

CURRICULUM VITAE (abbreviated)

Jonathan Joseph Lipman, Ph.D., MIBiol, FACN,
NEUROPHARMACOLOGIST



EDUCATION

High School: Allerton Grange School, Leeds, England: General Certificates of Education, 1970

Kitson College of Science, Leeds, England; Advanced Level Certificates of Education, 1972

Hatfield Polytechnic, Hertfordshire, England: B.Sc. (Honours) Applied Biology, 1976

The University of Wales Institute of Science and Technology (UWIST), Cardiff, Wales: Ph.D. (Neuropharmacology) December 1979

REGISTRATION / CERTIFICATION:

Board Certifications:

Pain Management: Diplomate of the American Academy of Pain Management

Fellow and Diplomate, American Board of Medical Psychotherapists & Psychodiagnosticians

Certification Board for Nutrition Specialists [recertified July 2001]

Diplomate of the American Board of Forensic Examiners

Diplomate of the American Board of Forensic Medicine (1996)

American Board of Psychological Specialties: Psychopharmacology board (1997)

American Board of Psychological Specialties: Substance Abuse board (1997)

Senior Disability Analyst and Diplomate of the American Board of Disability Analysts

Registered Medical Laboratory Scientific Officer, England #17189 [from 2003: State Registered Biomedical Scientist (Health Professions Council)]

Certified Medical Hypnotherapist - National Board for Hypnotherapy and Hypnotic Anesthesiology

Certified Clinical Hypnotherapist - American Council of Hypnotist Examiners

National Registry of Board Certified Pain Practitioners (in Neuropharmacology)

Current Society Memberships (with joining date)

1979 Institute of Biology (U.K.), Member and Chartered Biologist
1980 American Assoc. for the Advancement of Science, Member
1981 Society for Neuroscience, Member
1981 International Brain Research Organization, Member
1987 International Association for the Study of Pain, Member
1987 American College of Nutrition, Fellow (recertified 2003)

PROFESSIONAL EXPERIENCE:

5/74 - 10/75 Institute of Neurology, Department of Neurosurgical Studies, National Hospital for Nervous Diseases, Queen Square, London, England

9/76 - 1/80 Research Associate and Instructor, The Welsh School of Pharmacy, The University of Wales, Institute of Science and Technology, Cardiff, Wales

2/80 - 9/83 Research Associate, Departments of Anesthesiology and Biochemistry and U.T. Pain Clinic, University of Tennessee Center for Health Sciences, Memphis, Tennessee

1985- Present President, Neuroscience Consulting Inc (Registered Illinois and Tennessee)

9/83 - 7/93 Research Instructor, Department of Surgery, Vanderbilt University School of Medicine, Nashville, Tennessee

9/84 - 6/88 Research Instructor, Department of Medicine, Vanderbilt University School of Medicine, Nashville, Tennessee

6/88 - 7/93 Research Assistant Professor, Departments of Medicine and Psychology, Vanderbilt University School of Medicine, Nashville, Tennessee

7/93 - 3/94 Group Leader, Pharmacology, Molecular Geriatrics Corp. Lake Bluff, IL 60044

10/94 –Present Senior Vice President, R & D, Medical Toolworks, Inc. Northwestern University 1840 Oak Avenue, Evanston, IL 60201

1/97-Present President and CEO, Neuroscience Toolworks Inc., Evanston Research Park Evanston, Illinois

9/01 – Present Associate Clinical Professor of Psychiatry, Quillen College of Medicine, East Tennessee State University

CONSULTANTSHIPS/PROFESSIONAL AFFILIATIONS (CURRENT):

American Academy of Pain Management, Pain Clinic Accreditation/Site Visit Team

U.S. Department of Health & Human Services, Public Health Service, National Institute on Drug Abuse, Consultant:

