

MELINDA ELIZABETH SNEP WILSON, PH.D.

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PERSONAL

Born: July 13, 1970
 Belleville, IL
 Marital Status: Married

EDUCATION

1992 B.S., Microbiology, University of Illinois, Urbana-Champaign, IL
 1997 Ph.D., Molecular Biology, Loyola University Chicago, Chicago, IL

PROFESSIONAL EXPERIENCE

1990-1992 Undergraduate Research Assistant, Department of Entomology,
 University of Illinois
 1992-1997 Graduate Research Assistant, Program in Molecular Biology, Loyola
 University Chicago
 1997-2000 Postdoctoral Scholar, Department of Physiology, University of Kentucky
 2000-2002 Research Associate, Department of Physiology, University of Kentucky
 2002-2008 Assistant Professor, Department of Physiology, University of Kentucky
 2008-Present Associate Professor, Department of Physiology, University of Kentucky
 2008-Present Associate Faculty, Division of Clinical and Reproductive Sciences,
 Doctorate Program in Reproductive Sciences, College of Health Sciences,
 University of Kentucky

AWARDS AND HONORS

1991 Hughes Undergraduate Research Award, University of Illinois
 1992-1994 Graduate Research Fellowship, Loyola University
 1994-1997 National Research Service Award Individual Predoctoral Fellowship, NIH/NIAAA
 1997 National Institutes of Health Postdoctoral Training Grant Fellowship,
 "Molecular and Cellular Aspects of Brain Aging," University of Kentucky
 1998-2001 National Research Service Award Individual Postdoctoral Fellowship, NIH/NIA
 1999 Endocrine Society 81st Annual Meeting, San Diego CA, Travel Award
 2000 Young Investigator Award, Workshop on Steroid Hormone and Brain
 Function, National Science Foundation

2000	Kentucky Chapter of Society for Neuroscience, Spring Neuroscience Day, Poster presentation, Postdoctoral Division, 1 st Place
2002-2003	Bridging Interdisciplinary Careers in Women's Health (BIRCWH) Scholar
2004-2010	Charles Wethington Research Excellence Award, University of Kentucky College of Medicine
2006	Abraham Flexner Master Educator Award in Outstanding Teaching Contribution or Mentorship, Center for Excellence in Medical Education, University of Kentucky College of Medicine
2007	Holsinger Award for Teaching Excellence, University of Kentucky, Department of Physiology
2009	Joe and Mabel Meites Distinguished Lecturer Seminar, Michigan State University

EXTRAMURAL FUNDING

Current:

7/03-6/08	"HIV protease inhibitors, macrophage function and estrogen" NIH/NHLBI (R01 HL73693) Role: Principal Investigator-no cost extension (6/30/10)
7/05-6/10	"Center of Biomedical Research Excellence in Women's Health" NIH/NCRR (P20 RR15592) Principal Investigator: Thomas E. Curry, PhD. Role: Co-Investigator
07/09-06/12	"Developmental regulation of estrogen receptor-alpha" NSF (0919944) Role: Principal Investigator

Pending:

7/10-6/15	"Molecular mechanisms of estrogen receptor regulation in the brain" NIH/NINDS (R01 NS062867) Role: Principal Investigator
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Completed:

8/94-5/97	"Fetal alcohol exposure and female reproductive development" National Research Service Award Individual Predoctoral Fellowship, NIH/NIAAA (F31 AA05395).
6/97-6/98	"The Molecular and Cellular Basis of Brain Aging" Institutional Training Grant Fellowship, University of Kentucky, NIH/NIA (T32 AG00024)
7/98-6/01	"Neuroprotective actions of estrogen in cortical explants" National Research Service Award Individual Postdoctoral Fellowship, NIH/NIA (F32 AG05818).
7/01-6/02	"Estradiol neuroprotection following a stroke-like injury in cortical explant cultures" American Heart Association Postdoctoral Fellowship (0120400B).
7/02-6/03	"Building Interdisciplinary Research Careers in Women's Health (BIRCWH)" (K12 DA14040) Principal Investigator: Emery A. Wilson, M.D. Role: Trainee
5/03-4/04	"Estrogen and HIV dementia" NIH/NIA (R03 AG22122) Role: Principal Investigator
7/06-6/08	"Estrogen Receptor Alpha mRNA Regulation in the Mouse Cortex Prior to and Following a Stroke-like Injury" American Heart Association Predoctoral Fellowship (0615231B) Principal Investigator: Amanda K. Prewitt. Role: Mentor

