

Kailyn Faye R Witonsky

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EDUCATION

University of Pittsburgh/CMU Medical Scientist Training Program, Pittsburgh, PA Expected May 2027
MD/PhD Candidate

Foundation for Advanced Education in the Sciences at the NIH (FAES) Dec 2017
Graduate coursework: Introduction to Epidemiology, Current Trends in the Neurobiology of Mental Illness

Swarthmore College, Swarthmore, PA May 2016
Bachelor of Arts, Majors: Neuroscience and English Literature GPA 3.79/4.0
Relevant Coursework: Data Analysis and Visualization, Statistical Methods, Social, Cognitive and Affective Neuroscience, Research Design and Analysis, Neurobiology, Animal Behavior
Honors/Memberships: *The Karen Dvonch Steinmetz '76 Memorial Prize; Philip Evans Scholar; Sigma Xi, Member*

RESEARCH EXPERIENCE

National Institutes of Health ("NIH"), Bethesda, MD July 2017 - May 2019
Training Fellow, Postbaccalaureate Intramural Research Training Award (IRTA), National Institute of Mental Health (NIMH)
Genetic Epidemiology Branch, Principal Investigator: Dr. Kathleen Merikangas

- Commitment to full-time epidemiological research focused on how mental disorders run in families
 - Recruit, screen, and interview participants in clinic and community
 - Coordinate clinical visits and administer smell and neuropsychological cognitive tasks in person
 - Process clinical measures including blood, DNA, saliva, actigraphy, and ecological momentary assessment
 - Code diagnostic criteria for headache characteristics using standard and novel methods
 - Developing a migraine analytical plan on team of 3
 - Analyze and interpret data from mobile technologies in clinical and population samples
 - Performed literature reviews on Dim Light Melatonin Onset, Headache Diaries, and fMRI
 - Working on a team to design and pilot translational research on light, rhythms and mood in mice and humans
 - Mentored 2 summer students conducting research projects on pain/sleep and migraine/mood-reactivity

National Institutes of Health ("NIH"), Baltimore, MD July 2016 - June 2017
Training Fellow, Postbaccalaureate Intramural Research Training Award (IRTA), National Institute on Drug Abuse (NIDA)
Behavioral Neuroscience Branch, Principal Investigator: Dr. Yavin Shaham
Post-Doctoral Fellow: Anna Li

- Commitment to full-time biomedical behavioral neuroscience research focused on the neuronal and molecular mechanisms of drug relapse to methamphetamine in a rat model
 - Ran behavioral trials, tests, for multiple cohorts simultaneously (~ 28 rats per cohort)
 - Performed/taught intravenous surgery and assisted in animal care
 - Assisted in immunohistochemistry, CTB+Fos double labeling, neuronal imaging procedures, and neuronal activation quantification
 - Regularly presented at weekly meetings and journal clubs
 - Performed statistical analyses, assisted in creating figures, paper writing, and editing
 - Earned co-authorship on *Journal of Neuroscience* (2nd) and *Biological Psychiatry* (3rd) publications

Swarthmore College, Swarthmore, PA Dec. 2014 – May 2016

Undergraduate Research Thesis

Principal Investigator: Dr. Alex Baugh

- Performed literature reviews and designed a system to quantify abnormal stress behavioral responses in 38 birds
- Cleaned and formatted large data set in Excel

- Established a collaboration to develop two Python programs leading to increased accuracy and efficiency in analysis
- Analyzed stress data and hormone data using RStudio while controlling for total movement
- Presented findings and defended research in public and private defense
- Earned co-authorship (2nd) in *Animal Behaviour* publication

The Children's Hospital of Philadelphia (CHOP), Philadelphia, PA
2014

June 2014 – Aug.

Student Scholar - Research Institute Summer Scholars Program (CRISSP), Pediatric Neurology

Principal Investigator: Dr. Christina Szperka

- Performed clinical research comparing tension type and migraine headache characteristics in pediatric patients meeting different criteria for Pseudotumor cerebri syndrome
- Self-taught and applied Research Electronic Data Capture (REDCap) to construct a patient survey
- Detected new patterns across patient data in preliminary analysis leading to redesign of survey
- Conducted a retrospective chart review of physical and electronic (EPIC) patient medical records
- Attended an IRB meeting and engaged in informational interviews and shadowing with CHOP staff
- Earned co-authorship (2nd) in *Headache* publication

