

CURRICULUM VITAE

NAME: Roy Arpad Earle Bakay, M.D.

OFFICE ADDRESS: Department of Neurosurgery (312) 942-6644
1725 West Harrison Street
Suite 970
Chicago, Illinois 60612

LICENSURE/BOARDS:

Temporary License	State of Michigan	1975 - 1976
Temporary License	State of Washington	1976 - 1977
Permanent License	State of Washington	1978 - 1984
Permanent License	State of Georgia	1982 - 2001
Permanent License	State of Illinois	2000 - Present
Diplomate	National Board of Medical Examiners	1976
Diplomate	American Board of Neurological Surgery	1985

EDUCATION:

College: Beloit College, B.S., May 1971
Major in Biology
Valedictorian for Bachelor of Science Degree

Medical Northwestern University, M.D., June 1975
Medical School: Chicago, Illinois

Internship: University of Michigan, 1975-1976
Department of Surgery (Neurosurgery Intern)
Ann Arbor, Michigan

Residency: University of Washington School of Medicine, 1976-1981
Arthur A. Ward, Jr., M.D., Chairman
Department of Neurological Surgery
Seattle, Washington
(Chief Resident: January 1980 - May 1981)

Fellowship: NIH NINCDS Grant - "Clinical Neuroscience Training Program"
1T32 NS017144 to work with Lesnick E. Westrum, M.D., Ph.D.
on neuronal plasticity (1981-1982)

OTHER EDUCATIONAL ACTIVITIES:

Special Studies:

1981 - Electron Microscopy Course
University of Washington
Seattle, Washington

- 1982 - Theodore Gildred Microsurgery Course
Course director Albert Rhoton MD
University of Florida
Gainesville, Florida
- 1982 - Stereotactic Surgery Course
Course director Patrick Kelly MD
SUNY - Buffalo
Buffalo, New York
- 1983 - Chymopapain Course
Course director Walter Whistler MD PhD
(AANS/AAOS)
Chicago, Illinois
- 1984 - CT Stereotaxy
Course director Peter Heilbrunn MD
University of Utah
Park City, Utah
- 1988 - Media Training
AANS
Chicago, Illinois

TITLES AND AFFILIATIONS:

Academic Positions:

Acting Instructor and Assistant, Department of Neurosurgery
University of Washington
1980 - 1982

Assistant Professor, Section of Neurological Surgery
Emory University
1982 - 1988

Associate Professor, Section of Neurological Surgery
Emory University
1988 - 1993

Professor, Department of Neurological Surgery
Emory University
1993 - 2000

Section Chief Neurosurgery
Veterans Administration Medical Center
Decatur, Georgia
1982 - 1995

Director of Neurological Surgery Resident Research

Department of Neurological Surgery
1984 - 2000

Vice Chairman, Department of Neurological Surgery
Emory University
1995 - 2000

Professor and Vice Chairman, Department of Neurological Surgery
Rush University Medical Center

Chicago Institute of Neurosurgery & Neuroresearch
Director of Functional Neurosurgery
2000 – 2006

A.Watson Armour III and Sarah Armour Presidential Chair
2003 – Present

Professional Appointments

Emory University

Library Committee Departmental Representative
1992 - 2000
Committee on Appointments and Promotions Committee Member,
1992 - 2000
Ad Hoc Member, The University Research Committee
1986-2000
Continuing Medical Education Conference
1993-1994

Yerkes Regional Primate Research Center - Atlanta, Georgia

Affiliate Scientist in Neurobiology
1982- Present

Veterans Administration Medical Center - Decatur, Georgia

Member, Research and Development Committee
1982 - 1986
Member, Surgical Intensive Care Committee
1983 - 1995
Search Committee for the Assistant Chief of Staff for Research and Development
1987
Local Ad Hoc Merit Reviewer
1986 - 2000
Merit Review Board for Neurobiology (Neurology B)
1998 - 2000 Ad Hoc Reviewer

U.S. Army

NETRP – Grant reviewer 1998
Progress report reviewer 2000 and 2002

Rush University Medical Center

Department Advisory Committee

2002 – present
Committee on Senior Faculty Appointments and Promotions (COSFAP)
2008 -

COMMITTEE & SOCIETY MEMBERSHIPS:

American Association of Neurological Surgeons

AANS Representative to UNOS (United Network for Organ Sharing)
1989-1993

AANS/CNS Joint Section on Tumors

Task Force Committee on Stereotactic Neurosurgery, 1992

Technology Assessment and Terminology Subcommittee, "Neurosurgical
Standards for Image-Interactive Stereotactic and Localization Systems"

1987 – 1994

AANS/CNS Joint Washington Committee,

Key Person Program

1992 - Present

GRAFT Project Committee of the AANS

Committee Member 1987 - 1995

Chairman 1988 - 1995

Joint Section Stereotactic and Functional Neurosurgery

Board of Directors 1987 - 2001

Vice President 1989 - 1991

President 1991 - 1993

American Epilepsy Society

Translational Clinical Research Task Force, 2000-Present

American Society for Neural Transplantation

Founding member 1994

Fellow 1994 - Present

Counselor 1994 - Present

President-elect 1999

President 2000

American Society of Stereotactic and Functional Neurosurgery

Executive Board

1987 – 2001

Vice President

1989 - 1991

Organizing Committee for 1991 Meeting

1989 - 1991

President

1991 - 1993

Distinguished Service Award Committee
1994 - 1996
Scientific Program Committee for 1995 Meeting
1994 - 1995

Epilepsy Foundation of America - Georgia Chapter

Professional Advisory Board
1985 - 2000
Chairman, Professional Advisory Board
1987 - 1988

Georgia Neurosurgical Society

Professional Education Committee Representative to American Cancer Society
1987 - 1990

International Tremor Foundation

Advisory Board
1995 - Present

International Symposium on Neural Transplantation

Organizing Committee
1989 - Present

Michael J. Fox Foundation for Parkinson's Research

St. Kitts Consortium
2003 - Present

Clinical Discovery 2007 Review
2007

Clinical Discovery 2008 Review
2008

Office of Technology Assessment

Member Advisory Panel,
"New Developments in Neuroscience", U.S. Congressional Committee
1988 - 1990

Southern Neurosurgical Society

Nominating Committee
1996-2000

United Network for Organ Sharing (UNOS)

Ad Hoc Advisor on Vital Connections
UNOS Education Committee Advisory Council
1992 - 1994
Ethics Committee
1991 - 1994

World Society for Stereotactic Functional Neurosurgery

Meeting Arrangements Committee

1990 – 1994

EDITORSHIPS AND EDITORIAL BOARDS

Cell Transplantation
Editorial Board
1998-present

Cleveland Clinic Journal of Medicine
Ad Hoc Reviewer
1988 - present

Contemporary Neurosurgery
Editorial Board
1986-1993

European Journal of Neuroscience
Ad Hoc Reviewer
2003 - Present

Experimental Neurology
Ad Hoc Reviewer
1991-present

Journal of Neural Transmission
Advisory Board
1989

Journal of Neurosurgery
Ad Hoc Reviewer
1990-present

Movement Disorders
Ad Hoc Reviewer
2003 – Present

Neurology
Ad Hoc Reviewer

Neurosurgery
Ad Hoc Reviewer
1990 - 1994
Editorial Board
1994-present

Neurosurgical Focus
Ad Hoc Reviewer
1999 - present
Topic Editor
2004-present

New England Journal of Medicine
Ad Hoc Reviewer
1992 - present

Stereotactic and Functional Neurosurgery
Ad Hoc Reviewer

1991-present
Surgical Neurology
Ad Hoc Reviewer
2007 - present
Surgery, Gynecology and Obstetrics
Abstracter
1978-1990

HONORS AND AWARDS:

- 1968 Membership to Beta Theta Pi (College Fraternity)
1970 Elected Captain Beloit College Football Team
1971 Elected to Omicron Delta Kappa (Honorary Fraternity for Excellence in Athletics and Academics)
Elected to "Outstanding College Athletes of America"
Winner of Walter Haven Award (Excellence in Biological Research for Graduating Senior)
Qualified for B Men's Club (Collegiate Athletic Organization for Alumni Letterman)
Temporary Assistant Coach, Pre-season Training, Beloit College
1972 Membership in the American Association for the Advancement of Science
Membership in the Student American Medical Association
Membership in Phi Rho Sigma (Medical Fraternity)
1975 Merriam Award (Research by Medical Students)
1976 Membership in American Medical Association
1979 Resident Research Award - The Western Neurosurgical Society
Resident Neurosurgery Award - The North Pacific Society of Neurology and Psychiatry
1981 Resident Research Award - Society of Neurosurgical Anesthesia and Neurologic Supportive Care
Resident Member - The Congress of Neurological Surgeons
1982 Member, Congress of Neurological Surgery
Awarded Veterans Administration R.A.G. Funding
1983 Member, American Association of Neurological Surgery
1984 AMA Physician Recognition Award (Reappointment through 2006)
1985 Member, Pediatric Oncology Group
Membership in both the World and American Societies of Stereotactic and Functional Neurosurgery
1988 Membership in Southern Neurosurgical Society
1989 Honorary Membership in The North Pacific Society of Neurology and Psychiatry
1990 Marquis Who's Who In America, Who's Who in Science and Engineering
1992 Member, New York Academy of Science
1994 Member, The Society of Neurological Surgeons
1994 Best Doctors in America (Reappointments through 2006)
1997 Lifetime membership, Strathmore's Who's Who
1998 Health Care Heroes (Atlanta, Ga)
2000 World Technology Award for Health and Medicine, The World Technology Network in association with *The Economist*
2003 Castle Connolly America's Top Doctors (Reappointment through 2006)

- 2003 A. Watson Armour III/Sara Armour Presidential Chair, Rush University Medical Center
- 2004 Chicago's Top Doctors, Chicago Magazine
- 2005 Chicago's Top Doctors, Chicago Magazine
- 2006 Chicago's Top Doctors, Chicago Magazine
- 2007 America's Top Doctors, Castle Connolly American Registry
- 2007 Chicago's Top Doctors, Chicago Magazine
- 2008 Chicago's Top Doctors, Chicago Magazine

RESEARCH FOCUS:

As an academic neurosurgery faculty member, I am interested in engaging in both clinical neurosurgery and basic science research. My clinical interest is in general adult neurosurgery and I have specific interests in stereotaxy, epilepsy, movement disorders and brain tumors. My research interests are neuroanatomical and electrophysiological. I have employed both immunocytochemical and receptor ligand techniques in conjunction with both light and electron microscopic techniques to investigate synaptic plasticity. My early efforts were directed at evaluating the neuro-anatomical changes in the development of an epileptic focus. Currently, my efforts focus on neural transplantation and neurotrophic gene therapy. Funded studies are in progress on the plasticity in the development of human epileptic foci and on the potential therapeutic uses of transplantation of stem cells and neurotrophic gene therapy to maximize therapeutic efficacy of neural transplantation into primates with Parkinson-like symptoms.

GRANT AND RESEARCH SUPPORT:

- 1968 Veterinary Assistant, Akron-Medina Veterinary Hospital, Medina, Ohio.
- 1970 Surgical Orderly, Moffitt Hospital, University of California, San Francisco, CA
Worked on Collegiate Research Project "EEG Changes in the Hippocampus into Response to the Reserpine and Scopalamine" (Unpublished Data).
- 1971 Worked on Collegiate Project "Uridine Incorporation into Hippocampus Memory"
- 1972 Worked on Research Project "Isolation and Analysis of Liver Nucleoli" with Dr. H. Koenig (Unpublished Data).
- 1973 Anesthesia Preceptorship, Jewish Hospital, Cincinnati, Ohio.
- 1974 Worked on Research Project "Secretion of Lysosomal Enzymes in the Male Reproductive Tract" with Dr. H. Koenig, Source of the Merriam Award and two publications.
- 1976 Worked on Model for subarachnoid hemorrhage with Dr. A. Basil Harris (Unpublished Data).
- 1978 Worked on "Neurotransmitter Receptor and Biochemical Changes in Monkey Cortical Epileptic Foci" with Dr. A. Basil Harris resulting in Resident Award from the Western Neurosurgical Society as well as the Pacific Northwest Society of Neurology and Psychiatry and a publication .

