

CURRICULUM VITAE

I. PERSONAL INFORMATION

Name: Wiertelak, Eric Paul
Institution Address: Department of Psychology
Macalester College
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Saint Paul, Minnesota 55105
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II. EDUCATION

1993 University of Colorado at Boulder, Ph.D. in
Psychology (Behavioral Neuroscience;
minor in Learning and Motivation)
1991 University of Colorado at Boulder, M.A. in
Psychology
1987-1989 University of Central Florida, B.A. in
Psychology
1986-1987 Valencia Community College, A.A.
1975-1977 University of Illinois at Chicago, Depts. of
Biology and Psychology

III. PROFESSIONAL EXPERIENCE

2008-present DeWitt Wallace Professor of Psychology,
Department of Psychology
Macalester College
2004-present Professor, Department of Psychology
Macalester College
2001-present Director, Cognitive and Neuroscience Studies,
Macalester College
1999-2004 Associate Professor, Department of Psychology,
Macalester College
1993-1999 Assistant Professor, Department of Psychology,
Macalester College
1991-1993 Synergen Pharmaceuticals, Inc., Consultant

IV. AWARDS, FELLOWSHIPS, OFFICES HELD

Journal of Undergraduate Neuroscience Education, Associate Editor, 2010-
Present.
Faculty for Undergraduate Neuroscience National Distinguished
Mentor Award, Inaugural Recipient, 2009.

Clifford T. Morgan Award for Outstanding Service,
American Psychological Association, 2009.

American Association of University Professors, Minnesota
Conference, Past-President, 2009-2011.

American Psychological Association Liaison to the Society for
Neuroscience, 2008-2011.

Director, Faculty for Undergraduate Neuroscience Program
& Department Consultations Services, 2008-Present.

American Psychological Association Committee on Animal
Research and Ethics, 2008-2010.

American Psychological Association Division 6 (Behavioral
Neuroscience and Comparative Psychology) Executive
Committee, 2008-2009.

Chair and Organizer, Faculty for Undergraduate Neuroscience
Workshop, "Interactions, Interdisciplines and Curricular Best
Practices", held at Macalester College, July 18-20, 2008.

American Psychological Association Division 6 (Behavioral
Neuroscience and Comparative Psychology) Executive
Committee, 2007-2008.

American Association of University Professors, Minnesota
Conference, President, 2007-2009.

Faculty for Undergraduate Neuroscience Career Achievement
Award, 2007.

Association for Psychological Science Fellow, elected 2007.

American Psychological Association Fellow, elected 2007.

American Association of University Professors, Minnesota
Conference, Vice President, 2005-2007.

American Psychological Association Division 6 (Behavioral
Neuroscience and Comparative Psychology) Executive
Committee, 2005-2006.

Chair and Organizer, Project Kaleidoscope/Faculty for
Undergraduate Neuroscience Workshop, "Leadership, Laboratories, and a
Curriculum for the 21st Century",
held at Macalester College, July 15-17, 2005.

Journal of Undergraduate Neuroscience Education Editorial Board, 2004-
Present.

Chair, Faculty for Undergraduate Neuroscience, Committee on Education, 2004-
Present.

Macalester College Excellence in Teaching Award, 2004.

Faculty for Undergraduate Neuroscience, Past-President 2004-
2005.

Journal of Undergraduate Neuroscience Education Editor's
Choice Award, for outstanding neuroscience education
article, 2004.

