

Diane M. P. Lawrence
Citizenship: United States of America

Office Address:

National Institute on Drug Abuse
National Institutes of Health
6001 Executive Boulevard, MSC 9581
Bethesda, MD 20892
301-594-3225
lawrencedi@nida.nih.gov

Education:

1995 Ph.D. Neuroscience, University of Rochester School of Medicine & Dentistry (Rochester, NY)
1992 M.S. Neuroscience, University of Rochester School of Medicine & Dentistry (Rochester, NY)
1989 B.A. Biological Sciences and Psychology, Carnegie Mellon University (Pittsburgh, PA)

Employment History:

Associate Director, AIDS Research Program 8/08 – present
Supervisor: Jacques Normand, Ph.D.

- Provide scientific guidance to researchers regarding NIDA research priorities in basic and clinical HIV/AIDS and drug abuse research
- Evaluate current AIDS portfolio, assist with funding recommendations, and provide scientific oversight for \$300M annual AIDS budget
- Facilitate communication among Program Officials across various NIDA divisions through coordination of interest group meetings/journal clubs and discussion about current research findings and conference proceedings
- Assist AIDS Director in communication with NIH Office of AIDS Research, other institutes and agencies to ensure multidisciplinary team effort for developing initiatives
- Represent AIDS interests in NIDA Research Training Committee
- Organize research meetings, workshops, and symposia (1-2 per year) to assess current state of the field, define gaps in knowledge, and encourage new areas of AIDS research useful to NIDA

Program Official, Division of Basic Neuroscience and Behavioral Research 3/05 – 8/08
Supervisor: Nancy Pilotte, Ph.D.

- Provide scientific guidance to researchers regarding grant and fellowship applications in multidisciplinary cell/animal research in HIV/AIDS pathogenesis, neuroscience, and drug abuse; responses to critiques; potential domestic or international collaborators; and relevance to NIDA mission-and programmatic priorities
- Evaluate current AIDS portfolio, make funding recommendations, and provide scientific oversight for 80-100 currently funded projects
- Organize research meetings, workshops, and symposia (1-2 per year) to assess current state of the field, define gaps in knowledge, and encourage new areas of AIDS research useful to NIDA
- Develop and present information about Division AIDS priorities at international scientific conferences
- Facilitate communication between Division and AIDS Research Program to ensure multidisciplinary team effort for developing initiatives and to initiate discussion about current research findings
- Represent Division in monthly NIDA Research Training Committee meetings and in ad hoc subcommittee meetings, assist with training funding recommendations, and represent NIDA at career development workshops

Health Scientist Administrator (half-time detail assignment) 10/02 – 10/03

Division of Extramural Research and Office of the Director, National Institute of Neurological Disease and Stroke, National Institutes of Health, Bethesda, MD 20892

- ◆ Scientific Review Administrator Trainee, Scientific Review Branch
 - Evaluated and subdivided applications, and recruited reviewers with appropriate expertise, for two Special Emphasis Panels to review 125 grant applications on “Brain Disorders in the Developing World”, a Fogarty International Center Request for Applications (RFA).
 - Organized assignment of applications to reviewers, and managed submission of critiques using internet-assisted review program
 - Assisted lead SRA with managing panel meetings; documented discussion of applications
 - Wrote summary statements for Fogarty applications as well as for applications for the Office of Research Integrity RFA, “Research on Research Integrity”
 - Recipient of NINDS Special Act Award and Fogarty International Center Group Award
- ◆ Program Director Trainee, Neural Environment Cluster
 - Coordinated planning meetings with three program directors to develop and write a workshop proposal to bring together researchers studying glial inflammation in HIV-1 Dementia, Alzheimer’s Disease, Parkinson’s Disease, ALS, and Huntington’s Disease
 - Successfully presented proposal to institute Committee for Scientific Implementation; subsequently the proposal was approved by NINDS for \$120,000 and the workshop took place December 7-10, 2003
 - Observed peer review study section meetings and documented key discussion points
 - Reviewed annual progress reports from grantees
 - Communicated with professional staff from Grants Management Branch, Center for Scientific Review
- ◆ Science Writer Trainee, Office of Communication and Public Liaison
 Interviewed scientific researchers and prepared news articles for publication on NINDS public web site (http://www.ninds.nih.gov/news_and_events/news_article_epilepsy_gene_therapy.htm;
http://www.ninds.nih.gov/news_and_events/news_article_gene_silencing.htm)