- 1978 Worked on "Enzymatic Changes in Serum and CSF in Neurologic Injury" which was presented at the Federation of the Western Societies of Neurological Science Meeting, February 1981, and later resulted in Resident Award for Research from the Society of Neurological Anesthesia and Neurologic Supportive Care and a publication.
- 1979 Worked on "Neurotransmitter Receptor and Biochemical Changes in Human Epileptic Foci" which resulted in a publication.
Worked on "The Effects of Acute and Chronic Administration of Valproic Acid on CSF Neurotransmitters" (unpublished data).
Worked on "The Effect of Early Treatment on Severely Head Injured Patients," Dr. Tamas primary author of a publication
Worked on "Therapeutic Results Observed in a Regional Spinal Cord Injury Center" (Unpublished Data).
- 1981-1982 Worked on "Pyriform Cortex in Relation to the Temporary Sequence of Synaptogenic Development" using standard electron microscopy techniques to document morphologic maturation of synapses and using high affinity receptor ligand binding techniques to autoradiographically demonstrate neurotransmitter location and lateration with maturation. In addition we studied classic neuroplasticity following olfactory bulb ablations using classical light and electron microscopy techniques to demonstrate degeneration and reinnervation. Receptor ligand binding autoradiography is used to document the morphologic changes as they relate to specific neurotransmitter terminal alterations. This work is done under the auspices of NIH fellowship with Dr. Lesnick Westrum. Multiple publications.
- 1982-1983 Awarded Veterans Administration - R.A.G. Funding
Principal Investigator, Roy A.E. Bakay.
- 1983-1986 Veterans Administration Merit Award - "Plasticity of the Neocortex and the Development of Epilepsy."
Principal Investigator, Roy A.E. Bakay.
- 1984-1985 American Parkinson's Disease Association -
"Transplantation of Fetal Tissue in the MPTP Primate Model of Parkinsonism." Principal Investigator, Roy A.E. Bakay.
- 1984-1987 Research Project on "Transplantation of Fetal Tissue in the MPTP Primate Model of Parkinsonism," funded by multiple sources including American Parkinson Disease Association, Emory University Research Fund and the Marion Love Fund.
Principal Investigator, Roy A.E. Bakay.
- 1985-1986 American Parkinson's Disease Association -
"Transplantation of Fetal Tissue in the MPTP Primate Model of Parkinsonism."
Principal Investigator, Roy A.E. Bakay.
- 1985-1986 Emory University Research Fund - "Effect of Age in the Primate Model of

- Parkinsonism using the 1-Methyl-4-Phenyl-1,2,3,6,-Tetrahydropyridine Preparation."
- 1985-1987 Shiley Infusaid, Inc. "Double-Blind Trial of Intracranial Bethanechol Infusion in Patients with Alzheimer's Disease", PI: Harbaugh.
- 1987-1988 Emory-Georgia Tech Biochemical Research Grant - "The Cone Electrode: A Long-term Neural Recording Electrode With Potential Prosthetic Applications." Philip Kennedy, Georgia Tech Principal Investigator
R.A.E. Bakay, Emory Principal Investigator.
- 1987-1988 Research projects on "Adrenal Medullary Tissue Grafting in the Treatment for the MPTP Model of Parkinsonism," Grants from American Parkinson Disease Association. Principal Investigator, Roy A.E. Bakay.
- 1987-1990 Veterans Administration Merit Award - "Plasticity of the Neocortex and the Development of Epilepsy." Principal Investigator, Roy A.E. Bakay.
- 1988-1989 American Parkinson's Disease Association - "Surgical Technique In Treatment of Parkinsonism." Principal Investigator, Roy A.E. Bakay.
- 1988-1989 Emory-Georgia Tech Biomedical Research Grant - "Transcranial Magnetic Stimulation of the Cerebral Cortex for Noninvasive Functional Localization in Epilepsy Patients." Emory Principal Investigator, Roy A.E. Bakay, M.D.
- 1989-1990 Emory-Georgia Tech Biomedical Research Grant - "The Cone Electrode: A Long-term Neural Recording Electrode With Potential Prosthetic Applications." Philip Kennedy, Georgia Tech Principal Investigator
R.A.E. Bakay, Emory Principal Investigator.
- 1989-1993 National Institute of Neurological Disorders and Stroke (RO1 NS-24340) "CNS Grafting for Parkinsonism" R.A.E. Bakay, Principal Investigator.
- 1991-1992 Research project on the use of BCNU wafers for recurrent malignant gliomas in randomized placebo trial, funded by Nova. PI - Daniel L. Barrow, M.D. Amount: product and patient costs.
- 1991-1993 Veterans Administration - "Safety and Efficacy of Neural Grafting for the Treatment of Parkinson's Disease." Merit Award, Principal Investigator, Roy A.E. Bakay, M.D.
- 1992-1993 Cellular Transplants, Inc. Co-investigators R.A.E. Bakay and R.L. Watts
- 1992-1993 Emory-Georgia Tech Biomedical Research Grant - "The Cone Electrode: A Long-term Neural Recording Electrode With Potential Prosthetic Applications." Philip Kennedy, Georgia Tech Principal Investigator
R.A.E. Bakay, Emory Principal Investigator.
- 1994-1999 National Institute of Neurological Disorders and Stroke (RO1 NS-32047) "Pallidotomy in Parkinson's Disease",