TEACHING EXPERIENCE

CLASSROOM TEACHING

University of Kentucky

<u>Fall 1997</u> PGY 710	Neurobiology of Aging, "Neurotrophins"-2 lectures
<u>Fall 1999</u> PGY 607	Physiology of Reproduction, "Gonadotropins"-2 lectures
<u>Spring 2000</u> GRN 612	Biology of Aging, "Cellular Mechanisms of Aging"-1 lecture
<u>Fall 2002</u> PGY 710	Neurobiology of Aging, "Neuroendocrine Aging and Estrogen"- 2 lectures
<u>Spring 2004</u> PGY 206	Elementary Physiology, "The Endocrine System"-5 lectures
<u>Fall 2004</u> PGY 206 PGY 774	Elementary Physiology, "The Endocrine System" -5 lectures Seminar in Physiology-Course Director
<u>Spring 2005</u> IBS 606 PGY 206 PGY 774	Integrated Biomedical Systems, "Menopause and the Mechanisms of Estrogen Action"-3 lectures Elementary Physiology, "The Endocrine System"-5 lectures Seminar in Physiology-Course Director
<u>Fall 2005</u> PGY 602 PGY 206	Readings in Systems, Cellular and Molecular Physiology-Course Director Elementary Physiology, "The Endocrine System," and "Cellular Physiology"-7 lectures
<u>Spring 2006</u> IBS 606 PGY 206 PGY 602	Integrated Biomedical Systems, "Menopause and the Mechanisms of Estrogen Action"-3 lectures Elementary Physiology, "The Endocrine System," and "Cellular Physiology"-7 lectures Readings in Systems, Cellular and Molecular Physiology-Course Director
<u>Fall 2006</u> PGY 206 PT 854	Elementary Physiology, "The Endocrine System," and "Cellular Physiology" -7 lectures Pathophysiology, "Disorders of the Endocrine System"-2 lectures
<u>Spring 2007</u> IBS 606 PGY 206 PT 854	Integrated Biomedical Systems, "Menopause and the Mechanisms of Estrogen Action"-2 lectures Elementary Physiology, "The Endocrine System," and "Cellular Physiology"-7 lectures Pathophysiology, "Disorders of the Endocrine System"-2 lectures
<u>Fall 2007</u>	

PGY 206 Elementary Physiology, "The Endocrine System," and "Cellular Physiology" -7 lectures

Spring 2008

PGY 814 Human Function, "The Endocrine System"-12 lectures
IBS 606 Integrated Biomedical Systems, "Menopause and the Mechanisms of Estrogen Action"-3 lectures
PGY 206 Elementary Physiology, "The Endocrine System," and "Cellular Physiology"-7 lectures
PT 854 Pathophysiology, "Disorders of the Endocrine System"-2 lectures

Fall 2008

PGY 206 Elementary Physiology, "The Endocrine System" -5 lectures

Spring 2009

PGY 814 Human Function, "The Endocrine System"-12 lectures
IBS 606 Integrated Biomedical Systems, "Menopause and the Mechanisms of Estrogen Action"-3 lectures
PGY 206 Elementary Physiology, "The Endocrine System," and "Cellular Physiology"-7 lectures
PT 854 Pathophysiology, "Disorders of the Endocrine System"-2 lectures

Fall 2009

PGY 206 Elementary Physiology, "The Endocrine System," and "Cellular Physiology" -7 lectures

Spring 2010

PGY 814 Human Function, "The Endocrine System"-12 lectures
IBS 606 Integrated Biomedical Systems, "Menopause and the Mechanisms of Estrogen Action"-3 lectures
PT 854 Pathophysiology, "Disorders of the Endocrine System"-2 lectures
PGY 630 Cellular and Molecular Mechanisms of Aging, "Aging and the Endocrine System"- 3 lectures

Other Institutions

Spring 1995-96

MBIO 417 Molecular Biology, "Molecular Neurobiology," Loyola University Chicago-3 lectures

Fall 1999

BIO 220 Microbiology, Adjunct Faculty, Midway College-All Lecture and Laboratory Sessions

STUDENTS TRAINED

Postdoctoral Fellows

2006-pres Jenne M. Westberry, Ph.D.
2006-pres Tomoko Sengoku, Ph.D.

Graduate Students-Major Professor

2006-2008 Paula Heron, Physiology, Ph.D.
2005-pres Amanda Prewitt, Physiology, Ph.D. Candidate
2006-pres Amanda Trout, Physiology, Ph.D. Candidate

Graduate Students-Advisory Committees

2003-2005 Amanda Prewitt, Physiology
2004-2005 Sarah Martin, Anatomy and Neurobiology
2006-2008 Karrie Greer, Physiology
2007 Meredith Boley, Biology
2008-pres Thitinart Sithisarn, Physiology
2009-pres Amanda Sherwood, Biochemistry

Graduate Students-Rotation Supervision

2003 Adrienne Ellis, Integrated Biomedical Sciences
2004 Lamin Han Mbye, Integrated Biomedical Sciences
2004 Laura Johnson, Integrated Biomedical Sciences
2004 Angela Martin, Integrated Biomedical Sciences
2004 Jeremy Mathenia, Integrated Biomedical Sciences
2005 Gayle Joseph, Integrated Biomedical Sciences
2005 Amanda Trout, Integrated Biomedical Sciences
2006 Paula Heron, Physiology
2007 Laura Ashley, Integrated Biomedical Sciences
2008 Leann Fiore, Integrated Biomedical Sciences
2009 Jennifer Rios-Pilier, Integrated Biomedical Sciences
2009 Amanda Sherwood, Integrated Biomedical Sciences