American Board of Forensic Examiners, Springfield, Missouri Executive Board Member
(Executive Board of Scientific and Technical Advisers) (1997/98, 98/99, 00/03 Terms of Office.
Currently serving as Chair Emeritus of the Executive Board of Scientific and Technical Advisers
(2002-4 term)

Director, Toxicology Section, American College of Forensic Examiners (2003 -)

Reviewer, NIH / National Center for Complementary and Alternative Medicine (2003 -)

PATENTS:

US 5,941,833, Heatbeam Dolorimeter for Pain and Sensory Evaluation

US 6,248,079 Improved Heatbeam Dolorimeter

US 6,659,964 Sonar controlled Apparatus for the Delivery of Electromagnetic Radiation

- SCIENTIFIC PUBLICATIONS (selected) -

1. Basic Drug Research

1(A) Peer Reviewed Journals / Publications - Basic Drug Research

Lipman JJ and Spencer PSJ. Clonidine and opiate withdrawal. Lancet 11:521, 1978.

Lipman JJ and Spencer PSJ. Further evidence for a central site of action for the antinociceptive effect of clonidine-like drugs. Neuropharmacology 18:731-733, 1979.

Lipman JJ and Spencer PSJ. An examination of tolerance to the antinociceptive effects Of clonidine, morphine and their combination in the mouse tail immersion test. In: Way EL (ed.). Endogenous and Exogenous Opiate Agonists and Antagonists. London: Pergamon Press, pp. 197-200, 1979.

Lipman JJ and Spencer PSJ. A new rapid technique for intracerebroventricular administration of agents in the conscious mouse. Journal of Pharmacological Methods 4:327-333, 1980.

Lipman JJ and Spencer PSJ. A comparison of muscarinic cholinergic involvement in the antinociceptive effects of morphine and clonidine in the mouse. European Journal of Pharmacology 64:249-258, 1980.

Lipman JJ, Miller BE, Karkera S, Winfield RC, North WC and Byrne WL. Morphine tolerance is associated with elevated levels of an uncharacterized endorphin (peak B) in mouse brain with no change in 3H-dihydromorphine binding. Life Sciences 33(1):373-376, 1983.

Lipman JJ, Tolchard S. Separate and Combined Effects of Morphine and Amphetamine on the Quantitative Electroencephalogram and Regional Cerebral Glucose Uptake in a Rat Model., Neuropsychobiology 23:89-98, 1990.

B. Book Chapters - Basic Drug Research

Lipman JJ, Neurotoxic Actions on Mammalian Nerve Impulse Conduction: Chapter 37 In Colowick and Kaplan's Methods in Enzymology. Vol. 165, Microbial Toxins. Harshman, S. (ed.) Academic Press, New York, pp. 254-269, 1988.

1(C). Abstracts Presented at Meetings - Basic Drug Research

Blumenkopf B and **Lipman JJ**. Autotomy I: Evidence supporting its being a behavioral response to nociceptive afference. American Association of Neurological Surgeons, 5/1990, Nashville, TN.

2. Human Pain and Addiction States

2(A). Journal Articles - Human Pain and Addiction States

Mays KS, Schnapp M, North WC, **Lipman JJ** and Yodlowski E. Morphine peripheral perineural injection in chronic pain syndromes. In: Rizzi R (ed). Proceedings of the International Postgraduate Course in Pain Therapy. Italian Ministry of Health (publishers), 1981.

Lipman JJ, Miller BE, Mays KS, North WC, Karkera S and Byrne WL. CSF endorphin levels in chronic pain patients and in patients before and after a placebo pain relief. In: *Advances in Endogenous and Exogenous Opioids*. Kodansha Press, Japan, pp.315-317, 1983.

Mays KS, **Lipman JJ** and Schnapp M. Local analgesia without anesthesia using peripheral perineural morphine injections. *Anesthesia and Analgesia* 66:417-420, 1987.

Lipman JJ, Blumenkopf B. Comparison of Subjective and Objective Analgesic Effects of Intravenous and Intrathecal Morphine in Chronic Pain patients by Heat Beam Dolorimetry. *Pain* 39:249-256, 1989.