American Psychological Association Division 6 (Behavioral

Neuroscience and Comparative Psychology) Executive Committee, 2004-2005.
American Association of University Professors, Minnesota Conference, Director, 2004-2005.
Faculty for Undergraduate Neuroscience, President 2003-2004 (Elected to third term).
American Psychological Association Division 6 Behavioral Neuroscience and Comparative Psychology Executive Committee, 2003-2004.
Faculty for Undergraduate Neuroscience Fellow, elected 2003.
American Association of University Professors, Minnesota Conference, Director, 2003-2004.
Faculty for Undergraduate Neuroscience, President 2002-2003 (Elected to second term).
American Association of University Professors, Minnesota Conference, Director, 2002-2003.
Minnesota Psychological Association Walter D. Mink Award, for outstanding undergraduate teaching, 2002.
Faculty for Undergraduate Neuroscience, President, 2001-2002.
Project Kaleidoscope Workshop Leader, 2001.
Faculty for Undergraduate Neuroscience, President-Elect, 2000- 2001.
Faculty for Undergraduate Neuroscience, Treasurer, 1998-2000
American Psychological Association (Division 6) Brenda A. Milner Award, for outstanding early career authorship in behavioral neuroscience, inaugural recipient, 1998.
Project Kaleidoscope Faculty For The 21st Century, named 1997.
Faculty for Undergraduate Neuroscience, Councilor, 1996-1998.
Wallace International Travel Fellow, 1993.
American Psychological Association Dissertation Award, 1993.
University of Colorado Charlotte Hayes Dozier Outstanding Graduate Student Award, 1992-93.
University of Colorado Graduate Student Research and Creative Work Award, 1993.
University of Colorado Graduate School Dissertation Grant, 1993
University of Colorado Doctoral Fellowship, 1991-92, 1992-93
National Institute of Mental Health Predoctoral Fellowship, 1991, 1992
National Science Foundation Predoctoral Fellowship; Honorable Mention, 1991
University of Colorado Graduate School Dean's Small Grant, 1991
University of Colorado Supplemental Graduate Fellowship, 1989- 90

V. SUPPORT

Andrew W. Mellon Foundation, in support of workshop "Sharing and Disseminating Innovative Approaches to Teaching Neuroscience in a Liberal Arts College", Co-PI with Mary Harrington, Smith College. Total Budget \$14000 (2008)

Andrew W. Mellon Foundation, in support of workshop “Teaching Innovative Laboratory Courses in Undergraduate Neuroscience”, Co-PI with Kristina Mead, Denison University. Total Budget \$12000 (2008)

National Center for Complementary and Alternative Medicine: R-15 Grant, “Impact of Cholinergic Plant Extracts on Nociception” Total budget \$203,000. (2005-2009)

National Institute For The Study Of Drug Abuse: R-29/R-01 Grant, “Endogenous hyperalgesia mechanisms and analgesic efficacy” Total budget \$441,000. (1995-2001)

National Kids Judge! Neuroscience Fair Alliance, Total budget \$15,000. (2003-2005)

Keck Student-Faculty Summer Research Collaboration Grant, Total Budget \$5000. (2006)

Keck/Larson Student-Faculty Summer Research Collaboration Grant, Total Budget \$5000. (2004)

Bush Foundation Curriculum Development Grant, Total budget \$2400. (2002)

VI. PROFESSIONAL AFFILIATIONS/MEMBERSHIPS

American Association for Laboratory Animal Science
American Association of University Professors
American Pain Society
American Psychological Association
Association for Psychological Science
Council for Undergraduate Research
Faculty for Undergraduate Neuroscience
International Association for the Study of Pain
International Behavioral Neuroscience Society
International Brain Research Organization
Society for Neuroscience

VII. PUBLICATIONS/BIBLIOGRAPHY

1. Thomas, D.R., Mood, K., Morrison, S., and **Wiertelak, E.P.** (1991). Peak shift revisited: A test of alternative interpretations. Journal of Experimental Psychology: Animal Behavior Processes, 17, 130-140.

