# **CURRICULUM VITAE**

Name: SHEILA ANN ALEXANDER, PhD, RN

**Business Address:** University of Pittsburgh Telephone (412) 624-3831 School of Nursing FAX (412) 383-7227

School of Nursing 336 Victoria Building 3500 Victoria Street Pittsburgh, PA 15261

Email Address: salexand@pitt.edu

**EDUCATION** 

<u>Undergraduate</u> 1984-1989 University of Pittsburgh

989 University of Pittsburgh B.S.N. Nursing

Pittsburgh, PA

Graduate

1996-2004 University of Pittsburgh PhD Nursing

Pittsburgh, PA

National Institute of Nursing Research/ Summer Genetics Institute

Georgetown University Washington, D.C.

**APPOINTMENTS AND POSITIONS** 

**Academic** 

1999-2004 University of Pittsburgh Research Associate

School of Nursing

Department of Acute/Tertiary Care

Pittsburgh, PA

2005 - 2014 University of Pittsburgh Assistant Professor

School of Nursing

Department of Acute/Tertiary Care

Pittsburgh, PA

2012 - 2014 University of Pittsburgh Assistant Professor

School of Medicine Secondary Appointment Critical Care Medicine

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Pittsburgh, PA

2014 - present University of Pittsburgh Associate Professor

School of Nursing

Department of Acute/Tertiary Care

Pittsburgh, PA

2014 - present University of Pittsburgh

School of Medicine Critical Care Medicine

Pittsburgh, PA

Associate Professor Secondary Appointment

#### Non-Academic

1988 – 1989 University of Pittsburgh Medical Clinical Nurse III

Center, Montefiore University Neuro/General Surgical Unit

Hospital, Pittsburgh, PA

1989 – 1996 University of Pittsburgh Medical Clinical Nurse III / Charge Nurse

Center, Presbyterian University Neurovascular Intensive Care Unit

Hospital, Pittsburgh, PA

1996 – 1999 University of Pittsburgh Medical Assistant Nurse Clinical Manager

Center, Western Psychiatric Institute Geriatric Program

and Clinic, Pittsburgh, PA

# LICENSURE AND CERTIFICATION

Expires 10/31/18 RN Licensure Pennsylvania

2012-2016 Emergency Neurological Life Support Certification

# MEMBERSHIP IN PROFESSIONAL AND SCIENTIFIC SOCIETIES

1992 - present American Association of Neuroscience Nurses

2010-present Clinical Practice Guidelines (CPG) Editorial Board Member

2012,

2015 Grant Review Committee

1998 - 2004 Doctoral Nursing Student Organization

1999 - 2000 Vice President 2000 - 2002 President

1999 -present Sigma Theta Tau, National Honor Society in Nursing (Eta Chapter)

2005-2012,

2014, 2016 Member, Grant Review Committee

2010-2011 Chair

2005-2007 Governance Committee

2007-2009 President

2000- present Society of Critical Care Medicine

2006-present Abstract Reviewer

2006-present Nursing Section Research Committee

2006-2015 Research Committee/Scientific Review Committee

2012-2015 Vice-chair/Chair/Immediate Past Chair 2008-2012 **Practice Survey Committee** 2010-present Moderator, Professor Walk Rounds at annual congress 2011-2014 **Benchmarking Committee** 2011-2013 Vice-chair/Chair 2012-present Norma J. Shoemaker Nursing Excellence Award Committee 2014-present Research Section Steering Committee Member Secretary/Treasurer 2016 Chair-Elect 2017 2015-2016 Research Clinical Trials Taskforce 2015-present Congress Planning Committee 2016-present Discovery Research Network Steering Committee 2017-present Critical Care Knowledge Assessment Program (MCCKAP) Eastern Nursing Research Society 2000-present 2005-2009 Abstract Reviewer 2001-present American Association of Critical Care Nurses 2005-2008 Member, Grant Review Committee 2010-2013 Member, Grant Review Committee 2001-2009 Association of Clinical Research Professionals 2004-present International Society of Nurses in Genetics Member, Policy and Procedure Committee 2005-2008 2006-present Abstract Reviewer 2006-2009 **Annual Conference Planning Committee** 2009 Conference Planning Committee Co-chair 2007-2009 Research Committee Member-At-Large 2009-2011 2011-2014 Chapters Taskforce 2012-2016 **Education Committee** 2012-2014 Co-chair **Annual Conference Planning Committee** 2014-2015 President Elect 2013-2014 2014-2015 President 2015-2016 Immediate Past President 2005-present Council for the Advancement of Nursing Science 2009-present Abstract Reviewer 2007-present National Neurotrauma Society 2010-2012 Abstract Reviewer 2007-present Women in NeuroTrauma Research (WINTR) member 2010-present **Neurocritical Care Society** 2011-2012 Conference Planning Committee Moderator, Professor Walk Rounds at annual congress 2012-2013 Women in Neurocritical Care (WINC) member 2012-present 2013-2016 Abstract Reviewer

# 2015-present American Nurses Association/Pennsylvania State Nurses Association

# **HONORS**

1999	Sigma Theta Tau, International Honor Society of Nursing member
2004	Elizabeth Lloyd Noroian Scholarship, University of Pittsburgh School of Nursing
2008	Sigma Theta Tau, International Honor Society of Nursing Eta Chapter Leadership in Nursing Research Award
2009	Research Award, Neurology Specialty, Society of Critical Care Medicine.
2009	Semi-finalist, Robert Wood Johnson Nurse Faculty Scholars Program
2010	Presidential Citation for outstanding contributions to the Society of Critical Care Medicine
2010	Fellow, Provost Faculty Diversity Seminar
2011	Dean's Distinguished Teaching Award Recipient
2011	Abstract Presentation Judge, 9th Annual Safar Symposium
2012	International Society of Nurses in Genetics Founders Award for Excellence in Education
2015	Presidential Citation for outstanding contributions to the Society of Critical Care Medicine
2016	Fellow, Academy of Critical Care Medicine
2016	Presidential Citation for outstanding contributions to the Society of Critical Care Medicine
2016	Abstract Presentation Judge, 14 <sup>th</sup> Annual Safar Symposium
2017	PA Nightingale Award for Nursing Research Finalist

# **PUBLICATIONS**

# **Refereed Articles** (\* = data-based)

- 1. Lovasik, D., Kerr, M.E., **Alexander, S.** (2001). Traumatic brain injury (TBI) research: A review of clinical studies. *Critical Care Nursing Quarterly*, 23(4), 24-41. PMID: 11852948.
- 2. \*Lorenzi, L., Kerr, M.E., **Alexander, S.**, Crago, E., Yonas, H. (2003). Influence of delaying treatment after symptoms develop from subarachnoid hemorrhage (SAH) on outcome. *Journal of Neuroscience Nursing*, *35* (4), 210-214. PMID: 12942655
- 3. \*Alexander, S., Kerr, M.E., Yonas, H., Marion, D.W. (2004). The effects of admission alcohol level on

