

## COLLEGE OF MEDICINE CURRICULUM VITAE

September 2012

### A. List of institutions attended (least to most recent)

1992	Earlham College, Richmond, IN – B.A.- Biology and Chemistry
2001	Johns Hopkins University School of Medicine, Baltimore, MD – MD
2001	Johns Hopkins University School of Medicine, Baltimore, MD – PhD (Neuroscience - Dr. Solomon Snyder, PI)
2001-2002	Johns Hopkins University School of Medicine, Internal Medicine Internship
2002-2004	Johns Hopkins University School of Medicine, Department of Psychiatry Residency
2004-2005	UT Southwestern Medical Center, Department of Psychiatry Research Tract Residency
2005-2006	UT Southwestern Medical Center Research Fellow, Departments of Psychiatry and Biochemistry (Dr. Steven McKnight, PI)

American Board of Psychiatry and Neurology      1/19/2007      56912

Texas      M3358      4/7/2006

### B. Professional and academic positions (least to most recent)

09/2006-09/2012	Assistant Professor, Departments of Psychiatry and Biochemistry, University of Texas Southwestern Medical Center, Dallas, TX
09/2012-present-	Associate Professor, Department of Psychiatry Director of Translational Neuroscience University of Iowa Carver College of Medicine, Iowa City, IA

### C. Honors, Awards, Recognitions, Outstanding Achievements (least to most recent)

1988	Earlham College Community Service Scholarship 1985-1989
1992	Chemistry Departmental Honors, Earlham College
1992	Biology Departmental Honors, Earlham College
1992	College Honors, Earlham College
1992	Earlham College Russel L. Malcom Premedical Award
1992	Phi Beta Kappa
2003	Johns Hopkins University Department of Psychiatry Administrative Resident
2003	Janssen Research Scholars on Severe Mental Illness / APIRE Fellowship
2005	UTSWMC Department of Psychiatry Chairman's Research Award
2005	UTSWMC Physician Scientist Training Program Fellowship
2005	UTSWMC David Nathan Meyerson Fellow in Psychiatric Research
2006	Lilly Psychiatric Research Fellowship
2007	Merck Early Academic Career Award
2007	NARSAD Young Investigator Award
2007	Hartwell Individual Biomedical Research Award
2008	Hartwell Biomedical Research Collaboration Award
2008	Rett Syndrome Research Trust Research Award
2009	NARSAD Young Investigator Award
2009	UTSWMC Hi Risk / Hi Impact Research Award
2009	American College of Neuropsychopharmacology Travel Award
2009	Staglin Family Rising Star Research Award (IMHRO)
2010	Ted Nash Long Life Foundation Research Award
2011	Friends of the Alzheimer's Disease Center Research Award

2011 Daniel X Freedman Award, Honorable Mention for Outstanding Basic Research Achievement by a Brain and Behavior Research Foundation Young Investigator

A. Teaching assignments on semester by semester basis (least to most recent)

2006-2012	Mentoring of Medical Students and Psychiatry Residents in Parkland Hospital Psychiatric Emergency Department
2006-2012	Psychiatry Medical Student and Resident Academic Teaching Rounds on Inpatient Wards
2008, 2010	UT Southwestern MSTP program lecturer
2006-2012	Case Study of Ethics, small group discussions in Graduate Neuroscience Program
2008-2012	Co-organizer (2008) and lecturer for Neurobiology of Mental Illness, Psychiatry / Neuroscience
2006-2012	PGY3 residents, lecturer
2009-2012	Co-organizer of N

**Mentor for Rotating Residency Research Tract Students**

Tracy Snell

**Mentor for Summer Students (Surf, Stars and Student Internships):**

Bryce Foster (2006)  
Richard Price (2006)  
Hannah Shen (2006, 2008)  
Jeremiah Britt (2008)  
Alyssa McMenamy-Becker (2008)  
Marissa Goddard (2008)  
Shauna Goldman (2008)  
Alex Wang (2009)  
Jessica Thomas (2009)  
Sarah Ally (2009-present)  
Devin McDaniel (2009)  
Vivian Ho (2010, 2011)  
Shivali Chag (2010)  
Jo Tang (2009, 2010)  
Rudy Hikel (2010)  
Jieqi Wang (2011)  
Manjari Subramaniam (2011)  
Indu Bedi (2011)  
Cristina Co (2011)  
Rachel Hodges (2012)

