

Robert Edward Breeze, M.D.
CURRICULUM VITAE

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EDUCATION

High School: Lynwood High School
Lynwood, California
(1969-1973)

College: University of California, Irvine
School of Biological Sciences
(B.S., Biology, 1977)
School of Physical Sciences
(B.A., Mathematics, 1977)

Medical School: University of California, San Diego
School of Medicine
(M.D., 1981)

POST-GRADUATE TRAINING

Internship: Los Angeles County/University of Southern
California Medical Center
(Surgery, 1981-1982)

Residency: University of Southern California
School of Medicine Affiliated Hospitals
(Neurosurgery, 1982-1987)

HONORS

Valedictorian
Lynwood High School
1973

Phi Beta Kappa
1976

Bachelor of Science Degree
Awarded *Magna Cum Laude*
1977

Bachelor of Arts Degree
Awarded *Magna Cum Laude*
1977

Shulman Award
(Pediatric Section of the AANS
Annual Resident Award)
1986

Alpha Omega Alpha
1987

Excellence in Teaching Award
Second Year Medical School Class
1997

Excellence in Teaching Award
Second Year Medical School Class
2001

PROFESSIONAL BACKGROUND

Appointments:

Vice Chairman
Department of Neurosurgery
2006-Present

Residency Program Director
Department of Neurosurgery
2006-Present

Vice Chairman of Academic Affairs
Department of Neurosurgery
2001-2006

Professor of Neurosurgery (with tenure)
University of Colorado Health Sciences Center
2000-present

Associate Professor of Neurosurgery (with tenure)
University of Colorado Health Sciences Center
1999-2000

Associate Professor of Surgery (Neurosurgery)
(with tenure)
University of Colorado Health Sciences Center
1996-1999

Medical Director
Neurosciences Ward, University of Colorado Hospital
1995-present.

Head, Section of Neurovascular Surgery
University of Colorado Health Sciences Center
1990-present

Co-Director
Human Neurotransplantation Project
University of Colorado Health Sciences Center
1988-present

Director
Neurosurgery Research Laboratory
University of Colorado Health Sciences Center
1987-1998

Chief, Section of Neurosurgery
Veterans Affairs Medical Center
Denver, Colorado
1991-1995

Medical Director
Neuroscience Intensive Care Unit
Denver General Hospital
1988-1990

Assistant Professor of Surgery (Neurosurgery)
University of Colorado Health Sciences Center
1987-1996

Clinical Instructor in Neurosurgery
University of Southern California
School of Medicine
1986-1987

Current Hospital
Privileges:

Denver Health Medical Center
Denver, Colorado

St. Anthony Hospital Central
Denver, Colorado

The Childrens Hospital
Denver, Colorado

University of Colorado Hospital
Denver, Colorado

Veterans Affairs Medical Center
Denver, Colorado

Society Memberships: Denver County Medical Association
Colorado Medical Association
American Medical Association
Colorado Neurosurgical Society
Congress of Neurological Surgeons
American Association of Neurological Surgeons
Society of University Neurosurgeons
American Society of Interventional and Therapeutic
Neuroradiology

Committees and
Related Work:

Patient Care Fund
Los Angeles County/University of Southern
California Medical Center
1986

Sergeant at Arms Committee
Congress of Neurological Surgeons Annual
Meeting
1987 and 1988

Critical Care Committee
Denver General Hospital
1987-1990

Medical Records Review Committee
Denver General Hospital
1988-1990
Program Chairman
Neurosurgery in the Rockies
Sponsored by the Department of Neurosurgery
University of Colorado Health Sciences Center
1988-present

Faculty
AANS Practical Clinics (Stereotaxy)
1991-1997

Pharmacy and Therapeutics Committee
Veterans Affairs Medical Center
1991-1995

Host Committee
Congress of Neurological Surgeons
1993

Registration Committee
American Association of Neurological Surgeons
1994

Trauma Committee
University Hospital
1994-present

Medical Directors' Committee
University Hospital
1996-present

Senator
University of Colorado SOM Faculty Senate
1997-present

Membership Committee
Society of University Neurosurgeons
1997-2000

Member
UPI Board of Directors
1998-2001
Director
AANS Practical Clinic (Stereotaxy)
1998

Chair, Membership Committee
Society of University Neurosurgeons
1999-2000
Guest Examiner
2000 Spring Oral Examinations
ABNS

University of Colorado SOM
Faculty Promotions Committee
2000-2003

Emergency Department Steering Committee
2000-2003

Vice President
Society of University Neurosurgeons
2001-2002

Chair, University of Colorado SOM
Faculty Promotions Committee
2001-2002

President
Society of University Neurosurgeons
2003-2004

Member at Large
University of Colorado Hospital Medical Board
2006-2009

Audit and Finance Committee
University Physicians, Inc.
2006-2009

Past Grants:

Dupont Critical Care
*The Effects of Colloidal Volume Expansion in
Brain Edema*
Study No. 607-88-KJ
\$14,683

Co-investigator (PI - Curt R. Freed, M.D.)
*Brain Transplant Treatment for Parkinsonian
Monkeys*
NIH Grant No. NS23918
5% Effort

Co-investigator (PI- Curt R. Freed, M.D.)
*Embryonic Dopamine Cell Implants for
Parkinsonism: A Double Blind Study*
NIH Grant No. NS32368
18% Effort

Local Co-Investigator
*Intraoperative Hypothermia for Aneurysm Surgery
Trial,
Part 2 (IHAST2), NINDS*

Editorial
Boards:

Member, Editorial Board
Computer Assisted Surgery
1994- Present

Member, Editorial Board
Neurosurgery
1998-2003

Guest Editor
Neurosurgical Focus
1999

Licensure and
Certification:

National Board of Medical Examiners
No. 242391
1982

California Medical License
No. G50683
1983

DEA Registration
No. AB2252512
1983

Colorado Medical License
No. 28184
1987

American Board of Neurological Surgery
No. 91027
1991

BIBLIOGRAPHY

Peer-Reviewed Articles

1. **Breeze R** and Ignelzi RJ: Microvascular decompression for trigeminal neuralgia. Results with special reference to the late recurrence rate. *J Neurosurg* 57(4):487-490, 1982
2. Apuzzo MLJ, Petrozich P, Luxton G, Jepson, Cohen D and **Breeze RE**: Interstitial brachytherapy of malignant cerebral neoplasms - rationale, methods, and prospects. *Neurol Res* 9(2):91-100, 1987
3. Fitzgibbon PL, Appley AJ, Turner RR, Bishop PC, Parker JW, **Breeze RE**: Weiss MH and Apuzzo ML: Flow cytometric analysis of pituitary tumors. Correlation of nuclear antigen p105 and DNA content with clinical behavior. *Cancer* 62(8):1556-1560, 1988
4. **Breeze RE**, McComb JG, Hyman S and Gilles FH: CSF production in acute ventriculitis. *J Neurosurg* 70(4):619-622, 1989
5. Freed CR, **Breeze RE**, Rosenberg NL, Schneck SA, Wells TH, Barrett JN, Grafton ST, Mazzoitta J, Eidelberg D and Rottenberg DA: Therapeutic effects of human fetal dopamine cells transplanted in a patient with Parkinson's disease. *Prog Brain Res* 82:715-721, 1990.

6. Freed CR, **Breeze RE**, Rosenberg NL, Schneck SA, Wells TH, Barrett JN, Grafton ST, Huang SC, Eidelberg D and Rottenberg DA: Transplantation of human fetal dopamine cells for Parkinson's disease: Results at one year. *Arch Neurol* 47(5):505-512, 1990.
7. **Breeze RE**, Nichols P, Segal H and Apuzzo MLJ: Intradural epithelial cyst at the craniovertebral junction: Case report. *J Neurosurg* 73(5):788-791, 1990.
8. **Breeze RE**: Implanting fetal tissue to treat Parkinson's disease. *Western J Med* 153(5):543-544, 1990
9. Winston KR, **Breeze RE**: Hydraulic regulation of brain parenchymal volume. *Neurol Res* 13(4):237-247, 1991
10. Freed CR, Rosenberg NL, Schneck SA and **Breeze RE**: Improved drug responsiveness following fetal tissue implant for Parkinson's disease. *Neurochem Int* 20:321S-327S, 1992
11. Litofsky NS, Zee CS, **Breeze RE** and Chandrasoma T: Meningeal melanocytoma: Diagnostic criteria for a rare lesion. *Neurosurg* 31(5):945-948, 1992
12. Freed CR, **Breeze RE**, Rosenberg NL, Schneck SA, Kriek E, Qi JX, Lone T, Zhang YB, Snyder JA, Wells TH, Ramig LO, Thompson L, Mazziotta JC, Huang SC, Grafton ST, Brooks D, Sawle G, Schroter G and Ansari AA: Survival of implanted fetal dopamine cells and neurologic improvement 12 to 46 months after transplantation for Parkinson's disease. *N Eng J Med* 327:15499-1555, 1992
13. Freed CR, **Breeze RE**, Rosenberg NL and Schneck SA: Embryonic dopamine cell implants as a treatment for the second phase of Parkinson's disease: Replacing failed nerve terminals. *Advan Neurol* 60:721-728, 1993.
14. Freed CR, **Breeze RE** and Rosenberg NL: Fetal tissue transplantation for Parkinson's disease. *N Eng J Med* 329:1499-1500, 1993
15. **Breeze RE**, Wells TH, Freed CR: Implantation of fetal tissue for the management of Parkinson's disease: a technical note. *Neurosurg* 36(5):1044-1048, 1995.
16. Ansari AA, Mayne A, Freed CR, **Breeze RE**, Schneck SA, O'Brien CF, Kriek EH, Zhang YB, Mazziotta JC and Hutchinson M: Lack of a detectable systemic humoral/cellular allogeneic response in human and nonhuman primate recipients of embryonic mesencephalic allografts for the therapy of Parkinson's disease. *Transplantation Proceedings* 27(1):1401-1405, 1995.
17. Prall JA, Lloyd GL and **Breeze RE**: Traumatic brain injury associated with an intradiploic epidermoid cyst: case report. *Neurosurg* 37(3):523-525, 1995
18. Freed CR, **Breeze RE**, Schneck SA: Transplantation of fetal mesencephalic tissue in Parkinson's disease. *N Eng J Med* 333(11): 730-731, 1995.