- CBF and outcomes after severe TBI. Journal of Neurotrauma, 21(5), 575-583. PMID: 15165365
- 4. \*Kerr, M.E., Kamboh, M.I., Kong, Y., **Alexander, S.**, Yonas, H. (2006). Apolipoprotein E genotype and CBF in traumatic brain injured patients. *Advances in Experimental Medicine and Biology*, *578*; 291-296. PMID: 16927707
- \*Alexander, S., Kerr, M.E., Kim, Y., Kamboh, M.I., Beers, S.R., Conley, Y. (2007). APOE 4 Allele presence and functional outcomes after severe traumatic brain injury. *Journal of Neurotrauma*, 24(5), 790-797. PMID: 17518534
- 6. \* Lanterna, L., Ruigrok, Y., **Alexander, S.**, Tang, J., Biroli, F., Dunn, L.T., Poon, W.S. (2007). Metaanalysis of APOE Genotype and Subarachnoid Hemorrhage: clinical outcome and delayed ischemia. *Neurology*, 69(8), 776-84. PMID: 17709709
- 7. \*Barr, T., **Alexander, S.**, Crago, E., Horowitz, M.B., Yonas, H., Kerr, M.E. (2008). Endovascular coiling versus surgical clipping and outcomes after SAH. *Neurosurgery Quarterly*. *18*(1); 16-21.
- 8. **Alexander, S. A.**, Beach, M. (2008). Genes and Acute Neurologic Disease and Injury: A primer for the Neurological Intensive Care Nurse. *Critical Care Nursing Clinics of North America*.20(2);203-12. doi: 10.1016/j.ccell.2008.01.001.PMID: 18424349
- 9. \*Alexander, S. A., Kerr, M.E., Balzer, J., Horowitz, M., Kassam, A., Kim, Y., Hoffman, L., Conley, Y. (2008). Cerebrospinal fluid apolipoprotein E, calcium and cerebral vasospasm after subarachnoid hemorrhage. *Biological Research for Nursing*. *10*(2); 102-112. PMID: 18829593
- 10. \*Gallek, M., Sherwood, P., Horowitz, M. B., Kassam, A., Conley, Y., **Alexander, S.** (2009). APOE Genotype and Functional Outcome Following Aneurysmal Subarachnoid Hemorrhage. *Biological Research for Nursing*. 10 205-212. doi: 10.1177/1099800408323221. PMID: 19017669. PMCID: 2744368.
- 11. Carwile, E., Wagner, A., Crago, E., **Alexander, S.** (2009). Estrogen and Stroke: A Review of the Literature. *Journal of Neuroscience Nursing*.41(1): 18-25. PMID: 19368068.
- 12. Presciutti, M., **Alexander, S.**, Schmidt, M. (2009). Neuro-monitoring in Intensive Care Focus on Microdialysis and Nursing Implications. *Journal of Neuroscience Nursing*. 41(3): 131-139. PMID: 19517763
- 13. \*Puccio, A. M., Hoffman, L. A., Bayir, H., Zullo, T. G., Fischer, M. Darby, J., **Alexander, S.,** Dixon, C. E., Okonkwo, D. O., Kochanek, P. M. (2009). Effect of Short Periods of Normobaric Hyperoxia on Local Brain Tissue Oxygenation and Cerebrospinal Fluid Oxidative Stress Markers in Severe Traumatic Brain Injury. *Journal of Neurotrauma*, 36; 1241-1249. doi: 10.1089/neu.2008-0624. PMID: 19505175. PMCID: 2850254.
- \*Alexander, S. A., Poloyac, S. M., Hoffman, L., Gallek, M., Ren, D., Balzer, J., Kassam, A., B., Conley, Y. (2009). Endothelial Nitric Oxide Synthase Tagging Single Nucleotide Polymorphisms and Recovery from Aneurysmal Subarachnoid Hemorrhage. *Biological Research for Nursing*. 11 (1): 42-52. doi: 10.1177/1099800409334751. PMID: 19419976. PMCID: 2938012
- \* Chuang P, Conley YP, Poloyac SM, Okonkwo DO, Ren D, Sherwood PR, Hravnak MT, **Alexander S.A**. (2010) Neuroglobin genetic polymorphisms and their relationship to functional outcomes after traumatic brain injury. *Journal of Neurotrauma*. 2010; 27 (6):999-1006. doi: 10.1089/neu.2009.1129. PMID: 20345238. PMCID: 2943497.

- \* Hoh, N. Z., Wagner, A. K., **Alexander, S.**, Clark, R., Beers, S. R., Okonkwo, D. O., Ren, D., Conley, Y. P. (2010) BCL2 Genotypes: Functional and Neurocognitive Outcomes after Severe Traumatic Brain Injury. *Journal of Neurotrauma*. 27(8): 1413-1427. doi: 10.1089/neu.2009.1256. PMID: 20504155. PMCID: 2967822. PMCID: 2967822.
- 17. Barr, T., **Alexander, S.**, Conley, Y. (2011). Gene Expression Profiling for Discovery of Novel Targets in Human Traumatic Brain Injury. Biological Research for Nursing. 13(2): 140-53. doi: 10.1177/1099800410385671. PMID 21112922
- \*Thampatty B.P., Sherwood P.R., Gallek M., Crago E.A., Hricik A.J., Kuo C.J., Klamerus M.M., Alexander S.A., Bender C., Hoffman L.A., Horowitz M.B., Kassam A.B., Poloyac S.M. (2011) Role of endothelin-1 in human aneurysmal subarachnoid hemorrhage: Associations with vasospasm and delayed cerebral ischemia. *Neurocritical Care*. 15(1): 19-27. doi: 10.1007/s12028-011-9508-9. PMID: 21286855. PMCID: 3134137.
- 19. \*Gallek M., **Alexander S.**, Crago E., Sherwood P., Horowitz M., Poloyac S., Conley Y. (2013) Endothelin-1 and Endothelin Receptor Gene Variants and Their Association with Negative Outcomes Following Aneurysmal Subarachnoid Hemorrhage. *Biological Research for Nursing*.15(4): 390-7. doi:10.1177/109980041245964. PMID: 22997346. PMCID: 3758781.
- 20. \*Conley, Y.P., Okonkwo, D., Deslouches, S., **Alexander, S.,** Puccio, A., Beers, S., Ren, D. (2014). Mitochondrial Polymorphisms Impact Outcomes after Severe Traumatic Brain Injury. *Journal of Neurotrauma*.31(1): 34-41. doi: 10.1089/neu2013.2855. PMID: 23883111. PMCID: 3880110.
- \*Kantor, E. Bayir, H., Ren, D., Provencio, J. J., Watkins, L., Crago, E., Horowitz, M.B., Ferrell, R.E. Conley, Y.P., **Alexander, S., A.** (2014). Haptoglobin Genotype and Functional Outcome after Aneurysmal Subarachnoid Hemorrhage. *Journal of Neurosurgery*. 120(2) 386-90. DOI: 10.3171/2013.10.JNS13219. PMID 24286153. PMCID: 4544750.
- \*Alexander, S., Ren, D., Gunn, S., Kochanek, P., Tate, J., Ikonomovic, M., Conley, Y. (2014)
  Interleukin-6 and apolipoprotein E as predictors of acute brain dysfunction and survival in ICU Patients.

  \*American Journal of Critical Care. 23(1): 49-57. doi: 10.4037/ajcc2014578. PMID: 24382617. PMCID: 4809634. Highlighted in AJCC 'Evidence-based review and discussion points' with interview by guest editor R. Hickman.
- 23. Li, Z., & Alexander, S.A. (2015) Current Evidence in the Management of Post-stroke Should Pain. *Journal of Neuroscience Nursing.* 47(1): 10-19. doi: 10.1097/JNN.000000000000109. PMID 25503543.
- 24. \*Gallek, M.J., **Alexander, S.A.,** Crago, E., Sherwood, P.R., Klamerus, M., Horowitz, M.B., Poloyac, S.M., & Conley, Y. (2015) Endothelin-1 gene polymorphisms influence cerebrospinal fluid endothelin-1 levels following aneurysmal subarachnoid hemorrhage. *Biological Research for Nursing*. 17(2):185-90. doi: 10.1177/1099800414536261. PMID: 24852947.
- 25. Gopalakrishna, A. & **Alexander, S. A**. (2015). Understanding Parkinson Disease: A Complex and Multifaceted Illness. *Journal of Neuroscience Nursing*.47(6):320-26. doi: 10.1097/JNN.00000000000162. PMID: 26528949.
- \*Giorgino, M.M., Kress, T., **Alexander, S. A.** & Beach, M. (2015). Emergency Preparedness Education for Nurses: Core Competency Familiarity Measured Utilizing an Adapted Emergency Preparedness Information Questionnaire (EPIQ). *Journal of Trauma Nursing*. 22(5); 240-8. doi: 10.1097/JTN