2. **Wiertelak, E.P.**, Maier, S.F., and Watkins, L.R. (1992) Cholecystokinin antianalgesia: Safety cues abolish morphine analgesia. Science, 256, 830-833.
3. Watkins, L.R., **Wiertelak, E.P.**, and Maier, S.F. (1992). Kappa systems mediate opiate tailshock-induced analgesia at the level of the spinal cord. Brain Research, 582, 1-9.
4. Watkins, L.R., **Wiertelak, E.P.**, and Maier, S.F. (1992). Delta opiate receptors mediate tailshock-induced antinociception at supraspinal levels. Brain Research, 582, 10-21.
5. Maier, S.F., **Wiertelak, E.P.**, and Watkins, L.R. (1992). Endogenous pain facilitory systems: Antianalgesia and hyperalgesia. Journal of the American Pain Society, 1, 191-198.
6. Maier, S.F., **Wiertelak, E.P.**, and Watkins, L.R. (1992). Commentary on the commentaries. Journal of the American Pain Society , 1, 210-211.
7. **Wiertelak, E.P.**, Watkins, L.R., and Maier, S.F. (1992). Conditioned inhibition of analgesia. Animal Learning and Behavior, 20 (4), 339-349.
8. Watkins, L.R., **Wiertelak, E.P.**, Grisel, J.E., Silbert, L., and Maier, S.F. (1992). Parallel activation of multiple spinal opiate systems appears to mediate “non- opiate” stress-induced analgesias. Brain Research, 594, 99-108.
9. Watkins, L.R., **Wiertelak, E.P.**, and Maier, S.F. (1993). The amygdala is necessary for the expression of conditioned but not unconditioned analgesia. Behavioral Neuroscience, 107, 402-405.
10. Maier, S.F., Grahn, R., Kalman, B., Sutton, L., **Wiertelak, E.P.**, and Watkins, L.R. (1993). The role of the amygdala and dorsal raphe nucleus in mediating the behavioral consequences of inescapable shock. Behavioral Neuroscience, 107, 377-388.
11. Maier, S.F., **Wiertelak, E.P.**, Martin, D., and Watkins, L.R. (1993). Interleukin-1 mediates the behavioral hyperalgesia produced by lithium chloride and endotoxin. Brain Research, 623, 321-325.
12. **Wiertelak, E.P.**, Yang, H.Y.-T., Mooney-Heiberger, K., Maier, S.F., and Watkins, L.R. (1994). The nature of conditioned anti-analgesia: Spinal cord opiate and anti-opiate neurochemistry. Brain Research, 634, 214-226.
13. **Wiertelak, E.P.**, Smith, K.P., Furness, L., Mooney-Heiberger, K., Mayr, T., Maier, S.F., and Watkins, L.R. (1994). Acute and conditioned hyperalgesic responses to illness. Pain, 56, 227-234.
14. Watkins, L.R., **Wiertelak, E.P.**, Goehler, L., Mooney-Heiberger, K., Martinez, J., Furness, L., Smith, K.P., and Maier, S.F. (1994). Neurocircuitry of Illness-induced hyperalgesia. Brain Research, 639, 283-299.
15. **Wiertelak, E.P.**, Furness, L., Horan, R., Martinez, J., Maier, S.F., and Watkins, L.R. (1994). Subcutaneous formalin produces centrifugal hyperalgesia at a non- injected site via the NMDA-nitric oxide cascade. Brain Research, 649, 19-26.
16. Watkins, L.R., **Wiertelak, E.P.**, Goehler, L.E., Smith, K.P., Martin, D., and Maier, S.F. (1994). Characterization of cytokine-induced hyperalgesia. Brain Research, 654, 15-26.

