

COLLEGE OF MEDICINE CURRICULUM VITAE

ANDREW A. PIEPER, MD, PhD

September 2012

I. EDUCATIONAL AND PROFESSIONAL HISTORY

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)

Certification

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

Licensure

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 985-1989
- 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

II. TEACHING

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 McMenemy-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)
2012 Cedar Centre of Psychiatry guest lecturer, Cedar Rapids, Iowa.

III. SCHOLARSHIP

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. *J Neurochem* 65:1411-1414.
2. Eliason MJL, Sampei K, Mandir AS, Hum PD, Traystman RJ, Bao J, Pieper AA, Wang Z-Q, Dawson TM, Snyder SH, Dawson VI. (1997) Poly (ADP-ribose) polymerase gene disruption renders mice resistant to cerebral ischemia. *Nat Med* 3:1089-1095.
3. **Pieper AA**, 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. *Proc Natl Acad Sci USA* 96:3059-3064. PMID 15894
4. Takahashi K, **Pieper AA**, 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. *Brain Res* 1999; 829:46-54. ACCESSION # 10350529

5. **Pieper AA**, Verma A, Zhang J, Snyder SH. (1999) Poly (ADP-ribose) polymerase, nitric oxide and cell death. *Trends Pharmacol Sci* 20(4): 171-181. ACCESSION # 10322503
6. LaPlaca MC, Raghupathi R, Verma A, **Pieper AA**, 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 Neurochem* 1999; 73:205-213. ACCESSION # 10386972
7. **Pieper AA**, Walles T, Wei G, Clements EE, Verma A, Snyder SH. (2000). Myocardial postischemic injury is reduced by poly (ADP-ribose) polymerase-1 gene disruption. *Mol Med* 6(4):271-282. PMCID 1949947
8. **Pieper AA**, 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. *Proc Natl Acad Sci USA* 97(4):1845-1850. PMCID 26524
9. **Pieper AA**, 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. *Neuroscience*, 102(2):433-444. ACCESSION # 11166129
10. **Pieper AA**, Treisman GJ. (2004-present). Overview of the neuropsychiatric aspects of HIV infection and AIDS. UpToDate. www.uptodate.com.
11. **Pieper AA**, Treisman GJ. (2004-present). Depression, mania, and schizophrenia in HIV-infected patients. UpToDate. www.uptodate.com.
12. **Pieper AA**, Treisman GJ. (2004-present). Dementia and delirium in HIV-infected patients. UpToDate. www.uptodate.com.
13. **Pieper AA**, Treisman GJ. (2004-present). Substance abuse and addiction in HIV-infected patients. UpToDate. www.uptodate.com.
14. **Pieper AA**, 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. *Proc Natl Acad Sci USA* 102(39):14052-14057. PMCID 1216832
15. **Pieper AA**, Treisman GJ. (2005). Drug treatment of depression in HIV-positive patients: Safety considerations. *Drug Saf* 28(9):753-762. ACCESSION # 16119970
16. Pickard BS, **Pieper AA**, Porteus DJ, Blackwood DH, Muir WJ. (2006). The NPAS3 gene—emerging evidence for a role in psychiatric illness. *Ann Med* 38(6): 439-448. ACCESSION # 17008307
17. **Pieper AA**, 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. www.mcknightlab.com (posted May 15, 2006).
18. Zhao H, Lidet N, Wei W, LaCour TG, Estill SJ, Capota E, **Pieper AA**, Harran PG. (2008). Acid promoted cinnamyl ion mobility within peptide derived macrocycles. *J Am Chem Soc*, 130(42): 13864-13866. ACCESSION # 18811162
19. **Pieper AA**,* 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. *Cell* 142(1): 39-51. PMCID 2930815 (* = **co-corresponding authorship**).
20. Aqul A, Liu B, Ramirez C, **Pieper AA**, 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 Neurosci* 31(25): 9404-9413 PMCID 3134878.
21. Watkins CC, **Pieper AA**, Treisman GJ. (2011) Safety considerations in drug treatment of depression in HIV-positive patients: an updated review. *Drug Saf* 34(8):623-639 ACCESSION 21751824.
22. MacMillan KS, Naidoo J, Liang J, Melito L, Williams NS, Morlock L, Huntington PJ, Longgood J, McKnight SL, **Pieper AA**,* De Brabander JK, Ready JM.* (2011).

Development of proneurogenic, neuroprotective small molecules. *J Am Chem Soc* 133(5):1428-1437. PMID 3033481. (* = co-corresponding authorship)

23. Lee, A.S., Ra, S., Rajadhyaksha, A.M., Britt, J., Moosmang, S., Hofmann, F., **Pieper, A.A.***, Rajadhyaksha, A.M.* (2012). Forebrain elimination of *CACNA1C* mediates anxiety-like behavior in mice. *Molecular Psychiatry* 17:1054-1055.. (* = co-corresponding authorship).
24. Lee, A.S., Gonzales, K.L., Moosmang, S., Hoffman, F., **Pieper, A.A.**, Rajadhyaksha, A.M. (2012). Selective genetic deletion of *cacna1c* in the mouse prefrontal cortex. *Molecular Psychiatry* 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. *Proc Natl Acad Sci USA* <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.* , **Pieper, A.A.*** (2012). Neuroprotective efficacy of aminopropyl carbazoles in a mouse model Parkinson's disease. *Proc Natl Acad Sci USA* <http://doi:10.1073/pnas.1213956109>. (* = co-corresponding authorship).

Other: Patents

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

Overview: *Patent Filings* (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 *in vivo* screening small drug-like molecules with behavioral efficacy in an animal model of obsessive-compulsive disorder.

In vivo 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 *in vivo* screening small drug-like molecules or FDA-approved drugs having behavioral or physiologic efficacy in an animal model of Rett syndrome.

In vivo 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 *in vivo* 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.

COMPLETED:

Investigation of the Role of Brain τ nv m ng

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 *in vivo* 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 8th 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 1st Annual Hartwell Foundation Meeting. Memphis, TN
- 2009 Department of Neuroscience Seminar. Centre de Recherche du CHUL (CHUQ). Quebec
- 2009 2nd 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 3rd 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, *PINS* (Progress in Neuroscience Seminar), 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)

IV. SERVICE

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

Professional Affiliations:

Society for Neuroscience
American Psychiatric Association

Ad Hoc Reviewer:

Science
Science Translational Medicine
Biological Psychiatry
Journal of Neuroscience
Neuropsychopharmacology
FEBS
Neuroscience Letters
Molecular Psychiatry
Stem Cells
Genes, Brain and Behavior
Anatomia, Histologia, Embryologia
Experimental Neurology
Current Alzheimer Research
Bioorganic and Medicinal Chemistry

NIH Workshops:

Setting Priorities for Rett Syndrome Research – NIH Workshop – 2011

NIH Grant Reviews:

NINDS Exploratory Clinical Trials (RO1) – 2011

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)