- \*Hoffman, S.L., Kaufman, R., Ferrari, S., **Alexander, S.,** Rosenzweig, M., Wesmiller, S. (2016). Beyond BRCA: A Pilot Program to Assess and Improve Knowledge of Pharmacogenomic Testing Among Advanced Practice Providers in a Breast Cancer Treatment Setting. *Journal of the Advanced Practitioner in Oncology*, 7, 382-9. Doi:10.6004/jadpro.2016.7.4.2
- 28. \*Khalil, H. Sereika, S.M., Dai, F., **Alexander, S.**, Conley, Y., Gruen, G., Meng, L., Siska, Pl, Tarkin I., & Henker, R. (2016). OPRM1 and COMT Gene-Gene Interaction is Associated with Postoperative Pain and Opioid Consumption after Orthopedic Trauma. *Biological Research for Nursing*, 19(2); 170-179. Doi: 10.1177/10990800416680474.
- 29. \*Osier, N.D., Bales, J.W., Pugh, B., Shin, S., Wyrobek, J., Puccio, AM., Okonkwo, D.O., Ren, D., Alexander, S., Dixon, C.E., Conley, Y.P. (2017) Variation in PPP3CC is associated with long-term recovery after severe brain injury. *Journal of Neurotrauma*, 34(1); PMID: 27225880 doi:10.1089/neu2015.4343
- 30. Osier, N. D., Pham, L., Savarese, A., Sayles, K., & **Alexander, S.** (2016) Animal Models in Genomic Research: Techniques, Applications and Roles for Nurses. *Applied Nursing Research*, 32; 247-56. Doi:10.1016/j.anpr.2016.07.016.
- \*Osier, N.D., Pham, L., Pugh, B.J., Puccio, A., Ren, D., Conley, Y.P., **Alexander, S.**, & Dixon, C.E. (2017) Brain injury results in lower levels of melatonin receptors subtypes MT1 and MT2. *Neurosci Lett.* 650:18-24. doi: 10.1016/j.neulet.2017.03.053. Epub 2017 Apr 2. PMID:28377323
- 32. **Alexander, S.A.**, Kalmakis, K., Stewart Fahs, P. S., Groth, S. W. & Chasens, E. R. (2017) Biological Markers in Nursing Research. Journal of Nursing Measurement, 25(2). http://dx.doi.org/10.1891/1061-3749.25.2.1
- 33. \*Smithburger, P.L., Korenoski, A.S., Kane-Gill, S.L., & **Alexander, S.A**. (2017). Perceptions of family members, nurses, and physicians on involving the patient family in delirium prevention activities in a medical intensive care unit. *Critical Care Nurse*.
- 34. \*Smithburger, P.L., Korenoski, A.S., Kane-Gill, S.L., & **Alexander, S.A.** (2017). Intensive Care Unit Patient Family Opinions and Perceptions regarding Involvement with Delirium Prevention Activities: A Qualitative Study. *Critical Care Nurse*.
- \*Anderson, M., Elmer, J., Shutter, L., Puccio, A., & **Alexander, S.** (in press). Integrating quantitative pupillometry into regular care in a Neuro-Trauma Intensive Care Unit. *Journal of Neuroscience Nursing*.
- 36. \*Wright Heinsberg, L., Turi, E., Ren, D., Crago, E., **Alexander, S.**, Grimes Stanfill, A., & Conley, Y. (in press). Association of APOE genotype with activities of daily living following aneurysmal subarachnoid hemorrhage. *Biological Research for Nursing*.

# **Text and Chapters**

- 1. **Alexander, S.** (2013). Evidence-Based Nursing Care for Stroke and Neurovascular Conditions. Wiley-Blackwell, Ames, IA.
- 2. **Alexander, S.** (2016) .**Chapter 12. Neurologic System.** In **Genomic Essentials for Graduate Level Nurses**, Editors: Diane Seibert, Quannetta Edwards, Ann Maradiegue, and Susan Tinley. Destech

Publications, Lancaster, PA. ISBN: 978-1-60595-094-5

#### **Other Invited Publications**

- 1. **Alexander, S.A.,** Gallek, M., Presciutti, M., Zrelak, P. (2008). Care of the patient with subarachnoid hemorrhage: A guide for clinical nurses. American Association of Neuroscience Nurses Clinical Practice Guideline Series (http://www.aann.org/pubs/guidelines.html).
- 2. Conley, Y.P. & **Alexander, S**. (2011). Genomic, Transcriptomic, and Epigenomic Approaches to Recovery following Acquired Brain Injury. *Physical Medicine & Rehabilitation*; S52-58. doi: 10.1016/j.pmrj.2011.04.004. PMID: 21703581.
- 3. **Alexander, S.A.** & Provencio, JJ. (2014) Editorial Response: Haptoglobin Genotype. *Journal of Neurosurgery*, 120(2); 384-5. PMID: 24645183.
- 4. Puccio, A.M. & **Alexander, S.A.** (2015) Genomics, Transcriptomics and Epigenomics in TBI Research. *Annual Reviews in Nursing Research*, 33(1): 75-109. doi: 10.1891/0739-6686.33.75. PMID: 25946384.
- 5. **Alexander, S.A.** (2017). Announcing the Primer in Genetics and Genomics Series. *Biological Research for Nursing*, 19(1); 5-6. Doi: 10.1177/1099800416677094.
- 6. Maserati, M. & **Alexander**, **S**. (In Press). Genetics and genomics of acute neurologic disorders. AACN Advanced Critical Care.

#### **Published Abstracts**

- 1. **Alexander, S.,** Kerr, M.E., Bullian, L., Marion, D. (2001). Effect of alcohol intoxication on cerebral blood flow and outcomes following a severe traumatic brain injury. *Critical Care Medicine*, 28(12) A206 (Suppl.).
- 2. Kerr, M.E., Nemoto, E. Yonas, H., Kassam, A., Crago, E., **Alexander, S.** (2001). Vasospasm detection following SAH using cerebral oximetry. *Critical Care Medicine*, 28 (12) A208 (Suppl).
- 3. Lorenzi, L., Kerr, M.E., Yonas, H., Kassam, A, **Alexander, S.**, Crago, E. (2001). Influence of delaying treatment after symptoms develop from subarachnoid hemorrhage (SAH) on outcome: A preliminary analysis. *Critical Care Medicine*, 28 (12) A 209 (Suppl).
- 4. Kerr, M.E., **Alexander, S.,** Kim, Y., Kamboh, I., Marion, D. (2001). Effect of Apolipoprotein E genotype on cerebral blood flow in traumatic brain injured patients. *Critical Care Medicine*, 29 (12) A6 (Suppl).
- 5. **Alexander, S.,** Kim, Y., Kerr, M.E., Yonas, H. (2002). A Comparison of psychometric qualities of the SF-36 Physical Function Subscale and the Barthel Index in the subarachnoid hemorrhage population. *Critical Care Medicine*, 29 (12) A133 (Suppl).
- 6. Beatty, M.G., Kerr, M.E., **Alexander, S.,** Beers, S., Marion, D. (2002). Effects of the APOE Allele on memory following traumatic brain injury (TBI). *Critical Care Medicine*, *29* (12) A33 (Suppl).
- 7. Puccio, A.M., Kim, Y., Kerr, M.E., Beers, S.R., Wagner, A., **Alexander, S. A.**, and Marion, D.W. (2002). Psychometric analysis of the functional independence measure in severe traumatic brain injury: A comparison to the Glasgow outcome scale. *Critical Care Medicine*, *30* (12), A283 (Suppl).

- 8. Kim, Y., Kerr, M.E., **Alexander, S.,** and Yonas, H. (2002). Use of structural equation modeling (SEM) in quality of life measurement in the subarachnoid hemorrhage population. *Quality of Life Research*, 11(7), 671 (Suppl).
- 9. Kim, Y., Kerr, M.E., Puccio, A.M., Beers, S.R., **Alexander, S.,** and Crago, E. A. (2003). Repeatability and responsiveness of the FIM, DRS, and NRS in patients with severe traumatic brain injury. *Critical Care Medicine*, *30* (12), A565 (Suppl).
- 10. Puccio, A.M., Kim, Y., Kerr, M.E., Beers, S.R., Wagner, A., **Alexander, S.**, and Marion, D.W. (2003). Reliability and validity of the Functional Independence Measure in severe traumatic brain injury, *Eastern Nursing Research Society*, p. 116 [The Best Student Presentation Award].
- 11. **Alexander, S.,** Kerr, M.E., Yonas, H., (2004). Cerebrospinal fluid (CSF) calcium as a biomarker of vasospasm after subarachnoid hemorrhage (SAH). *Critical Care Medicine, 31* (12) A11 (Suppl).
- 12. **Alexander, S.**, Kerr, M.E., Conley, Y., Yonas, H. (2005). Cerebrospinal fluid calcium levels and cerebral vasospasm after subarachnoid hemorrhage. *Biological Research for Nursing*, 6 (4) p. 301.
- 13. Alexander, S., Kerr, M.E., Conley, Y., Kong, Y., Yonas, H. (2004). Apolipoprotein E Genotype and outcomes in the subarachnoid hemorrhage population. *Nursing and Health Sciences*, 7 (2), pp 143-44.
- 14. **Alexander, S.,** Walter, K., Conley, Y. (2006). APOE genotype and Glasgow Coma Score after severe traumatic brain injury. *Critical Care Medicine*, *33*:A293 (Suppl.).
- 15. **Alexander, S.,** Gallek, M., Poloyac, S., Horowitz, M., Kassam, A., Conley, Y. (2007). eNOS Tagging SNPs and CV after SAH. *Critical Care Medicine*, *34* (Suppl.).
- 16. Gallek, M.J., Sherwood, P., Crago, E., **Alexander, S.**, Hoffman, L.A., Poloyac, S.M., Horowitz, M. (2007). Edothelin-1 cerebrospinal fluid levels are associated with the development of cerebral vasospasm in aneurysmal subarachnoid hemorrhage patients. *Critical Care Medicine*, *34*:A80 (Suppl).
- 17. **Alexander, S.,** Poloyac, S., Balzer, J., Hoffman, L., Gallek, M., Kassam, A., Ren, D., Conley, Y. (2008) NO Pathway Biomarkers and CV after SAH. *Critical Care Medicine*. *36*:A11(Suppl).
- 18. Chuang, P.Y., Conley, Y., **Alexander, S.,** Ren, D., Hravnak, M. (2008) Neuroglobin Genetic Polymorphisms and Their Relationship to Functional Outcome Following Traumatic Brain Injury. *Critical Care Medicine 36*: A10 (Suppl).
- 19. Kantor, E., Conley, Y.P., Ren, D., Bayir, H., Provencio, J. J., Crago, E., Horowitz, M., **Alexander, S.** (2009) Haptoglobin Genotype and Functional Outcome after Aneurysmal Subarachnoid Hemorrhage. *Critical Care Medicine 37:* A368 (Suppl).
- 20. Watkins, L., **Alexander, S.**, Ren, D., Crago, E., Conley, Y., Kagan, V., Bayir, H. (2009) Haptoglobins Containing α-2 Subunit Favor Angiographic Vasopasm in Aneurysmal Subarachnoid Hemorrhage. *Critical Care Medicine 37:* A19 (Suppl).
- 21. **Alexander, S.,** Poloyac, S., Ren, D., Crago, E., Horowitz, M., Conley, Y.P. (2009) DDAH2 Genotype Predicts Outcome after Subarachnoid Hemorrhage. *Critical Care Medicine 37:* A156 (Suppl).
- 22. NeSmith, E.G., Catravas, J.D., Marsland, A.L., **Alexander, S.A.**, Hawkins, M.L., Medeiros, R.S. (2009). The influence of accelerated biologic aging, chronic stress, and inflammatory response on outcomes