17. **Wiertelak, E.P.**, Furness, L.E., Watkins, L.R., and Maier, S.F. (1994). Illness-induced hyperalgesia is mediated by a spinal NMDA-Nitric Oxide cascade. Brain Research, *664*, 9-16.
18. Watkins, L.R., **Wiertelak, E.P.**, Furness, L.E., and Maier, S.F. (1994). Illness-induced hyperalgesia is mediated by spinal neuropeptides & excitatory amino acids. Brain Research, *664*, 17-26.
19. Grisel, J., **Wiertelak, E.P.**, Watkins, L.R., and Maier, S.F. (1994). Route of morphine administration modulates conditioned analgesic tolerance and hyperalgesia. Pharmacology, Biochemistry and Behavior, *49* (4), 1029-1035.
20. **Wiertelak, E.P.**, Roemer, B., Maier, S.F., and Watkins, L.R. (1997). Comparison of the effects of nucleus tractus solitarius and ventral medial medulla lesions on illness-induced and subcutaneous formalin-induced hyperalgesias. Brain Research, *748*, 143-150.
21. Watkins, L.R., McGorry, M., Schwartz, B., Sisk, D., **Wiertelak E.P.**, and Maier SF. (1997). Reversal of spinal cord non-opiate analgesia by conditioned anti-analgesia in the rat. Pain, *71* (3), 237-247.
22. Sutton, L.C., Grahn, R.E., **Wiertelak, E.P.**, Watkins, L.R., and Maier, S.F. (1997). Inescapable shock-induced potentiation of morphine analgesia in rats: involvement of opioid, GABAergic, and serotonergic mechanisms in the dorsal raphe nucleus. Behavioral Neuroscience, *111* (4), 816-824.
23. Watkins, L.R., **Wiertelak, E.P.**, McGorry, M., Martinez, J., Schwartz, B., Sisk, D., and Maier, S.F. (1998). Neurocircuitry of conditioned inhibition of analgesia: Effects of amygdala, dorsal raphe, ventral medullary, and spinal cord lesions on antianalgesia in the rat. Behavioral Neuroscience, *112* (2), 360-378.
24. **Wiertelak, E.P.**, Koski, D., Carriere, J., Stamschror, S., and Robins, S. (2002). Thalidomide blockade of lipopolysaccharide- and lithium chloride-induced hyperalgesias. Analgesia, *6*, 11-18.
25. **Wiertelak, E.P.** (2002). And the winner is: Inviting Hollywood into the neuroscience classroom. Journal of Undergraduate Neuroscience Education, *1* (1), 4-17.
26. **Wiertelak, E.P.** (2003). Introductory neuroscience— Courses in an evolving concept, teaching that which is yet to be truly defined. Journal of Undergraduate Neuroscience Education, *1* (2), 2-3.
27. **Wiertelak, E.P.** (2003) Goals for student learning in undergraduate neuroscience. Project Kaleidoscope Volume IV: Institutional Transformation; Neuroscience Portfolio, [http://www.pkal.org/template2.cfm?c_id=800].
28. Hardwick, J.C., Kerchner, M., Lom, B., Ramirez, J.J. and **Wiertelak, E.P.** (2006). From Faculty for Undergraduate Neuroscience: Encouraging Innovation in Undergraduate Neuroscience Education by Supporting Student Research and Faculty Development. CBE Life Science Education (5), 86-90.
29. **Wiertelak, E.P.** (2007). Towards a better neuroscience

- tomorrow: thoughts on the Society for Neuroscience and the undergraduate. Journal of Undergraduate Neuroscience Education, 5 (2), 2-3.
30. **Wiertelak, E.P.** and Ramirez, J.J. (2008). Undergraduate Neuroscience Education: Blueprints for the 21st Century. Journal of Undergraduate Neuroscience Education, 6 (2), 34-39.
 31. Johnson, B.R., Harrington, M.E., and **Wiertelak, E.P.** (2009). Introduction to papers from the FUN 2008 Macalester workshops: Proceedings of the 2008 Faculty for Undergraduate Neuroscience workshops at Macalester College, St. Paul, MN July 17-20, 2008. Journal of Undergraduate Neuroscience Education, 8 (1), 1-2.
 32. Ramirez, J.J. and **Wiertelak, E.P.** (2009). Jeanne Narum: A lifetime of achievement. Journal of Undergraduate Neuroscience Education, 8 (1), 3-4.
 33. **Wiertelak, E.P.**, Ramirez, J.J. and Yates, J. (2009). The Faculty for Undergraduate Neuroscience: Learning lessons since 1991. Project Kaleidoscope Online.
 34. **Wiertelak, E.P.**, Busha, D.A., Marsh, A., and Derrington, S. Solenace plants induce bidirectional effects in the rat hot plate, tail flick, and formalin tests. Manuscript in revision.
 35. Brisbois, R., **Wiertelak, E.P.**, and Busha, D.A. . Method for extraction of plant alkaloids: application in research in teaching. Manuscript in preparation.
 36. Wiertelak, E.P., and Koch, K. The HotPlate Test re-envisioned. Manuscript in revision.