- Principal Investigator: Mehlon DeLong, M.D.
Co-Investigator: Roy A.E. Bakay, M.D.
- 1996-1997 Cyberonics
“Vagus Nerve Stimulation for Epilepsy” Principal Investigator: Thomas Henry, M.D.,
Co-Investigator: Roy A.E. Bakay, M.D. Amount: equipment and patient costs
- 1996-1997 Medtronic
“Thalamic Stimulation for Tremor” Principal Investigator: Jerold Vitek, M.D. Co-
Investigator: Roy A.E. Bakay, M.D. Amount: equipment and patient costs
- 1996-1999 National Institutes of Health (NIH)
“CNS Transplantation for Parkinsonism” Principal Investigator: Roy A.E. Bakay, M.D.
- 1997-1998 Diacrin/Cellular Transplants Inc
Genzyme
“A Double Blind, Randomized Controlled Multicenter Clinical Trial of the
Safety and Efficacy of Transplanted Fetal Porcine Cells in Patients with
Parkinson’s Disease”
Principal Investigator: Ray Watts, M.D.
Co-Investigator: Roy A.E. Bakay, M.D.
Amount: Product and Patient costs
- 1999-2000 The Rich Foundation Initiative for Dystonia
“Pallidotomy and Deep Brain Stimulation as Treatments for Dystonia”
Principal Investigator: J.L. Vitek
Co-Investigator: Roy A.E. Bakay, M.D.
- 1999-2000 Theracell (Titan Pharmaceutical Inc.)
“Assessment of the Effects of Intrastratial Implantation of Retinal Pigmented
Epithelial Cells (RPE) in Parkinsonian Monkeys”
Principal Investigator: Thyagarajan Subramanian, M.D.
Co-Investigator: Roy A.E. Bakay, M.D.
- 1999-2000 NIH Accelerated SBIR to Titan Pharmaceuticals, Inc.
(R44 NSQ211) “Spheramine: A cell-based therapy for Parkinson’s disease
Principal Investigator: Ray L Watts, MD
Co-Investigator: Roy A. E. Bakay, M.D.
Amount: Product and patient costs
- 1999-2004 “Deep Brain Stimulation for Parkinson’s Disease” (RO1 NS-32047)
Principal Investigator: J.L. Vitek
Co-Investigator: Roy A.E. Bakay, M.D. - 10%
- 1999-2004 “Deep Brain Stimulation in the Parkinsonian Monkey” (RO1 NS-37019)
Principal Investigator: J.L. Vitek
Co-Investigator: Roy A.E. Bakay, M.D. – 15%

2001-2006 “Strategies to Identify a Viral Cause of Multiple Sclerosis (MS)”
(RO1 NS-42890)
Principal Investigator: H.L. Lipton
Consultant: Roy A.E. Bakay, M.D.