- following trauma. Brain, Behavior, and Immunity, 23(2), S51.
- 23. **Alexander, S.,** Tate, J., Ren, D., Gunn, S., Ely, E. W. (2010) Interleukin 6 and Delirium in ICU patients *Critical Care Medicine 38 (12): A326* (Suppl).
- 23. Watkins, L., **Alexander, S.**, Kapralov, A., Ren, D., Crago, E., Conley, Y., Kagan, V., Bayir, H. (2010) Possible Role for Haptoglobin and Hemoglobin Aggregates in Pathomechanism of Aneurysmal Subarachnoid Hemorrhage. *Critical Care Medicine* 38 (12): A154 (Suppl).
- 24. **Alexander, S.**, Tate, J. Ren, D., Gunn, S., Conley, Y. (2011) APOE Genotype, Inflammation and Delirium in ICU Patients. *Critical Care Medicine*. *39* (12):A7 (Suppl).
- 25. **Alexander, S.,** Conley, Y. (2013) Inflammatory Gene Methylation in ICU Patients with and without Delirium. *Critical Care Medicine*. *41* (12): A104 (Suppl). DOI: 10.1097/01.ccm.0000439574.72890.33
- 26. **Alexander, S.** (2014) Gene-Protein Interaction: A Methodology for Integration of Biomarkers into Nursing Research. *Nursing Research*, *63*(2): *E66*.
- 27. **Alexander, S.,** Ren, D., McVerry, B.M., Gunn, S.M. (2014) Preadmission Smoking and Inflammation and Delirium in ICU Patients. *Critical Care Medicine.42 (12):* A1501 (Suppl). DOI: 10.1097/01.ccm.0000458083.70730.b4
- 28. Smithburger PL, **Alexander SA**, Gries CJ, Korenoski AS, Kane-Gill SL. (2015) Provider and family perceptions of family involvement in delirium prevention in an ICU. *Critical Care Medicine* 43(12)
- 29. **Alexander, S.** (2015) Medical History, Delirium and Recovery from the ICU. *Critical Care Medicine* 43(12)

#### RESEARCH

#### Research Awards as PI

Role: Principal Investigator Dates: 2003, Nov – 2004, Oct.

Type: Professional Organization

Funding Agency: American Nurses Foundation John Merck Scholar

Title: Biomarkers to Predict Cerebral Vasospasm after Subarachnoid Hemorrhage.

Award: \$5,000

Role: Principal Investigator Dates: 2004, July – 2005, June

Type: Professional Organization

Funding Agency: Neuroscience Nursing Foundation

Title: The Impact of Isoform Specific ApoE-Calcium Interaction on Cerebral Vasospasm after Subarachnoid

Hemorrhage Award: \$2,200

Role: Principal Investigator Dates: 2004, Sept – 2005, Aug

Type: Professional Organization

Funding Agency: Sigma Theta Tau International Research Award, Eta Chapter

Title: APOE Genotype and Cerebral Vasospasm and Outcomes after Subarachnoid Hemorrhage

Award: \$1,500

Role: Principal Investigator Dates: 2004, Sept - 2005, August

Type: School of Nursing Endowed Research Award

Funding Agency: The Leslie A. Hoffman Endowed Acute Care Nursing Research Fund Title: The Effect of Apolipoprotein E and Calcium on Cerebral Vasospasm after SAH

Award: \$ 750

Role: Principal Investigator Dates: 2005, July - 2009, January

Type: University of Pittsburgh

Funding Agency: Central Research Development Fund

Title: CSF Ca<sup>++</sup> APOE protein and genotype and CV after TBI.

Award: \$ 16,000

Role: Principal Investigator 0% Dates: 2008, February- 2011, February

Type: Norma J. Shoemaker Grant for Critical Care Nursing Research

Funding Agency: Society for Critical Care Medicine

Title: Apolipoprotein E, Inflammatory Markers and Delirium in ICU Patients.

Award: \$16,000

Role: Principal Investigator 0% Dates: 2008, September –2010, August

Type: School of Nursing Endowed Research Award

Funding Agency: Ruth Perkins Kuehn Research Award 2008

Title: ADMA and Cerebral Vasospasm after Subarachnoid Hemorrhage

Award: \$12,828

Role: Principal Investigator 27% Dates: 2008, September- 2011, July

Type: R03 NR01152-01 Funding Agency: NIH, NINR

Title: Long Term Outcomes in ICU Patients: Delirium & Apolipoprotein E

Award: \$99,831

Role: PI 0% Dates: 2015, July- 2016, June

Type: Pilot study

Funding Agency: University of Pittsburgh School of Nursing Genomics Hub Title: Epigenetic Changes Promoting Delirium after Intensive Care Unit Admission

Award: \$5,000

Role: Principal Investigator 2.5% Dates: 2017, January – 2017, December

Type: Weill Research Grant Funding Agency: SCCM

Title: Temporal Inflammatory Gene Methylation Profiles and ICU Delirium

Award: \$50,000

Research Awards as Co-I / Mentor

Role: Co-Investigator 10% (PI Yvette Conley, PhD)

Dates: 2005, July - 2009, June

Type: R01 NR008424

Funding Agency: NIH, NINR

Title: Mitochondrial Genetics of Recovery after Brain Injury

Award: \$800,000

Role: Co-Investigator 5% (Co-PIs S. Poloyac, P. Sherwood) Dates: 2009, August-2014, July

Type: R01 NR004339

Funding Agency: NIH, NINR

Title: Determining genetic and biomarker predictors of DCI and long term outcomes after aSAH

Award: \$3,365,222

Role: Co- Mentor 0% (PI-Nesmith)

Dates: 2010, August- 2013, June

Type: K01 NR011471

Funding Agency: NIH, NINR

Title: Accelerated Biological Aging and Risk for Sepsis and Organ Failure Following Trauma

Award: \$93.363

Role: Sponsor (PI- Osier) Dates: 2014, September – 2016, August

Type: F31 NR014957

Funding Agency: NIH, NINR

Title: Mechanism of Melatonin-Induced Neuroprotection in Traumatic Brain Injury.

