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Thomas John Chippendale, M.D., Ph.D.

EDUCATION

University of California, Irvine, CA ■ 1971
B.S., Biological Sciences, Cum Laude, Research Honors in Psychobiology

University of California, Irvine, CA ■ 1972
M.S., Medical Pharmacology and Experimental Therapeutics

Princeton University, Princeton, NJ ■ 1974
M.A., Psychology, Spencer Fellow

Princeton University, Princeton, NJ ■ 1977
Ph.D., Neurosciences and Behavior, Spencer Fellow

University of California, Irvine, CA ■ 1980
M.D.

University of California, San Diego, CA ■ 1980-1981
Internship, Medical

University of California, San Diego, CA ■ 1981-1984
Residency, Neurology

LICENSURE

California Medical License Number – G46820

DEA Certificate Number – AC1522867

CERTIFICATIONS

American Board of Psychiatry and Neurology ■ 1989

ACADEMIC APPOINTMENTS

Teaching Assistant, Department of Pharmacology
California College of Medicine, University of California, Irvine, ■ 1971-72

Instructor, Department of Psychology
Princeton University, Princeton, New Jersey ■ 1972-76

ACADEMIC APPOINTMENTS CONTINUED

Instructor, Department of Anatomy, Human Neuroanatomy

University of California, Irvine, ■ 1980

Chief Resident, Department of Neurology

California College of Medicine, University of California, San Diego, ■ 1983-1984

Assistant Professor, Department of Neurosciences

University of California, San Diego, ■ 1984 – present

RELATED EXPERIENCE

Neurologist, Private Group Practice, North County Neurology Associates dba The Neurology Center, Oceanside, Encinitas, and La Jolla offices, CA ■ 1984 – Present

HOSPITAL AFFILIATIONS

Tri-City Medical Center, Oceanside, California, Active Privileges ■ 07/26/1984 – Present

Chief of Staff ■ 1996 – 1997

Scripps Memorial Hospital, Encinitas, California, Active Privileges ■ 1984 – Present

Chief, Division of Neurology ■ 1993 – 95, 1998 – 2000

Chief, Division of Medicine ■ 2001 – Present

Stroke Director ■ 2004 – Present

Physician Advisor, Case Management ■ 2003 – Present

Co-Director of Neurosciences ■ 2007 – Present

Scripps Memorial Hospital, La Jolla, California, 1992 – Present

UCSD, La Jolla, California, Asst. Clinical Prof. ■ 1984 – 2004

VA Medical Center, San Diego, California, Active Privileges ■ 1984 – 2004

PROFESSIONAL SOCIETIES

- American Academy of Neurology, Member ■ 1981 – Present
- American Heart Association, Board of Directors, San Diego Chapter ■ 2005 - present
- San Diego Neurological Association ■ 1981 – Present
 - President ■ 1989 – 1990
- American Society of Neuroimaging, Board of Directors ■ 1990 – 1993
- San Diego Stroke Council ■ 1996 – Present
 - Founder and Co-Chairman ■ 1996 – 1999
- National MS Society, San Diego Chapter, Professional Advisory Board ■ 1992 – Present
- Association of California Neurologists, Charter Member ■ 1998 – Present

PUBLICATIONS AND PAPERS

Chippendale, T.J., Zawolkow, G.A., Russell, R.W., and Overstreet, D.H., Tolerance to Low Acetylcholinesterase Levels: Modification of Behavior Without Acute Behavioral Change, *Psychopharmacologia*, 26, 127-139; 1972.

Chippendale, T.J., Cotman, C.W., Kozar, M.D., and Lynch, G.S., Analysis of Acetylcholinesterase Synthesis and Transport in the Rat Hippocampus: Recovery of Acetylcholinesterase Activity in the Septum and Hippocampus after Administration of Diisopropylfluorophosphate, *Brain Research*, 81, 485-496; 1974.

Kozar, M.D., Overstreet, D.H., **Chippendale, T.J.**, and Russell, R.W., Changes of Cholinesterase Activity in Three Major Brain Areas and Related Changes in Behavior Following Acute Treatment with Diisopropylfluorophosphate, *Neuropharmacology*, 15, 291-298; 1976.

Haubrich, D.R., **Chippendale, T.J.**, and Wang, P.L.F., The Role of Dietary Choline in Acetylcholine Synthesis, *Journal of Neurochemistry*, 27, 1235-1313; 1976.

Haubrich, D.R., and **Chippendale, T.J.**, The Regulation of Acetylcholine Synthesis in Nervous Tissue, Mini-review, *Life Sciences*, 20, 1465-1478; 1977.