19. Prall JA and **Breeze RE**: Rhabdomyolysis following spinal cord injury: case report. *J Trauma* 39(4):802-804, 1995.
20. Brega KE, Munro LG, Seltzer W and **Breeze RE**: Genotypic variations in type III collagen in patients with cerebral aneurysms. *Surg Neurol* 46:253-257, 1996.
21. Duke BJ, Kindt GW and **Breeze RE**: Pineal region choroid plexus papilloma treated with stereotactic radiosurgery: case report. *Computer Aided Surgery* 2:135-138, 1997.
22. Rubinstein D, Sandberg EJ, **Breeze RE**, Sheppard SK, Perkins TG, Cajade-Law AG and Simon JH: T-2 weighted three-dimensional turbo spin-echo MR of intracranial aneurysms. *AJNR* 18:1939-1943, 1997.
23. Prall JA, Brega KE, Coldwell DM and **Breeze RE**: Incidence of unsuspected blunt carotid artery injury. *Neurosurg* 42:495-499, 1998.
24. Kleinschmidt-DeMasters BK, Mierau GW, Sze CI, **Breeze RE**, Greffe B, Lillehei KO and Stephens JK: Unusual dural and skull-based mesenchymal neoplasms: a report of four cases. *Human Pathology* 29:240-245, 1998.
25. Duke BJ, **Breeze RE**, Rubenstein D, Tranmer BI and Kindt GW: Induced hypervolemia and inotropic support for acute cerebral arterial insufficiency: an underused therapy. *Surg Neurol* 49:51-7, 1998.
26. Duke BJ, Kindt GW and **Breeze RE**: Outcome after urgent surgery for grade IV subarachnoid hemorrhage. *Surg Neurol* 50:169-73, 1998.
27. Wang MC, Escott EJ and **Breeze RE**: Posterior fossa swelling and hydrocephalus resulting from hypertensive encephalopathy: Case report and review of the literature. *Neurosurgery* 44:1325-1327, 1999.
28. **Breeze RE** and Wang MC: An overview of central nervous system transplanation in human disease. *Neursurg Focus* 7(3),1999.
29. Wang MC, Brega KE and **Breeze RE**: Maintenance of cerebral perfusion pressure via induced systemic hypertension and intracranial pressure does not exacerbate cerebral edema in acute brain injury. *Surgical Forum*, Vol. L, 1999, pp 516-18.
30. Eule J, **Breeze RE** and Kindt GW: Clinical results following surgical decompression for lumbar stenosis. *Surgical Neurology* 52(4): 329-337, 1999.
31. Freed CR, Fahn S, and **Breeze RE**: Placebo surgery in trials of therapy for Parkinson's disease. *New England Journal of Medicine* 342(5):353-4, 2000.
32. Freed CR, Greene P, **Breeze RE**, Eidelberg D, Tsai, W-Y, DuMouchel W, Dillon S, Winfield H, Culver S, McCrae C, Kao R, Trojanowski John, Rosenstein J, and Fahn S: Transplantation of embryonic dopamine neurons for severe Parkinson's Disease. *New England Journal of Medicine*, 344(10):710-719, 2001.

33. Nakamura T, Dhawan V, Chaly T, Fukuda M, Ma Y, **Breeze R**, Greene P, Fahn S, Freed C and Eidelberg D: Blinded positron emission tomography study of dopamine cell implantation for Parkinson's disease. *Ann Neurol* 50:181-187, 2001.
34. Ma Y, Feigin A, Dhawan V, Fukuda M, Shi Q, Greene P, **Breeze R**, Fahn S, Freed, C., Eidelberg D. Dyskinesia after fetal cell transplantation for parkinsonism: a PET study. *Ann Neurol*. 52: 628-34, 2002.
35. Wang MC, Winston KR and **Breeze RE**: Cerebellar mutism following interruption of midbrain pathways. *J Neurosurgery* 96:607-610, 2002.
36. Wang MC, Rubenstein D, Kindt GW and **Breeze RE**: Prevalence of intracranial aneurysms in first degree relatives of patients with aneurysms. *Neurosurg Focus* 13 (3):1-4, 2002
37. Shenkar R, Elliott JP, Diener K, Gault J, Hu LJ, Cohrs RJ, Phang T, Hunter L, **Breeze RE** and Awad IA: Differential gene expression in human cerebrovascular malformations. *Neurosurgery* 52 (2):465-478, 2003.
38. Sze CI, Huffer W, **Breeze R**, Escott E and Kleinschmidt-DeMasters BK: Intracalvarial cholesterol granulomas – clinicopathologic correlates of three cases. *Clinical Neuropathology* 22 (1):41-46, 2003.
39. Kleinschmidt-DeMasters BK, Lillehei KO and **Breeze RE**, Neoplasms involving the central nervous system in the older old. *Human Pathology* 34(11):1137-1147, 2003.
40. Freed CR, Leehey, MA, Bjugstad K, Thompson L and **Breeze RE**: Do patients with Parkinson's disease benefit from embryonic dopamine cell transplantation? *J Neurol* 250 (Suppl 3): III/44-III/46, 2003.
41. Trott CT, Fahn S, Greene P, Dillon S, Winfield H, Winfield L, Kao R, Eidelberg D, Freed CR, **Breeze RE** and Stern Y: Cognition following bilateral implants of embryonic dopamine neurons in PD: a double blind study. *Neurology* 60(12):1938-1943, 2003.
42. Bjorklund A, Dunnet SB, Brundin P, Stoessi AJ, Freed CR, **Breeze RE**, Levivier M, Peschanski M Studer L and Barker R: Neural transplantation for the treatment of Parkinson's disease. *Lancet Neurology* 2(7):437-45, 2003.
43. Gordon PH, Yu Q, Qualis C, Winfield H, Dillon S, Greene PE, Fahn S, **Breeze RE**, Freed CR and Pullman SL: Reaction time and movement time after embryonic cell implantation in Parkinson's disease. *Archives of Neurology* 61(6):858-861, 2004.
44. Freed CR, Breeze RE, Fahn S and Eidelberg D: Preoperative response to levodopa is the best predictor of transplant outcome. *Annals of Neurology* 55(6):896, 2004
45. Cerebral cavernous malformations: somatic mutations in vascular endothelial cells. Gault J, Awad IA, Recksiek P, Shenkar R, **Breeze R**, Handler M, Kleinschmidt-DeMasters BK. *Neurosurg* 2009: 65:138-44, Discussion 144-45.