Undergraduate Students

2003 Dipika Patel, Agricultural Biotechnology 401 Senior Research Project
2004-2006 Amanda N. Rosewell, Undergraduate Research Assistant
2004 Delano Proctor, Agricultural Biotechnology 401 Research Project
2004-2005 Elizabeth M. Kordik, Biology 395 Senior Research Project
2005-2007 Deana K. Jasper, Agricultural Biotechnology 401 Research Project
2006-2007 Fitore Vula, Biology 395 Senior Research Project
2007 Keri A. Borden, Biology 395 Research Project
2007-2008 Stephanie Pyzola, Agricultural Biotechnology 401 Research Project
2008 Alexis L. Mavroides, Biology 405 Research Project, Midway College
2009-2010 Chadwick D. Lampl, Biology 395 Research Project
2009 Lece Webb, Transylvania University
2010 Katherine Miller, Asbury College

Awards by Trainees

2006 Amanda Prewitt American Heart Association, Predoctoral Fellowship
2007 Amanda Prewitt Endocrine Society 89th Annual Meeting, Toronto CA, Travel Award
2007 Jenne Westberry University of Kentucky Reproductive Sciences Symposium, 1st
Place Poster Award, Postdoctoral Fellow Division

- 2007 Tomoko Sengoku Society for Neuroscience 37th Annual Meeting, San Diego, CA, Postdoctoral Trainee Travel Award
- 2009 Jenne Westberry Bluegrass Chapter of the Society for Neuroscience, Spring Neuroscience Day, 1st Place Poster Award, Postdoctoral Fellow Division
- 2010 Jenne Westberry Bluegrass Chapter of the Society for Neuroscience Chapter Travel Award Nominee

PROFESSIONAL ACTIVITIES

Departmental

- 1999 Postdoctoral Scholar Representative
- 2004 New Faculty Search Committee
- 2004 Holsinger Award Selection Committee
- 2004-2005 Departmental Seminar Series Organizer
- 2008-pres Graduate Affairs Committee
- 2008 Holsinger Award Selection Committee, Chair
- 2008 Department of Physiology Six Year Review Committee
- 2009 Departmental Expectations for Promotion Rules of Procedure Committee
- 2010 50 year Anniversary Planning Committee

University

- 2002-2005 Reproductive Sciences Training Grant Faculty Member, University of Kentucky
- 2003-pres Associate Member of the Graduate Faculty
- 2003-2005 Agricultural Biotechnology "Introduction to Research" Seminar
- 2005 Outside Examiner for Final Doctoral Examination of Janelle Reed, Department of Anatomy and Neurobiology, University of Kentucky
- 2005-pres Medical Center Internal Pilot Grant Program Reviewer
- 2005-pres College of Medicine MD/PhD Applicant Interviewer
- 2006-pres Integrated Biomedical Sciences Admissions Committee
- 2006 Kentucky Pediatric Research Institute Inflammation Chief Search Committee
- 2006-2008 Kentucky Pediatric Research Institute Infectious Disease Advisory Committee, Chair
- 2007-2008 President's Commission on Women *Circles of Power* Leadership Program Participant
- 2007 Outside Examiner for Final Doctoral Examination of Tracy Strepanyan, Department of Molecular and Biomedical Pharmacology, University of Kentucky
- 2007 Clinical and Reproductive Sciences New Faculty Search Committee
- 2007-pres Member of Center for Excellence in Reproductive Sciences
- 2008-pres University of Kentucky Postdoctoral Fellow Committee Poster Session Judge
- 2009 University of Kentucky Institutional American Cancer Society Grant Reviewer

Regional

- 1999-pres Society for Neuroscience, Bluegrass Chapter Member
- 2003-pres Science Fair Judge, Fayette County Public Schools
- 2004-2005 Society for Neuroscience, Bluegrass Chapter, Executive Committee, Membership Coordinator

- 2005-2009 Society for Neuroscience, Bluegrass Chapter Spring Neuroscience Day, Poster Judge
- 2009-2010 Society for Neuroscience, Bluegrass Chapter, Executive Committee, Outreach Director

National

Professional Society Memberships:

- 1992-pres American Association for the Advancement of Science
- 1995-pres Society for Neuroscience
- 1995-pres The Endocrine Society
- 1999-2005 Women in Neuroscience (presently the Committee on Women in Neuroscience within the Society for Neuroscience)
- 1999-pres Women in Endocrinology
- 2009-pres Organization for the Study of Sex Differences

Professional Society Service:

- 2008 Endocrine Society Summer Research Fellowship Awards Reviewer
- 2008 Endocrine Society Endocrine Scholars Award Reviewer

Grant Reviewer:

- 2001-2002 National Science Foundation, Ad-hoc
- 2003 Health Research Board, Ireland
- 2003-2007 Alzheimer's Association
- 2006-2009 American Heart Association, Peer Review Committee, Molecular Signaling, Basic Cell and Molecular Biology
- 2008-pres National Institutes of Health, CSR, Drug Discovery Panel Study Section
- 2008 National Institutes of Health, CSR, Molecular Neurogenetics Study Section, Ad-hoc
- 2009 Cancer Research United Kingdom, Biological Sciences Committee
- 2009 National Institutes of Health, CSR, Neuroprotection and Neurodegeneration Special Emphasis Panel

Manuscript Reviewer:

- 2009-2012 *Endocrinology* Editorial Board Member
- 2002-pres Manuscript Reviewer:
- Biomedical Pharmacology*
 - Brain Research*
 - Endocrinology*
 - Experimental Neurology*
 - Frontiers in Neuroendocrinology*
 - Glia*
 - Histology and Histopathology*
 - Hormone and Metabolic Research*
 - Hormones and Behavior*
 - Journal of Clinical Endocrinology and Metabolism*
 - Journal of Leukocyte Biology*
 - Journal of Neurochemistry*
 - Journal of Neuroendocrinology*
 - Journal of Neuroscience*
 - Journal of Neuroscience Methods*

Journal of Neuroscience Research
Journal of Steroid Biochemistry and Molecular Biology
Molecular Brain Research
Neurobiology of Aging
Neurobiology of Disease
Neurochemical Research
Neuropsychiatric Disease and Treatment
Neuroscience Letters
Nutrition Journal

ORGANIZING ROLES IN CONFERENCES AND SCIENTIFIC MEETINGS

- 2000-2001 Reproductive Sciences Weekly Forum Director, University of Kentucky
2004 Workshop on Steroid Hormones and Brain Function, Session Co-Chair "Steroids and neurosteroids: From brain injury to repair," Breckenridge, CO
2007 26th Annual University of Kentucky Symposia in Reproductive Sciences and Women's Health, Organizing Director
2007 Workshop on Steroid Hormones and Brain Function, Session Chair "Long-term developmental consequences of early exposure to steroids and endocrine active compounds," Breckenridge, CO
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PUBLICATIONS

Manuscripts in Peer-Reviewed Journals

1. **Wilson, ME**, Marshall, MT, Bollnow, MR, McGivern, RF, and Handa, RJ (1995) Gonadotropin-releasing hormone mRNA and gonadotropin beta-subunit mRNA expression in the adult female rat exposed to ethanol *in utero*. *Alcoholism: Clinical and Experimental Research* 19:1211-1218.
2. **Wilson, ME** and Handa, RJ (1997) Ontogeny of gene expression in the gonadotrope of the female rat. *Biology of Reproduction* 56:563-568.
3. **Wilson, ME** and Handa, RJ (1997) Gonadotropin secretion in infantile female rats exposed to ethanol *in utero*. *Alcohol* 14:497-501.
4. **Wilson, ME** and Handa, RJ (1998) Direct actions of gonadal steroid hormones on FSH secretion and expression in the infantile female rat. *Journal of Steroid Biochemistry and Molecular Biology* 66:71-78.
5. **Wilson, ME** and Handa, RJ (1998) Activin subunit, follistatin, and activin receptor gene expression in the prepubertal female rat pituitary. *Biology of Reproduction* 59:278-283.
6. **Wilson, ME**, Price Jr., RH, Handa, RJ (1998) Estrogen receptor-beta in the female rat pituitary. *Endocrinology* 139:5151-5156.
7. Dubal, DB, **Wilson, ME**, Wise, PM (1999) Estradiol: A protective and trophic factor in the brain. *Journal of Alzheimer's Disease* 1: 265-274.
8. Dubal, DB, Shughrue, PJ, **Wilson, ME**, Merchenthaler, I, Wise, PM (1999) Estradiol modulates *bcl-2* in cerebral ischemia: A potential role for estrogen receptors. *Journal of Neuroscience* 19:6385-6393.