Award: \$85,796

Role: Co-Investigator 5% (PI- Conley)

Dates: 2012, September- 2017, June

Type: R01 NR 013610 Funding Agency: NIH, NINR

Title: Epigenomics of Patient Outcomes after Aneurysmal SAH

Award: \$2,749,754

Role: Faculty Dates: 2006, July- 2021, June

Type: T32 NR009759

Funding Agency: NIH, NINR

Title: Targeted Research and Academic Training of Nurses in Genomics

Award: \$223,876

#### **Other Scholarly Activities**

#### **Research Grant Reviews**

2006-2015	Society for Critical Care Medicine Vision grant reviewer
2007-2013	Department of Defense Congressionally Directed Medical Research Program Post-Traumatic Stress Disorder and Traumatic Brain Injury Research Program – Traumatic Brain Injury Award grant reviewer
2008- 2013	United States Army Medical Material Development Activity grant reviewer
2005-2011, 2013, 2014, 2017	Sigma Theta Tau International, Eta chapter grant reviewer
2010- 2013	American Association of Critical Care Nurses, grant reviewer
2010- 2013	Italian Ministry of Health grant reviewer
2012- 2014	Neuroscience Nursing Foundation grant reviewer

2013-present Department of Veterans Affairs (Neurobiology C) grant reviewer Permanent Member 2015-present 2015-2016 Society of Critical Care Medicine THRIVE Grant reviewer 2016-present The Defense and Veterans Brain Injury Center (DVBIC) intramural research grant science reviewer 2017 University of Pittsburgh Central Research Development Fund Grant reviewer 2017 National Institutes of Health/National Institute on Aging, Special Emphasis Panel. ZAG1 ZIJ-3(01). Relationship between Delirium and Alzheimer's disease 2017 Society of Critical Care Medicine Research Grant reviewer-Weil and Discovery grants 2017 International Society for Nurses in Genetics, Grant Reviewer Editorial Board/Regular Manuscript Reviewer 2005-present Journal of Neuroscience Nursing, regular reviewer

Biological Research for Nursing, regular reviewer 2007-present

> 2016-present Guest Editor, 'Primer in Genetics and Genomics Series'

**Editorial Board Member** 2018-present

2007-2012 Nursing Research, regular reviewer

2008- present Journal of Neurotrauma, ad hoc reviewer

2010-2014 Open Critical Care Medicine Journal, regular reviewer, Editorial Advisory Board member

PLOS One, regular reviewer 2012-present

2014-present **Editorial Board Member** 

2014-present Pediatric Critical Care Medicine, ad hoc reviewer

2014-present Journal of the Neurological Sciences, ad hoc reviewer

2014-present Stroke, ad hoc reviewer

Heart & Lung: The Journal of Acute & Critical Care, ad hoc reviewer 2014-present

2015 Biomarkers, ad hoc reviewer

2015 BMC Neurology, ad hoc reviewer

# **PRESENTATIONS**

#### **International**

# **Paper**

(2000, August). Continuous assessment of cerebrovascular regulation after subarachnoid hemorrhage

- (SAH), by near- infrared spectroscopy (NIRS). International Society on Oxygen Transport to Tissue. Nijmegen, Netherlands.
- 2. (2004, February). Cerebrospinal fluid (CSF) calcium as a biomarker of vasospasm after subarachnoid hemorrhage (SAH). Society of Critical Care Medicine 33<sup>rd</sup> International Educational and Scientific Symposium. Orlando, FL.
- 3. (2004, October). Apolipoprotein E genotype and outcomes in the subarachnoid hemorrhage population. International Society of Nurses in Genetics, Annual International Conference. Toronto, Canada.
- 4. (2007, February). Nursing year in review. Society of Critical Care Medicine 36<sup>th</sup> Critical Care Congress. Orlando, FL.
- 5. (2008, October). Influence of the Endothelial Nitric Oxide Synthase Gene and Recovery from SAH. 21<sup>st</sup> Annual ISONG Conference.
- 6. (2009, February). NO Pathway Biomarkers of CV after SAH. Society of Critical Care Medicine 38<sup>th</sup> Annual Critical Care Congress. Nashville, TN.
- 7. (2010, October). DDAH2 Genotype Predicts Outcome after Subarachnoid Hemorrhage. International Society of Nurses in Genetics 23<sup>rd</sup> Annual Conference. Dallas, TX.
- 8. (2012, February). APOE Genotype, Inflammation and Delirium in ICU Patients. Society of Critical Care Medicine 40<sup>th</sup> Annual Critical Care Congress. Houston, TX.
- 9. (2012, October) Genetics Influences on Risk of Stroke and Stroke Recovery. International Society of Nurses in Genetics, 25<sup>th</sup> Annual Conference. Philadelphia, PA.
- 10. (2014, November) Inflammatory Gene Methylation Profile as a marker of ICU Delirium. International Society of Nurses in Genetics 27<sup>th</sup> Annual Congress. Philadelphia, PA, USA.
- 11. (2017, November) ICU Delirium and Changes in IL6ST Methylation. International Society of Nurses in Genetics 30<sup>th</sup> Annual Congress, Reston, VA, USA.

#### **Poster**

- 1. (2000, August). Vasospasm detection following SAH using cerebral oximetry. International Society on Oxygen Transport to Tissue. Nijmegen, Netherlands.
- 2. (2002, January). Effect of Apolipoprotein E genotype on cerebral blood flow in traumatic brain injured patients. Society of Critical Care Medicine 31<sup>st</sup> International Educational and Scientific Symposium. San Diego, CA, USA.
- 3. (2005, October). APOE ε2 allele, clotting, and hemorrhage in traumatic brain injury. International Society of Nurses in Genetics Annual International Conference. Salt Lake City, UT, USA.
- 4. (2008, February). eNOS Tagging SNPs and CV after SAH. Society of Critical Care Medicine 37<sup>th</sup> International Educational and Scientific Symposium. Honolulu, HI, USA.
- 5. (2010, February). DDAH2 Genotype Predicts Outcome after Subarachnoid Hemorrhage. Society of Critical Care Medicine 39<sup>th</sup> Critical Care Congress. Miami, FL, USA.

- 6. (2011, January) Interleukin 6 and Delirium in ICU Patients. Society of Critical Care Medicine 40<sup>th</sup> Critical Care Congress. San Diego, CA, USA.
- 7. (2011, October) APOE Genotype and Delirium in an ICU Population. International Society of Nurses in Genetics 24<sup>th</sup> Annual International Conference. Montreal, Canada.
- 8. (2014) Inflammatory Gene Methylation in ICU Patients with and without Delirium. Society of Critical Care Medicine, 42<sup>nd</sup> Annual Critical Care Congress. San Francisco, CA, USA.
- 9. (2016) Medical History, Delirium and Recovery from the ICU. Society of Critical Care Medicine, 44<sup>th</sup> Annual Critical Care Congress, Orlando, FL, USA.

# **National**

#### **Paper**

- 1. (1999, March). Charting the course for standardizing neurologic assessment in the ICU. 31st Meeting & Exposition of the American Association of Neuroscience Nurses. Philadelphia, PA.
- 2. (2002, September). An analysis of the SF-36 function subscale and the Barthel index for use in the subarachnoid hemorrhage population. State of the Science in Nursing Research. Washington, D.C.
- 4. (2004, October). Cerebrospinal fluid calcium levels and cerebral vasospasm after subarachnoid hemorrhage. National Congress on the State of the Science in Nursing Research. Washington, D.C
- 5. (2006, April). Apolipoprotein E and outcome after subarachnoid hemorrhage. American Association of Neuroscience Nurses 38<sup>th</sup> Annual Meeting. San Diego, CA.
- 6. (2007, May). Basic genetics for nurses. National Teaching Institute & Critical Care Exposition. Atlanta, GA.

#### **Poster**

1. (2015, June). Smithburger, P. L., **Alexander, S.A.,** Kane-Gill, S., Korenoski, A., Gries, C.J. Healthcare provider perception of delirium prevention and family involvement in a medical intensive care unit. The 5th Annual American Delirium Society Meeting, Baltimore MD

### Regional

#### **Paper**

- 1. (2001, April). Vasospasm detection following SAH using cerebral oximetry. 13<sup>th</sup> Annual Scientific Session of the Eastern Nursing Research Society. Atlantic City, N.J.
- 2. (2001, April). Effect of alcohol intoxication on cerebral blood flow and outcomes following a severe traumatic brain injury. 13<sup>th</sup> Annual Scientific Session of the Eastern Nursing Research Society. Atlantic City, N.J.
- 3. (2002, April). A comparison of psychometric qualities of the SF-36 physical function subscale and the Barthel index in the subarachnoid hemorrhage population. 14<sup>th</sup> Annual Scientific of the Session of the Eastern Nursing Research Society. State College, PA.
- 4. (2005, April). Apolipoprotein E genotype and outcomes in the subarachnoid hemorrhage population. 17<sup>th</sup> Annual Scientific Session of the Eastern Nursing Research Society. New York City, NY.

- 5. (2006, April). APOE genotype and cognitive outcomes after severe TBI. Eastern Nursing Research Society 18th Annual Scientific Sessions. Cherry Hill, NJ.
- 6. (2008, March). Endothelial Nitric Oxide Synthase Tagging Single Nucleotide Polymorphisms and Outcome after Aneurysmal Subarachnoid Hemorrhage. Eastern Nursing Research Society 20<sup>th</sup> Annual Scientific Sessions. Philadelphia, PA.
- 7. (2009, March). Bringing Genetics into Your Program of Nursing Research. Eastern Nursing Research Society 21<sup>st</sup> Annual Scientific Sessions. Boston, MA.
- 8. (2014, April). Gene-Protein Interaction: A Methodology for Integration of Biomarkers into Nursing Research. Eastern Nursing Research Society 26<sup>th</sup> Annual Scientific Sessions. Philadelphia, PA
- 9. (2015, April). Consent and Human Subject Issues for Genetic and Genomic Research. Eastern Nursing Research Society 27<sup>th</sup> Annual Scientific Sessions, Washington, D.C.
- 10. (2016, April). Special Populations: Conducting Genetic, Genomic and Physiologic Research in Cognitively Impaired, Critically Ill Adults. Eastern Nursing Research Society 28<sup>th</sup> Annual Scientific Sessions, Pittsburgh, PA.