PUBLICATIONS

Research

- 1) Lateef, T., **Witonsky, K.**, He, J. and Ries Merikangas, K., 2019. Headaches and sleep problems in US adolescents: Findings from the National Comorbidity Survey–Adolescent Supplement (NCS-A). *Cephalalgia*, 39(10), pp.1226-1235.
- 2) Rubio, F.J., Quintana-Feliciano, R., Warren, B.L., Li, X., **Witonsky, K.F.**, Valle, F.S.D., Selvam, P.V., Caprioli, D., Venniro, M., Bossert, J.M. and Shaham, Y., 2019. Prelimbic cortex is a common brain area activated during cue-induced reinstatement of cocaine and heroin seeking in a polydrug self-administration rat model. *European Journal of Neuroscience*, 49(2), pp.165-178.
- 3) Hamedani, A.G., **FR Witonsky, K.**, Cosico, M., Rennie, R., Xiao, R., Sheldon, C.A., Paley, G.L., McCormack, S.E., Liu, G.W., Friedman, D.I. and Liu, G.T., 2018. Headache Characteristics in Children With Pseudotumor Cerebri Syndrome, Elevated Opening Pressure Without Papilledema, and Normal Opening Pressure: A Retrospective Cohort Study. *Headache: The Journal of Head and Face Pain*.
- 4) Li, X., **Witonsky, K.**, Lofaro, O.M., Surjono, F., Zhang, J., Bossert, J.M. and Shaham, Y., 2018. Role of anterior intralaminar nuclei of thalamus projections to dorsomedial striatum in incubation of methamphetamine craving. *Journal of Neuroscience*, pp.2873-17.
- 5) Li, X., Carreria, M.B., **Witonsky, K.F.**, Zeric, T., Lofaro, O.M., Bossert, J.M., Zhang, J., Surjono, F., Richie, C.T., Harvey, B.K. and Son, H., 2017. Role of dorsal striatal histone deacetylase 5 in incubation of methamphetamine craving. *Biological Psychiatry*.
- 6) Baugh, A.T., **Witonsky, K.R.**, Davidson, S.C., Hyder, L., Hau, M. and van Oers, K., 2017. Novelty induces behavioural and glucocorticoid responses in a songbird artificially selected for divergent personalities. *Animal Behaviour*, 130, pp.221-231.

POSTER PRESENTATIONS

NIH Research Festival, Bethesda, MD, September 13th, 2018

NIMH Scientific Training Day, Washington, DC, September 7th, 2018

Witonsky KR, Lateef T, Xiao Y, Cui L, Zipunnikov V, Merikangas K.

- *Daily patterns and symptomatology of migraine attacks assessed in real-time via mobile technologies*

John Hopkins Sleep & Circadian Research Day, Baltimore, MD, June 25th, 2018

Witonsky K*, Xiao Y*, Zipunnikov V, Swendsen J, Merikangas K.

*Equally contributing authors

- *Directional associations between sleep characteristics and stress reactivity using mobile technologies*

World Psychiatric Association: Epidemiology and Public Health Section, Columbia, NY, May 4th, 2018

Witonsky K, Cui L, Swendsen J, Zipunnikov V, Merikangas K.

- *Inter-relationships of mood, motor activity, and sleep using mobile technologies*

NIH Research Festival, Bethesda, MD, September 14th, 2017

NIMH Scientific Training Day, Bethesda, MD, September 11th, 2017

Witonsky K, Cui L, Lateef T, Merikangas K.

- *Circadian preference and insomnia differs between individuals with and without migraine in a nonclinical sample: results from the NIMH family study*

National Institute on Drug Poster Day, Baltimore, MD, May 17th, 2017

Witonsky K, Surjono F, Zeric T, Bossert J, Shaham Y, Li X.

- *Role of afferents into dorsal striatum in incubation of methamphetamine (Meth) craving*

Society for Integrative and Comparative Biology, Portland, OR, Jan. 6, 2016

Swarthmore College Sigma Xi Student Research Poster Presentation, Swarthmore, PA, Sept. 17th and 18th, 2015

- *The influence of object neophobia on behavioral coping and hormonal stress responses in great tits (*Parus major*) selected for divergent personalities*

26th Annual Saint Joseph's University Sigma Xi Student Research Symposium, Philadelphia, PA, April 17th, 2015

- *Abnormal repetitive behavior and stress physiology are linked with personality in a European songbird (*Parus major*)*

Swarthmore College Sigma Xi Student Research Poster Presentation, Swarthmore, PA, Sept. 19th and 20th, 2014