9. McShane, TM, **Wilson, ME**, Wise, PM (1999) Effects of life-long moderate caloric restriction on levels of neuropeptide Y, proopiomelanocortin, and galanin mRNA. *Journal of Gerontology* 54A: B14-B21.
10. **Wilson, ME**, Dubal, DB, Wise, PM (2000) Estradiol protects against injury-induced cell death in cortical explant cultures: A role for estrogen receptors. *Brain Research* 873: 235-242.
11. **Wilson, ME**, Rosewell, KL, Kashon, ML, Shughrue, PJ, Merchenthaler I, Wise, PM (2002). Age differentially influences estrogen receptor- α (ER α) and estrogen receptor- β (ER β) gene expression in specific regions of the brain. *Mechanisms of Ageing and Development* 123:593-601.
12. **Wilson, ME**, Liu, Y, Wise, PM. (2002) Estradiol modulates anti-apoptotic signals in the cortical explant cultures. *Molecular Brain Research* 102:88-94.
13. Dressman, J, Kincer, J, Matveev SV, Guo L, Greenberg R, Guerin T, Meade D, Li, X-A, Zhu W, Uittenbogaard, A, **Wilson, ME**, Smart, EJ. (2003) HIV protease inhibitors promote atherosclerotic lesion formation in mice by increasing CD36-dependent cholesterol accumulation in macrophages. *Journal of Clinical Investigation* 111: 389-397.
14. Gong, M, **Wilson, ME**, Kelly, T, Su, W, Dressman, J, Kincer, K, Matveev, SV, Guo, L, Guerin, T, Li, X-A, Zhu, W, Uittenbogaard, A, Smart, EJ (2003). HDL-associated estradiol stimulates endothelial NO synthase and vasodilation in an SR-BI-dependent manner. *Journal of Clinical Investigation* 111:1579-1587.
15. Dimayuga, FO, Reed, JL, Carnero, GA, Wang, C, Dimayuga, ER, Dimayuga, VO, **Wilson, ME**, Keller, JN, Bruce-Keller AJ (2005). Estrogen and Brain Inflammation: Effects on Microglial Cytokine Release and MHC/Co-stimulatory Molecule Expression. *Journal of Neuroimmunology* 161: 123-36.
16. Allred, KF, Smart, EJ, **Wilson, ME** (2006). Estrogen receptor-alpha decreases HIV protease inhibitor-induced atherosclerosis. *Journal of Biological Chemistry* 281:1419-1425.
17. **Wilson, ME**, Allred, KF, Bisotti, AJ, Chauhan, A, Bruce-Keller, AJ, Nath, A (2006). Estrogen suppresses Tat-induced transcription in glial cells. *AIDS Research and Human Retroviruses* 22: 350-356.
18. Stocker, SD, **Wilson, ME**, Madden, CJ, Lone, U, Sved, AF (2006). Intravenous 6-Hydroxydopamine attenuates vasopressin and oxytocin secretion stimulated by hemorrhage and hypotension but not hyperosmolality in rats. *American Journal of Physiology-Regulatory, Integrative and Comparative Physiology* 291:R59-R67.
19. Bradshaw, EL, Li, X-A, Guerin, T, Everson, WV, **Wilson, ME**, Bruce-Keller, AJ, Greenberg, RN, Guo, L, Ross, SA, Smart, EJ. (2006) Nucleoside reverse transcriptase inhibitors prevent HIV protease inhibitor-induced atherosclerosis by ubiquitination and degradation of protein kinase C. *American Journal of Physiology-Cell Physiology* 291:C1271-1278.
20. Prewitt, AK and **Wilson, ME** (2007). Regulation of estrogen receptor-alpha in the developing mouse cortex. *Brain Research* 1134: 62-69.
21. Bruce-Keller AJ, Dimayuga, FO, Reed, JL, Wang, C, Angers, R, **Wilson, ME**, Dimayuga, VM, Scheff, SW, (2007). Gender and estrogen manipulation do not affect traumatic brain injury in mice. *Journal of Neurotrauma* 24: 203-215.
22. Swartz, KR, Fee, DB, Joy, KM, Roberts, KN, Sun, S, Scheff, NN, **Wilson, ME**, Scheff, SW (2007). Gender differences in spinal cord injury are not estrogen-dependent. *Journal of Neurotrauma* 24: 473-480.

23. **Wilson, ME**, Allred, KF, Kordik, EM, Jasper, DK, Rosewell, AN, Bisotti, AJ (2007). Gender-specific effects of HIV protease inhibitors on body mass in mice. *AIDS Research and Therapy* 4:8.
24. Wang, X, Southard, RC, Allred, CD, Talbert, DR, **Wilson, ME**, Kilgore, MJ (2008). MAZ drives tumor specific expression of PPAR gamma 1 in breast cancer cells. *Breast Cancer Research and Treatment*. 111: 103-111.
25. **Wilson, ME**, Sengoku, T, Allred, KF (2008). Estrogen prevents cholesterol accumulation in macrophages induced by ritonavir. *Journal of Cellular Biochemistry*. 103: 1598-1606.
26. Westberry, JM, Prewitt, AK and **Wilson ME** (2008). Epigenetic regulation of the estrogen receptor alpha promoter in the cerebral cortex following ischemia in male and female rats. *Neuroscience* 152: 982-989.
27. **Wilson, ME**, Westberry, JM and Prewitt, AK (2008). Dynamic Regulation of Estrogen Receptor-Alpha Gene Expression in the Brain: A Role for Promoter Methylation? *Frontiers in Neuroendocrinology* 29: 378-385.
28. Heron, PM, Turchan-Cholewo, J, Bruce-Keller, AJ and **Wilson, ME** (2009). Estrogen receptor alpha inhibits the estrogen-mediated suppression of HIV transcription in astrocytes: implications for estrogen neuroprotection in HIV dementia. *AIDS Research and Human Retroviruses* 25: 1071-1081. **selected for the focus of a cover story for the NCCR Reporter, June 2010**
29. Westberry, JM, Trout, AL, and **Wilson, ME** (2010). Developmental regulation of estrogen receptor-alpha mRNA via promoter methylation in the mouse cortex. *Endocrinology* 151: 731-740.
30. Heron, PM, Sengoku, T, and **Wilson, ME**. A role for GPR30 mediating estrogen action in astrocytes. In preparation.