Lipman JJ, Miller BE, Mays KS, Miller MN, North WC and Byrne, WL. Peak "B" Endorphin Concentration in Cerebrospinal Fluid: Reduced in Chronic Pain Patients and Increased During the Placebo Response. *Psychopharmacology* 109 (1) 112-116, 1990.

Lipman JJ, Blumenkopf B, Lawrence PL. Normal and Radiculopathic Cutaneous Pain Tolerance Levels Evaluated By Heat-Beam Dolorimetry. *J. Neurosurgery* 72:883-888, 1990.

Lipman JJ, Blumenkopf B, Parris WCV: Chronic Pain Assessment Using Heat- Beam Dolorimetry. *Pain* 30:59-67, 1987

Miller BE, **Lipman JJ**, Byrne WL: Partial Characterization of a Novel Endogenous Opioid in Human Cerebrospinal Fluid. *Life Sciences* 41:2535-2545, 1987.

Blumenkopf B and **Lipman JJ**. Studies in Autotomy: Its pathophysiology and usefulness as a model of chronic pain. *Pain* 45(2):203-211, 1991.

Lipman, JJ, Objective Scientific Study of Hypnotic Analgesia on Experimental Pain. *Adventures in Education*. 11(3) 1-5, 1995.

2(B) Book Chapters- Human Pain and Addiction States

Lipman JJ. *Pain Measurement* In: Contemporary Issues in Pain Management. Parris, WCV (ed.) Kluwer Pubs., 1991.

2(C) Abstracts Presented at Meetings - Human Pain and Addiction States

Miller BE, Byrne WL, Noel M, Ungar AL, Mays K, North WC and **Lipman JJ**. Levels of cerebrospinal fluid endorphin are elevated in placebo responding chronic pain patients. Society for Neuroscience (abstract), 1980.

Mays KS, Schnapp M, **Lipman JJ** and North WC. Pain relief after peripheral perineural injection of morphine. *Pain* 10, Suppl. 120, 1981.

Miller BE, **Lipman JJ**, Karkera S, Winfield R., Byrne WL, Mays KS and North WC. Partial purification and characterization of a novel human endorphin from human CSF. Society for Neuroscience (abstract), 1981.

Lipman JJ, Hudson JS, Karkera S and Winfield R. CSF endorphin changes during transcutaneous electrical stimulation (TENS) for relief of causalgia-like pain: Report of a case. Memphis Neuroscience Society (abstract), 1981.

Lipman JJ, Parris WCV, and Blumenkopf B: Heat Beam Dolorimetry in the Assessment of Chronic Pain. Proceedings of the 6th Annual Meeting of the American Pain Society, Washington, D.C., (abstract), 1986.

Byrne WL, **Lipman JJ**, Miller BE, Mays KS and North WC. Pain and the placebo response: Involvement of CSF endorphins. Federation Proceedings,(abstract), 1985.

Lipman JJ and Blumenkopf B: Pain Assessment Using Heat Beam Dolorimetry In Neurosurgical Patients. *Proc Soc Neurol Surg* (abstract), 1986.

Lipman JJ and Blumenkopf B. No Evidence for a Segmental Local Analgesic Effect Due to Intrathecal Morphine Sulphate. Intraspinial Narcotic Special Interest Group Meeting, Hawaii, April 1990.

Lipman JJ and Blumenkopf B. Thermal pain tolerance dolorimetry for evaluation of the pain and sensory deficits of radiculopathy. American Association of Neurological Surgeons, May 1990, Nashville, TN.

