

CURRICULUM VITAE

Robin L. Cotter

OFFICE ADDRESS:

Department of Biology
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EDUCATION:

1992-1996: Bachelor of Arts; DePauw University, Greencastle, IN
1997-2002: Ph.D. in Pathology/Microbiology
(Dr. Jialin Zheng and Dr. Howard E. Gendelman, co-advisors. "Role of Mononuclear Phagocyte Activation in the Pathogenesis of HIV-1-Associated Dementia and Alzheimer's Disease"), Department of Pathology/Microbiology, University of Nebraska Medical Center, Omaha, NE

PROFESSIONAL EXPERIENCE:

1994-1995: Research assistant, DePauw University, Greencastle, IN
1995-1996: Research assistant, Riley Children's Hospital, Indianapolis, IN
1996-1997: Environmental Educator, Nature's Classroom, Colebrook, CT
2001-2002: Group Leader, Rapid Autopsy Program, Center for Neurovirology & Neurodegenerative Disorders, University of Nebraska Medical Center, Omaha, NE
2002-2003: Post-Doctoral Fellow, Laboratory of Cellular Neurobiology, Center for Neurovirology & Neurodegenerative Disorders, University of Nebraska Medical Center, Omaha, NE
2003-2004: Post-Doctoral Fellow, Center for Immunology & Microbial Disease, Albany Medical Center, Albany, NY
Fall 2003 Adjunct, Biology Department, Sage College of Albany, Albany NY
Spring 2004 Lecturer, Albany Medical Center, Albany NY
Fall 2004 Instructional Specialist, Integrated Natural Sciences, Arizona State University West, Phoenix AZ
2005-Present Faculty, Department of Biology, Phoenix College, Phoenix, AZ

HONORS, GRANTS & MEMBERSHIPS:

Rector Honor Scholar, DePauw University (1992-96)
Magna Cum Laude, DePauw University (1996)
National Cancer Institute Training Grant Fellowship (1997-98)
University of Nebraska Medical Center Graduate College Award (1998, 2000)
Streck Laboratory Award (2001)
Graduate Studies Award, University of Nebraska Medical Center Graduate (1999-2001)
Wideman Fellowship, University of Nebraska Medical Center Graduate (2001-2002)
Arizona State University Student Affairs "Make a Difference" Award (2004)
American Society for Microbiology (2005-Present)
MCLI Teaching and Learning with Technology Grant: "Teaching Clinical Reasoning in Health Care Education Using Multi-Media Sim Patient Technology" (2008)
Phoenix College Distinguished Teaching Award (2009)
Title 5 Grant: "Biology Boot Camp Student Tutorials" (2009)
Maricopa County Community College District (MCCCD) "Teaching with Technology" Grant (2009)

COMMUNITY SERVICE & LEADERSHIP:

1990-92: Family, Career & Community Leaders of America, Indiana State President
1995: Public Health Team Coordinator, DePauw Winter Term in Service, Immokalee, FL
1996: Nature Director, Rocky Mountain Easter Seals Camp, Empire, CO
1998-2002: Alzheimer's Association Volunteer, Omaha, NE
2000: Brains Rule Neuroscience Education Program (Boys & Girls Clubs of America) Omaha, NE
2004: Student Research Day, Albany Medical College, Albany NY
2007: Bioindustry Curriculum Task Force, Maricopa County Community College District (MCCCD)
2007-2008 Curriculum Committee, Phoenix College
2008-2009 Employee Development Committee, Phoenix College
2008-2009 Critical Thinking Assessment Committee Co-Chair, Phoenix College
2008-2010 Faculty Senate Representative, Phoenix College
2009-2010 Student-Athlete Scholastic Success *Program* Mentor, Phoenix College
2009-2010 Learning College Committee, Tri-Chair, Phoenix College

MEETINGS

2008 28th Annual International Conference on Critical Thinking. Berkeley, California
2008 MCLI Dialogue Day, "Introduction to Formative Classroom Assessment." Tempe, Arizona.
2009 MCLI Dialogue Day, "Critical Thinking: Theory, Application, and Assessment." Tempe, Arizona.
2009 American Association of Community Colleges (AACC) Convention. Phoenix, Arizona
2009 Learning College Summit, League for Innovation in the Community College. Phoenix, Arizona

PUBLICATIONS:

1. Zheng, J., Thylin, M. R., Ghorpade, A., Xiong, H., **Cotter, R.**, Niemann, D., Che, M., Zeng, Y., Shepard, R. B., Swartz, J. M., Persidsky, Y., Gendelman, H. E. (1999). Intracellular CXCR4 signaling, neuronal apoptosis, and the neuropathogenic mechanisms for HIV-1-associated dementia. *J. Neuroimmunology* 98:185-200.
2. Zheng, J., Ghorpade, A., Thylin, M.R., **Cotter, R. L.**, Niemann, D., Epstein, L., Swartz, J. M., Shepard, R. B., Liu, X., Nukuna, A., Gendelman, H.E. (1999). Lymphotropic virions affect chemokine receptor-mediated neural apoptosis: Implications for HIV-1-associated dementia. *J. Virology* 73 (10): 8256-8267.
3. **Cotter, R.**, Burke, W., Potter, J., Zheng, J., Gendelman, H. E. (1999). New insights into the neurodegenerative process of Alzheimer's Disease: Role of microglia-associated inflammation and neurotoxicity. *J. Leukocyte Biology* 65: 416-427.
4. **Cotter, R.**, Zheng, J., Che, M., Niemann, D., Liu, Y., He, J., Thomas, E., Gendelman, H.E. (2001). Regulation of HIV-1 infection, β -chemokine production and CCR5 expression in CD40L-stimulated macrophages: Immune control of viral entry. *J. Virology* 75:4308-4320.
5. Zheng, J., Thylin, M.R., **Cotter, R. L.**, Lopez, A. L., Ghorpade, A., Persidsky, Y., Xiong, H., Leisman, G.B., Che, M., Gendelman, H.E. (2001). HIV-1 infected and immune competent mononuclear phagocytes induce quantitative alterations in neuronal dendritic arbor: relevance for HIV-1-associated dementia. *Neurotoxicity Research*. 3(5): 443-459.

6. Zheng, J., Thylin, M.R., Persidsky, Y., Williams, C. E., **Cotter, R.L.**, Zink, W., Ryan, L., Ghorpade, A., Lewis, K., Gendelman, H.E. (2001). HIV-1 infected immune competent mononuclear phagocytes influence the pathways to neuronal demise. *Neurotoxicity Research*. 3(5): 461-484.
7. Zheng, J., Lopez, A.L., Erichsen, D., Peng, H., Williams, C., **Cotter, R.L.**, Ryan, L.A., Ghorpade, A., Morgello, S., and Gendelman, H.E. (2001). Neuronal fractalkine production and macrophage activation in HIV-1 associated dementia. *J. Neuroimmunology*. 118:117-125.
8. Zheng, J., Bauer, M., Williams, C., Niemann, D., Peng, H., Ghorpade, A., Gendelman, H.E. and **Cotter, R.L.** (2001). Interleukin-8 and growth related oncogene-a effect neuronal signaling and demise in HIV-1-associated dementia. *J. Neuroimmunology*. 118:117-125 (No. 385).
9. Ryan, L., **Cotter, R.L.**, Zink, W.E., Gendelman, H.E., Zheng, J. (2002). Macrophage, chemokines and neuronal injury in HIV-1 associated dementia. *Mol. Cell. Biology*. 48(2): 125-138.
10. Zheng, J., **Cotter, R.L.**, Thylin, M. R., Flanagan, C. R., Gendelman, H. E. (2001). Macrophage activation and the pathways of arachidonic acid metabolism: Relevance to HIV-1 neuropathogenesis. *J. Leuk. Biology* (in revision).
11. **Cotter, R.L.**, Williams, C., Ryan, L., Lopez, A., Peng, H., and Zheng, J. (2002). Fractalkine and Brain Inflammation: Implications for HIV-1-Associated Dementia. *J. Neurovirology*. 8: 585-98.
12. Erichsen, D., Lopez, A., Peng, H., Niemann, D., Williams, C., Bauer, M., Morgello, S., **Cotter, R.**, Ryan, L., Ghorpade, A., Gendelman, H., and Zheng, J. (2003). Neuronal injury regulates fractalkine: relevance for HIV-1-associated dementia. *J. Neuroimmunology*. 138(1-2): 144-55.
13. Zhao, J., Lopez, A. L., Erichsen, D., Herek, S., **Cotter, R. L.**, Curthoys, N. P. and Zheng, J. (2004). Mitochondrial glutaminase enhances extracellular glutamate production in HIV-1 infected macrophages: Linkage to HIV-1-associated dementia. *Journal of Neurochemistry*. 88(1): 169-80.
14. Ghorpade, A., Bruch, L., Persidsky, Y., Chin, B., Brown, W.H., Borgmann, K., Persidsky, R., Wu, L., Holter, S., **Cotter, R.**, Faraci, J., Heilman, D., Meyer, V., Potter, J.F., Swindells, S., and Gendelman, H.E. (2005). Development of a Rapid Autopsy Program for Studies of Brain Immunity. *J. Neuroimmunology*. 163(1-2): 135-44.
15. Ghorpade, A., Persidsky, Y., Swindells, S., Borgmann, K., Persidsky, R., Holter, S., **Cotter, R.**, and Gendelman, H.E. (2005). Neuroinflammatory Responses from Microglia Recovered from HIV-1-infected and Seronegative Subjects. *J. Neuroimmunology*. 163(1-2): 145-56.
16. Paskaleva, E. , Lin, X., Li, W., Cotter, R., Klein, M. , Roberge, E., Yu, E., Clark, B., Veille, J.C., Liu, Y., Lee, D. and Canki, M. (2006). Inhibition of highly productive HIV-1 infection in T cells, primary human macrophages, microglia, and astrocytes by *Sargassum fusiforme*. *AIDS Res Ther*. 3: 15.
17. "CXCL8 protects human neurons from amyloid- β ($A\beta$)-induced neurotoxicity: Relevance to Alzheimer's disease (AD)." Submitted to Journal of Neuroscience Research