C. Other contributions to institutional programs

**Community Presentations**

- 2010 NPR Interview, KERA Dallas / Fort Worth
- 2010 International Mental Health Research Organization - Discovery of New Treatments for Mental Illness, Dallas, TX
- 2010 Little Elm High School - Careers in Mental Illness Research Series, Little Elm, TX
- 2011 Friends of the Alzheimer's Disease Center Lecture Series, Dallas, TX
- 2011 IMHRO Interview on Schizophrenia Treatment and Research, Free Your Mind Radio Show, Brian Canning, Next Wave Production, Los Angeles, CA.  
([http://www.freeyourmindprojects.com/index.php?option=com\\_content&view=article&id=15&Itemid=15](http://www.freeyourmindprojects.com/index.php?option=com_content&view=article&id=15&Itemid=15))
- 2012 Cedar Centre of Psychiatry guest lecturer, Cedar Rapids, Iowa.

A. Publications and creative works (least to most recent)

**Publications**

1. Zhang J, Pieper AA, Snyder SH. (1995) Poly (ADP-ribose) synthetase activation: an early indicator of neurotoxic DNA damage. 65:1411-1414.
2. Eliason MJL, Sampei K, Mandir AS, Hurn PD, Traystman RJ, Bao J, Pieper AA, Wang Z-Q, Dawson TM, Snyder SH, Dawson VL. (1997) Poly (ADP-ribose) polymerase gene disruption renders mice resistant to cerebral ischemia. 3:1089-1095.
3. , Brat DJ, Krug DK, Watkins CC, Gupta A, Blackshaw S, Verma A, Wang Z-Q, Snyder SH. (1999) Poly (ADP-ribose) polymerase-deficient mice are protected from streptozotocin-induced diabetes. 96:3059-3064. PMID 15894
4. Takahashi K, , Croul SE, Zhang J, Snyder Sh, Greenberg JH. (1999) Post-treatment with an inhibitor of poly(ADP-ribose) polymerase attenuates cerebral damage in focal ischemia. 1999; 829:46-54. ACCESSION # 10350529