Chapters and Other Invited Articles

1. Apuzzo MLJ, Zee CS and **Breeze RE**: Anterior and mid ventricular lesions: A surgical overview, in Apuzzo MLJ (ed): *Surgery of the Third Ventricle*. Baltimore: Williams and Wilkins, 1987, pp 495-542.
2. **Breeze RE** and Apuzzo MLJ: Laser types, in Robertson J and Clark WC (eds): *Lasers in Neurosurgery*. Boston: Kluwer Academic Publishers, 1988, pp 9-16.
3. Apuzzo MLJ, Chandrasoma PT, **Breeze RE**, Cohen DM, Luxton G and Mazumder A: Applications of image-directed stereotactic surgery in the management of intracranial neoplasms, in Heilbrun MP (ed): *Concepts in Neurosurgery, Volume Two - Stereotactic Neurosurgery*. Baltimore: Williams and Wilkins, 1988, pp 73-132.
4. **Breeze RE**: Neurocysticercosis, in Tindal G (ed): *Contemporary Neurosurgery*, Vol 12, No 9, 1990.
5. Freed CR, **Breeze RE**, Rosenberg NL, Schneck SA, Schroter G, Lafferty K, Talmage DW, Barrett JN, Wells T, Mazziotta JC, Huang SC, Eidelburg D and Rottenberg DA: Fetal neural implants for Parkinson's disease: results at 15 months, in Lindvall O, Bjorkland A and Widner H (eds): *Intracerebral Transplantation in Movement Disorders*. Amsterdam: Elsevier Science Publishers, 1991, pp 69-77.
6. Freed CR, Rosenberg NL, Schneck SA and **Breeze RE**: Fetal tissue implants improve parkinsonian signs in patients with the on-off phenomenon, in Hefti F and Weiner WJ (eds): *Progress in Parkinson's Disease Research* Mount Kisco NY: Futura Publishing Co, Inc, 1992, pp 479-494.
7. **Breeze RE**: Cervical spine fractures, in Norton LW, Steele G and Eiseman B (eds): *Surgical Decision Making*. Philadelphia: Saunders, 1993, pp 310-311.
8. **Breeze RE** and Kindt GW: Spontaneous hemorrhage in the posterior fossa, in Apuzzo MLJ (ed): *Brain Surgery - Complication Avoidance and Management*. New York: Churchill Livingstone, 1993, pp 1915-1928.
9. Freed CR, **Breeze RE**, Rosenberg NL, O'Brien CF and Schneck SA: Fetal transplants for Parkinson's disease. *CNI Review*, 5:13-15, 1994.
10. Freed CR, **Breeze RE**, Rosenberg NL, O'Brien CF and Schneck SA: Fetal neural transplants for Parkinson's disease, in Lieberman R and Mukherjee A (eds): *Principles of Drug Development in Transplantation and Autoimmunity*. RG Landes Co, 1994, pp. 345-349.
11. Bakay RAE, **Breeze RE** and Freed CR: Transplantation in the Human Nervous System, in Schmidek HH and Sweet WH(eds): *Operative Neurosurgical Techniques*. Philadelphia: WB Saunders, 1995, pp 1361-1369.

12. Freed CR, **Breeze RE**, Schneck SA, Bakay RAE and Ansari AA: Fetal neural transplantation for Parkinson disease, in Rich RR (ed): *Clinical Immunology - Principles and Practice*. St. Louis: Mosby, 1996 pp. 1677-1687.
13. Freed CR, **Breeze RE**, Leehey M, O'Brien CF and Schneck SA: Neural transplants for Parkinson's disease. *Internal Medicine* 17(3):40-42, 1996.
14. **Breeze RE** and Brega KE: Cervical spine fracture, in Norton LW, Steele G and Eiseman B (eds): *Surgical Decision Making (Second Edition)* Philadelphia: Saunders, 2000, 328-329.
15. **Breeze RE**: Closed head injury, in Norton LW, Steele G and Eiseman B (eds): *Surgical Decision Making (Second Edition)*. Philadelphia: Saunders, 2000, 34-35.
16. Bakay RAE, **Breeze RE** and Freed CR: Transplantation in the human nervous system in Parkinson's disease, in Schmidek HH (ed): *Operative Neurosurgical Techniques*. Philadelphia: WB Saunders, 2000, pp 1625-1633.
17. Freed CR, Clarkson ED, Leehey MA, Zawada M, Thompson LL and **Breeze RE**: Clinical experience with fetal neural transplantation in Parkinson's disease, in Krauss JK, Jankovic J and Grossman RG (eds): *Surgery for Parkinson's Disease and Movement Disorders*. Philadelphia: Lippincott Williams & Wilkins, 2001, pp 210-216.
18. Curt R. Freed, W. Michael Zawada, Maureen Leehey, Wenbo Zhou and Robert E. Breeze, *Transplantation*, in *Handbook of Clinical Neurology, volume 84, Parkinson's disease and related disorders, Part II*, W. C. Koller, E. Melamed, eds. Elsevier B. V., Edinburgh, 2007.

Abstracts

1. **Breeze RE** and McComb JG: Management of expanding multiple loculated csf filled cavities following enteric organism ventriculitis. American Association of Neurological Surgeons (Pediatric Section). Salt Lake City, Utah, 11-13 December 1984.
2. **Breeze RE** and McComb JG: Management of expanding multiple loculated csf filled cavities following enteric organism ventriculitis. American Association of Neurological Surgeons. Atlanta, Georgia, 21-25 April 1985.
3. **Breeze RE**, McComb JG, Hyman S, Gilles FH, and Weiss MH: CSF formation in acute ventriculitis. American Association of Neurological Surgeons (Pediatric Section). Pittsburgh, Pennsylvania, 2-5 December 1986.
4. **Breeze RE**, McComb JG, Hyman S and Gilles FH: CSF formation in acute ventriculitis. American Association of Neurological Surgeons. Dallas, Texas, 3-7 May 1987.