Blumenkopf B and **Lipman JJ** Hyperalgesia of peripheral nerve injury (PNI) evaluated by Heat Beam Dolorimetry. American Association of Neurological Surgeons, February 1989, Cancun, Mexico

Blumenkopf B, **Lipman JJ**. Objective Assessment of the Nociceptive Sensibility and Deficits Associated with Radioculopathy Using the Heat Beam Dolorimeter. Fifth World Congress on Pain, Hamburg, Germany, August 20, 1987. *Pain*, (Suppl. 4), 1987, S10.4

Lipman JJ, Blumenkopf B, Parris WC. Chronic Pain Assessment Using Heat Beam Dolorimetry. Fifth World Congress on Pain, Hamburg, Germany, August 2-7, 1987. *Pain*, (Suppl. 4), 1987, S353.

Lipman JJ, Recent Developments in Chronic Pain Assessment Using Heatbeam Dolorimetry, American College of Forensic Examiners / American Board of Psychological Specialties Annual Training, New York, October 1999

Miller BE, Miller MN, Schacht T, Kauffmann C & **Lipman JJ** (1999) Depressed Patients Report More Subjective Pain and Have a Higher Objective Pain Tolerance Than Normal Controls. Soc. Neurosci Annual Meeting, Miami, Abstract 839.3

2(D). Invited Lectures - Human Pain and Addiction States

The Principles of Chronic Pain Management, Symposium, faculty and lecturer. Vanderbilt University Medical Center, September 1991.

3. Encephalopathy - Dementia

3(A). Journal Articles – Encephalopathy and dementia

Wehr CJ, **Lipman JJ**, Hammon JW Jr, Bender HW JR and Merrill WH. The effect of arterial carbon dioxide tension on cerebral blood flow and electroencephalogram during cardiopulmonary bypass. Surgical Forum 35:252-254, 1984.

Wehr CJ, **Lipman JJ**, Hammon JW Jr, Bender HW Jr and Merrill WH. Effect of carbon dioxide tension and hypothermia on cerebral blood flow and the electrocorticogram during cardiopulmonary bypass. Surgical Forum XXXVI:240-242, 1985.

Teschan PE, **Lipman JJ**, Lawrence P, DeBoer D: Encephalopathic Toxicity: An Experimental Model of Uremic and Solute-specific Dialysis. (Proceedings), ISAO Symposium on Uremic Toxins; S. Ringoir, (ed.), (Plenum Pubs.) Ghent, Belgium, 1987.

Lipman JJ, Brill AB, Som P, Jones KW, Colowick S, Cholewa J: Studies of Aluminum in Rat Brain. Biological Trace elements Research Vol 13, pp. 44-53, 1987.

Lipman JJ, Colowick SP, Lawrence PL, Abumrad NN: Aluminum induced encephalopathy in the rat. Life Sciences 42(8):863-875 (1988).

Lipman JJ, White DL, Lawrence P, Teschan PE. Juvenile Hypocalcemia provokes Persistent Electroencephalographic Change in Renally Compromised Rats J Am Coll Nutrition, 7(6): 453-460, 1988.

Teschan PE, **Lipman JJ**, Lawrence PE, and DeBoer D. Solutes vs Symptoms in Uremia. Int'l Artificial Organs 11 (4):232-234, 1988.

Lipman JJ, Lawrence PL, DeBoer DK, Shoemaker MO and Teschan PE: Role of dialysable solutes in the mediation of Uremic Encephalopathy Kidney International 37(3):892-900 (1990)

3(B) Book Chapters– Encephalopathy and dementia

Lipman JJ, The Electroencephalogram as a Tool for Assaying Neurotoxicity Chapter 38 In Colowick and Kaplan's Methods in Enzymology, Vol. 165, Microbial Toxins. Harshman, S. (ed.), Academic Press, New York, p. 276-277, 1988.

