



BIOGRAPHICAL SKETCH

Provide the following information for the key personnel in the order listed on Form Page 2.

Photocopy this page or follow this format for each person.

NAME	POSITION TITLE		
Chung Y. Hsu	Professor		
EDUCATION/TRAINING (<i>Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.</i>)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
National Taiwan University School of Medicine	MD	1970	Medicine
University of Virginia School of Medicine	PhD	1975	Neuropharmacology

RESEARCH AND PROFESSIONAL EXPERIENCE: Concluding with present position, list, in chronological order, previous employment, experience, and honors. Include present membership on any Federal Government public advisory committee. List, in chronological order, the titles, all authors, and complete references to all publications during the past three years and to representative earlier publications pertinent to this application. If the list of publication in the last three years exceeds two pages, select the most pertinent publications. **DO NOT EXCEED TWO PAGES.**

PRESENT EMPLOYMENT AND EXPERIENCE

07/75 - 06/77 Postdoctoral Fellow, NIH Diabetes Research Center at the University of Virginia, Charlottesville, VA
 07/77 - 06/80 Intern (Medicine), Resident and Chief Resident (Neurology) Medical Univ. Hospital, Charleston, SC
 07/81 - 06/89 Assistant and Associate Professor of Neurology, Medical University of South Carolina
 07/89 - 06/93 Associate Professor, Division of Restorative Neurology Baylor College of Medicine, Houston, TX
 07/93 - 09/02 Professor and Head, Cerebrovascular Disease Section, Department of Neurology, Washington University School of Medicine, St. Louis, MO
 08/94- 09/02 Director, Stroke Center, Washington University and Barnes-Jewish Hospital, St. Louis, MO
 10/01 - 09/02 Elliot H. Stein Professor of Neurology, Barnes-Jewish Hospital, Washington Univ. Med. Ctr., St. Louis, MO.
 09/02 - President, Taipei Medical University, Taipei, Taiwan.
 11/04 - President, Taiwan Neuroscience Society

EXPERIENCE IN PRECLINICAL AND CLINICAL TRIALS (1982-Present): Engaged in 32 multicenter or multinational clinical trials. Scientific Advisory Board Member with 6 US biotech companies. Consultant to 15 major US, European and Japanese pharmaceutical companies.

AWARDS, HONORS, AND MEMBERSHIPS

NIH-NINDS Javits Neuroscience Investigator Award (1991-1998); NIH-NINDS Teacher-Investigator Development Award 1983-1988; NIH Fellowship 1975-1977; National Research Service Award (1978 and 1980); Vivian L. Smith Foundation Distinguished Research Award, 1993-1994; Taiwanese-American Foundation Award, 1997; Member, NIH-NICHD National Advisory Board on Medical Rehabilitation and Research, 1997-2001; NIH-NINDS Director's Contract Review Committee, 1997-2000; Neurological Disorder Program Project A Study Section, 1988-1992. Chair, 12 NIH-NINDS site visit teams or review panels, 1988-1997; BDCN1 (CND) Study Section, 2001 – 2005; Co-Chair, NINDS DNA Damage and Repair after Brain Injury Workshop, 9/1995; Co-chair, 3rd FASEB Conference on Neurobiology of Brain Injury, 8/1996; Co-chair, Keystone Stroke Symposium, (3/2002); Chair, 2nd Biennial Conference of the Asian Society for Mitochondria Research and Medicine, Taipei, Taiwan (4/2004); Chair, American Heart Association Brain Review Committee, 1996-1997; Chair, American Heart Association Bugher Foundation Stroke Awards Review Committee (1999 – 2001); President, The US National Neurotrauma Society, 1992-1993; Member, United States

Pharmacopoeial Advisory Panel on Drug Information in Neurological and Psychiatric Disorders (1985-1990); American Heart Association, Stroke Council, Fellow (1983-); American Academy of Neurology, Fellow (1988-); Member of journal editorial boards: Stroke, J Cereb Blood Flow Metab, J Neurotrauma, Clinical Neuropharmacology, Brain Research, Current Neurovascular Research.