5. Verma A, Zhang J, Snyder SH. (1999) Poly (ADP-ribose) polymerase, nitric oxide and cell death. *J Neurosci* 20(4): 171-181. [ACCESSION # 10322503](#)
6. LaPlaca MC, Raghupathi R, Verma A, , Saatman KE, Snyder SH, McIntosh TK. (1999) Temporal patterns of poly(ADP-ribose) polymerase activation in the cortex following experimental brain injury in the rat. *J Neurosci* 1999; 73:205-213. [ACCESSION # 10386972](#)
7. , Walles T, Wei G, Clements EE, Verma A, Snyder SH. (2000). Myocardial postischemic injury is reduced by poly (ADP-ribose) polymerase-1 gene disruption. *J Biol Chem* 275(4):271-282. [PMCID 1949947](#)
8. , Blackshaw S, Clements EE, Brat DJ, Krug DK, White AJ, Pinto-Garcia P, Favitt A, Conover JR, Snyder SH, Verma A. (2000) Poly (ADP-ribosyl)ation basally activated by DNA strand breaks reflects glutamate-nitric oxide neurotransmission. *J Biol Chem* 275(4):1845-1850. [PMCID 26524](#)
9. , Brat DJ, O'Hearn E, Krug DK, Kaplin AI, Takahashi K, Greenberg JH, Ginty D, Molliver ME, Snyder SH (2001) Differential neuronal localizations and dynamics of phosphorylated and unphosphorylated type 1 inositol 1,4,5-trisphosphate receptors. *J Biol Chem* 276(2):433-444. [ACCESSION # 11166129](#)
10. Treisman GJ. (2004-present). Overview of the neuropsychiatric aspects of HIV infection and AIDS. [UpToDate.](#)
11. Treisman GJ. (2004-present). Depression, mania, and schizophrenia in HIV-infected patients. [UpToDate.](#)
12. Treisman GJ. (2004-present). Dementia and delirium in HIV-infected patients. [UpToDate.](#)
13. Treisman GJ. (2004-present). Substance abuse and addiction in HIV-infected patients. [UpToDate.](#)
14. , Wu X, Han TW, Estill SJ, Dang Q, Wu LC, Reece-Fincannon S, Dudley CA, Richardson JA, Brat DJ, McKnight SL. (2005). The neuronal PAS domain protein 3 transcription factor controls FGF-mediated adult hippocampal neurogenesis in mice. *J Biol Chem* 280(39):14052-14057. [PMCID 1216832](#)
15. Treisman GJ. (2005). Drug treatment of depression in HIV-positive patients: Safety considerations. *J Clin Psychiatry* 66(9):753-762. [ACCESSION # 16119970](#)
16. Pickard BS, , Porteus DJ, Blackwood DH, Muir WJ. (2006). The NPAS3 gene—emerging evidence for a role in psychiatric illness. *J Psychiatry* 161(6): 439-448. [ACCESSION # 17008307](#)
17. , Rush AJ, John A, Choate L, Gibson A, Ayacannoo S, Noack KR, Han TW, Quinn C, Ihara T, Probst B, McKnight SL (2006). Polymorphic variation in human circadian genes in mental illness. [\(posted May 15, 2006\).](#)  
Zhao H, Lidet N, Wei W, LaCour TG, Estill SJ, Capota E, , Harran PG. (2008). Acid promoted cinnamyl ion mobility within peptide derived macrocycles. *J Am Chem Soc* 130(42): 13864-13866 [18811162](#)
19. , Xie S, Capota E, Estill SJ, Zhong J, Long JM, Becker GL, Huntington P, Goldman, SE, Shen C-H, Capota M, Britt JK, Kotti T, Ure K, Brat, DJ, Williams NS, MacMillan KS, Naidoo J, Melito L, Hsieh J, DeBrabander J, Ready J, McKnight SL.\* (2010). Discovery of a pro-neurogenic, neuroprotective chemical. *J Neurosci* 30(1): 39-51. [PMCID 2930815 \(\\* = co-corresponding authorship\).](#)
20. Aqul A, Liu B, Ramirez C, , Estill S, Burns D, Repa J, Turley S, Dietschy J. (2011). Unesterified cholesterol accumulation in the late endosomes/lysosomes causes neurodegeneration and is prevented by driving cholesterol export from this component. *J Biol Chem* 286(25): 9404-9413 [PMCID 3134878](#).
21. Watkins CC, , Treisman GJ. (2011) Safety considerations in drug treatment of depression in HIV-positive patients: an updated review. *J Clin Psychiatry* 72(8):623-639. [ACCESSION 21751824](#).
22. MacMillan KS, Naidoo J, Liang J, Melito L, Williams NS, Morlock L, Huntington PJ, Longgood J, McKnight SL, De Brabander JK, Ready JM.\* (2011).

