LIFE IN THE DMV

The DMV Region, including Greater College Park, is a vibrant hub of culture, history, sciences, and the arts. Internationally renowned as a prime destination for academic conferences, performers, artists, and thought leaders alike, there is no denying the exciting opportunities and experiences that await in the DMV.

LIFESTYLE

History & Culture: Home to numerous international embassies, Smithsonian museums (free admission!), historical monuments, and much more, there is always something to do in the DMV area. DC is considered one of the most diverse metropolitan areas in the nation, so you can be sure to have countless opportunities to experience other cultures through history, music, or even food!

Arts, Nature, and Recreation: Whether you love live music, visiting the National Zoo, or hiking in nature, the DMV has something for everyone. Hoping to catch a live show? Check out the Wolf Trap and the 9:30 Club. An outdoor enthusiast? The Appalachian Trail and the Chesapeake Bay are all a drive away. Love sports? Visit Nationals Park and Capital One Arena to watch your favorite game.

Travel & Transportation: With DC’s Metrorail system, 3 international airports, the Amtrak Train Station, UMD shuttle buses, and even a DC bikeshare, the DMV is a well-connected area perfect for local and international travelers. The readily accessible modes of transportation make traveling to conferences and academic events a breeze.

Food & Drink: Treat yourself to a delicious adventure by exploring the dynamic restaurants, coffee shops, and weekend farmers markets available all throughout the DMV! Check out the UMD's Dairy for fresh ice cream, Insomnia Cookies for late night sweet treats, and the on-campus farmers market for some fresh fruits and veggies!

RESEARCH

There are numerous research institutes located in the DMV (NIH, Krieger, MPRC, Lieber), enabling unparalleled access to NIH scientists, facilitating collaborations, training, and mentorship opportunities (e.g. Atlas, Pine, Ernst, AFNI developers, and more).

Here at the Shackman Lab, you will have opportunities to attend NIH-hosted neuroscience workshops, meet with invited NIH speakers, and develop collaborations with NIH faculty.
UMD NEUROSCIENCE

The UMD Neuroscience and Cognitive Science program holds an international reputation for top-tier affective, translational, and developmental neuroscientists (e.g. Luiz Pessoa, Nathan Fox, Alex Shackman, Elizabeth Redcay, Alec Solway, and Ed Bernat).

With an on-campus Maryland Neuroimaging Center (MNC), UMD offers unique training opportunities and cutting-edge data collection techniques.

- Data collection techniques include: MEG, high-density EEG, MRI/fMRI (multiband BOLD, ASL, rsFC), fMRI & EEG dual recording, electrodermal activity, psychophysiology, and eye tracking.
- The MNC offers advanced MRI operator training sessions and hosts a journal club to discuss latest scientific advancements.

UMD CLINICAL PSYCHOLOGY

The UMD Clinical Psychology program provides access to multiple year long external clinical placements at many renowned and diverse settings including pediatric psychology and acute mental illness (sites include: Children’s National, Washington DC VA Medical Center, Kennedy Krieger Institute, National Institutes of Mental Health, Baltimore VA Medical Center).

- An in-house clinic enables students to conduct therapy and assessments in close proximity to their classes/research labs with close mentorship from clinical supervisors.
- Clinical psychology students are highly involved in the development of their own training, with student-led committees that serve to fulfill greater community aims such as training, mentorship, and diversity.
**Introducing Dr. Alex Shackman**

**Who is Dr. Alex Shackman?**

Dr. Shackman has demonstrated a strong and sustained commitment to improving the state of clinical neuroscience training. With the limited timeline of a PhD program, advancements must be made to ensure that our future leaders receive adequate training in the many domains that comprise a career in clinical neuroscience science. To further this goal, Dr. Shackman has...

**Philosophy & Approach.**

Mentoring trainees to become top-notch, multidisciplinary scientists is important, but challenging. I am a firm believer in hands-on training combined with formal assessments of hard skills. To that end, my lab has developed its own structured imaging training protocols, with a focus on our unique, cutting-edge processing and analysis pipeline.

**Preparation.** Science is not an established body of facts, but a practical set of methods for estimating and reducing uncertainty, an on-going process, at times messy or tedious, of grappling with nature and our preconceived notions about how it works.

**Inspiration.** The best science is infused with a sense of magic, revelation, and wonder. It is inspiring, counter-intuitive, and eye-opening.

**Scientific Contribution Areas:**

1. Psychiatric nosology: Active member of Hierarchical Taxonomy of Psychopathology (HiTOP), a multi-disciplinary international consortium that promote the development and dissemination of a reliable, usable dimensional model of mental illness, with the aim of improving research, diagnosis, prognosis, and treatment.
2. Understanding the neurobiology of phenotypic risk for the development of emotional disorders and depression.
3. Affective and translational neuroscience.
4. The interplay of anxiety and cognition.
5. Emotion and cognition integration in the mid-cingulate cortex.

**The Shackman Lab’s Commitment to Training**

- Developed an in-house imaging competency exam and training materials to ensure rigorous, and systematic training.
- Worked with the DCT and other clinical faculty to reduce the number of graduate courses necessary to satisfy APA requirements, leaving more time for training and research.
- Co-organized a national survey of clinical neuroscience graduate students and their mentors. Based on the survey results, organized a roundtable discussion with Dylan Gee (Yale) and Bob Levenson (UC-Berkeley/PCSAS) at the 2018 annual meeting of the Society for Research in Psychopathology to discuss key challenges in the graduate training field.
- Co-organized a workgroup of leaders in the field focused on developing and disseminating best practices for graduate training in clinical neuroscience (Gee, Tillman, Barch, Berenbaum, Forbes, Krueger & Strauman).
Prospective Determination of Neurobehavioral Risk for the Development of Emotion Disorders  
(NIMH R01; Collaborators: Pessoa, Hancock, Eatont, Kashdan)  
- ABOUT: 30-month prospective longitudinal study examining the psycho-biological pathways that confer risk for anxiety and mood disorders in young adults.  
- STATUS: Imaging data collected; f/u clinical/EMA assessments are on-going; baseline EMA data analyzed/written; data collection done in 2020.

The Role of Anxiety-Related Brain Circuits in Tobacco Dependence and Withdrawal  
(NIDA R21; Collaborators: Curtin)  
- ABOUT: A study examining the role of fear and anxiety circuitry in addiction (community tobacco smokers).  
- STATUS: Data collected.

Emotion in the Adolescent Brain  
(Start-up; Collaborators: De Los Reyes)  
- ABOUT: A study examining the role of fear and anxiety circuitry in adolescent social anxiety disorder.  
- STATUS: Data collection is on-going.

The Impact of Acute Alcohol Administration on Brain Substrates of Anxiety  
(Start-up; Collaborators: Curtin)  
- ABOUT: A study examining the impact of acute alcohol administration on fear and anxiety circuitry.  
- STATUS: Data collected; face/place data published; countdown data untouched.

Understanding the Role of Negative Affect in Psychosis Using Multimodal Imaging and Wearable Sensors  
(UMD Seed Grant/NIMH RO1; Collaborators: Blanchard, Anticevic, Stewart, Lemay, Hancock, Danny Wang (USC))  
- ABOUT: A study examining the psychobiological pathways that support pathology negative affect and paranoia in psychosis.  
- STATUS: Pilot data collection is on-going (RO1 under review).

The Impact of Benzodiazepine Administration on Brain Signatures of Anxiety  
(Piloting/RO1; Collaborators: TBD)  
- ABOUT: A study examining machine learning and neuropsychopharmacology to develop a robust brain signature for anxiety.  
- STATUS: Pilot data collection is on-going (RO1 under review).