5. Appley AJ, Fitzgibbons PL, Turner RR, **Breeze RE** and Apuzzo MLJ: Simultaneous flow cytometric DNA and proliferation-associated antigen quantitation in astrocytic neoplasms: Correlation with clinical outcome. American Association of Neurological Surgeons. Toronto, Canada, 24-28 April 1988.
6. Neal JH, Stillerman C, **Breeze RE**, Wells TH and Apuzzo MLJ: Concepts and initial clinical experience related to Wells arc-centered stereotactic system. American Association of Neurological Surgeons. Toronto, Canada, 24-28 April 1988.
7. Freed CR, **Breeze RE**, Rosenberg NL, Barrett JN and Rottenberg DA: Transplant of human fetal dopamine cells in a patient with Parkinson's disease. *Clin Res* 37(2):527A, 1989.
8. Freed CR, **Breeze RE**, Rosenberg NL, Barrett JN, Eidelberg D and Rottenberg DA: Human Parkinson's disease treated by fetal dopamine cell transplant. *Soc Neurosci Abstracts* 15(1):123, 1989.
9. Freed CR, **Breeze RE**, Rosenberg N, Barrett JN and Rottenberg DA: Transplant of human fetal dopamine cells in a patient with Parkinson's disease. AAP/ASCI/AFCR. Washington, D.C., 28 April - 1 May, 1989.
10. **Breeze RE**, Munro L, Osburn LL, Adey G and Kindt GW: Effects of volume expansion with pentafraction on the functioning of edematous brain. Congress of Neurological Surgeons. Atlanta, Georgia, 29 October - 2 November 1989.
11. **Breeze RE**, Freed CR and Kindt GW: Results of stereotactic implantation of human fetal cells in a patient with Parkinson's disease. American Association of Neurological Surgeons. Nashville, Tennessee, 28 April - 3 May 1990.
12. Freed CR, **Breeze RE**, Rosenberg NL, Barrett JN, Wells T, Grafton ST, Mazziotta JC, Eidelberg D and Rottenberg DA: Fetal neural implants in a patient with Parkinson's disease. *Clin Res* 38(1):156A, 1990.
13. Freed CR, **Breeze RE**, Rosenberg NL, Barrett JN, Wells T, Grafton ST, Huang SC, Eidelberg D and Rottenberg DA: Fetal neural implants for Parkinson's disease: Results at six months and one year. Eric K. Fernstrom Symposium on Intracerebral Transplantation in Movement Disorders, Experiment Basis and Clinical Experiences. Lund, Sweden, 20-22 June 1990.
14. **Breeze RE**, Winston KR, Munro L and Kindt GW: The effects of a bradykinin antagonist on ischemic brain injury in the gerbil. Western Neurological Society. Mauna Lani Bay, Hawaii, 9-12 September 1990.
15. Freed CR, **Breeze RE**, Rosenberg NL, Barrett JN, Wells T, Grafton ST, Eidelberg D and Rottenberg DA: Fetal neural implants for Parkinson's disease: One year followup. International Congress of Movement Disorders, April 25-27, Washington, D.C., Abstract 187, 1990.

16. Freed CR, **Breeze RE**, Rosenberg NL, Barrett JN, Wells T, Grafton ST, Huang SC, Eidelberg D and Rottenberg DA: Fetal neural implants for Parkinson's disease: Results at six months and one year. XIth International Congress of Pharmacology, Amsterdam, The Netherlands, July 1-6, 1990.
17. Freed CR, **Breeze RE**, Rosenberg NL, Barrett JN, Wells T, Grafton ST, Huang SC, Eidelberg D and Rottenberg DA: Fetal neural implants for Parkinson's disease: Results at six months and 15 months. Satellite meeting of the XIth International Congress of Pharmacology, Dopamine Systems and Their Regulation, Villa Olmo, Como, Italy, July 8-11, 1990.
18. Munro LG, **Breeze RE**, Winston KR and Kindt GW: Bradykinin antagonist blocks beneficial effects of saline infusion in a gerbil stroke model. *Clin Res* 39(1):103A, 1991.
19. Freed CR, **Breeze RE**, Schneck SA, Kruse C and Rosenberg NL: Striatal implants of human fetal dopamine cells improve signs of Parkinson's disease. *Third IBRO World Congress of Neuroscience*, Abstract P14.27, page 109, 1991.
20. Freed CR, **Breeze RE**, Schneck SA, Kruse C and Rosenberg NL: Human fetal transplants of Parkinson's disease. *Soc Neurosci Abstracts* 17:769, 1991.
21. **Breeze RE**: Preliminary results from the first USA series of fetal cell implantations for the treatment of Parkinson's disease. Society of University Neurosurgeons . Boston, Massachusetts, 5-8 June 1991.
22. Freed CR, **Breeze RE**, Schneck SA, Kruse C and Rosenberg NL: Human fetal dopamine cell transplants for Parkinson's disease. 10th International Symposium on Parkinson's Disease. Tokyo, Japan, 27-30 October 1991.
23. **Breeze RE** and Winston KR: Evidence of a role for bradykinin in cerebral autoregulation. American Association of Neurological Surgeons. San Francisco, California, 11-16 April 1992.
24. Freed CR, **Breeze RE**, Rosenberg NL, Kriek E, Lone T, Wells T, Grafton ST, Huang SC, Mazziotta J, Swale G and Brooks D: Implants of human embryonic mesencephalic dopamine cells improve motor performance and reduce drug requirements in patients with severe Parkinson's disease 5 to 46 months after transplant. IV International Symposium on Neural Transplantation. Washington D.C., 12-16 July 1992.
25. Munro LG, **Breeze RE**, Winston KR and Kindt GW: Effect of bradykinins in cerebral autoregulation. *Clin Res* 40(1):107A, 1992.
26. Freed CR, **Breeze RE**, Schneck SA, Kruse C, Rosenberg NL, Mazziotta J and Sawle G: Human fetal dopamine cell implants for Parkinson's disease: outcome in seven patients. *Neurology* 42(Suppl 3):197, 1992.