VIII. PRESENTATIONS/ABSTRACTS IN PRINT

1. Watkins, L.R., **Wiertelak, E.P.**, Grisel, J.E., Silbert, L., and Maier, S.F. (1991). Apparent parallel activation of multiple spinal opiate systems: Non-opiate analgesia is really opiate. International Narcotics Research Conference, Aspen, Colorado.
2. **Wiertelak, E.P.**, Subel, L., Maier, S.F., and Watkins, L.R. (1991). Behavioral evidence for the existence of anti-analgesia systems: Conditioned reversal of opiate analgesia. Proceedings of the Society for Neuroscience, 21, 109.
3. Subel, L., **Wiertelak, E.P.**, Maier, S.F., and Watkins, L.R. (1991). Endogenous opioid mediation of analgesia conditioned to contextual vs. discrete cues. Proceedings of the Society for Neuroscience, 20, 109.
4. Watkins, L.R., **Wiertelak, E.P.**, Silbert, L., and Maier, S.F. (1991). Non-opiate analgesia is really opiate: Apparent parallel activation of multiple spinal opiate systems. Proceedings of the Society for Neuroscience, 21, 109.
5. Watkins, L.R., **Wiertelak, E.P.**, and Maier, S.F. (1992). Evidence for the existence of "anti-analgesia" systems: conditioned reversal of opioid analgesia. Behavioural Pharmacology, 3, Supp. 1, 102.

6. **Wiertelak, E.P.** Cholecystokinin mediation of conditioned anti-analgesia (1992). Rocky Mountain Region Neuroscience Group Neurosymposium, Denver, Colorado.
7. **Wiertelak, E.P.**, Mooney-Heiberger, K., Van Wyhe, W., FitzPatrick II, G.R., Maier, S.F., and Watkins, L.R. (1992). Internal aversive stimuli elicit acute & conditioned hyperalgesia. Proceedings of the Society for Neuroscience, 22, 1026.
8. Grahn, R.E., Kalman, B.A., Sutton, L., Silbert, L.H., **Wiertelak, E.P.**, Watkins, L.R., and Maier, S.F. (1992). The effect of inescapable shock on shuttle-box escape performance, conditioned fear, and anxiety in rats with lesions of the dorsal raphe nucleus or central nucleus of the amygdala. Proceedings of the Society for Neuroscience, 22, 534.
9. Watkins, L.R., **Wiertelak, E.P.**, Mooney-Heiberger, K., Grahn, R., and Maier, S.F. (1992). Endogenous anti-analgesia: effects of amygdala, dorsal raphe & spinal lesions. Proceedings of the Society for Neuroscience, 22, 1025.
10. **Wiertelak, E.P.**, Mooney-Heiberger, K., Van Wyhe, W., FitzPatrick II, G.R., Maier, S.F., and Watkins, L.R. (1992). Internal aversive stimuli elicit acute & conditioned hyperalgesia. American Pain Society Annual Scientific Meeting, San Diego, California.
11. **Wiertelak, E.P.**, Mooney-Heiberger, K., Grahn, R., Maier, S.F., and Watkins, L.R. (1992). Endogenous anti-analgesia: effects of amygdala, dorsal raphe & spinal lesions. American Pain Society Annual Scientific Meeting, San Diego, California.
12. **Wiertelak, E.P.**, Yang, H.-Y.T., Maier, S.F., and Watkins, L.R. (1993). Endogenous anti-analgesia: spinal opiate & anti-opiate specificity. Proceedings of the International Association for the Study of Pain 7th World Congress, 456.
13. Maier, S.F., **Wiertelak, E.P.**, and Watkins, L.R. (1993). Endogenous anti-analgesia: effects of ventromedial medulla & dorsal raphe lesions. Proceedings of the International Association for the Study of Pain 7th World Congress, 457.
14. Watkins, L.R., **Wiertelak, E.P.**, and Maier, S.F. (1993). Centrifugal hyperalgesia circuitry: effects of ventromedial medulla and spinal lesions. Proceedings of the International Association for the Study of Pain 7th World Congress, 456.
15. **Wiertelak, E.P.**, Yang, H.Y.-T., Mooney-Heiberger, K., Maier, S.F., and Watkins, L.R. (1993). Conditioned anti-analgesia: spinal opiate and anti-opiate mechanisms. Proceedings of the Society for Neuroscience, 23, 114.
16. Maier, S.F., **Wiertelak, E.P.**, Goehler, L., Martin, D., and Watkins, L.R. (1993). Illness-induced hyperalgesia: Interleukin 1B (IL-1) and IL-1 antagonist. Proceedings of the Society for Neuroscience, 23, 114.
17. Furness, L., **Wiertelak, E.P.**, Maier, S.F., and Watkins, L.R. (1993). Illness-induced hyperalgesia: Investigations of spinal cord neurochemistry. Proceedings of the Society for Neuroscience, 23, 114.
18. Watkins, L.R., **Wiertelak, E.P.**, Furness, L., Smith, K.P., Martinez, J., and Maier, S.F. (1993). Neurocircuitry of centrifugal pain facilitory systems: anti-analgesia and hyperalgesia. Proceedings of the Society for Neuroscience, 23, 114.

