**CURRICULUM VITAE**

**Sheila R. Shanmugan, M.D, Ph.D.**

**EDUCATION**

2009 – 2013 B.A. University of Pennsylvania (Biological Basis of Behavior)

2013 – 2017 Ph.D. University of Pennsylvania (Neuroscience)

2013 – 2018 M.D. University of Pennsylvania

**FELLOWSHIPS, HONORS, AND AWARDS**

**SOBP Predoctoral Scholar’s Fellowship Award**, Society of Biological Psychiatry, 2018

**Dr. David B. P. Goodman Award for Outstanding Paper**, Perelman School of Medicine, 2018

**Kenneth E. Appel Award for Devotion to Patient Care**,Perelman School of Medicine, 2018

**F1000Prime Recommended Article,** Faculty of 1000, 2017

Article by Shanmugan S et al. published in *Psychoneuroendocrinology* received the ranking of "Exceptional" (3/3).

**Predoctoral Ruth L. Kirschstein National Research Service Award (NRSA) Research Fellowship (F30 AG055256),**

National Institute On Aging, National Institutes of Health (NIH), 2016

**Jameson-Hurvich Award in Behavioral Neuroscience**, University of Pennsylvania, 2016

**Phi Beta Kappa**, University of Pennsylvania, 2014

**Medical Scientist Training Program Fellowship,** Perelman School of Medicine, 2013-2018

**Penn Institute on Aging Poster Competition Award in Clinical Research,** University of Pennsylvania, 2013

**Summa Cum Laude**, University of Pennsylvania, 2013

**Honors with Distinction in Biological Basis of Behavior**, University of Pennsylvania, 2013

**Phi Sigma Biological Sciences Honors Society**, University of Pennsylvania, 2012

**Pincus-Magaziner Family Undergraduate Research Grant**, University of Pennsylvania, 2012

**Penn Undergraduate Research Mentoring Program**, University of Pennsylvania, 2011

**Tennessee Women in Science, Technology, Engineering, and Research Scholarship,** Women in Technology of

Tennessee, 2009

**Valedictorian**, Battle Ground Academy, 2009

**PUBLICATIONS**

**Shanmugan S**, Satterthwaite TD, Sammel MD, Cao W, Ruparel K, Gur RC, Epperson CN, Loughead J (2017). Impact of Early Life Adversity and Tryptophan Depletion on Functional Connectivity in Menopausal Women: A Double-Blind, Placebo-Controlled Crossover Study. *Psychoneuroendocrinology*. doi: 10.1016/ j.psyneuen.2017.07.239

**Shanmugan S**, Loughead J, Cao W, Sammel MD, Satterthwaite TD, Ruparel K, Gur R, Epperson CN (2017). Impact of Tryptophan Depletion on Executive System Function during Menopause is Moderated by Childhood Adversity. *Neuropsychopharmacology*. doi: 10.1038/npp.2017.64

**Shanmugan S**, Loughead J, Nanga RPR, Elliot MA, Hariharan H, Appleby D, Kim DR, Ruparel K, Reddy R, Brown T, Epperson CN (2017). Lisdexamfetamine Effects on Executive Activation and Neurochemistry in Menopausal Women with Executive Difficulties. *Neuropsychopharmacology*. doi: 10.1038/npp.2016.162

**Shanmugan S**, Satterthwaite TD (2016). Neural Markers of the Development of Executive Function: Relevance for Education. *Curr Opin Behav Sci*. 10:7-13

**Shanmugan S,** Wolf DH, Calkins ME, Moore TM, Ruparel K, Hopson R, Vandekar SN, Roalf DR, Elliott MA, Jackson C, Gennatas ED, Leibenluft E, Pine, DS, Shinohara RT, Hakanarson H, Gur RC, Gur RE, Satterthwaite TD (2016), Common and Dissociable Mechanisms of Executive System Dysfunction Across Psychiatric Disorders in Youth. *Am J Psychiatry*. 173:517-526

Epperson CN, **Shanmugan S**, Kim DR, Mathews S, Czarkowski KA, Bradley J, Appleby DH, Iannelli C, Sammel MD, Brown TE(2015). New Onset Executive Function Difficulties at Menopause: A Possible Role for Lisdexamfetamine. *Psychopharmacology* 232(16): 3091-3100