PUBLICATIONS (Selected from 250 research articles, 4 books and more than 150 abstracts):

1. Selected Basic Science Articles:

- Hsu CY, Brooker G, Peach MJ, Westfall TC: Inhibition of catecholamine release by tolbutamide. **Science** 187:1086-88, 1975.
- Gibbs JBN, Hsu CY, Terasaki WL, Brooker G: Calcium sensitivity and microtubular dependence of ornithine decarboxylase induction by cyclic AMP and independent mechanisms. **Proc Nat Acad Sci USA** 77:995-99, 1980.
- An G, Lin TN, Liu JS, He YY, Xue JJ, Hsu CY: Expression of c-fos and c-jun after cerebral ischemia. **Ann Neurol** 33:457-464, 1993.
- Liu PK, Salminen A, He YY, Jiang MH, Xue JJ, Liu JS, Hsu CY: Suppression of ischemia-induced Fos expression and AP-1 activity by an antisense oligodeoxynucleotide to c-fos mRNA. **Ann Neurol** 36:566-576, 1994.
- Koh JY, Suh SW, Gwag BJ, He YY, Hsu CY, Choi DW: The role of zinc in neuronal death after transient global cerebral ischemia. **Science**, 272:1013-1016, 1996.
- Liu PK, Hsu CY, Dizdaroglu M, Floyd RA, Kow YW, Karakaya A, Rabow LE, Cui JK: Damage, repair, and mutagenesis in nuclear gene after mouse forebrain ischemia and reperfusion. **J Neurosci**, 16(21):6795-6806, 1996.
- Liu XZ, Xu XM, Hu R, Du C, Shang SX, McDonald JW, Dong HX, Wu YJ, Fan GS, Jacquin MF, Hsu CY, Choi DW: Neuronal and glial apoptosis after traumatic spinal cord injury. **J Neurosci**, 5395-5406, 1997.
- Yamada KA, Covey DF, Hsu CY, Hu R, Hu Y, He YY: The diazoxide derivative IDRA 21 enhances ischemic hippocampal neuron injury. **Ann Neurol** 43:664-669, 1998.
- Yeh H-J, He YY, Xu J, Hsu CY, Deuel TF: Upregulation of pleiotrophin (ptn) gene expression in microvasculature, macrophage, and astrocyte on acute ischemic brain injury in the rat. **J Neurosci** 18:3699-3707, 1998.
- Xu J, Yeh CH, Chen SW, He L, Sensi SL, Canzoniero LMT, Choi DW, Hsu CY: Involvement of de novo ceramide biosynthesis in TNF- α /cycloheximide-induced cerebral endothelial cell death. **J Biol Chem** 273:16521-16526, 1998.
- Huang SS, Huang FW, Chen SW, Xu J, Hsu CY, Huang JS: Amyloid β -peptide possesses a transforming growth factor- β activity. **J Biol Chem** 273: 27640-27644, 1998.
- Cui JK, Hsu CY, Liu PK: Suppression of post-ischemic hippocampal NGF expression by a c-fos antisense oligodeoxynucleotide. **J Neurosci**, 19:1335-1344, 1999.
- Yan P, Chen SW, Kim GM, Xu J, Hsu CY, Xu XM: Expression of glucocorticoid receptor after traumatic spinal cord injury. **J Neurosci**, 19:9355-9363, 1999.
- Xu J, Chen SW, Ahmed SH, Chen H, Ku G, Goldberg MP, Hsu CY: Amyloid- β peptides are cytotoxic to oligodendrocytes. **J Neurosci** 21:RC118:1-5, 2001.
- Holtzman DM, Han BH, He YY, Kim GM, Choi JJ, Hsu CY: Inhibition of post-ischemic brain injury by clusterin overexpression. **Nature Med** (Letter) 7:978-979, 2001.
- Xu J, Kim GM, Ahmed SH, Xu JM, Yan P, Xu XM, Hsu CY: Glucocorticoid receptor-mediated suppression of AP-1 activation and matrix metalloproteinase expression after spinal cord injury. **J Neurosci** 21: 92-97, 2001.
- Kim GM, Xu J, Xu JM, Song SK, Yan P, Ku G, Xu XM, Hsu CY: TNF receptor deletion reduces NF- κ B activation, c-IAP2 expression and functional recovery after traumatic spinal cord injury. **J Neurosci** 21: 6617-6625, 2001.
- Liu PK, Grossman RG, Hsu CY, Robertson GS: Ischemic Injury and Faulty Gene Transcripts in the Brain. **Trends Neurosci** 24:581-588, 2001.
- Yin KJ, Lee JM, Chen SD, Xu J, Hsu CY: Amyloid beta induces Smac release via AP-1/Bim activation. **J Neurosci** 22:9764-9770, 2002.
- Lee JM, Vo K, Hongyu, Hsu CY, Lin WL: MR cerebral metabolic rate of oxygen utilization in hyperacute patients. **Ann Neurol** 53:227-232, 2003.
- Lee JM, Yin KJ, Hsin I, Chen, Fryer JD, Holtzman D, Hsu CY, Xu J: A Role for Matrix Metalloproteinase-9 in Cerebral Amyloid Angiopathy-related Hemorrhage. **Ann Neurol**, 54:379-382, 2003.
- Lee JT, Xu J, Lee JM, Ku G, Han XL, Yang DI, Chen SW, Hsu CY: Amyloid- β peptide Induces oligodendrocyte death by activating the neutral sphingomyelinase-ceramide pathway. **J Cell Biol** 164:123-131, 2004.
- Yin KJ, Hsu CY, Hu XY, Chen H, Chen SW, Xu J, Lee JM. PP2A regulates bim expression via the Akt/FKHRL1 signaling pathway in $A\beta$ -induced cerebrovascular endothelial cell death. **J Neurosci**, 26: 2290-2299, 2006..