19. Grisel, J.E., **Wiertelak, E.P.**, Frohardt, R.J., Yang, H.Y.-T., Maier, S.F., and Watkins, L.R. (1993). Conditioned tolerance to intravenous (IV) morphine: Demonstration and spinal mediation. Proceedings of the Society for Neuroscience, 23, 1025.
20. Sutton, L.C., Woodmansee, W.W., **Wiertelak, E.P.**, Maier, S.F., and Watkins, L.R. (1993). Tailshock-induced analgesia is blocked by serotonin, but not norepinephrine depletion in spinal cord. Proceedings of the Society for Neuroscience, 23, 523.
21. **Wiertelak, E.P.** (1994). Conditioned and acute illness-cue elicited hyperalgesia in the rat: initial investigations. Pain Interest Group Annual Meeting, Milwaukee, WI.
22. **Wiertelak, E.P.**, Furness, L., Smalls, S., Horan, R., Watkins, L.R., and Maier, S.F. (1994). Subcutaneous formalin produces centrifugal hyperalgesia via spinal NMDA-nitric oxide. Proceedings of the Society for Neuroscience, 24, 555.
23. Furness, L., **Wiertelak, E.P.**, Grahn, R.E., Martinez, J., Watkins, L.R., and Maier, S.F. (1994). Subcutaneous formalin produces hyperalgesia via a centrifugal nucleus raphe magnus-ventral funiculus pathway. Proceedings of the Society for Neuroscience, 24, 555.
24. **Wiertelak, E.P.** (1994). Neuroscience laboratory experience within an introductory psychology course. Proceedings of the Society for Neuroscience, 24, 209.
25. **Wiertelak, E.P.** (1995). Conditioned Anti-analgesia: Spinal mechanisms and neurochemistry. Pain Interest Group Annual Meeting, St. Paul, MN.
26. **Wiertelak, E.P.** (1995). Using introductory-level laboratories to enhance the lower-division curriculum. Minnesota Psychological Association Annual Meeting, St. Paul, MN.
27. Watkins, L.R., **Wiertelak, E.P.**, Goehler, L., Relton, J., Martin, D., and Steven Maier, S.F. (1995). Illness-Induced Hyperalgesia: Peripheral, Vagal & Central Mediators. International Symposium On Cytokines As Communication Factors Between The Immune System And The Central Nervous System, Arcachon, France.
28. **Wiertelak, E.P.** (1995). World wide web surfing, internet searching and home page publishing: New methods to enhance learning outcome in neuroscience instruction. Proceedings of the Society for Neuroscience, 25, 251.
29. **Wiertelak, E.P.** and Roemer, B. (1995). Effects of unilateral nucleus tractus solitarius lesions on centrally-mediated hyperalgesia. Proceedings of the Society for Neuroscience, 25, 1638.
30. **Wiertelak, E.P.**, Anway, R., Aziz, A, and Grass, J. (1996) Spinal NMDA-Nitric Oxide mediation of conditioned hyperalgesia. Proceedings of the International Association for the Study of Pain 8th World Congress, 237.
31. Watkins, L.R., **Wiertelak, E.P.**, and Maier, S.F. (1996) Comparative investigations of anti-analgesia: safety signals affect both opioid and non-opioid analgesias Proceedings of the International Association for the Study of Pain 8th World Congress, 487.