EDITED BOOKS AND MONOGRAPHS:

1. **Cotter, R.**, Zheng, J., Gendelman, H.E. (1998). The role of mononuclear phagocytes in neurodegenerative disorders: Lessons from Multiple Sclerosis, Alzheimer's disease and HIV-1 associated dementia. In: Advances in Neurodegenerative Disorders Vol.2, Alzheimer's and Aging, edited by J. Marwah and H. Teitelbaum, Prominent Press, Scottsdale, AZ. 203-241.
2. Carlson, K. A., **Cotter, R.L.**, Williams, C.E., Branecki, C.E., Zheng, J., Gendelman, H.E. (2002). The Role of Mononuclear Phagocytes in the Pathogenesis of Alzheimer's Disease. In: The Macrophage 2nd Ed., edited by B. Burke and C. Lewis, Oxford Medical Publications, Oxford. 2002. 305-332.

ABSTRACTS

1. **Cotter, R.**, Chaika, O., and Lewis, R. (1998). Molecular Dissection of Insulin Signaling Pathways Regulating Cytoskeleton Dynamics. Midwest Student Biomedical Research Forum. Abstract P-37, Omaha, NE, February 1998.
2. Zheng, J., Thylin, M.R., Ghorpade, A., **Cotter, R.**, Persidsky, Y., Gendelman, H.E. (1998). CXCR4 mediates neuronal dysfunction by HIV-1 infected macrophage secretory products: Importance for HIV-1 associated dementia. Soc. Neurosci.Abs. 24: 1959. Los Angeles, CA, November 7-12, 1998.
3. Zheng, J., Niemann, D., Bauer, M., Leisman, G.B., **Cotter, R. L.**, Ryan, L. A., Lopez, A., Williams, C., Ghorpade, A., Gendelman, H. E. (1999). The role of interleukine-8 and their receptors in neuronal signaling: relevance for HIV-1-associated dementia. Fifth International Symposium of Macrophage. Italy, November, 1999.
4. **Cotter, R.**, Zheng, J., Niemann, D., Thomas, E., Gendelman, H.E. (1999). CD40L activation of mononuclear phagocytes: Regulation of HIV-1 replication and beta-chemokine production. XIth International Congress of Virology. Sydney, Australia, Abstract 2085, August 9-13, 1999.
5. Zheng, J., Ghorpade, A., Thylin, M.D., **Cotter, R.**, Niemann, D., Gelbard, H., Epstein, L., Swartz, Jr., Shepard, R., Liu, X., Nukuna, A., Persidky, Y., Gendelman, H.E. (1999). Chemokine receptor-mediated neuronal apoptosis in HIV-1-associated dementia: Signal transduction pathways and role of progeny virion and neural cell diversity. 6th Conference on Retroviruses and Opportunistic Infections. January 31-February 4.
6. Zheng, J., Thylin, M.R., Ghorpade, A., Xiong, H., **Cotter, R.**, Niemann, D., Che, M., Zeng, Y., Sheppard, R.B., Swartz, J.M., Persidsky, Y., Gendelman, H.E. (1999). Linkages between intracellular CXCR4 signaling, neuronal apoptosis, and the neuropathogenic mechanisms for HIV-1-associated dementia. 6th Conference on Retroviruses and Opportunistic Infections. January 31-February 4, 1999.