**Shanmugan S**, Epperson CN (2014), Estrogen and the Prefrontal Cortex: Towards a New Understanding of Estrogen's Effects on Executive Functions in the Menopause Transition. *Hum. Brain Mapp*., 35: 847–865. doi: 10.1002/hbm.22218

**Shanmugan S**, Sammel MD, Loughead J, Ruparel K, Gur RC, Brown TE, Faust J, Domchek S, Epperson CN. (Under Review). Executive Function after Risk-Reducing Salpingo-Oophorectomy in BRCA1 and BRCA2 Mutation Carriers: Does Current Mood and Early Life Adversity Matter?

**ORAL PRESENTATIONS**

**Shanmugan S**, Loughead J, Sammel MD, Satterthwaite TD, Cao W, Baller E, Ruparel K, Gur RC, Epperson CN. Impact of Adverse Childhood Experiences on Behavioral and Neural Markers of Executive Function in Menopausal Women. Society of Biological Psychiatry; 2018 May 10; New York, New York

**Shanmugan S**, Loughead J, Cao W, Sammel M, Ruparel K, Gur RC, Epperson C.N. Early Adversity Effects on Working Memory During Menopause: Is There an Estrogen-Serotonin Interaction? Specialized Center for Research on Sex Differences Advisory Board Meeting; 2016 May 27; Philadelphia, PA

**Shanmugan S,** Wolf DH, Calkins ME, Moore TM, Ruparel K, Hopson R, Vandekar SN, Roalf DR, Elliott MA, Jackson C, Gennatas ED, Leibenluft E, Pine, DS, Shinohara RT, Hakanarson H, Gur RC, Gur RE, Satterthwaite TD. Common and Dissociable Mechanisms of Executive System Dysfunction Across Psychiatric Disorders in Youth.Lifespan Brain Institute Neuroimaging Seminar Series; 2016 June 9; Philadelphia, PA

**POSTERS/ABSTRACTS**

**Shanmugan S**, Sammel MD, Loughead J, Ruparel K, Gur RC, Brown TE, Faust J, Domchek S, Epperson CN.Contribution of Mood Symptoms to Early Life Adversity Effects on Executive Function after Risk Reduction Salpingo-Oophorectomy. Poster session presented at: Society of Biological Psychiatry; 2018 May 10; New York, New York

**Shanmugan S**, Loughead J, Cao W, Sammel M, Ruparel K, Gur RC, Epperson CN. Adverse Childhood Experiences Moderates the Impact of Tryptophan Depletion on Executive System Function. Poster session presented at: American College of Neuropsychopharmacology; 2016 Dec 6; Hollywood, FL

**Shanmugan S**, Loughead J, Cao W, Epperson CN. Interactive effects of Adverse Childhood Experiences and Tryptophan Depletion on Executive Function in Healthy Menopausal Women. Poster session presented at: Organization for the Study of Sex Differences; 2016 May 25; Philadelphia, PA

**Shanmugan S**, Nanga RPR, Hopson R, Valdez J, Hariharan H, Elliott M, Bradley J, Schinstine C, Reddy R, Epperson CN. Psychostimulant treatment effects on prefrontal brain activation, glutamate concentration and executive function in menopausal women with memory complaints. Poster session presented at: Neuroscience 2012. 42nd Annual Meeting of the Society for Neuroscience; 2012 Oct 17; New Orleans, LA.

**EDITORIAL EXPERIENCE**

Reviewed for: *American Journal of Psychiatry, Biological Psychiatry, Current Opinion in Behavioral Sciences, Molecular Psychiatry, Psychoneuroendocrinology*

**TEACHING EXPERIENCE**

**Lecture,** Hartshorne Mudd Summer Research Intensive Lecture Series, July 2016 (1 session; Introduction to Neuroimaging: Techniques and Applications)

**Teaching Assistant**, Molecular and Cellular Neurobiology (BIBB 251), University of Pennsylvania, Fall 2016

**Organic Chemistry Tutor**, The Tutoring Center, University of Pennsylvania, Jan 2012 – May 2013

**LEADERSHIP EXPERIENCE**

**MD/PhD Admissions Tour Committee**, University of Pennsylvania (2015-2017)

 **Co-Chair** (2016-2017)