 2) To elucidate molecular mechanisms by which cholinergic signaling regulates neuroimmune function and cognition in normal and pathological aging.
- 3) To examine cellular and circuit mechanisms underlying long-term effects of early life stress on mnemonic processes.

**Email:** [vinay.parikh@temple.edu](mailto:vinay.parikh@temple.edu)

**Faculty profile:** <https://sites.temple.edu/parikh/>

Joseph Picone, PhD, Professor - Electrical & Computer Engineering

## **Signal and Information Processing (ISIP) Lab Temple University**

**General research interests:** Statistical modeling of EEG signals and digital pathology images.

**Methodologies used:** Signal processing; Machine learning; Information theory

**Current projects:** Applications of quantum computing to EEG science, automatic interpretation of EEG signals for critical events like seizures; automatic classification and localization of events in digital pathology images that can lead to the development of diseases such as cancer.

**Email:** [joseph.picone@temple.edu](mailto:joseph.picone@temple.edu)

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Domenico Pratico, PhD - Professor, Pharmacology & Microbiology and Immunology & Professor, Center for Translational Medicine

## **Signal and Information Processing (ISIP) Lab Lewis Katz School of Medicine, Temple University**

**General research interests:** Neurodegeneration

**Methodologies used:** In vivo – drug interactions, animal husbandry, genotyping; In vitro – Western-blot, ELISA, transfection

**Current projects:** 1. Evaluate the novel role of enzyme metabolism in Alzheimer's disease pathogenesis (modulate beta/tau) 2. dietary approach - acceleration/deceleration of disease (homocystine-induced).

**Email:** [praticod@temple.edu](mailto:praticod@temple.edu)

**Faculty profile:** <https://medicine.temple.edu/domenico-pratic%C3%B2>



Ramesh Raghupathi, PhD, Professor - Department of Neurobiology & Anatomy

### **Drexel University College of Medicine**

**General research interests:** Cellular and circuit-based mechanisms underlying long-term behavioral deficits following traumatic brain injury in children and adolescents

**Methodologies used:** We have developed age-appropriate and clinically-relevant animal models of TBI. We use a variety of behavioral measures ranging from simple cognitive tasks (learning) to complex cognition (delayed alternation, object recognition) to social and emotional behaviors. These behaviors are coupled to evaluation of neuronal activity (electrophysiology) and neuropathology.

**Current projects:** We are working on experiments that aim to (a) identify a role for dopaminergic and cholinergic circuits in behavioral deficits following repeated mild TBI in male and female rats, (b) determine whether early life stress modeling poverty and reduced maternal care influences outcomes after abusive head trauma in infants, and (c) demonstrate that treatment with anti-inflammatory compounds can limit the neuropathology and reduce the behavioral deficits.

**EMail:** rr79@drexel.edu

**Faculty profile:** <https://drexel.edu/medicine/faculty/profiles/ramesh-raghupathi/>

Scott Rawls, PhD, Professor - Pharmacology & Professor - Center for Substance Abuse Research

### **Lewis Katz School of Medicine Temple University**

**General research interests:** Neuropharmacology of Psychostimulants; Drug addiction; Brain reward and glutamate systems

**Methodologies used:** The laboratory uses vertebrate (rats, mice) and invertebrate (planarians) models to investigate the pharmacology of drugs of abuse such as cocaine, amphetamines, opioids, designer drugs (e.g. 'bath salt' synthetic cathinones) and kratom analogs.

**Current projects:** 1) Role of neuroinflammation (chemokines and cytokines) in psychostimulant addiction. 2) Role of brain reward glutamate systems in the reinforcing effects of 'bath salt' synthetic cathinones. 3) Role of FDA-approved riluzole (RLZ) and its analog trigriluzole (TRLZ) in cocaine addiction. 4) Characterization of kratom and its active constituent mitragynine.

**EMail:** scott.rawls@temple.edu

**Faculty profile:** <https://medicine.temple.edu/scott-rawls>

Servio H. Ramirez, PhD, Assistant Professor - Pathology and Laboratory Medicine

### **Lewis Katz School of Medicine Temple University**

**General research interests:** Cerebral vascular biology; Molecular/ signaling mechanisms leading to regulation of the Blood Brain Barrier

**Methodologies used:** Proteomics, Intra-vital microscopy and live cell imaging; Immunohistochemistry (multiple modalities); In- vitro blood brain barrier modeling; Evaluation of transendothelial electrical resistance; Viral vector construction for transgene delivery.