7. Zheng, J., Bauer, M., **Cotter, R.L.**, Ryan, L. A., Lopez, A., Williams, C., Ghorpade, A., Gendelman, H.E. (2000). Fractalkine mediated macrophage activation by neuronal injury: Relevance for HIV-1 associated dementia. Soc. Neurosci. Abs. No. 8147.
8. **Cotter, R.**, Zheng, J., Thomas, E., Gendelman, H.E. (2000). CD40L activation of mononuclear phagocytes: regulation of HIV-1 replication β -chemokine production, and β -chemokine receptor expression. 7th Conference on Retroviruses and Opportunistic Infections. February, 2000.
9. Ryan, L., Swindells, S., Zheng, J., Brester, M., Ratanasuwan, W., **Cotter, R.**, Bohac, D., Anderson, J., Gendelman H.E. (2000). Monocyte immunity as a predictor for HIV-1-associated dementia. 7th Conference on Retroviruses and Opportunistic Infections. February, 2000.
10. Zheng, J., Niemann, D., Bauer, M., Leisman, G.B., **Cotter, R. L.**, Ryan, L. A., Lopez, A., Williams, C., Ghorpade, A., Gendelman, H. E. (2000). α -chemokines and their receptors in the neuronal signaling: Relevance for HIV-1-associated dementia. 7th Conference on Retroviruses and Opportunistic Infections. February, 2000.
11. **Cotter, R.**, Zheng, J., Niemann, D., Bauer, M., Ryan, L., Thomas, E. Gendelman, H.E. (2000). CD40L modulates HIV-1 replication and beta-chemokine production in mononuclear phagocytes. Midwest Student Biomedical Research Forum. Abstract O-23. Omaha, NE, February, 2000.
12. **Cotter R.**, Carlson K., Branecki C., Zheng, J., Ghorpade, A., Thomas, E., Gendelman, H. E. β -amyloid Priming and CD40L-Mediated Activation Enhances Cytokine and Chemokine Production in Mononuclear Phagocytes. World Alzheimer Congress 2000: Pivotal Research. July 9-13, 2000.
13. Zheng, J., Lopez, A., Erichsen, D., Bauer, M., **Cotter, R.**, Ryan, L., Williams, C., Ghorpade, A., Morgello, S., Gendelman, H.E. (2001). Macrophage chemotaxis and activation by fractalkine: A role for neuronal injury in brain immunity during HIV-1 associated dementia. 8th Conference on Retroviruses & Opportunistic Infections. February 4-8, 2001.
14. Zheng, J., Niemann, D., Bauer, M., Williams, C., Lopez, A., Erichsen, D. Ryan, L. A., **Cotter, R. L.**, Ghorpade, A., Swindells, S., Gendelman, H.E. (2001). HIV-1-glia interactions in interleukin-8 and growth-related oncogene α secretion, neuronal signaling and demise: Relevance for HIV-1-associated dementia. 8th Conference on Retroviruses & Opportunistic Infections. February 4-8, 2001.