2. Selected Clinical Trial Articles:

- Hsu CY, Faught RE, Furlan AJ, Coull BM, Huang DC, Hogan EL, Linet OI, Yatsu FM for Prostacyclin Study Group: Intravenous prostacyclin in acute non-hemorrhagic stroke--A placebo-controlled double blind trial. **Stroke** 18:353-358, 1987.
- Hsu CY, Norris JW, Hogan EL, Bladin P, Dinsdale HB, Yatsu FM, Earnest MP, et. al: Pentoxifylline in acute nonhemorrhagic stroke--a randomized, placebo-controlled double blind trial. **Stroke** 19:716-23, 1988.
- The American Nimodipine Study Group: Clinical trial of nimodipine in acute ischemic stroke. **Stroke** 23:3-8, 1992.
- Publications Committee for the trial of Org 10172 in Acute Stroke Treatment(TOAST) Investigators. Low molecular weight heparinoid, Org 10172, and outcome after acute ischemic stroke. A randomized controlled trial. **JAMA** 279:474-481, 1998.

Clark W, Wissman S, Albers G, Jhamandas J, Madden K, Hamilton S for the ATLANTIS Study Investigators: The ATLANTIS Study: recombinant tissue plasminogen activator (alteplase) for ischemic stroke 3 to 5 hours after symptoms onset. A randomized, double-blind, placebo-controlled trial. **JAMA** 282:2019-2026, 1999

Sherman DG, Atkinson R, Chippendale T, Levin K, Ng K, Futrell N, Hsu CY, Levy DE for STAT Investigators: Ancrod improves functional outcome in patients with acute ischemic stroke: Results of the stroke treatment with ancrod trial (stat). **JAMA** 283:2395-2403, 2000.

Sacco RL, DeRosa JT, Haley EC, Levin B, Ordroneau P, Phillips SJ, Rundek T, Snipes RG, Thompson JLP for the GAIN American Investigators: Glycine antagonist in neuroprotection for patients with acute stroke: GAIN Americans: A randomized controlled trial. **JAMA** 285:1719-1728, 2001.