2002-2007 “Dyskinesias in Lenti-GDNF Treated Parkinsonian Monkeys” (RO1-NS-43290)
Principal Investigator: Jeffrey H. Kordower, Ph.D.
Co-Investigator: Roy A.E. Bakay, M.D. 15%

2004-2005 Ceregene
Ceregene 110 Trial for Alzheimer’s Disease Phase I
Primary Surgery Investigator

2004-2005 North Star
Cortical Stimulation for Stroke Phase II
Rush Principal Investigator: Roy A.E. Bakay, M.D.
Amount: Equipment and patient costs

2004-2005 Michael J. Fox Foundation
St. Kitts Consortium
Principal Investigator: Jeffrey Kordower, Ph.D. and Eugene Redmond, Ph.D.
Co-Investigator: Roy A.E. Bakay, M.D.

2005-2006 North Star
Cortical Stimulation for Parkinson’s Disease
Rush Principal Investigator: Leo Verhagen, M.D., Ph.D.
Amount: Equipment and patient costs

2005-2006 Ceregene
Ceregene 120 Trial for Parkinson’s disease Phase I
Surgical Site Investigator

CURRENT RESEARCH:

2002-2008 Schering
Sphermine Phase II Trial
Advisory board
Surgical Site Investigator

2004-2008 Medtronic
Sante Study Phase II
Surgical Site Investigator

2004-2008 Ceregene

- Ceregene 110 Trial for Alzheimer's disease Phase II
Surgical Site Investigator
- 2004-2009 "Stem Cells in CNS Transplantation
(RO1 NS-046612)
Principal Investigator: Roy A. E. Bakay, M.D.
Co-Investigator: Jeffrey Kordower, Ph.D.
Co-Investigator: Leonard Verhagen, M.D., Ph.D.
- 2006-2008 Ceregene
Ceregene 120 Trial for Parkinson's disease Phase II
Surgical Site Investigator
- 2006-present Consolidated Anti Aging Foundation
Electrophysiology of Aging and Parkinson's Disease and
Stem Cell Research for Aging
Site Investigator
- 2006-present American Neural Stimulation
Open label DBS equipment trial
Surgical Site Investigator

VISITING PROFESSOR AND INVITED GUEST:

- 1986 - Medical College of Georgia, Augusta, Georgia
1988 - University of Toronto, Toronto, Canada
1988 - Dartmouth University, Hanover, New Hampshire
1990 - University of Pittsburgh, Pittsburgh, Pennsylvania
1990 - Southern Illinois University, Springfield, Illinois
1992 - 10th Congress of the European Society for Stereotactical and Functional Neurosurgery,
Stockholm, Sweden
1994 - Rush-Presbyterian-St. Luke's Medical Center, Chicago, Illinois
1994 - University of California at Davis
1995 - Henry Ford Hospital, Detroit Michigan
1995 - University of California at San Francisco, San Francisco, California
1995 - University of Iowa, Iowa City, Iowa
1995 - University of Texas, San Antonio, Texas
1997 - St. John's Mercy Medical Center, St. Louis, Missouri
1997 - University of Texas, SW Medical Center, Dallas, Texas
1998 - The 57th Annual meeting of the Japan Neurosurgical Society, Sapora, Japan
1998 - University of South Carolina, Columbia, South Carolina
1999 - University of Chicago, Chicago, Illinois
1999 - National Hospital, Taipei, Taiwan

- 2000 - Grass Lecturer, Medical College of South Carolina, Charleston, South Carolina
- 2002 - Loyola University, Maywood, Illinois
- 2002 - The III Neurosurgical Symposium Clinica Universitaria De Navarra, Pomplong, Spain
- 2002 - National Institute of Health, Bethesda, Maryland
- 2003 - Field Neurological Institute, St. Mary's, Saginaw, Michigan
- 2003 - American Speech and Hearing Association Convention, Chicago, Illinois
- 2004 - Mease Dunedin Neuroscience Symposium, Safe Harbor, Florida
- 2004 - Munich Grosshadern Klinik, Munich. Germany
- 2004 - Universitatsklinik Carl-Gustav-Carus Klinik fur Neurologie, Dresden, Germany
- 2004 - Hospital Moinhes De Venton, 4th Annual International Symposium, Sao Paulo, Brazil
- 2005 - Joseph P. VanDermuelen Symposium, University of Southern California, Los Angeles, California
- 2006 - Turk Norosirurji, Dernegi XX, Antalya, Turkey
- 2007 - First International Joint Meeting on Stereotactic and Functional Neurosurgery and 8th Congress of the Brazilian Society for Stereotactic and Functional Neurosurgery, Rio Quente, Goias Brazil
- 2007 - The Movement Disorders Society, 11th International Congress of Parkinson's Disease and Movement Disorders, Istanbul, Turkey
- 2007 - 2nd Congress of the International Society of Reconstructive Neurosurgery & 5th Scientific Meeting of the AFNS Neurorehabilitation Committee, Taipei, Taiwan
- 2007 - 18th NECTAR Meeting, Lund, Sweden
- 2008 - Orlando J. Andy Research Lecture, The University of Mississippi Medical Center, Jackson, Mississippi