Invited Reviews (Peer Reviewed)

1. Handa, RJ, Price Jr., RH, **Wilson, ME** (1997) Steroid hormone receptors in the developing brain. *Biomedical Reviews* 7:51-66.
2. Dubal, DB, **Wilson, ME**, Wise, PM (1999) Estradiol: A protective and trophic factor in the brain. *Journal of Alzheimer's Disease* 1: 265-274.
3. Wise, PM, Smith, MJ, Dubal, DB, **Wilson, ME**, Krajnak, KM, Rosewell, KL (1999) Neuroendocrine influences on and repercussions of the menopause. *Endocrine Reviews* 20:243-248.
4. Wise, PM, Dubal DB, **Wilson, ME**, Rau, SW, Bottner, M, Rosewell KL (2001) Estradiol is a protective factor in the adult and aging brain: understanding mechanisms derived from in vivo and in vitro studies. *Brain Research Brain Research Reviews* 37:313-319.
5. Wise, PM, Dubal DB, **Wilson, ME**, Rau, SW (2001) Estradiol is a neuroprotective factor in *in vivo* and *in vitro* models of brain injury. *Journal of Neurocytology* 29: 401-410.
6. Wise, PM, Dubal DB, **Wilson, ME**, Rau, SW, Bottner, M (2001) Neuroprotective effects of estrogen-new insights into mechanisms of action. *Endocrinology* 142: 969-973.
7. Wise, PM, Dubal DB, **Wilson, ME**, Rau, SW, Liu, Y (2001) Estrogens: Trophic and protective factors in the adult brain. *Frontiers in Neuroendocrinology* 22: 33-66.
8. Wise, PM, Smith, MJ, Dubal, DB, **Wilson, ME**, Rau, SW, Cashion, AB, Bottner, M, Rosewell, KL. Neuroendocrine modulation and repercussions of female reproductive aging. (2002) *Recent Progress in Hormone Research* 57: 235-256.
9. **Wilson, ME**, Dimayuga, FO, Reed, JL, Curry, TE, Anderson, CF, Nath, A, Bruce-Keller, AJ. (2006) Immune Modulation by Estrogens: Role in CNS HIV-1 Infection. *Endocrine* 29:289-298.

10. **Wilson, ME** and Westberry, JM. (2009) Regulation of estrogen receptor gene expression: New insights and novel mechanisms. *Journal of Neuroendocrinology* 21: 238-242.
11. McCarthy, MM, Auger, AP, Bale, TL, DeVries, GJ, Dunn, GA, Forger, NG, Murray, AK, Nugent, BM, Schwarz, JM, **Wilson, ME**. (2009) The epigenetics of sex differences in the brain. *Journal of Neuroscience* 29: 12815-12823.

Book Chapters

1. Handa, RJ, Price Jr., RH, **Wilson, ME** (1997) Steroid hormone receptors and the assessment of feedback sensitivity. In: Methods in Neuroendocrinology, Van de Kar LD Ed. CRC Press, pp. 49-68.