Gorelick PB, Richardson D, Kelly M, Ruland S, Hung E, Harris Y, Kittner S, Leurgans S; African American Antiplatelet Stroke Prevention Study Investigators. Aspirin and ticlopidine for prevention of recurrent stroke in black patients: a randomized trial. **JAMA** 289:2947-2957, 2003.

3. Selected Monographs:

Hsu CY (ed.): **Cerebral Ischemia**: From basic mechanisms to new drug development, Karger, AG, Basel, 1998.

Wei YH, Lee HM, Hsu CY (eds.): The role of mitochondria in human aging and disease. **Ann NY Acad Sci**, Vol 1042, 2005.

RECENT NIH AND TAIWAN GOVERNMENT GRANT SUPPORTS:

1. Cell-cell interactions and hypoxic brain injury, (PO-1 NS32636) PI, CY Hsu (15%), 12/1/00 - 11/30/05, \$1,500,000 approximate total costs/year for the entire Program Project Grant, approximate total: \$7,000,000. (Transferred to Dr. Mark Goldberg)
2. Amyloid-induced cerebroendothelial degeneration in aging (RO-1 NS40525), PI, CY Hsu (20%), 7/1/00 – 6/30/2005, \$384,000 total costs/year, approximate total: \$1,890,000. (Transferred to Dr. Jin-Moo Lee)
3. Methylprednisolone treatment of spinal cord injury, (RO-1, NS40162), PI, CY Hsu (20%), 11/1/00 – 10/31/05, \$320,000 total costs/year, approximate total: \$1,600,000. (Transferred to Dr. Jan Xu)
4. Inflammatory Apoptosis after Spinal Cord Injury, RO1, (RO-1 NS37230), PI, CY Hsu (15% effort), 9/1/97-8/31/03, \$288,000 total costs/year, approximate total: \$1,560,000.
5. ES Cell Transplantation after Spinal Cord Injury Program Project (PO-1 NS39577), PPG PI: Johnson EM; Core B PI: CY Hsu (10%): 12/1/99 – 11/30/04, \$155,268 total costs/year for Core B, approximate total: \$776,340.
6. Vitamin Intervention for Stroke Prevention (RO-1 NS 34447), PIs, JF Toole and V Howard; Wash U PI, CY Hsu (2%) 8/1/98 - 7/31/04, \$65,000 total costs/year, approximate total: \$260,000.
7. NIH African American Aspirin Stroke Prevention Study: PI, P. Gorelick, Wash U PI, CY Hsu (8.5% effort), approximately \$60,000/ year direct, \$90,000/year total, 6/1/96-5/31/04, approximate total: \$630,000
8. Stroke Prevention Center Grant, Ministry of Health (Taiwan), PI, CY Hsu (5%): 1/03 – 12/05, \$ 300,000, total costs.
9. Amyloid-induced cerebral vascular degeneration PPG, National Science Council (Taiwan), PI, CY Hsu, 8/03 – 7/06, \$400,000, total costs.
10. Genetic mechanism of methylprednisolone neuroprotection, National Genomic Medicine PPG, National Science Council (Taiwan), PI, CY Hsu, 5/04 – 4/07, \$ 1,500,000, total costs.
11. OxLDL cytotoxicity in cerebral endothelial cells PPG, National Science Council (Taiwan), PI, CY Hsu, 8/04 – 7/07, \$450,000 total costs.
12. Clinical Research Center of Excellence grant, Ministry of Health (Taiwan), PI, CY Hsu, 8/05 – 7/10, \$3,000,000, total costs.
13. Stroke Center Registry, Ministry of Health (Taiwan), PI, CY Hsu, 1/06 – 12/07, \$ 250,000 with #250,000 matching funds from Dr. Chi-Chin Huang Stroke Center Foundation.
14. Topnotch Stroke Research Center, Ministry of Education (Taian), PI, CY Hsu, 1/1/06 – 12/07, \$3,000,000, total costs.
15. M-Taiwan Subproject, Ministry of Economy (Taiwan), TMU PI, CY Hsu, 1/06 – 12/07, \$800,000, total costs for TMU.