- Development of proneurogenic, neuroprotective small molecules.  
133(5):1428-1437. PMID 3033481.
23. Lee, A.S., Ra, S., Rajadhyaksha, A.M., Britt, J., Moosmang, S., Hofmann, F.,  
\*, Rajadhyaksha, A.M.\* (2012). Forebrain elimination of \* mediates  
anxiety-like behavior in mice. 17:1054-1055.. (\* = co-corresponding  
authorship).
  24. Lee, A.S., Gonzales, K.L., Moosmang, S., Hoffman, F., \*, Rajadhyaksha, A.M.  
(2012). Selective genetic deletion of cacna1c in the mouse prefrontal cortex.  
17: 1051.
  25. Tesla, R., Wolf, H.P., Xu, P., Drawbridge, J., Estill, S.J., Huntington, P., McDaniel, L., Knobbe,  
W., Burket, A., Tran, S., Starwalt, R., Morlock, L., Naidoo, J., Williams, N.S., Ready, J.M.\*,  
McKnight, S.L.\*, Pieper, A.A.\* (2012). Neuroprotective efficacy of aminopropyl carbazoles in a  
mouse model of amyotrophic lateral sclerosis.  
<http://doi:10.1073/pnas.1213960109>. (\* = co-corresponding authorship).
  26. De Jesús-Cortés H., Xu, P., Drawbridge, J., Estill, S.J., Huntington, P., Tran, S., Britt, J., Tesla,  
R., Morlock, L., Naidoo, J., Melito, L., Williams, N.S., Ready, J.M.\*, McKnight, S.L.\*,  
\* (2012). Neuroprotective efficacy of aminopropyl carbazoles in a mouse model  
Parkinson's disease. <http://doi:10.1073/pnas.1213956109>. (\* = co-  
corresponding authorship).

#### **Other: Patents**

McKnight SL, \*, Ready JM, DeBrabander J. July 2010. Proneurogenic compounds.  
U.S. Patent 2010/020681.

(as of June 22, 2011)

##### Application #1, "Pro-Neurogenic Compounds":

- Initial provisional application 60/143,755 was filed January 9, 2009.
- US Utility Application 12/685,652 and corresponding (identical) PCT international  
application (PCT/US2010/020681), based on the initial provisional application, were filed  
January 11, 2010.
- Entry into the National Stage of foreign filing in certain foreign countries will occur in July  
2011 (I believe the deadline is July 11, 2011).

##### Application #2, "Pro-Neurogenic Compounds":

- Continuation-in-Part ("CIP") application 12/832,056, claiming priority to the initial provisional  
application, was filed in the U.S. on July 7, 2010.

##### Application #3, "Pro-Neurogenic Compounds":

- A new Continuation-in-Part application and an identical PCT international application, both  
claiming priority to 12/832,056, will be filed on or before July 7, 2011.

##### Application #3 through #9:

- Seven pending provisional applications, all entitled "Neurotrophic Small Molecules  
Stimulate Postnatal Neurogenesis", were refiled on January 20, 2011; these claim the  
additional compositions that appeared to be of interest in initial screens:

61/296,852  
61/296,854  
61/296,859  
61/296,862  
61/296,863  
61/296,865  
61/296,866

B. Areas of Research Interest and Current Projects

C. Published reviews of scholarship

D. Grants received

**Current**

Investigation of Efficacy of Small, Drug-Like Pro-Neurogenic Molecules in Animal Models of Schizophrenia

NARSAD 2009 Young Investigator's Award

1/1/10 – 12/31/11

Pieper-PI

The main goal of this project is to determine the behavioral efficacy of stimulating hippocampal neurogenesis in models of learning and memory in NPAS3-deficient mice, an animal model of schizophrenia.

Rapid discovery of small molecules for drug development in an animal model of obsessive-compulsive disorder

Hartwell Biomedical Research Collaboration Award, The Hartwell Foundation

09/01/08 – 08/31/11

Pieper, Feng – coPIs

The major goal of this project is to identify through screening small drug-like molecules with behavioral efficacy in an animal model of obsessive-compulsive disorder.

identification of pharmacologic agents for treatment of Rett syndrome

Rett Syndrome Research Trust Research Award, Rett Syndrome Research Trust

09/01/08 – 08/31/11

Pieper-PI

The major goal of this project is to identify through screening small drug-like molecules or FDA-approved drugs having behavioral or physiologic efficacy in an animal model of Rett syndrome.

identification and investigation of new pharmacologic agents to improve hippocampal functioning in schizophrenia

2009 Staglin Family Rising Star in Schizophrenia Research Award, The International Mental Health Research Organization.

09/01/09-08/31/12

Pieper-PI

The major goal of this project is to identify and assess the efficacy of pro-neurogenic small molecules in various animal models of schizophrenia, and to elucidate the basic mechanisms by which these molecules exert their pro-neurogenic effect.