32. **Wiertelak, E.P.** (1996). World Wide Web Publishing in Neuroscience Instruction: Going From Web Surfing and Internet Searching to Creating WWW Resources. Macalester College Faculty/Staff Retreat, 9/96.
33. **Wiertelak, E.P.** (1996). Spinal cord endogenous opioid mediation in illness-induced & conditioned hyperalgesias. Proceedings of the Society for Neuroscience, 25, 207.
34. Watkins, L.R., **Wiertelak, E.P.**, and Maier, S.F. (1996). Spinal mechanisms of anti-analgesia: learned safety signals block non-opiate as well as opiate analgesias. Proceedings of the Society for Neuroscience, 26, 418.
35. **Wiertelak, E.P.** (1996). The world-wide web undergraduate behavioral neuroscience resource site project: promoting scientific literacy for the next generation. Proceedings of the Society for Neuroscience, 26, 46.
36. **Wiertelak, E.P.** (1997). From behaviorism to biomedical research: The interdisciplinary nature of neuroscience research today and tomorrow. Talk and panel discussion at Carleton College, Department of Psychology, 5/97.
37. Carriere, J, **Wiertelak, E.P.** and Koski, D. (1997). Spinal cord endogenous opioid mediation in illness-induced & conditioned hyperalgesias. Proceedings of the Society for Neuroscience, 27, 287.
38. **Wiertelak, E.P.** (1997). The world-wide web undergraduate behavioral neuroscience resource site project in year 2: promoting scientific literacy for the next generation. Proceedings of the Society for Neuroscience, 27, 109.
39. Carriere, J, **Wiertelak, E.P.** and Koski, D. (1997). Spinal cord endogenous opioid mediation in illness-induced & conditioned hyperalgesias. Presentation at Faculty for Undergraduate Neuroscience Annual Meeting, New Orleans, LA, 10/97.
41. **Wiertelak, E.P.**, De la Cruz, A.-L., Winer, T., and Koski, D. (1998). Lavandula angustifolia inhalation and nociception: breathing lavender alters pain sensitivity in the rat. Presentation, American Pain Society 20th Annual Scientific Meeting, held 11/5-8/98 in San Diego, CA.
40. **Wiertelak, E.P.** (1998). The world-wide web undergraduate behavioral neuroscience resource site project in year 3: outcomes, expectations and new resources. Proceedings of the Society for Neuroscience, 28, 97.
41. **Wiertelak, E.P.**, De la Cruz, A.-L., Winer, T., and Koski, D. (1998). Lavandula angustifolia inhalation and nociception: breathing lavender alters pain sensitivity in the rat. Proceedings of the Society for Neuroscience, 28, 250.
42. **Wiertelak, E.P.**, Pain mediation and modulation: Conditional and un-conditional stimulation and the direction of nociceptive responses. Invited address, Minnesota Psychological Association 2nd Annual Science and Practice: Bridging the Gap Conference, held at the University of Minnesota-St. Paul Campus, October, 1998.
43. **Wiertelak, E.P.**, Carriere, J., and Koski, D. (1999) Immune activity and pain: thalidomide blockade of illness-induced hyperalgesia. Proceedings of the International Association for the Study of Pain 9th World Congress, 601.
44. **Wiertelak, E.P.**, Murray, A., Woronczuk, J., and Koski, D. (1999) Illness-induced & conditioned hyperalgesia neurochemistry: intrathecal endogenous opiate