The Children's Hospital of Philadelphia (CHOP), Philadelphia, PA, Aug. 2014

- *Comparison of headache characteristics in children who do and do not meet revised criteria for Pseudotumor Cerebri Syndrome*

PUBLIC HEALTH EXPERIENCE

NIH Academy

September 2017– Present

Fellow

- One of 31 Fellows selected for the 10 month NIH Academy program
- Active participant (minimum 120 hours):
 - Health Disparities Short Course, Fellows Retreat, Diversity Workshop, 8 Roundtable sessions exploring health disparities, 3 Health Disparity Seminars, and Career Planning Workshop
- Designed and implemented a 10 month community outreach project aimed at increasing health disparity awareness in young people culminating in a public presentation in May 2018

Speak2Swatties, Swarthmore College, Swarthmore, PA

Sept. 2013 – May 2016

Peer Counselor and Co-Leader

- Co-led efforts in the design, re-envisioning, and startup of Speak2Swatties after the dissolution of the group
 - Sought education and training on mental health on campus and in college-aged people
- Engaged in peer counseling based in active listening
- Designed and facilitated programming and mental health advocacy events based on community needs and feedback
- Elected to co-lead (2 years) and trained 7 counselors ensuring standardized practices
- Work resulted in positive verbal and written feedback, large attendances, dynamic discussions, and repeatedly receiving larger event budgets than initially requested from student council

Global Medical Brigades, San Carlos, Panama

May 2015

Volunteer

- Educated both children and adults in improved medical, dental, hydration, and hygiene to create sustainable daily health prevention practices
- Assisted medical, dental and pharmacological staff providing support to over 424 patients

Swarthmore College, Swarthmore, PA

Aug.

2014

Leader, Resident Assistant Orientation

- Led and facilitated trainings on diversity, healthy relationships, identity, community living, and drug use

Intercultural Center – Swarthmore College, Swarthmore, PA

Sept. 2013

Diversity Workshop Facilitator

- Facilitated discussions with new students promoting awareness, understanding and acceptance of diversity

ADDITIONAL LEADERSHIP EXPERIENCE

Swarthmore College, Swarthmore, PA

Aug. 2014 – May

2016

Resident Assistant

- Oversaw over 30 residents ensuring understanding and compliance with collegiate policies, creating a positive and safe dorm culture
- Organized and implemented weekly programming and monthly events for up to 150 attendees
- Counseled students creating inclusive, dynamic teams and living communities
- Engaged in both personal and external self-assessment via weekly hall meetings and bi-weekly administrator meetings, and adapted accordingly

McCabe Library – Swarthmore College, Swarthmore, PA

Sept. 2012 – May

2016

Circulation Desk Attendant (Sept. 2013 – 2016), *Library Technician* (Sept. 2012-May 2013)

- Processed and answered customer requests, researched, and problem solved in an efficient manner
- Designed and implemented Excel spreadsheet enabling enhanced processing of invoices and record management

ADDITIONAL VOLUNTEER EXPERIENCE

Shady Grove Medical Center

Apr. 2018 – Present

Volunteer

- Clinical weekly volunteer in a hospital postpartum unit
- Assist with discharge, paperwork and care of supplies

Swarthmore Admissions Volunteer

Dec. 2016 – Present

Volunteer

- Conduct interviews for prospective Swarthmore students in Baltimore and DC
- Provide qualitative and quantitative information about Swarthmore College to prospective students
- Write clear and comprehensive evaluations on behalf of Swarthmore College

English Conversation Partner

Dec. 2016 – July 2018

Volunteer

- Met weekly with Dr. Yong Zhang, a visiting neurologist at NIH, focused on improving English language ability and mutual cultural understanding
- Provided daily language assistance to Dr. Jianjun Zhang, a visiting psychology professor (Shaham lab)
- Edited presentations, grants, and manuscript for Dr. Zhang (Shaham lab)

American Foundation for Suicide Prevention – Colorado Chapter, Highlands Ranch, CO

June 2013 – Aug. 2013

Intern

- Solicited and secured donations and sponsorships from organizations and individuals
- Designed PowerPoint presentation used for demonstration at Charles Schwab, securing corporate support
- Drafted emails, forms, and correspondence marketing events and increasing volunteer recruitment
- Active participant in bi-weekly strategy meetings
- Continued relationship with AFSP, forming a yearly Swarthmore AFSP walking team through Speak2Swatties

COMPUTER SKILLS

- Applied use of REDCap, Epic, RStudio, SPSS, Prism, Excel, PowerPoint, Word, Google Docs