BIBLIOGRAPHY:

Journal Articles:

1. Koenig H, Lu CY, Bakay R: Testosterone and 6-N, 2-O dibutyryl adenosine 3': 5'-cyclic monophosphate stimulate protein and lysosomal enzyme secretion in rat seminal vesicle. *Biochemical Journal* 158:543-547, 1976.
2. Koenig H, Lu CY, and Bakay R: Lysosomal enzyme secretion in rat ventral prostate. Secretagogue action of testosterone and dibutyryl cyclic AMP. *Acta Biol Med Ger* 36: 1653-1659, 1977.
3. Bakay RAE, Harris AB: Neurotransmitter receptor and biochemical changes in monkey cortical epileptic foci. *Brain Res* 206:387-404, 1981.
4. Bakay RAE, Ward AA: Enzymatic changes in the serum and CSF in neurological injury. *Journal of Neurosurgery* 58:27-37, 1983.
5. Tindall SC, Bakay RAE, Wood JH, Tindall GT: Treatment of herniated lumbar discs with chymopapain. *J Med Assoc Ga* 72:547-551, 1983.
6. Burchiel KJ, Hoffman JH, Bakay RAE: Quantitative determination of plasma fibrinolytic activity in patients with ruptured intracranial aneurysm on epsilon-aminocaproic acid therapy: relationship of possible complications of therapy and the degree of fibrinolytic inhibition. *Neurosurgery* 14:57-63, 1984.

7. Bakay RAE, Westrum LE: Age related fine structural changes in axons and synapses during deafferentation of the rat pyriform cortex: a possible basis for plasticity. *J Neurocytol* 13:743-765, 1984.
8. Pearl GS, Chan WC, Bakay RAE, Wood JH: Primary lymphoma of the central nervous system diagnosed on computed tomographic scan - directed needle biopsy using a frozen section immunoperoxidase technique. *Neurosurgery* 16:1-4, 1985.
9. Pearl GS, Takei Y, Bakay RAE, David P: Intraventricular primary cerebral neuroblastoma in adults. Report of three cases. *Neurosurgery* 16:847-849, 1985.
10. Bakay RAE, Fiandaca MS, Barrow DL, Schiff A, Collins DC: Preliminary report on the use of fetal neural tissue transplantation to correct MPTP induced Parkinson-like syndrome in primates. *Appl Neurophysiol* 48:358-361, 1985.
11. Bakay RAE, Hoffman JC, Rhodes M: Advantages of computerized tomography-assisted interaction during stereotactic procedures using computer-generated graphics. *Appl Neurophysiol* 48:79-80, 1985.
12. Westrum LE, Bakay RAE: Plasticity in the rat olfactory cortex. *J Comp Neurol* 243:195-206, 1986.
13. Ribak CE, Hunt CA, Bakay RAE, Oertel W: A decrease in the number of GABAergic somata is associated with the preferential loss of GABAergic terminals at epileptic foci. *Brain Res* 363:78-90, 1986.
14. Bakay RAE, Sweeney KM, Wood JH: The pathophysiology of cerebrospinal fluid in head injury: Part I Pathological changes in CSF solute composition following traumatic injury. *Neurosurgery* 18:234-243, 1986.
15. Bakay RAE, Sweeney KM, Wood JH: The Pathophysiology of cerebrospinal fluid in head injury: Part II Biochemical markers for central nervous system trauma. *Neurosurgery* 18:376-383, 1986.
16. Kunkel DD, Westrum LE, Bakay RAE: Primordial synaptic structures and synaptogenesis in rat olfactory cortex. *Synapse* 1:191-201, 1987.
17. Bakay RAE: Brachytherapy. *Contemp Neurosurg* 9(22):1-6, 1987.
18. Bakay RAE, Barrow DL, Fiandaca MS, et al. Biochemical and behavioral correction of MPTP Parkinson-like syndrome by fetal cell transplantation. *Ann NY Acad Sci* 495:623-40, 1987.
19. Fiandaca MS, Ross WK, Pearl GS, Bakay RAE: Carcinoid in a presacral teratoma associated with an anterior sacral meningocele: A case report and review of the literature. *J Neurosurg* 22:581-586, 1988.
20. Fiandaca MS, Bakay RAE, Sweeney KM, Chan WC: Immunologic response to intracerebral fetal neural allografts in the Rhesus monkey. *Prog Brain Res* 78:287-295, 1988.
21. Ribak CE, Farbin S, Bakay RAE: GABAergic neurons in the motor thalamus and thalamic