- specific receptor antagonist dose response studies. Proceedings of the Society for Neuroscience, 29, 217.
45. **Wiertelak, E.P.**, Woronczuk, J., Hicks, K., and Koski, D. (2000) Aromatherapy and pain: impact of exposure to lemongrass, linalool and linalyl acetate on pain responsivity in the rat. Proceedings of the Society for Neuroscience, 30, 601.
 46. **Wiertelak, E.P.**, (2000) Five years of the world-wide web undergraduate behavioral neuroscience resource site project: results and future directions. Proceedings of the Society for Neuroscience, 30, 118.
 47. **Wiertelak, E.P.**, Will it Work on the Web: Using HTML and Student Web-Authoring in a Neuroscience Course. Invited address, Project Kaleidoscope Workshop on Undergraduate Neuroscience Education: From the Enchanted Loom to the World Wide Web, held at Trinity College, Hartford CT, June 22-24, 2001.
 48. **Wiertelak, E.P.**, Koski, D., Hoffert, D., Connors, E. and Hicks, K. (2001). Differential effects of intracerebroventricular naltrexone and specific opiate receptor subtype antagonists on formalin- and illness-induced hyperalgesias. Proceedings of the Society for Neuroscience, 31, 441.
 49. **Wiertelak, E.P.**, Rohter, A. and D.L. Colbern, D.L. (2002). The Faculty for Undergraduate Neuroscience *Website 2002 project*: We're on a mission to expanded features and new directions. Proceedings of the Society for Neuroscience, 32, 22.9.
 50. **Wiertelak, E.P.**, Miller, Z.R., Scott, D.P., Nakamura, R. Coote, T. and M. Addicott, M. (2002). The rat staircase model of anxiety: Parametric investigation and effects of chlordiazepoxide and the putative herbal anxiolytics Kava Kava, Valerian Root, and Gotu Kola. Proceedings of the Society for Neuroscience, 32, 396.13.
 51. **Wiertelak, E.P.** (2003). The effects of aromatherapy and natural medicines in animal models of pain and anxiety. Invited address, Minnesota Psychological Association 67th Annual Convention.
 52. Gross, D., Lutsky, N., McMillan, D., Sherman, B., and **Wiertelak, E.P.** (2003). Psychology's tug of war: Neat rope trips or just a knotty identity crisis? Group presentation, Minnesota Psychological Association 67th Annual Convention.
 53. **Wiertelak, E.P.** (2003). The Brain: Reward, drugs of abuse and addiction. Invited address, National Science Teachers Association Convention, held October 30- November 1, Minneapolis, MN.
 54. Colbern, D.L., Cannon, J.T., DeLacalle, S., Rictor, D.M., and **Wiertelak, E.P.** (2003). Kids Judge! Fairs in undergraduate neuroscience education. Proceedings of the Society for Neuroscience, 33, 27.5.
 55. Caspers, M.L. and **Wiertelak, E.P.** (2003). The Faculty for Undergraduate Neuroscience: Taking students and faculty in new directions in 2003. Proceedings of the Society for Neuroscience, 33, 25.1.
 56. **Wiertelak, E.P.**, Busha, D., Casati, A., Depue, J., and Colbern, D.L. (2003). Undergraduate students help kids explore the universe of neuroscience. Proceedings of the Society for Neuroscience, 33, 27.1.
 57. **Wiertelak, E.P.**, Nieto, M., and Depue, J. (2003). Animal

- models of anxiety: differential effects of the natural remedies kava kava, valerian root and gotu kola with chlordiazepoxide in the elevated plus maze. Proceedings of the Society for Neuroscience, 33, 859.6.
58. **Wiertelak, E.P.** (2004). Incorporating world wide web-based group service projects into the curriculum: Experiences within a behavioral neuroscience course. National Institute on the Teaching of Psychology 26th Annual Meeting, held January 3-6, 2004.
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