15. **Cotter, R. L.**, Zheng, J., Niemann, D., Che, M., Lopez, A., Thomas, E., Gendelman, H.E. (2001). CD40 ligand inhibits HIV-1 infection and induces β -chemokine production in mononuclear phagocytes. The 32nd Annual Midwest Student Biomedical Research Forum. February 16-17, 2001.
16. Lopez, A., Erichsen, D., Bauer, M., **Cotter, R.**, Ryan, L., Williams, C., Ghorpade, A., Morgello, S., Gendelman, H.E., Zheng, J. (2001). Neuronal injury induces fractalkine production and macrophage activation in HIV-1 associated dementia. The 32nd Annual Midwest Student Biomedical Research Forum. February 16-17, 2001.
17. Niemann, D., Bauer, M., Williams, C., Lopez, A., Erichsen, D. Ryan, L. A., **Cotter, R. L.**, Ghorpade, A., Swindells, S., Gendelman, H.E., Zheng, J. (2001). Effects of interleukin-8 and growth-related oncogene α secretion on neuronal signaling and demise. The 32nd Annual Midwest Student Biomedical Research Forum. February 16-17, 2001.
18. **Cotter R.**, Williams, C., Carlson, K., Ghorpade, A., Che, M., Ghorpade, A., Persidsky, Y., Zheng, J., Gendelman, H. E. (2001) β -amyloid Priming and CD40L-Mediated Activation Enhance Cytokine and Chemokine Secretion. Abstract No. 660.7. Soc Neuroscience Society for Neuroscience 31st Annual Meeting. San Diego, CA, Nov. 10-15, 2001.
19. Lopez, A. L., **Cotter, R. L.**, Erichsen, D. A., Peng, H., Gendelman, L., Shibata, A., Gendelman, H.E. and Zheng, J. The regulation of neurotrophic factor activities following HIV-1 infection and immune activation of mononuclear phagocytes. 9th conference on Retroviruses and Opportunistic Infections, Seattle, WA, Feb. 24-28, 2002.
20. Burke, W. J., Bohac, D. L., **Cotter, R.**, Zheng, J., Potter, J., Gendelman, H. E. A 26-Week Double Blind, Placebo-controlled Study of the Efficacy of Thalidomide in the Treatment of Alzheimer's Disease. 8th International Conference on Alzheimer's Disease and Related Disorders in Stockholm, Sweden, July 20-25, 2002.
21. Bohac, D. L., Burke, W. J., **Cotter, R.**, Zheng, J., Potter, J., Gendelman, H. E. A 24-Week Randomized, Double-blind, Placebo-Controlled Study of the Efficacy and tolerability of TNFR:FC (Etanercept) in the Treatment of Dementia of the Alzheimer's Disease. 8th International Conference on Alzheimer's Disease and Related Disorders in Stockholm, Sweden, July 20-25, 2002.
22. Zhao, J., Lopez, A., Erichsen, D., **Cotter, R.** and Zheng, J. (2003). Increased production of extracellular glutamate by mitochondrial glutaminase in HIV-1 infected macrophages: Linkage to HIV-1 associated dementia. 10th conference on Retroviruses and Opportunistic Infections, Boston, MA, Feb., 2003. (Poster presentation).
23. Swindells, S., Ghorpade, A., Persidsky, Y., Borgmann, K., Persidsky, R., Holter, S., **Cotter, R.**, Carlson, K., McComb, R., Bruch, L. and Gendelman, H. (2003). Rapid Autopsy Isolation of Human Microglia from a Patient with HIV-1 Encephalitis: Recovery of Virus and Studies of Glial Function. 10th conference on Retroviruses and Opportunistic Infections, Boston, MA, Feb., 2003. (Abstract # L-34).
24. Plevyak, M., Veille, JC, **Cotter, R.**, Canki, M. Induction of Apoptosis in Human Fetal Astrocytes during Productive Infection by HIV-1: Requirement for Virus Replication. Society for Gynecologic Investigation 51st Annual Scientific Meeting. Houston, TX, March 24-27, 2004.

BOOK REVIEW

Cotter, R. and Zheng, J., The AIDS Knowledge Base: A Textbook on HIV Disease. Doody's Health Sciences Book Review Journal, 7: 5-6. November 9, 1999.

INVITED LECTURES, SEMINARS, AND PARTICIPATION IN SYMPOSIA:

Cotter R. and Gendelman, HE. (1998). Recent Advances in AIDS and Alzheimer's Disease Research: Lessons from the Laboratory. Nebraska Association of Teachers of Science (NATS) Conference; Fremont, NE. October 1998.

Cotter R., Chavez M., Finkenstadt P. and Bednarek S. Teaching Clinical Reasoning in Health Care Education Using Multi-Media Sim Patient Technology. American Association of Community Colleges (AACCC) Convention, Phoenix, AZ. April 2009.