Research Fellow

7/00 – Present

National Institutes of Health, Laboratory of Molecular Medicine and Neuroscience,
 National Institute of Neurological Disease and Stroke (NINDS)

Supervisor: Eugene O. Major, Ph.D.

- Trained and managed research projects for senior technician and 5 students; provided scientific expertise and training to clinical/research fellows
- Coordinated lab meeting schedule and specialized laboratory ordering with federal purchase card (\$10,000 monthly credit line)
- Designed, conducted experiments on human brain samples and brain-derived progenitor cells; demonstrated that progenitors support HIV-1 infection that can be activated by differentiation or by inflammatory cytokines, and clarified mechanism for upregulation of chemokine production in differentiating astrocytes
- Associate Investigator for Bench-to-Bedside award (May 2004) comparing neuroinflammatory markers with neurological, neuropsychological, and imaging findings in HIV-infected children with virologic failure and CNS disease
- Presented research findings at seven international conferences and three workshops, to 100-500 scientists each, and authored five publications plus two in preparation
- Received NINDS Group Merit Award for leadership and independence in research, and Michael Oldstone Pioneer in Neurovirology Lectureship Award

Postdoctoral Fellow

1/97 – 6/00

The Fox Chase Cancer Center, 333 Cottman Avenue, Philadelphia, PA 19111

Supervisor: Glenn F. Rall, Ph.D.

- Wrote five peer-reviewed publications in fields of virology, immunology, molecular biology, and neuropathogenesis; provided manuscript reviews for *Virology*, *J. Virology*
- Established how immune responses to brain viral infections (measles, LCMV) contribute to neuropathology and neuroprotection, using novel transgenic and knockout mouse model systems
- Defined unique mechanism of measles virus spread in neurons: independent of CD46 receptor expression and cell fusion, but dependent on synaptic contact

Postdoctoral Fellow

1/95 – 12/96

Temple University School of Medicine, 3420 North Broad Street, Philadelphia, PA 19140

Supervisors: Martin W. Adler, Ph.D. (Department of Pharmacology) and Toby K. Eisenstein, Ph.D. (Department of Microbiology and Immunology)

- Examined the role of morphine in susceptibility to bacterial infection in mice
- Investigated how chemokines in the brain influence opioid thermoregulatory pathways

Graduate Trainee, Neuroscience Program

1/89 – 12/94

University of Rochester School of Medicine and Dentistry, 601 Elmwood Ave, Box 711

Rochester, New York 14642

Supervisor: Jean M. Bidlack, Ph.D.

- Established that opioid receptors expressed on lymphocyte cell lines are identical to brain receptors, based on binding properties and inhibition of adenylyl cyclase
- Developed novel method for fluorescent detection of cell surface opioid receptors

Awards and Fellowships:

- Quality Step Increase award for exceptional performance (2008)
- Certificate of Appreciation for organizing a workshop on NeuroAIDS, Drug Abuse and Inflammation, and for exceptional performance and significantly increasing the visibility of neuroAIDS within the Division (2007)
- Michael B.A. Oldstone, M.D. Investigator-in-Training Lectureship Award, 6th International Symposium on Neurovirology (Sardinia, Italy), for scholarship and excellence during an oral presentation in the field of neurovirology (2004)
- Group Merit Award, NINDS, for leadership and independence in research while laboratory chief assumed 2-year role as Acting Deputy Director (2004)
- Group Award, Fogarty International Center, for coordinating outstanding scientific review meetings (RFA: Brain Disorders in the Developing World) (2004)
- Special Act Award, NINDS, for coordinating outstanding scientific review meetings (RFA: Brain Disorders in the Developing World) (2003)
- Kirby Foundation Fellowship, The Fox Chase Cancer Center (1999-2000)
- NIAID Training Grant Postdoctoral Fellowship, The Fox Chase Cancer Center (1997-1999)
- NIDA Training Grant Postdoctoral Fellowship, Temple University (1995-1996)
- Wallace O. Fenn Award for Meritorious Research, University of Rochester (1995)
- NIDA Training Grant Graduate Fellowship, University of Rochester (1991-1994)

Service and Training:

- Board member, Bethesda Chapter, Association for Women in Science (AWIS) (2002-2007)
- Orientation to NIH Extramural Activities Core Curriculum (2003)
- Basic Science Co-Chair, NIH Fellows Committee (2002-2003)
- “Leadership Lab” training, Dept. of Health and Human Services (2001)
- Co-Chair, Symposium on Industry Research, The Fox Chase Cancer Center (1999)

- Cancer Prevention Campaign Committee, The Fox Chase Cancer Center (1999)
- Stephen Ministry crisis counseling training and service (1998-1999)
- Founder and Co-Chair, Fox Chase Postdoctoral Association (1998-2000)
- Editor, Fox Chase Cancer Center Postdoctoral Newsletter (1998-2000)

Professional Affiliations:

Association for Women in Science (National and Bethesda Chapter member)
 Society for Neuroscience
 International Society for Neurovirology
 Society for Neuroimmune Pharmacology
 American Association for the Advancement of Science

Publications:

1. Lawrence DM, Thomas DA, Wu DY (2008) Glial cells and the neurobiology of addiction. *Scientific World Journal* 7:86.
2. Schwartz L, Civitello L, Dunn-Pirio A, Ryschkewitsch S, Berry E, Cavert W, Kinzel N, Lawrence DM, Hazra R, Major EO (2007) Evidence of human immunodeficiency virus type 1 infection of nestin-positive neural progenitors in archival pediatric brain tissue. *J. Neurovirology*. 13:274.
3. Lawrence DM, Seth P, Durham L, Diaz F, Boursiquot R, Ransohoff RM, Major EO (2006) Astrocyte differentiation selectively upregulates CCL2/monocyte chemoattractant protein-1 in cultured human brain-derived progenitor cells. *Glia* 53: 81.
4. Lawrence DMP, Schwartz L, Major EO (2005) Psychiatric and neurological complications of HIV infection and AIDS. In: *Infectious Disease and Neuropsychiatric Disorders*, S. H. Fatemi (ed.), Wiley & Sons Ltd., London.
5. Lawrence DMP, Durham LC, Schwartz L, Seth P, Maric D, Major EO (2004) HIV-1 infection of human brain-derived progenitor cells. *J. Virol.*78: 7319.
6. Lawrence DMP and Major EO (2002) HIV-1 and the brain: connections between HIV-1-associated dementia, neuropathology and neuroimmunology. *Microbes Infect.* 4: 301.
7. Patterson CE, Lawrence DMP, Echols LA, Rall GF (2002) Immune-mediated protection from measles virus-induced CNS disease is noncytolytic and interferon-g dependent. *J. Virol.* 76: 4497.
8. Rall GF, Lawrence DMP, Patterson CE (2000) The application of transgenic and knockout mouse technology for the study of viral pathogenesis. *Virology* 271: 220.
9. Lawrence DMP, Patterson CE, Gales TL, D’Orazio JL, Vaughn MM, Rall GF (2000) Measles virus spread between neurons requires cell contact but not CD46 expression, syncytia formation or extracellular virus production. *J. Virol.* 74: 1908.
10. Kappes DJ, Lawrence DMP, Vaughn MM, Dave VP, Belman AR, Rall GF (2000) A delayed anti-viral cytotoxic T lymphocyte (CTL) response favors persistent neuronal infection. *Virology* 269: 248.
11. Lawrence DMP, Vaughn MM, Belman AR, Cole JS, Rall GF (1999) Immune response-mediated protection of adult but not neonatal mice from neuron-restricted measles virus infection and central nervous system disease. *J. Virol.* 73: 1795.
12. Lawrence DMP, Hutchinson I, Seyed-Mozaffari A, Archer S, Bidlack JM (1997) Fluorescent staining of kappa opioid receptors in the immune system using naltrexamine derivatives and phycoerythrin. *J. Immunol. Meth.* 201: 173.
13. Eisenstein,TK, Hilburger ME, Lawrence DMP (1996)Immunomodulation by morphine and other opioids. In: *Drugs of Abuse, Immunity and Infections*, H. Friedman, T.Klein and S. Specter (eds.), pp. 103-120, CRC Press, New York.
14. Bidlack JM, Lawrence DMP, Ignatowski TA (1996) Kappa opioid receptors on immune cells as studied by fluorescent ligands. *Adv. Exp. Med. Biol.*, 402: 13.
15. Bidlack JM, Ignatowski TA, Lawrence DMP (1996) Kappa opioid receptor expression on immune cells as studied by fluorescent ligands. *J. Neuroimmunol.* 69: 8.
16. Lawrence DMP, El-Hamouly W, Archer S, Leary JF, Bidlack JM (1995) Identification of μ -opioid receptors in the immune system by indirect immunofluorescence. *Proc. Natl. Acad. Sci. USA* 92: 1062.