Selected Abstracts

1. **Snep, ME** and Handa, RJ (1994) The effects of fetal exposure to ethanol on developmental changes in LH and FSH secretion and LH and FSH-beta mRNA levels in the infantile female rat. *Research Society on Alcoholism*.
2. **Wilson, ME**, McGivern, RF, and Handa, RJ (1995) Characterization of gene expression in the developing gonadotrope of infantile female rats. *The Endocrine Society*.
3. **Wilson, ME**, Bollnow, MR, Handa, RJ (1995) Gonadotropin releasing hormone (GnRH) mRNA and gonadotropin beta-subunit gene expression in the adult female rat exposed to ethanol *in utero*. *Research Society on Alcoholism*.
4. Price Jr., RH, **Wilson, ME**, and Handa RJ (1995) A smaller form of androgen receptor mRNA in brain contains a truncated 5'-untranslated region. *Society for Neuroscience*.
5. **Wilson, ME**, O'Keefe, JA, Price, Jr., RH, and Handa, RJ (1995) Androgen receptor (AR) and AR mRNA in primary cultures of rat hippocampus. *Society for Neuroscience*.
6. **Wilson, ME** and Handa, RJ (1996) Regulation of follicle stimulating hormone in primary cultures of infantile female rat pituitary cells by activin, androgen, and GnRH. *The Endocrine Society*.
7. **Wilson, ME**, Price Jr., RH, Handa, RJ (1997) Estrogen receptor-beta mRNA expression in the female rat pituitary. *Society for Neuroscience*.
8. **Wilson, ME** and Handa, RJ (1997) Activin subunit, follistatin, and activin receptor gene expression in the prepubertal female rat pituitary. *The Endocrine Society*
9. Dubal, DB, **Wilson, ME**, Wise, PM (1998) Estradiol upregulates Bcl-2 in response to ischemic injury. *Society for Neuroscience*.
10. Dubal DB, **Wilson, ME**, Shughrue, PJ, Merchenthaler, I, Wise, PM (1999) Induction of galanin gene expression in estradiol-mediated neuroprotection against cerebral ischemia.
11. Kashon, ML, **Wilson, ME**, Rosewell, KL, Shughrue, PJ, Mehta, KD, Merchenthaler, I, Wise, PM (1999) Age differentially influences estrogen receptor- β (ER β) gene expression in specific regions of the brain. *Society for Neuroscience*.
12. **Wilson, ME**, Dubal, DB, Wise, PM (1999) Estrogen neuroprotection in cortical explant cultures. *The Endocrine Society*.
13. **Wilson, ME**, Dubal, DB, Wise, PM (1999) Estrogen influences on gene expression in cortical explant during ischemic injury. *Society for Neuroscience*.
14. **Wilson, ME**, Liu, L, Wise, PM (2000) Estradiol modulates anti-apoptotic signals in cortical explant cultures. *Society for Neuroscience*.
15. **Wilson, ME** and Wise, PM (2001) Estradiol suppresses pro-apoptotic signals in a cortical explant model of injury. *Society for Neuroscience*.
16. **Wilson, ME**, Chauhan, A, Wise, PM, Nath, A (2002) Estradiol suppresses HIV-1 LTR-mediated transcription. *Society for Neuroscience*.

17. Allred, KF, Smart, EJ, **Wilson, ME** (2004) Estrogen modulates the expression of the scavenger receptor CD36 in macrophages treated with HIV protease inhibitors. Endocrine Society.
18. Kordik, EM, Proctor D, Martin, A, Allred, KF, Bisotti, AJ, Smart, EJ, **Wilson, ME** (2005) Gender differences in atherosclerosis induced by HIV protease inhibitor treatment in mice. University of Kentucky Symposium in Reproductive Sciences.
19. Wang, X, Southard, RC, **Wilson, ME**, Kilgore, MW (2005) Myc-associated zinc finger protein mediates the tumor specific expression of PPAR gamma 1 in human breast cancer cells. American Association for Cancer Research.
20. Prewitt, AK, Bisotti, AJ, Allred, KF, **Wilson, ME** (2005) Developmental regulation of estrogen receptor-alpha mRNA in the mouse cortex. Society for Neuroscience.
21. **Wilson, ME**, Prewitt, AK, Rosewell, AN, Trout, AL, Bisotti, AJ, Jasper, D, Allred, KF (2006) Developmental regulation of ER α mRNA involves differential promoter usage. Keystone Symposium, Nuclear Receptors: Steroid Sisters.
22. Prewitt, AK, Trout, AL, Jasper, DK, Rosewell, AN, **Wilson, ME** (2006) Developmental Regulation of Estrogen Receptor- alpha mRNA via Differential Promoter Usage in the Mouse Cortex. Endocrine Society.
23. Allred, KF, Rosewell, AN, Kordik, EM, Bisotti, AJ, **Wilson, ME** (2006) Gender differences in weight gain following HIV protease inhibitor treatment in mice. Endocrine Society.
24. Greenberg, RN, **Wilson, ME**, Vaughn, H, Guerin, T, White, J, Smart, EJ (2006) Taking Kaletra Capsules up-regulates monocyte/macrophage CD36 and cellular cholesterol: A five volunteer study. International Workshop on Adverse Drug Reactions and Lipodystrophy in HIV.
25. Prewitt, AK, Sengoku, T, Vula, F, **Wilson, ME** (2007) Epigenetic modification of the ER α promoter during mouse development. Endocrine Society.
26. Jasper, DK, Prewitt, AK, Bisotti, AJ, **Wilson, ME** (2007) Estrogen: Regulating genes involved in neuroprotection. University of Kentucky Undergraduate Research Showcase.
27. Borden, KM, Prewitt, AK, **Wilson, ME** (2007) Differential promoter usage in the developing mouse cortex. University of Kentucky Undergraduate Research Showcase.
28. Vula, F, **Wilson, ME** (2007) Expression of DNA Methyltransferases during mouse brain development. University of Kentucky Undergraduate Research Showcase.
29. Westberry, JM, Prewitt, AK, **Wilson, ME** (2007) Regulation of ER- α in the cortex following ischemic injury. Society for Neuroscience.
30. Sengoku, T, Turchan-Cholewo, J, Allred, KF, Bruce-Keller, AJ, **Wilson, ME** (2007) Modification of HIV expression by estrogens. Society for Neuroscience.
31. Heron, PM, **Wilson, ME** (2007) 17 β -Estradiol attenuates Tat-induced HIV-LTR activation: An investigation into the role of estrogen receptors Society for Neuroscience.
32. Prewitt, AK, Vula, F, Westberry, JM, **Wilson, ME** (2007) Estrogen receptor-alpha mRNA regulation in the mouse cortex via methylation following injury in vitro. Society for Neuroscience.
33. Pyzola, S, Westberry, JM, Trout, AL, Sengoku, T, **Wilson, ME** (2008) Estrogen treatment causes neuroprotection in rat cortical explants following ischemic injury. Institutional Development Award, NISBRE Symposium, Washington, DC.
34. Jasper, DK, Prewitt, AK, Trout AL, Westberry, JM, **Wilson, ME** (2008) Developmental regulation of ER- α in hypothalamic explants. Institutional Development Award, NISBRE Symposium, Washington, DC.