#### Local

### **Paper**

- 1. (1990, September). Care of the patient with an arterio-venous malformation. Nursing Grand Rounds. Montefiore University Hospital. Pittsburgh, PA.
- 2. (1994, May). Myasthenia Gravis. Nursing Grand Rounds. Montefiore University Hospital. Pittsburgh, PA.
- 3. (2000, October). Influence of delaying treatment after symptoms develop from subarachnoid hemorrhage (SAH) on outcome: a preliminary analysis. Greater Pittsburgh 12<sup>th</sup> Annual Nursing Research Conference. Pittsburgh, PA.
- 4. (2005, April). The effect of APOE genotype on outcome in severe traumatic brain injured adults. Brain Trauma Research Center Monthly Lecture Series. Pittsburgh, PA.
- 5. (2007, April). Apolipoprotein E and severe traumatic brain injury: Book 2. Safar Center for Resuscitative Research Monthly lecture series. Pittsburgh, PA.

#### **Poster**

1. (2002, February). Effects of the APOE 4 allele on memory following traumatic brain injury (TBI). Sigma Theta Tau, Eta Chapter Poster Presentation Night. Pittsburgh, PA.

#### **Invited Lectures**

- 1. (2008, October). Traumatic Brain Injury: Saving Lives, Saving Brain. Pennsylvania State Nurses Association Annual Summit. State College, PA
- 2. (2009, March). Bringing Genetics into Your Program of Research. Eastern Nursing Research

- Biobehavioral Research Interest Group Sponsored Symposium. Boston, MA.
- 3. (2010, September). NO Means NO: Nitric Oxide as an Inhibitor of Cerebral Vasospasm after Subarachnoid Hemorrhage. Neurocritical Care Society, San Francisco, CA.
- 4. (2011, January). Apolipoprotein E, Inflammatory Markers and Delirium in ICU Patients. Nursing Section Business Meeting, Society of Critical Care Medicine. San Diego, CA.
- 5. (2011, June) Moderator. The Spectrum of Simulation- A Quest to Improving Healthcare Education. 9<sup>th</sup> Annual Safar Symposium. Pittsburgh, PA.
- 6. (2012, March). Blame It on Your Mother: Genetic Influences on Stroke and Recovery. UPMC Stroke Institute 12<sup>th</sup> Annual Acute Stroke Management Conference. Canonsburg, PA.
- 7. (2012, July). Pharmacogenetics/Pharmacogenomics: Science. National Nurse Practitioner Symposium, Copper Mountain, CO.
- 8. (2012, October). What can you do with a PhD? Academic Nursing Research. Nursing Section Breakfast, Neurocritical Care Society. Denver, CO.
- 9. (2012, October) Moderator. Found in Translation: What your patients need to know right now about translational research. Neurocritical Care Society. Denver, CO.
- (2013, January). Neurocritical Care Research: One Investigators' Journey Down the Road Less Traveled. Center for Bio-Behavioral Clinical Research, School of Nursing, Virginia Commonwealth University. Richmond, VA
- 11. (2013, January). Neuroscience Nurses in Academia and Research. Arbeitstagung für neurologische Intensiv- & Notfallmedizin (Workshop for Neurological Intensive Care & Emergency Medicine). Mannheim, Germany.
- 12. (2013, January). Nursing in the United States of America: Past, Present and Future. Duale Hochschule Baden-Württemberg Stuttgart (Dual Academy of Baden-Wurttemberg, Stuttgart), Stuttart, Germany.
- 13. (2013, February). Delirium: Risks, Recognition, Remedies and Recovery. Pulmonary, Allergy, and Critical Care Medicine Grand Rounds, Pittsburgh, PA.
- 14. (2013, May). Pharmacogenomics: Basic Science. National Conference for Nurse Practitioners. Nashville, TN.
- 15. (2013, May). Pharmacogenetics/Pharmacogenomics: Science. National Teaching Institute & Critical Care Exposition, Boston, MA.
- 16. (2013, September). Nursing Research in Neurocritical Care. Research Career Development Symposium in Neurocritical Care, 11<sup>th</sup> Annual Neurocritical Care Society Meeting, Philadelphia, PA.
- 17. (2013, October). Electronic Medical Records Improve Care in the NeuroICU Debate (Pro). 11<sup>th</sup> Annual Neurocritical Care Society Meeting, Philadelphia, PA.
- 18. (2013, October). Incorporating Genetics/Genomics into the MSN Curriculum to Meet the Essentials.

- ISONG Silver Anniversary Conference, Bethesda, MD.
- 19. (2014, November) Incoming Presidential Address, ISONG Annual Congress, Phoenix, Az.
- 20. (2014, November) Case Studies to Enhance Education: Unfolding Case Studies: Huntington Disease as an Exemplar for Multidisciplinary Pathophysiology Education. ISONG Annual Congress, Phoenix, Az.
- 21. (2015, July). The Science behind Pharmacogenetics/Pharmacogenomics: Basic Science. National Nurse Practitioner Symposium, Keystone, CO.
- 22. (2015, July). Delirium in the Intensive Care Unit. National Nurse Practitioner Symposium, Keystone, CO.
- 23. (2015, November). Presidential Welcome Message. ISONG Annual Congress, Pittsburgh, PA.
- 24. (2016, March/April). My Career as a Nurse Scientist: A Journey Down the Road Less Traveled. Honors Day Program, University of Pittsburgh, Pittsburgh, PA
- 25. (2017, April). Clinical practice guidelines: Be part of the process. American Association of Neuroscience Nurses 49th Annual Meeting, Boston, MA.

#### **TEACHING**

# **University of Pittsburgh Medical Center**

#### **Guest Lecturer**

1994	Transcranial Dopplers-Unit Based In-service. Neurovascular Intensive Care Unit. University of Pittsburgh Medical Center, Pittsburgh, PA.
1997-1999	Emergency Response Training. Western Psychiatric Institute and Clinic, Pittsburgh, PA.
1997-2001	Cardiopulmonary Resuscitation. University of Pittsburgh Medical Center, Pittsburgh, PA.
2005	Research Design. Physical Medicine and Rehabilitation. University of Pittsburgh Medical Center, Pittsburgh, PA.
2005	Research Methods. Physical Medicine and Rehabilitation. University of Pittsburgh Medical Center, Pittsburgh, PA.
2007	Research Design and Methods. Physical Medicine and Rehabilitation, University of Pittsburgh Medical Center, Pittsburgh, PA
2017	Research in Special Populations: Cognitively Impaired Adults, Clinical and Translational Science, University of Pittsburgh, Pittsburgh, PA.

#### Children's Hospital of Pittsburgh

2006-2008	Brain Anatomy (for Pediatric Trauma Nurse Fellows)
2006-2008	Brain Disorders (for Pediatric Trauma Nurse Fellows)

2009 Critical Care Awareness Month Lecture Series.

Seizures and Antiepileptic Medications

# **University of Pittsburgh School of Education**

June 2006 Cardiovascular Risk (for Exercise Physiology Students)

### **University of Pittsburgh School of Nursing**

# **Primary Teacher**

2005-present NUR 2004 Pathophysiology across the Lifespan. (Fall and Summer terms for 2005-

2006; Fall, Spring and Summer terms for 2006-present)

Core graduate course presented to approximately 200 students yearly enrolled in nurse practitioner, nurse anesthesia, clinical nurse specialist, nursing administration nursing education, informatics and research master's programs. This course is also offered to students from the graduate school of public health (EPIDEM 2004) and health

and rehabilitative sciences (HRS 2004).

2009-present NUR 2204/2004 Pathophysiology across the Lifespan. (Fall term only)

Core graduate course presented to approximately 5-10 students in the online Clinical

Nurse Leader program.

2012-present NUR 2004D Pathophysiology across the Lifespan. (Fall, Spring and Summer terms)

Core graduate course presented to approximately 20 students yearly enrolled in select nurse practitioner programs. This course is offered via distance education and offered

synchronously with NUR 2004.

2015-2016 NUR 3050 Grant Writing. (Summer)

Doctorate level course presented to 5 students in select Online Doctor of Nursing Practice

Programs.