17. Lawrence DMP, Joseph DB, Bidlack JM (1995) K-opioid receptors expressed on three related cell lines: differences in receptor-effector coupling. *Biochem. Pharmacol.* 49: 81.
18. Lawrence DMP, Archer S, Bidlack JM (1995) Identification of opioid receptors in the immune system using a novel combination of selective opioid ligands and indirect phycoerythrin immunofluorescence. *Adv. Exp. Med. Biol.* 373: 17.
19. Bidlack JM, Joseph DB, Lawrence DMP (1995) Kappa opioid receptors on three related thymoma cell lines: differences in receptor-effector coupling. *Adv. Exp. Med. Biol.* 373: 23.
20. Joseph DB, Lawrence DMP, Bidlack JM (1994) Differences in kappa opioid receptor coupling to G proteins and adenylyl cyclase on three related cell lines. *Regul. Pept.* 54: 141.
21. Lawrence DMP, Archer S, Bidlack JM (1994) Fluorescent labeling of the kappa opioid receptor by indirect immunofluorescence with phycoerythrin. *Regul. Pept.* 54: 161.
22. Joseph DB, Lawrence DMP, Saripalli LD, Bidlack JM (1994) Chronic opioid treatment of R1.1 cells results in the downregulation of the kappa opioid receptor without desensitization of adenylyl cyclase activity. *Regul. Pept. Suppl.* 1: S183.
23. Lawrence DMP and Bidlack JM (1993) The kappa opioid receptor expressed on the mouse R1.1 thymoma cell line is coupled to adenylyl cyclase through a pertussis toxin-sensitive guanine nucleotide-binding regulatory protein. *J. Pharmacol. Exp. Ther.* 266: 1678.
24. Bidlack JM, Saripalli, LD, Lawrence DMP, Joseph DB (1993) *Adv. Biosci.* 86: 585.
25. Lawrence DMP and Bidlack JM (1993) *Adv. Biosci.* 86: 603.
26. Lawrence DMP and Bidlack JM (1992) *J. Neuroimmunol.* 41: 223.
27. Bidlack JM, Saripalli LD, Lawrence DMP (1992) *Eur. J. Pharmacol.* 227: 257.
28. Snyder LH, Lawrence DM, King WM (1992) *Vision Res.* 32:569.