35. Westberry, JM, Trout, AL, **Wilson, ME** (2008) Mechanisms of regulation of estrogen receptor beta gene expression in the cortex of female rats during aging. Society for Neuroscience.
36. Trout, AL, Westberry, JM, Jasper, DK, **Wilson, ME** (2008) Gender differences in gene expression following an *in vitro* model ischemic brain injury. Society for Neuroscience.
37. Sengoku, T, Heron, PM, **Wilson, ME** (2009) 17 beta-estradiol and a GPR30 agonist, G1 reduce Tat-mediated LTR activation in astrocytes. Society for Neuroscience.
38. Westberry, JM, Trout, AL, **Wilson, ME** (2009) Changes in promoter methylation in the rat cortex following middle cerebral artery occlusion. Society for Neuroscience.
39. Trout, AL, Westberry, JM, **Wilson, ME** (2009) Gender differences in gene expression following an *in vitro* model ischemic brain injury. Society for Neuroscience.

INVITED PRESENTATIONS

March, 2000	“Estrogen neuroprotection following an ischemic injury” HIV Forum, University of Kentucky, Lexington, KY
April, 2000	“Estrogen neuroprotection: A role for estrogen receptors” Young Investigator Symposium, Workshop on Steroid Hormones and Brain Function, Breckenridge, CO
April, 2003	“Multiple mechanisms of estrogen neuroprotection” Department of Molecular and Biomedical Pharmacology, University of Kentucky, Lexington, KY
March, 2004	“Estrogen and HIV dementia: Molecular interactions between HIV and estrogen receptors in astrocytes” Workshop on Steroid Hormones and Brain Function, Breckenridge, CO
June, 2004	“HIV protease inhibitors and atherosclerosis: A role for estrogen?” Department of Medicine, Charles Drew University, Los Angeles, CA
August, 2004	“Gender differences in atherosclerosis induced by HIV protease inhibitors” Endocrine Research Dinner, Department of Medicine, University of Kentucky, Lexington, KY
October, 2004	“Modulation of apoptotic pathways: Estrogen and HIV neurotoxicity” Gonadal Hormone Modulation of Brain Vulnerability, Mini-Symposium, Society for Neuroscience Meeting, San Diego, CA
May, 2006	“HIV infection in women: Multiple sites of possible estrogen action” 25 th Annual University of Kentucky Symposium in Reproductive Sciences and Women’s Health, Lexington, KY
March, 2007	“Epigenetic regulation of estrogen receptor alpha: A role in development and adulthood” Workshop on Steroid Hormones and Brain Function, Breckenridge, CO
June, 2007	“Epigenetic modification of the ER α promoter during mouse development” Endocrine Society Meeting, Toronto, CA
September, 2008	“Regulation of estrogen receptor gene expression: New insights and novel mechanisms” United States/Japan Bilateral Neurosteroid Symposium, Gifu, Japan
November, 2008	“Regulation of estrogen receptor gene expression in the injured brain” University of Kentucky Reproductive Sciences Forum, Lexington, KY

March, 2009 "The ups and downs of estrogen receptor regulation" Workshop on Steroid Hormones, Breckenridge, CO

April, 2009 "Regulation of Estrogen Receptor Gene Expression by DNA Methylation," Michigan State University, Lansing, MI

October, 2009 "Epigenetics as a regulator of hormone sensitivity", The Epigenetics of Sex Differences in the Brain, Mini-Symposium, Society for Neuroscience Meeting, Chicago, IL **Selected for a "Hot Topics" press release**

May, 2010 "DNA methylation as a regulator of gene expression in the developing brain" Department of Pathology Conference, University of Kentucky, Lexington, KY