27. Freed CR, **Breeze RE**, Rosenberg NL, Schneck SA, Kriek EH, Qi J-X, Zhang Y-B, Lone T, Wells TH, Ramig LO, Thompson L, Mazziotta JC, Huang SC, Schroter G and Ansari AA: Human fetal dopamine cell implants in eight patients with advanced Parkinson's disease. *Society for Neuroscience Abstracts* 18(2):931, 1992.
28. Brega KE, **Breeze RE** and Kindt GW: Surgical Management of Metastatic Melanoma. American Association of Neurological Surgeons. Boston, Massachusetts, 24-29 April 1993.
29. Brega KE, **Breeze RE** and Seltzer WK: Genotypic variation of collagen type III in patients with cerebral aneurysms. Congress of Neurological Surgeons. Vancouver, Canada, 2-7 October 1993.
30. Munro LG, **Breeze RE** and Winston KR: MRI and specific gravity analysis of the role of bradykinins in vasogenic brain edema. *Clin Res* 41(1): 94A, 1993.
31. Freed CR, **Breeze RE**, Rosenberg NL, Schneck SA, O'Brien CF, Kriek EH, Zhang Y-B, Mazziotta JC, Huang SC, Schroter G and Ansari AA: Immunosuppression may be unnecessary for transplant success after human fetal dopamine cell implants in patients with Parkinson's disease. *Society for Neuroscience Abstracts* 19(1):630, 1993.
32. Munro LG, Beel JA, and **Breeze RE**: Bicycle head injury in Colorado: an eight year retrospective review of a major trauma center. *Clin Res* 42(2): 246A, 1994.
33. Freed CR, **Breeze RE**, Rosenberg NL, Schneck SA, O'Brien CF, Kriek EH, Zhang Y-B: Immunosuppression may not improve transplant success after human fetal dopamine cell implants for Parkinson's disease. American Academy of Neurology, May 1-7, 1994.
34. Freed CR, **Breeze RE**, Rosenberg NL, Schneck SA, O'Brien CF, Kriek EH, Zhang Y-B, Mazziotta JC, Hutchinson M, Schroter G and Ansari AA: Transplants of embryonic mesencephalic dopamine cells do not elicit cellular or antibody immune responses in patients with advanced Parkinson's disease. 5th International Symposium on Neural Transplantation, Paris, France, June 25-29, 1994.
35. Freed CR, **Breeze RE**, Schneck SA, O'Brien CF, Mazziotta JC, Hutchinson M and Ansari AA: Immunosuppressants are unnecessary for transplant success after human fetal dopamine implants for Parkinson's disease. 10th Biennial Meeting of the International Society for Developmental Neuroscience, San Diego, CA, July 30-August 4, 1994.
36. Freed CR, **Breeze RE**, Schneck SA, O'Brien CF, Mazziotta JC, Hutchinson M, Bakay RAE and Ansari AA: Immunosuppression may interfere with fetal dopamine cell survival in human and animal models of Parkinson's disease. Symposia on Etiology, Pathogenesis and Treatment of Parkinson's Disease, San Francisco, CA, October 9, 1994.

37. Freed CR, **Breeze RE**, Schneck SA, O'Brien CF, Mazziotta JC, Hutchinson M and Ansari AA: Human fetal dopamine cells survive and develop processes after implantation into humans with Parkinson's disease. *Society for Neuroscience Abstracts* 20(1):9, 1994.
38. Levy AS, Munro LG, Beel JA, Nichols JS and **Breeze RE**: Correction of lactic acidosis enhances and prolongs the effects of hyperventilation in the treatment of increased intracranial pressure. American Association of Neurological Surgeons. Orlando, Florida, 22-27 April, 1995.
39. Brega KE, Seltzer WK and **Breeze RE**: Genotypic variations of collagen type III in patients with cerebral aneurysms. American Association of Neurological Surgeons. San Diego, California, 9-14 April 1995.
40. Duke BJ, **Breeze RE** and Kindt GW: Intravascular volume expansion for acute cerebral arterial insufficiency - an underused therapy. Fourth International Workshop on Cerebrovascular Disease. Chicago, Illinois, 11-14 June, 1995.
41. **Breeze RE**, Duke BJ and Kindt GW: Urgent surgery for poor-grade aneurysm patients. Fourth International Workshop on Cerebrovascular Disease. Chicago, Illinois, 11-14 June, 1995.
42. **Breeze RE**, Duke BJ and Kindt GW: Urgent surgery for poor-grade aneurysm patients. American Academy of Neurological Surgery. Tucson, Arizona, 1-4 November, 1995.
43. **Breeze RE**, Freed CR, Schneck SA, Leehey M and O'Brien CF: A new frontal approach to embryonic neural transplantation in humans with advanced Parkinson's disease. *Society for Neuroscience Abstracts* 21(3), abstract 691.5, 1995.
44. Hutt CJ, Zawad WM, Ansari AA, Kriek EH, **Breeze RE**, Bakay RAE and Freed CR: Old age but not immunosuppression predicts embryonic dopamine cell survival in parkinsonian bonnet monkeys. *Society for Neuroscience Abstracts* 21(1), abstract 133.4, 1995.
45. Freed CR, **Breeze RE**, Schneck SA, Leehey MA, O'Brien CF, Thompson L, Ramig LO, Kaddis FG, Mazziotta J, Eidelberg D, and Ansari AA: Embryonic dopamine cell implants in humans with advanced Parkinson's disease: results from seven months to seven years after transplant in 23 patients. *Society for Neuroscience Abstracts* 21(3), abstract 691.4, 1995.
46. Freed CR, **Breeze RE**, Schneck SA, Leehey MA, O'Brien CF, Ansari AA, Eidelberg D and DeMasters BK: Human embryonic dopamine cells survive transplantation in humans with advanced Parkinson's disease. *J Invest Med* 43(2), suppl 2, p. 295A, 1995.