2015-present NUR 2008 Ethics for Advanced Practice Nurses (Summer/Spring)

Core graduate course presented to 25 students enrolled in various graduate programs in

the School of Nursing. This course is offered online.

#### **Guest Lecturer School of Nursing**

2001-2003 NUR 3030 Research Development. Annual lecture on 'Hiring Project Directors'.

February, 2004 NUR 1680 Introduction to Genetics and Molecular Therapies. 'DNA/RNA Replication'.

October, 2004 NUR 2004 Advanced Pathophysiology. 'Alterations in Neurologic Function'.

2007- present NUR 3049 Doctoral Research Seminar. 'Genetic and Physiologic Neurologic Research'

2007- 2013 NUR 3040 Research Emphasis. 'Using Genetics to Understand Outcomes in Critically Ill

Neuro Patients: Strategies for Success'

August, 2008	2008 Pharmacology Update. Genetic-driven Prescribing
September, 2008	NUR 1680 Introduction to Genetics and Molecular Therapies. 'Individualized Medical Management in the Genomic Era: Genetic Driven Therapies'
2009- 2013	NUR 3030 Research Development. 'Department of Defense Grants: Topics & Review Process'
2009- 2011	NUR 0067 Nursing research: Introduction to critical appraisal and evidence based practice. 'Genetic and Physiologic Neurologic Research'
June, 2009	2009 Pharmacology Update. Little People, Big Headaches: Medical Management of Migraines in Pediatric Populations.
June, 2009	2009 Pharmacology Update. Seizures and Epilepsy in Pediatric Populations: Concepts to Guide Medical Management.
March, 2010-2011	University of Pittsburgh Medical Center Health Plan Continuing Education Series. Lifetime Management of Sickle Cell Disease.
July, 2010-present	NUR 3110 Research Instrumentation. 'Physiologic Research Methods.'

# **Clinical Supervision School of Nursing**

2006 (Spring)	Instructor: NUR 1033 Transitions into Nursing
2008 (Summer)	Instructor: NUR 1033 Transitions into Nursing
2009 (Fall)	NUR 0080 Foundations of Nursing Practice 1
2010 (Spring)	NUR 0081 Foundations of Nursing Practice 2

# **Undergraduate Research Mentorship**

2005 -2008	M. Orr
2007 - 2009	K. Flaherty
2007 -2010	J. Melchior
2007 - 2010	E. Kantor
2009 - 2010	K. Moon
2009	T. Fletcher
2009 - 2011	L. Pretsch
2010	E. Christopher
2010	B. Stewart
2010 -2012	K. Kamp
2010- 2012	A. Laiken
2011	M. Adebayo
2011	S. Hervitz
2011-2013	Y. Tsyss
2011-2014	A. Gopalakrishna
2012-2013	M. Maydick
2012-2015	L. Nagy
2014-2016	M. O'Donnell
2016-present	G. Paik

2017-present J. Kim 2017-present H. Beck 2017-present M. Holtslander

# **Masters Research Practicum Preceptor**

2000 (Summer) K. Gasior, MSN student 2000 (Fall) D. Herman, MSN student 2001(Spring) W. Shaulis, MSN student C. Yost, MSN student 2002 (Spring) M. Ogden, MSN student 2004 (Spring) B. Pelkey, MSN student 2006 (Spring) D. Mudar, MSN student S. Goel, MSN student E. Carwille, MSN student 2006 (Summer) 2009 (Spring) S. Klein, MSN student 2010 (Spring) C. Blewitt, MSN student P. McMullen, MSN student 2010 (Summer) L. Gray, MSN student J. Thompson, MSN student M. Berg, MSN student 2011 (Spring) N. Cournoyer, MSN student 2011 (Summer) A. Shah, MSN student C. Sivak, MSN student T. Fuller, MSN student 2012 (Spring) D. Gaggini, MSN student S. Barr, MSN student 2012 (Summer) J. Durall, MSN student S. Griffith, MSN student 2013 (Spring) 2014 (Summer) E. J. Hawkins, MSN student 2015 (Summer) A. Heard, MSN student J. Davis, MSN student 2017 (Spring)

# **DNP Research Practicum Preceptor**

2018 (Spring) G. Romano, DNP student 2018 (Spring) K. Sheerin, DNP student 2018 (Spring) S. West, DNP student

#### **Doctoral Practicum Preceptor**

Coordinating Clinical Trials Practicum 2005 (Spring) T. Barr, RN, PhD student 2006 (Spring) Manuscript Development Practicum M. Gallek, RN, PhD student Neuroanatomy 2006 (Summer) P. Chuang, PhD student 2008 (Spring) Coordinating Clinical Trials Practicum C. Shaler. PhD student 2013 (Spring) Genetic Research Proposal Development N. Osier, RN, PhD student 2013 (Summer) Genetic Research Proposal Development II N. Osier, RN, PhD student

2013 (Fall) Research in Critical Care

T. Eaton, RN, Doctoral student

2014 (Fall) Animal laboratory methodologies in TBI research

N. Osier, RN, PhD student

2017 (Spring) M. Anderson, RN, Doctoral student

Pupillometer Use in the Neuro-Trauma ICU

M. Maserati, RN, PhD student

Biomarkers of Traumatic Brain Injury

# Theses, Capstones and Dissertations

Bachelor of Philosophy Thesis Chair

E. Kantor, SN. "An Analysis of Haptoglobin Genotypes and Recovery from Aneurysmal Subarachnoid Hemorrhage". Final presentation August, 2011

**BSN-Honors Thesis Committee Member** 

G. Paik, SN.

**BSN-Honors Thesis Committee Chair** 

J. Kim, SN.

**DNP Doctoral Capstone Committee member** 

K. (Weinholdt) Shatz RN, BSN, CCRN. "ICU Delirium" Final presentation April 2015

M. Georgino, RN, BSN, PCCN, CCRN. "Emergency Preparedness and Disaster Response: Trauma Nurse Education at a Level 1 Trauma Center Utilizing the Emergency Preparedness Information Questionnaire (EPIQ)." Final presentation December 2014

**DNP Doctoral Capstone Committee chair** 

M. Anderson, RN, BSN, MSN, ACNP-BC. "Improved Care of Adult Patients With Severe Traumatic Brain Injury by the Use of an Automated Pupillometer During Regular Neurological Assessments." Final presentation March 2017.

#### PhD Doctoral Dissertation Committee member

A. Puccio, RN, MSN, PhD "Effect of FiO<sub>2</sub> Elevation on Local Brain Tissue Oxygenation & Cerebrospinal Fluid Oxidative Stress Markers in Severe Traumatic Brain Injury." Defense, March, 2008

M. Gallek, RN, BSN, PhD "Endothelin-1 Polymorphisms and Endothelin-1 Cerebrospinal Fluid Protein Expression and their Relationships to Cerebral Vasospasm and Long Term Outcomes in Individuals Following Aneurysmal Subarachnoid Hemorrhage." Defense: May, 2008

P. Chuang, MSN, PhD "Neuroglobin Genetic Polymorphisms and Their Relationship to Functional Outcome Following Traumatic Brain Injury." Defense: May, 2008.

N. Zangrilli- Hoh, RN, BSN, PhD "BCL2 Genotypes and Outcomes after Traumatic Brain Injury." Defense: September, 2008

T. Barr, RN, BSN, PhD "Gene Expression Profiling & Biomarker Discovery in Ischemic Stroke." Defense: April, 2009.

H. Khalil, RN "Gene-Gene Interactions and Opioid Response in Post-operative Pain Management." Defense: November, 2015.

K. Edwards, RN (Clemson University School of Nursing/National Institute of Health, National Institute of Nursing Research Graduate Partners Program) "Peripheral Biomarkers of Inflammation Following Blast Exposure in a Clinical Population."

L. Wright Heinsberg, RN, BSN. "Epigenetic Variation of the Iron Homeostasis Pathway in Patient Outcome Following Aneurysmal Subarachnoid Hemorrhage."

### PhD Doctoral Dissertation Committee Chair

N. Osier, RN, BSN PhD Student "Mechanism of Melatonin-induced Neuroprotection in Severe Traumatic Brain Injury." Defense: July, 2016.