- reticular nucleus of monkeys with experimental focal epilepsy. *Prog Brain Res* 78: 339-348, 1988.
22. Bakay RAE, Fianadaca MS, Sweeney KM, Colbassani HR Jr, Collins DC: Delayed stereotactic transplantation technique in nonhuman primates. *Prog Brain Res* 78:463-471, 1988.
 23. Colbassani HJ, Nishio S, Sweeney KM, Bakay RAE, Takei Y: CT-assisted stereotactic brain biopsy: value of intraoperative frozen section diagnosis. *J Neurol Neurosurg and Psychiatry* 51:332-341, 1988.
 24. Ribak CE, Joubran C, Kesslak JP, Bakay RAE: A selective decrease in the number of GABAergic somata occurs in pre-seizing monkeys with alumina gel granuloma. *Epilepsy Research* 4:126-138, 1989.
 25. Bakay RAE, Herring CJ: Central nervous system grafting in the treatment of parkinsonism. *Stereotact Funct Neurosurg* 53:1-20, 1989.
 26. Colbassani H, Barrow DL, Sweeney KM, Bakay RAE, Check IJ, Hunter RL: Modification of acute focal ischemia by Poloxamer 188. *Stroke* 20:1241-1246, 1989.
 27. Harbaugh RE, Reeder TM, Senter HJ, Knopman DS, Baskin DS, Pirozzolo F, Chang Chui H, Shetter AG, Bakay RAE, Leblanc R, Watson RT, DeKosky ST, Schmitt FA, Read SL, Johnston JT: Intracerebroventricular bethanechol chloride infusion in Alzheimer's disease. *J Neurosurg* 71:481-486, 1989.
 28. Watts RL, Bakay RAE, Herring CJ, Sweeny KM, Colbassani H, Byrd LD, Iuvone PM: Preliminary report on adrenal medullary grafting and co-grafting with sural nerve in the treatment of hemiparkinson monkeys. *Prog Brain Res* 82:581-591, 1990.
 29. Bakay RAE, Allen GS, Apuzzo M, Penn R, Tindall GT: A preliminary report on adrenal medullary grafting from the American Association of Neurological Surgeons GRAFT project: preliminary report. *Prog Brain Res* 82: 603-610, 1990.
 30. Goetz CG, Stebbins GT III, Klawans HL, Koller WC, Grossman RG, Bakay RAE, Penn RD: United Parkinson Foundation Neurotransplantation Registry: multicenter US and Canadian data base, pre-surgical and 12 month follow-up. *Prog Brain Res* 82:611-617, 1990.
 31. Watts NB, Clark RV, Watts RL, Graham SD, Bakay RAE: Changes in endocrine function after adrenal medullary transplantation to the central nervous system. *J Clin Endocrin and Metabolism* 71(3):773-776, 1990.
 32. Watts RL, Bakay RAE, Freeman A, Iuvone PM, Watts NB, Graham S: Assessment of autologous adrenal-to-caudate grafting for parkinsonism in man. *Int J Neurol* 23-24:78-88, 1990.
 33. Bakay RAE, Watts RL, Freeman A, Iuvone PM, Watts NB, Graham SD: Preliminary report on adrenal-brain transplantation for parkinsonism in man. *Stereotact Funct Neurosurg* 54/55:312-323, 1990.
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MANUSCRIPTS SUBMITTED

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