47. Freed CR, **Breeze RE**, Schneck SA, Leehey MA, O'Brien CF, Ansari AA, Eidelberg D and Mazziotta JC: Seven year's experience with embryonic dopamine cell implants into humans with advanced Parkinson's disease. Fourth International Congress of Movement Disorders. Vienna, Austria, 17-21 June 1996.
48. Freed CR, **Breeze RE**, Leehey MA, Schneck SA, O'Brien CF: A new frontal approach for embryonic dopamine cell transplants for Parkinson's disease. American Academy of Neurology, 48th Annual Meeting. 23-30 March, 1996.
49. Freed CR, **Breeze RE**, Leehey MA, Schneck SA, O'Brien CF, Thompson LL, Ramig LO, McRae CA, Mazziotta JC, Miletich RS, and Eidelberg D: Eight years experience with fetal neurotransplantation in patients with advanced Parkinson's disease. *Soc Neurosci Abstracts* 22(2), abstract 481.3, 1996.
50. Freed CR, **Breeze RE**, Leehey MA, Schneck SA, O'Brien CF, Rosenstein JM, Clarkson ED, Zawada WM, Mazziotta JC, Miletich RS, and Eidelberg D: Cultured tissue strands of human embryonic mesencephalon for transplant in patients with Parkinson's disease. 6th International Neural Transplantation Meeting. San Diego, California, 13-16 Feb, 1997.
51. Freed CR, **Breeze RE**, Leehey MA, Schneck SA, O'Brien CF, Thompson LL, Ramig LO, McRae CA, Mazziotta JC, Miletich RS, and Eidelberg D: Fetal neurotransplantation for Parkinson's disease: results after eight years. American Society for Clin Pharmacology and Therapeutics. San Diego, California, 5-8 March 1997.
52. Munro LG, Beel JA and **Breeze RE**: Epidemiology of ski injuries in Colorado. *Biomedicine* 97. Washington, D.C., 25-27 April 1997
53. **Breeze RE**, Prall JA, Brega KE and Coldwell DM: Incidence of unsuspected blunt carotid artery injury. Society of University Neurosurgeons. Ann Arbor, MI, 29-31 May 1997.
54. **Breeze RE**: Was Lincoln's gunshot wound to the head fatal? Society of University Neurosurgeons. Memphis, TN, 25-28 March 1998.
55. Beauchamp K, Duke BJ, Baxter RN, Brega KE, Cajade-Law, A and **Breeze RE**: Nonoperative management of spinal epidural abscess. Congress of Neurological Surgeons Post- Meeting Satellite Convention. Blaine, WA, 8-11 October 1998.
56. Freed CR, **Breeze RE**, Leehey MA, Schneck SA, O'Brien CF, Thompson LL, Ramig LO, McRae CA, Mazziotta JC, Miletich RS, and Eidelberg D: Ten years experience with fetal neurotransplantation in patients with advanced parkinsons disease. Society for Neuroscience, 24(1):559, abstract 223.16, 1998.

57. Leehey MA, **Breeze RE**, Schneck SA, O'Brien CF, Culver S, Thompson LL, McRae C, Ramig LO, Mazziotta JC, Miletich RM, Eidelberg D and Freed CR: Neurotransplantation for Parkinson's disease: ten years' experience. Congress of Parkinson's Disease and Movement Disorders, New York, NY, October 10 -14, 1998.
58. Wang MC, **Breeze RE** and Kindt GW: Prevalence of familial aneurysms. American Association of Neurological Surgeons, New Orleans, LA, 24-29 April 1999.
59. **Breeze RE**, Freed CR, Fahn S, Greene P, Tsai W and Eidelberg D: Fetal cell implantation for Parkinson's disease. American Association of Neurological Surgeons, New Orleans, LA, 24-29 April 1999.
60. Wang MC and **Breeze RE**: Induced systemic hypertension and intracranial pressure reduction equally diminish cerebral edema in acute brain injury. American College of Surgeons Annual Meeting, San Francisco, CA, 12 October 1999.
61. Wang MC, Munro L, Brega KE, and **Breeze RE**: Induced systemic hypertension and intracranial pressure reduction do not exacerbate cerebral edema in acute brain injury. Congress of Neurological Surgeons Annual Meeting, Boston, MA 30 Oct-4 Nov 1999.
62. Wang MC, Breeze RE and Winston KR: Cerebellar mutism. AANS/CNS Section on Pediatric Neurosurgery Annual Meeting, Atlanta, GA, 1-4 Dec, 1999.
63. Wang MC, **Breeze RE**: Classification of aneurysmal residua. AANS/CNS Section on Cerebrovascular Surgery Annual Meeting, New Orleans, LA, 7-10 Feb 2000.
64. **Breeze, RE**, Wang, MC: Cautions regarding application of ISUIA results to a general population. AANS/CNS Section on Cerebrovascular Surgery Annual Meeting, Hawaii, Feb 2001.
65. **Breeze, RE**: Late results with fetal cell implantation for Parkinson's disease. Society of University Neurosurgeons Annual Meeting, Portland, Oregon, 17-20 June, 2001.
66. Freed CR, Bjugstad KB, **Breeze RE**, Greene p, Tsai WY, Kao R, Eidelberg D and Fahn S: Human embryonic dopamine cell transplant patients show stable clinical outcome for at least five years after surgery, Neuroscience abstract, 2002