**Current projects:** Mapping of the vascular networks by microCT following experimental Traumatic Brain Injury. Bioprinting of vascular geometries and the neurovascular unit for gene therapy and drug delivery applications. Projects related to understanding the changes to the blood-brain barrier in the context of substance abuse.

**Email:** [servio.ramirez@temple.edu](mailto:servio.ramirez@temple.edu)

**Faculty profile:** <https://medicine.temple.edu/servio-ramirez>

Jamie Reilly, PhD, Associate Professor - Department of Communication Sciences & Disorders

### **Concepts & Cognition Lab Temple University**

**General research interests:** Interests in semantic memory, psycholinguistics, and the representation of object knowledge in the human brain.

**Current projects:** In addition to basic science research, we are currently developing novel treatments that promote language maintenance in Alzheimer's Disease (AD) and Frontotemporal Degeneration (FTD)

**Email:** [reillyj@temple.edu](mailto:reillyj@temple.edu)

**Faculty profile:** <https://www.reilly-coglab.com/>

Benjamin Rood, PhD, Assistant Professor - Department of Cell Biology and Neuroscience

### **School of Osteopathic Medicine Rowan University**

**General research interests:** Function of neural circuits in the regulation of social behavior; Sex differences and impact of hormones on neuron function; Physiology and gene expression of vasopressin-responsive neurons

**Methodologies used:** Multidisciplinary approach studying neural circuits through neuroanatomy, electrophysiology, transcriptomics, and behavior testing

**Current projects:** Physiology and transcriptome profiling of vasopressin-responsive neurons in the dorsal raphe; Impact of gonadal steroid hormones on serotonin neuron physiology and gene expression

**Email:** [rood@rowan.edu](mailto:rood@rowan.edu)

**Faculty profile:** <https://som.rowan.edu/research/basicscience/cellbiology/facultybios/rood.html>

Bassel E. Sawaya, PhD, Professor - Fels Cancer Institute for Personalized Medicine; Dept. Cancer and Cellular Biology

### **Lewis Katz School Medicine Temple University**

**General research interests:** Molecular mechanism of neurodegenerative disease and Aging: how HIV leads to dementia? Long-term COVID19 sequelae and inflammation

**Methodologies used:** Molecular and Cellular biology techniques, animal models

**Current projects:** Determine the mechanisms used by HIV-1 proteins lead to premature brain aging (metabolic reprogramming; ER-mitochondria association [MAM]; loss of lysosomal acidity; inflammation;

AGE-RAGE pathway). Long-term covid sequelae (inflammation and organ failure [heart, lung], neurological symptoms).

**Email:** sawaya@temple.edu

**Faculty profile:** <https://medicine.temple.edu/bassel-sawaya>

David V. Smith, PhD, Assistant Professor - Department of Psychology & Neuroscience

### **Neuroeconomics Lab Temple University**

**General research interests:** Neuroeconomics, social neuroscience, decision neuroscience, brain connectivity.

**Methodologies used:** functional magnetic resonance imaging (fMRI), transcranial electrical stimulation, behavioral testing, computational modeling.

**Current projects:** The lab studies a broad range of decisions, but they are particularly interested in social decisions (e.g., trusting other people) and economic decisions (e.g., gambling). To study these processes, they integrate perspectives from economics, neuroscience, and psychology. One of their current major projects uses fMRI to assess age-related differences in reward processing and decision making. They also use transcranial electrical stimulation to modulate the brain and cause temporary changes in decision making.

**Email:** david.v.smith@temple.edu

**Lab Website:** <https://sites.temple.edu/neuroeconlab/>

Christopher K. Thompson, PT, PhD, DPT, Assistant Professor - Physical Therapy

### **Temple University Shriners Hospital for Children**

**General research interests:** Research focuses on the neural control of movement, how the neural control of movement changes following injury to the central/peripheral nervous system, and what can be done to improve motor function

**Methodologies used:** Parallel experiments in humans and animal models. Single motor unit recordings using high-density surface and fine wire intramuscular electromyography; isometric joint torque; reflexes through electrical and mechanical stimulation; kinetic and kinematic assessments of functional movement. Parallel experiments are performed in the in vivo cat model with the addition of extracellular recordings of spinal interneuron populations.