Discovery, characterization and preclinical development of pro-neurogenic drugs.

NIH R01MH87986

10/01/09 – 9/30/14

Pieper, McKnight – coPIs

The main goal of this project is to provide a basis for the discovery of new treatment options for patients suffering from cognitive deficits by developing novel small molecules that augment hippocampal functioning through stimulating birth and functional incorporation of new neurons.

Preclinical development of a proneurogenic, neuroprotective drug targeting hippocampus for treatment of Alzheimer's disease

Ted Nash Long Life Foundation

12/1/10-11/30/12

Pieper-PI

The main goal of this project is to evaluate the efficacy of a series of novel small proneurogenic, neuroprotective molecules in animal models of Alzheimer's disease and cognitive decline with aging.

Development of Proneurogenic, Neuroprotective Molecules as Therapeutics for Alzheimer's disease.  
Thome Foundation Awards Program

12/1/10-11/30/13

Pieper, Ready co-PIs

The main goal of this project is to synthesize and evaluate the proneurogenic, neuroprotective efficacy and side effect profile of novel molecules built on a chemical scaffold known to convey proneurogenic, neuroprotective properties.

Evaluation of proneurogenic neuroprotective compounds in an animal model of Alzheimer's disease.  
Friends of the Alzheimer's Disease Center

4/1/11-3/30/12

Pieper – PI

The goal of this project is to evaluate the efficacy of 2 lead molecules from our laboratory, along with Dimebon (a drug currently in phase 3 trials for Alzheimer's and Huntington's disease), in an animal model of Alzheimer's disease, to provide proof of principle for a new treatment strategy.

Pharmacologic Agents for Treatment of Anxiety in Autism: Cav1.2-deficient Mice as a New Animal Model of Autism.

The Hartwell Foundation

6/15/11 – 6/14/14

Pieper, Rajadhyaksha co-PIs

The goal of this project is to characterize molecular and behavioral deficits in Cav1.2-deficient Mice, and to apply these findings towards the identification of novel small molecules that may serve as a basis for developing new pharmacologic treatments for anxiety in autism.

R21NS081487 (Pieper, Bauman - coPIs) 1/01/13 – 12/31/15

Efficacy of a Novel Neuroprotective Compound in Nonhuman Primate

This project is designed to provide additional support for a novel class of molecules demonstrating neuroprotective effects in rodent models.

Investigation of the Role of Brain  $\hat{A}$  Brain  $\hat{A}$  Bts  $\hat{A}$  r

The main goal of this project was to utilize small molecules that enhance hippocampal neurogenesis to clarify the role of this phenomenon in learning and memory deficits that occur with aging in rodents.

Discovery of small molecules having neurogenic efficacy for treatment of childhood schizophrenia.

The Hartwell Foundation: Hartwell Individual Biomedical Research Award

04/01/07 – 03/31/10

Pieper – PI

The major goal of this project was to identify through screening small drug-like molecules that augment hippocampal neurogenesis.