INVITED LECTURES

1. Physics of lasers and lasers in basic research. *Seminar on Application of Lasers in Surgery and Medicine*. Sponsored by the Veterans Administration. Long Beach, California, 20 May 1983.
2. Laser physics. *Seminar on Lasers in Medicine*. Sponsored by Kaiser Hospitals. Los Angeles, California, 22 October 1983.

3. Principles of laser application. *Symposium on Trends in Neurosurgery*. Sponsored by the Southern California Neurosurgery Society. Los Angeles, California, 29 February 1984.
4. The application of lasers in the field of neuro-oncology. Continuing education seminar sponsored by Anaheim Memorial Hospital. Anaheim, California, 20 February 1986.
5. A review of the principles of head trauma. Los Angeles/Orange County Regional Chapter of the American Association of Neuroscience Nurses. Los Angeles, California, 25 June 1986.
6. Computer tomographic guidance stereotaxis. American Association of Neuroscience Nurses. Dallas, Texas, 3-7 May 1987.
7. Neurocysticercosis. *Neurosurgery in the Rockies*. Sponsored by the Division of Neurosurgery, University of Colorado Health Sciences Center. Vail, Colorado, 6-10 March 1988.
8. Surgical approach to the Parkinson patient. Mini Symposium: Fetal Dopamine Cells Implants as a Treatment for Parkinson's Disease. AAP/ASCI/AFCR. Washington, D.C., 28 April - 1 May 1989.
9. Intraoperative electrophysiologic monitoring in neurosurgery. American Society of Electroneurodiagnostic Technologists. New Orleans, Louisiana, 24-29 September 1989.
10. Fetal cell implantation in the management of Parkinson's disease. *Neurosurgery in the Rockies*. Sponsored by the Division of Neurosurgery, University of Colorado Health Sciences Center. Vail, Colorado, 4-8 March 1990.
11. The management of AVM's in young, minimally symptomatic patients. *Neurosurgery in the Rockies*. Sponsored by the Division of Neurosurgery, University of Colorado Health Sciences Center. Vail, Colorado, 4-8 March 1991.
12. Fetal tissue implants for the treatment of Parkinson's disease: the University of Colorado Health Sciences Center experience (breakfast seminar). American Association of Neurological Surgeons. San Francisco, California, 11-16 April 1992.
13. Abnormalities in type III collagen associated with cerebral aneurysms. *Neurosurgery in the Rockies*. Sponsored by the Division of Neurosurgery, University of Colorado Health Sciences Center. Vail, Colorado, 7-11 March 1993.
14. Fetal transplantation. *Movement Disorders Update*. Sponsored by the Baton Rouge General Medical Center. Baton Rouge, Louisiana, 9 September 1994.
15. Lincoln's gunshot wound to the head - was it truly fatal? *Neuroscience Nursing in the Rockies*. Vail, Colorado, 5-7 March 1995.

16. Operative treatment of central nervous system degenerative diseases (breakfast seminar). American Association of Neurological Surgeons. San Diego, California, 9-14, 1995.
17. Pathophysiology of cerebral aneurysms. Fourth International Workshop on Cerebrovascular Disease. Chicago, Illinois, 11-14 June, 1995.
18. Fetal cell implantation. American Association of PeriAnesthesia Nurses 16th National Conference. Denver, Colorado, 16-20 March, 1997.
19. Stereotactic radiosurgery options. Team up for Triumph (Patient and Family Brain Tumor Conference for the Rocky Mountain Region). Denver, Colorado, 17-18 October 1997.
20. Current concepts in the care of neuro patients. Colorado Review of Anesthesia and Ski Holiday 98. Vail, Colorado, 28 February-6 March 1998.
21. The Neurotransplantation Program at the University of Colorado. The Society of Neurological Surgeons. Colorado Springs, CO 16-18 May 1999.
22. Fetal cell transplantation for Parkinson's disease. Resident Training Course, European Association of Neurosurgical Societies, Barcelona, Spain, 15 June 1999.
23. Surgical Interventions for stroke. Western States Stroke Consortium, Aspen Colorado, 9-10 September, 2000.
24. Anterior circulation aneurysms: options and approaches. Congress of Neurological Surgeons. San Diego, CA, 29 Sept-4Oct, 2001.
25. Vascular case studies: How I would do it. Congress of Neurological Surgeons. San Diego, CA, 29 Sept-4Oct, 2001.
26. Surgical approaches to Trigeminal neuralgia. The Quarterly Regional Meeting of the Trigeminal Neuralgia Association Support Group. Denver, CO, 8 Dec 2001.
27. Neurotransplantation for Parkinson's disease. American Association of Neurological Surgeons. Chicago, Illinois, 6-11 April 2002.
28. Discussant: A surgical placebo-controlled trial of intrastriatal transplantation of fetal porcine ventral mesencephalic tissue in subjects with Parkinson's disease, presented by Freeman, T. American Association of Neurological Surgeons. Chicago, Illinois, 6-11 April 2002.

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