3(C). Abstracts Presented at Meetings – Encephalopathy and dementia

Jazarevic S, **Lipman JJ**, Abumrad NN: Inactivation of opioid receptors by collagenase: Relevance to studies on glucose homeostasis. Second Annual Vanderbilt University Research Forum (1984)

Wehr CJ, Gerhardt E, DeBoer DK and **Lipman JJ**: Quantitative Electroencephalographic Effects Attendant on Cardiopulmonary Bypass (CPB) in the Dog: Correlation With Regional Cerebral Blood Flow and pCO₂. Second Annual Vanderbilt University Research Forum (1984)

Lipman JJ, Lawrence PL, Teschan PS: Dialysate Solute Relations in Rat Uremic Neurotoxicity. Xth International Congress of Nephrology (abstract), London, 1987.

Lipman JJ, Colowick SP, Lawrence PL, Abumrad NN: Aluminum Induced Encephalopathy in the Rat. Xth International Congress of Nephrology (abstract), London, 1987.

Teschan P, **Lipman JJ**, Lawrence PL, DeBoer D, White D, Sulser, D: Quantitative Solute-Symptom Relationships in renal Failure and Solute-Specific Dialysis. American Society of Nephrology, Washington, D.C., 1987.

Lipman JJ, Lawrence PL, Teschan PE: Dialysate Solute Relations in Rat Uremic Neurotoxicity. Xth International Congress of Nephrology, 1987(abstract).

DeBoer D, **Lipman JJ**, Lawrence PL, Teschan PE: Automated EEG Monitoring System for Quantification of Uremic Encephalopathy in a rodent Model. Am.Assoc. Med. Instr., 1985.

Lipman JJ, White DL, Tolchard S, Lawrence PL: The Effect of Elevated Dietary Phosphate on Uremic Progression and the Electroencephalogram in Renally Compromised Rats. Journal of the American College of Nutrition, Vol. 7, No. 5, October, 1988.

Lipman JJ, Lawrence PL, Sulser D, White DL, Tolchard S, Teschan PE: Uremia Produces Dialysis- Reversible Depression of Geniculate but not Superior Collicular or Cortical 2-Deoxy-D-Glucose Uptake. Society for Neuroscience Abstracts, Vol. 14, November, 1988.

Lipman JJ, Lawrence PL, DeBoer DK, Shoemaker MO, Sulser D, Tolchard S, Teschan PE: The Role of Dialyzable Solutes in the Mediation of Uremic Encephalopathy in the Rat Indexed by Electroencephalography and Regional Cerebral Glucose Uptake. American Society of Nephrology, 21st Annual Meeting, December, 1988.

Nishijima F, Ikoma M, **Lipman JJ**, Teschan P, Fogo A, Ichikawa I: Effect of Dialytic Intervention on the Function and Morphology of Glomeruli in Rats at an Early Stage of Progressive Renal Disease. American Society of Nephrology, 21st Annual Meeting, Dec. 1988.

Lipman JJ, Tolchard S. Comparison of the Effects of Central and Peripheral Aluminum Administration on Regional 2-Deoxy-D-Glucose Incorporation In The Rat Brain. Life Sciences 45:1977-1987, 1989.

Teschan PE, **Lipman JJ**, Lawrence P, DeBoer D: Encephalopathic Toxicity: An Experimental Model of Uremic and Solute-Specific Dialysis (Proceedings) ISAO Symposium on Uremic Toxins; S. Ringoir, (ed.), (Plenum Pubs.) Ghent, Belgium, 1987.

White DL, **Lipman JJ**, Lawrence PL, Teschan PE. Dietary Hypocalcemia Provokes Transient Uremia and Persistent Electroencephalogram Changes in Renally Compromised Juvenile Rats. J Am Coll Nutrition, Vol. 6(5), 441, 1987.

4. **Forensic Pharmacology**

Abstracts and Presentations at Meetings – Forensic Pharmacology

The future of the Insanity Defense: The Best of the Worst Defense - Genetic and Other Biological Causes of Criminal Behavior, delivered at: The John Dice Annual Criminal Defense Seminar, Peabody Hotel, Memphis, TN, October 10-11, 1987.