#### E. Invited lectures

Conference presentations

Visiting Professorships

- 1998 Annual meeting on Ataxia-Telangiectasia, NIH
- 2005 Janssen Research Scholars on Severe Mental Illness / APIRE, Emory University
- 2006 Annual Research Colloquium for Junior Investigators: Neuroscience and Neuroimaging Across the Lifespan, APIRE
- 2006 Neurogenesis and the Adult Brain. Banbury Center, Cold Spring Harbor Laboratory
- 2006 Cold Spring Harbor Laboratory Schizophrenia Workshop. Banbury Center, Cold Spring Harbor Laboratory
- 2007 Symposium on Basic Genetics of Psychiatric Disease. International Conference on Schizophrenia Research
- 2007 Cold Spring Harbor Laboratories Department of Neuroscience Seminar
- 2007 8<sup>th</sup> Annual Rett Syndrome Symposium. Chicago, IL
- 2008 Schizophrenia Research Project Seminar. Tokyo Institute of Psychiatry. Tokyo, Japan
- 2008 Riken BSI Seminar. Tokyo, Japan
- 2008 University of Tokyo Neurogenesis Meeting. Tokyo, Japan
- 2008 Tohoku University Neuroscience Seminar. Sendai, Japan
- 2008 Rett Syndrome: Translating Basic Mechanisms into Novel Treatment Strategies
- 2008 Duke University Department of Neurobiology Seminar
- 2008 1<sup>st</sup> Annual Hartwell Foundation Meeting. Memphis, TN
- 2009 Department of Neuroscience Seminar. Centre de Recherche du CHUL (CHUQ). Quebec
- 2009 2<sup>nd</sup> Annual Hartwell Foundation Meeting. Memphis, TN
- 2009 Staglin Family Rising Star Award Lecture
- 2009 Johns Hopkins University Department of Psychiatry Seminar, Division of Molecular Psychiatry
- 2010 University of Virginia Department of Neuroscience Seminar
- 2010 3<sup>rd</sup> Annual Hartwell Foundation Meeting, Ithaca, NY
- 2010 Neuroscience of Schizophrenia, Neuro2010 Kobe, Japan
- 2010 Department of Natural Science University Lecture, University of Puerto Rico
- 2010 Neuroscience Seminar, BiogenIDEC, Boston, MA
- 2011 UT Southwestern Medical Center, Department of Psychiatry Grand Rounds
- 2011 Burke/Cornell Medical Research Institute Neuroscience Seminar
- 2011 Gail F. Beach Memorial Visiting Lectureship, Miami Project to Cure Paralysis
- 2011 Graduate Program in Neuroscience, Department of Neurology and Neuroscience, (regress n euroscience eminar), Weill Cornell Medical College, New York, NY
- 2011 Division of Neurobiology, Department of Psychiatry Seminar, Johns Hopkins School of Medicine, Baltimore, MD
- 2011 Neurogenesis 2011 (co-organizer of meeting), Kobe, Japan
- 2011 Mini-symposium - MIND Institute – UC Davis, Sacramento, California.
- 2011 Mt. Sinai Friedman Brain Institute Seminar, New York, NY
- 2011 Fourth Annual Hartwell Foundation Meeting, Memphis, TN
- 2011 University of Iowa Department of Psychiatry Seminar, Iowa City, IA
- 2012 Alzheimer's Disease Center Research Seminar, UT Southwestern Medical Center, Dallas, TX



- 2012 Translational Research in Mechanisms of Neurodegeneration Seminar, UTSWMC, Dallas, TX
- 2012 Convergence on Aging Seminar Series, UTSWMC, Dallas, TX
- 2012 University of Alabama at Birmingham (UAB) Department of Neurobiology Seminar, Birmingham, AL.
- 2012 University of Iowa Carver College of Medicine Psychiatry Research Seminar
- 2012 Fifth Annual Hartwell Foundation Meeting, Duke University, Durham, NC.
- 2012 University of Iowa Carver College of Medicine Department of Neurology Grand Rounds

F. Pending decisions (grant proposals, book contracts)

A. Offices held in professional organizations (least to most recent)

***Professional Affiliations:***

Society for Neuroscience

American Psychiatric Association

***Ad Hoc Reviewer:***

***NIH Workshops:***

***NIH Grant Reviews:***

***University and Departmental Committees***

Recruitment of new junior faculty and PYN Division Chief – 2011, 2012

Recruitment of Director for the Parkland Psychiatric Emergency Department - 2011

Chair – Data and Safety Monitoring Board – “Reversing Corticosteroid-Induced Memory Impairment” - Dr. Sherwood Brown

Chair – Data and Safety Monitoring Board – “A Randomized, Double-Blind, Placebo Controlled Trial of Pregnenolone for Bipolar Depression” - Dr. Sherwood Brown

UTSWMC Internal Review Board for Applications to the Clayton Foundation for Research – 2011.

UTSWMC Internal Review Board for Application to The Hartwell Foundation – 2011, 2012.

UTSWMC Department of Psychiatry Emergency Medicine Physician Task Force – 2011, 2012.

B. Clinical assignments since last promotion (if applicable)