**Current projects:** Our goal is to quantify the excitation, inhibition, and neuromodulation underlying the discharge of mammalian spinal motoneurons. We want to understand the task dependent changes in these parameters within and across motor pools. We then want to understand how these components are altered in individuals with neurological injury.

**Email:** ckt@temple.edu

**Faculty profile:** <https://cph.temple.edu/pt/faculty/christopher-k-thompson>

Ellen M. Unterwald, PhD, Director: Center for Substance Abuse Research

Chair & Professor - Department of Neural Sciences

**Lewis Katz School of Medicine  
Temple University**

**General research interests:** Neurobiology of addiction.

**Methodologies used:** BPreclinical rodent models. Behavioral assays including measurements of drug self-administration, reward, anxiety, depression and memory in rats and mice. Protein analysis by Western blots and immunohistochemistry. Gene expression by qRT-PCR. Receptor function assays.

**Current projects:** Cellular and molecular mechanisms of drug-associated memory. Traumatic stress and susceptibility to substance use. Neuroimmunopharmacology: Chemokines in the brain as related to drug addiction. SARS-CoV2 and blood brain barrier function in the presence of cocaine. Sex and age differences in responses to drugs of abuse.

**EMail:** ellen.unterwald@temple.edu

**Faculty profile:** <https://medicine.temple.edu/ellen-unterwald>

Vinod Venkatraman, PhD - Associate Professor  
Marketing and Supply Chain Management

**Center for Applied Research in Decision Making  
Fox School of Business, Temple University**

**General research interests:** Research focuses primarily on the processes and mechanisms underlying decision making. I am interested in studying the effects of states, traits, and context on decision-making strategies using a multi-methodological approach. A core objective of my research is to leverage insights from laboratory studies to inform real-world decision preferences in the areas of marketing communications, consumer behavior, media consumption, and public policy.

**Methodologies used:** Behavioral, eye tracking, skin conductance, heart rate, EEG and fMRI

**EMail:** vinod.venkatraman@temple.edu

**Faculty profile:** <https://www.fox.temple.edu/institutes-centers/center-for-applied-research-in-decision-making/>

Barry Waterhouse, PhD, Chair & Professor - Cell Biology & Neuroscience

**Graduate School of Biomedical Sciences  
Rowan University**

**General research interests:** Neurobiology of the locus coeruleus-norepinephrine (LC\_NE) transmitter system

**Methodologies used:** In vivo and in vitro electrophysiology, neuroanatomical analyses of LC\_NE network connections, behavioral assay – operant strategy shifting task

**Current projects:** Impact of mild traumatic brain injury (concussion) or stress on functionality of the LC-NE transmitter system - behavioral, electrophysiological, and anatomical assays

**EMail:** waterhouse@rowan.edu

**Lab website:** <https://research.rowan.edu/research-areas/cellbiology/waterhouse/index.htm>

Mathieu Wimmer, PhD, Assistant Professor - Neuroscience Program,  
Department of Psychology & Neuroscience

## **Memory, Epigenetics and Addiction Lab**

### **Temple University**

**General research interests:** Epigenetics of addiction and memory

**Methodologies used:** Rodent behavioral models of addiction and memory. Molecular biology

**Current projects:** Molecular mechanisms underlying addiction vulnerability. Molecular underpinnings of drug craving

**Email:** mathieu.wimmer@temple.edu

**Lab website:** wimmerlab.org

W. Geoffrey Wright, PhD, Director: Neuromotor Sciences Programs  
Professor - Health & Rehabilitation Sciences (Primary) & Bioengineering

## **Motion-Action Perception (MAP) Lab**

### **Temple University**

**General research interests:** Research focuses on sensorimotor and perceptual influences on human movement control, which include: neuromuscular processes, postural control, and CNS disease models.

**Methodologies used:** Virtual Environment; Dynamic Posture Platform; 3D Motion analysis infrared camera system (kinematics); Electromyography (EMG); linear sled

**Current projects:** Visual-vestibular interaction (sensorimotor integration), Oculomotor function, Virtual reality and head- mounted display technology development; Parkinson's Disease – how it affects muscle rigidity and posture control; TBI and concussion.

**Email:** william.geoffrey.wright@temple.edu

**Faculty profile:** <https://cph.temple.edu/pt/faculty/w-geoffrey-wright>