The Effects of Drugs and Alcohol on Brain and Behavior, delivered at: Experts on Experts, Annual Joint Meeting of The National Defender Investigator Association/ Tennessee Association of Criminal Defense Lawyers, May 20-21, 1988.

Forensic Aspects of the Effects of Drugs on the Brain and Behavior, delivered at: National Defender Investigator Association, Annual Meeting, Atlanta, GA, November 7-8, 1990.

Lectures and Invited Presentations – Forensic Pharmacology

Airlie Conference Faculty. Lecturer on Behavioral Psychopharmacology (plenary session) and Convenor of Evidentiary and Litigation Workshop, Airlie, Virginia, August 1-4, 1991.

Capital Litigation and Investigation Seminar, faculty, Lecturing on Mental Health Issues, Nashville, Tennessee, January 23-25, 1992.

ACLU Conference/Forum Faculty: Medical Marijuana, Nashville, Tennessee, November, 1992.

Faculty, New York State Defender Association in-service training -effects of drugs on the brain and behavior - Conference on drug and alcohol addiction, March 1993.

Lecturer on Forensic Neuropharmacology (for Prof. Karl Dean), Vanderbilt University Law School, March 1993

Faculty and lecturer in forensic neuropharmacology: Arkansas Trial Lawyers Annual Meeting, continuing legal education training seminar, May 1995, Eureka Springs, Arkansas.

Invited Lecturer: Drug Abuse, Drug Effects and the Law - Chemical Dependency and Chemical Abuse, Missouri State Public Defender System Annual Training Seminar, September 1997

Moderator: American Board of Psychological Specialties Abstract Presentations, Chronic Pain, Personality Attributes, Disability Evaluation, Iatrogenic Illness, New York, Oct 1999

Faculty: CORE III course in Special Topics Forensic Psychology – Biological Psychology of Substance Abuse and Toxicity (with Dr. John Brick), American Board of Psychological Specialties / American College of Forensic Examiners

Faculty: Center for American and International Law, CDLP Forensic Seminar, Plano, Texas, August 2003

Publications-Forensic Pharmacology

.McMullin MM, Selavka CM, Wheeler MT, Werrell PL, Karbiwnyk CM and **Lipman JJ**, Forensic hair testing for haloperidol: A tale of two cases. Proceedings of the American Academy of Forensic Sciences, December 1993

Lipman JJ. Multiple Homicides Occurring During A Time Of Abnormally Low Drug Concentration In The Hair Of A Treated Paranoid Schizophrenic, *Forensic Examiner*, 14-15, March-April 1996.

Lipman JJ. Recent Forensic Pharmacological Developments in Drug Abuse: The growth and problems of speedballing, *Forensic Examiner* 6 (7-8) 9-13, 1997

Lipman JJ. , Psychopharmacology and the Disability Analyst. Chapter 2 in Anchor K and Felicetti T (eds) Disability Analysis in Practice, Kendall Hunt (pubs),1999

Lipman JJ. and Murphy PJ, Idiosyncratic psychotoxic effect of codeine in a criminal defendant suffering Gilbert's Syndrome , *Forensic Examiner*, Nov-Dec 1998

Lipman JJ. Chronic Pain Assessment Using Heatbeam Dolorimetry, Proceedings of the American College of Forensic Examiners/ American Board of Psychological Specialties, Oct/Nov 1999. *Forensic Examiner* 9(1&2), 34

Lipman JJ, Personality Drug Abuse and Murder: A pilot Study, *Forensic Examiner* 10 (1 & 2) 20-26 (2001)

Testifying forensic consultant and expert witness in State and Federal courts of Arizona, Arkansas, California, Colorado, Florida, Georgia, Illinois, Kansas, Kentucky Louisiana, Massachusetts, Mississippi, Missouri, Montana, New York, Ohio, Oklahoma, Pennsylvania, Tennessee, Texas, Utah, Vermont, Virginia, and Washington, in forensic pharmacological matters and the effects of psychoactive drugs on human behavior.