M. Maserati, RN, BSN, PhD Student. "Biomarkers of Mild and Moderate Traumatic Brain Injury"

T. Eaton, RN, BSN, MSN, PhD Student. "Palliative Care Intervention in the Context of an ICU Survivors Clinic."

Children's Hospital of Pittsburgh/Safar Center for Resuscitative Research, Research Committee member L. Watkins, MD Critical Care Medicine Fellow

Jonas Nurse Leader Scholar Program Mentor

T. Eaton, RN, BSN, MSN, PhD student, University of Pittsburgh

K. Edwards, RN, PhD student, Clemson University

#### **Independent study**

2005 (Fall)	Basic Neuroanatomy.
	T. Barr, PhD student
2006 (Spring)	Manuscript development.
	T. Barr, PhD student
2006 (Summer)	Neurologic and epidemiologic research methods.
	P. Chuang, PhD student
2006 (Summer)	Advanced Pathophysiology.
	K. Samuelson, pre-BSN student
2006 (Fall)	Neuro-physiologic methods, analysis and manuscript development.
	E. Carwille, PhD student
2006 (Fall)	Neuroscience and neuroscience nursing manuscript development.
	P. Chuang, PhD student
2007 (Summer)	Graduate level teaching.
	M. Gallek, BSN, PhD student
2007 (Fall)	Genetics in Neuroscience Nursing
	P. Chuang, PhD student
2008(Fall)	Genetic Based Research Strategies in Neuroscience
	K. Kovach, PhD student
2009 (Summer)	Theory and Framework Driving Physiologic Research

	V. Varrack DhD attrident
2009 (Summer)	K. Kovach, PhD student
2009 (Summer)	Advanced Pathophysiology.  M. Hanritzy, pro PSN student
2000 (Eall)	M. Henritzy, pre-BSN student
2009 (Fall)	Advanced Pathophysiology.
2010 (FeII)	D. Woomer, MSN student
2010 (Fall)	Evidenced based rehabilitation for stroke patients
2011 (E-II)	C. Page, MSN student
2011 (Fall)	Neurologic Research in Acute Brain Injured Populations
2011 (Eall)	N. Osier, PhD student
2011 (Fall)	Concepts in Advanced Pathophysiology
	S. Albrecht, PhD, RN T. Lynchetti, MSN student
	T. Lucchetti, MSN student
2011 (Fell)	R. Robinson, MSN student
2011 (Fall)	Professional Writing for Publication
2012 (Carrier a)	K. Kamp, BSN student
2012 (Spring)	Professional Writing for Publication
	K. Kamp, BSN student
2012 (Fell)	A. Laiken, BSN student
2012 (Fall)	Select Topics in Advanced Pathophysiology O. Dougles Smith, MSN student
	O. Douglas Smith, MSN student A. Kornarhens, MSN student
	A. Wojdyla, MSN student
2013 (Fall)	Exploring Human Brain Injury
2013 (Fall)	N. Osier, BSN, PhD student
	Select Topics in Advanced Pathophysiology
	J. Bala Hampton, PhD/DNP student
	J. Eiler, MSN student
	H. Madera, MSN student
	E. Matone, MSN student
	International Healthcare Utilization Research
	L. Nagy, BSN student
2014 (Spring)	Manuscript Preparation (translational research dissemination)
2014 (Spring)	N. Osier, BSN, PhD student
	International Healthcare Utilization Research II
	L. Nagy, BSN student
	Select Topics in Advanced Pathophysiology
	J. Kim, MSN student
2014 (Summer)	PhD Dissertation (Thesis Research)
(	N. Osier, BSN, PhD student
	Capstone Project (Directed Studies)
	S. Hoffman, BSN, MSN, DNP student
2014 (Fall)	F31 Proposal Development
,	T. Eaton, RN, PhD student
	PhD Dissertation (Thesis Research)
	N. Osier, BSN, PhD student
2015 (Spring)	F31 Proposal Development
<u>.</u> <del>.</del> <del>.</del> .	T. Eaton, RN, PhD student
	PhD Dissertation (Thesis Research)
	N. Osier, BSN, PhD candidate
2015 (Summer)	Grant Proposal Development

	M. Maserati, RN, DNP, PhD student
	PhD Dissertation (Thesis Research)
	N. Osier, BSN, PhD candidate
2015 (Fall)	Select Topics in Advanced Pathophysiology
	R. DeCastro, MSN student
2017 (Spring)	Select Topics in Advanced Pathophysiology
	J. Pickering, DNP student
	J. Bentzen, MSN student
2017 (Fall)	Select Topics in Advanced Pathophysiology
	J. Bodenschatz, MSN student

# **SERVICE**

# **University of Pittsburgh Medical Center**

1/92-7/96	Member, Unit based Quality Improvement Committee
6/93-7/96	Member, Unit based Patient Education Committee
8/93-7/96	Member, Primary Nursing Task Force
6/97-9/99	Member, Medical Emergency Committee, WPIC
11/98-9/99	Member, Nursing Documentation Committee
11/98-9/99	Member, Nursing Roles Committee

# **University of Pittsburgh**

2009-present	University of Pittsburgh Postdoctoral Association Data & Dine Symposium Table host/Abstract judge
2014	Women in Medicine & Science Forum, 'Self Promotion: Building Your Brand for Success' Group Facilitator

# **University of Pittsburgh School of Nursing**

4/03 - 9/04	Student representative, Search Committee, Assistant Dean for Scientific & International Affairs
2005-present	Member, MSN Council
2005-2009	Member, Evaluation and Steering Committee
2005-2007	Member, Cameos of Caring Scholarship Review Committee
2005	Member, Scholarship Review Committee
2006	Member, Clinical Instruction Review Committee
2006, 2009, 2011, 2012, 2014	Grant Reviewer, Ruth Perkins Kuehn Research Review Committee
2006-2007	Chair, Evidenced Based Practice Implementation Evaluation Taskforce
2007-present	Member, PhD Council

2009-2011	Member, PhD Program Outcome Evaluation subcommittee	
2007, 2010, 2011, 2013	Grant reviewer, Leslie A. Hoffman Endowed Acute Care Nursing Research Fund Committee	
2005-present	Member, BSN Council	
2008-2010 2009	Member, PhD Curriculum Committee Chair	
2008-2009	Chair, MSN Quality Improvement Committee	
2012-present 2013-20	Member, University of Pittsburgh Faculty Senate Library Committee  Chair	
2012	Member, PhD Council Career Development Task Force	
2012	Member, PhD Council Research Course Task Force	
2012	Member, Cameos of Caring Advanced Practice Award Selection committee member	
2013- 2015 2014-20	Member, PhD Program Progression and Graduation Committee  Chair	
2014-2015	Refreshing the Curriculum Taskforce 10 Advocacy Education	
2015-present	Member, Nursing University Honors College Committee	
2017-present	Member, Planning and Budget Committee	
<u>Consultation</u>		
2005	Review of credentials for promotion to Associate Professor without tenure. Wayne State University, Detroit, MI	
2005	Genetics (1) and Neuroscience (4) chapter reviews. LeMone Publishing.	
2006-2010	Research program design Brain Trauma Research Center visiting physicians/fellows.	
2012-2015	Surviving Critical Care Clinic development committee, University of Pittsburgh Medical Center.	
2012-present	Delirium assessment and management in the Intensive Care Units committee, University of Pittsburgh Medical Center.	
2013	Biological Research in Intensive Care/Acute Care Settings. Center for Bio-Behavioral Clinical Research, Virginia Commonwealth University.	
2013	Professional Nursing Development. Duale Hochschule Baden-Württemberg Stuttgart (Dual Academy of Baden-Wurttemberg, Stuttgart), Stuttgart, Germany.	

2014	Review of credentials for promotion to Associate Professor without tenure. Rush University, Chicago, Ill.
2015	Family involvement in prevention of ICU Delirium. University of Pittsburgh Medical Center.
2015	Review of credentials for promotion to Associate Professor Duke University, Durham, NC.
2015	Faculty Mentor for Visiting Scholar, P. Amay-Ray, Professor, School of Nursing, Universidad Nacional de Colombia, Bogota, Columbia; Incorporating Genetics and Genomics into Nursing Resarch and Education.
2015	Review of Hartford Award for Research and Practice (HARP) Research Proposal, Oregon Health and Science University, Hartford Center of Gerontological Nursing Excellence at OHSU, Portland, OR.
2015	Review of credentials for promotion to Associate Professor University of California Los Angeles School of Nursing, Los Angeles, CA.
2016	Review of credentials for promotion to Associate Professor without Tenure (Tenure Stream) University of Pittsburgh Johnstown, School of Nursing, Johnstown, PA.
2016	Review of credentials for promotion to Associate Professor with Tenure in the School of Nursing and Health Studies at Northern Illinois University, Dekalb, IL.
2017	Review of credentials for promotion to Associate Professor in the Tenure Stream University of Texas Health Science Center at Houston, School of Nursing, Houston, TX.
2017	Delirium in Nursing Home Residents, grant review. Asuzu Pacific University School of Nursing, Azusa, CA.

# **Community**

Volunteer, Young Women in Science Day