Squires, K., **Chippendale, T.J.**, and Starr, A., Serial Changes in Cognitive Components of Auditory Evoked Potentials in Dementing Illness, *Annals of Neurology*, 8, 115, 1980.

Chippendale, T.J., Meralgia Paresthetica, *Western Journal of Medicine*, 132, 145-146; 1980.

Goodin, D.S., Starr, A., **Chippendale, T.J.**, and Squires, K. C., Sequential Changes in the P3 Component of the Auditory Evoked Potential of Confusional States and Dementing Illnesses, *Neurology*, 33, 1215-1218; 1983.

Collaborating Clinical Centre, North County Neurology Associates, Oceanside: **T. Chippendale**, M. Lobatz, E. Diamond, J. Schim, M. Sadoff. "A randomized, blinded, trial of clopidogrel versus aspirin in patients at risk of ischemic events (CAPRIE)", CAPRIE Steering Committee, *The Lancet* Vol 348 No 9038, 1329-1339, November 16, 1996.

Participating Clinical Center: Tri-City Medical Center, **T. Chippendale**, E. Diamond, M. Lobatz, D. Murphy, D. Rosenberg, T. Ruel, M. Sadoff, J. Schim, J. Schleimer. "Tissue Plasminogen Activator for Acute Ischemic Stroke," *The New England Journal of Medicine*, Vol. 333 No 24, 1581-1587, December 14, 1995.

Sherman D.G., Atkinson R.P., **Chippendale T.J.**, et al., Intravenous Ancrod for Treatment of Acute Ischemic Stroke, The STAT Study: A Randomized Controlled Trial, *JAMA*, 2000; 283:2395-2403, May 10, 2000
Prominent Pseudoathetosis of Pernicious Anemia"
Transactions of the Chicago Neurological Society ■ 1974

SPARCLE Investigators, "A Double-Blind, Randomized, Placebo-Controlled Study of Atorvastatin as Prevention of Cerebrovascular Events in Patients with a Previous Transient Ischemic Attack (TIA) or Stroke" *N Engl J Med* 2006; 335:549-59

RESEARCH ACTIVITIES

Alzheimer's disease

Suloctidil study for Alzheimer's Disease, Monsanto, Sub Investigator, 1987

D97-019 "Metrifonate investigational nationwide trial (M.I.N.T.)", Principal Investigator, 1997

Parke-Davis 979-14 "A 26-week, randomized, double-blind, placebo-controlled, parallel-group, multi-center with a sustained active phase study of Milameline (CI-979/RU 35926) in patients with probable Alzheimer's Disease", Sub-Investigator, 1995 - 1996.

Parke-Davis 979-16 "Open label extension of "A 26-week, randomized, double-blind, placebo-controlled, parallel-group, multi-center with a sustained active phase study of Milameline (CI-979/RU 35926) in patients with probable Alzheimer's Disease", Sub-Investigator, 1996-1997

970-68-23 "A 16-week randomized, double-blind, placebo-controlled parallel-group, dose-response multi-center study of Tacrine (CI-970) once-a-day formulation (Tacrine GITS) with a 16-month open-label extension in patients with dementia of the Alzheimer's type", Sub-Investigator, 1996 - 1997

970-68-23 "Open label extension of "A 16-week randomized, double-blind, placebo-controlled parallel-group, dose-response multi-center study of Tacrine (CI-970) once-a-day formulation (Tacrine GITS) with a 16-month open-label extension in patients with dementia of the Alzheimer's type", Sub-Investigator, 1996-1997.

GAL-INT-11 "A randomized double blind placebo-controlled trial to evaluate the efficacy and safety of galantamine in subjects with mild cognitive impairment (MCI) clinically at risk for development of clinically probably Alzheimer's Disease", Principal-Investigator, 2001 – 2003

TVP1012-A001-201- A 1-Year, double-blind, randomized, placebo-controlled study of Rasagiline 1 mg and 2 mg added to Aricept 10 mg daily in patients with mild to moderate dementia of the Alzheimer's type. Sub-Investigator, 2005.

VP-AD-301 "A Double-Blind Placebo-Controlled Study of VP4896 for the Treatment of Mild to Moderate Alzheimer's Disease". Sub-Investigator, 2006.

PRX-03140 "A Randomized, Double-Blind, Placebo Controlled, Phase IIa Study to Assess the Short-Term Effects of PRX-03140 Alone and in Combination with Donepezil in Subjects with Mild Alzheimer's Disease". Sub-Investigator, 2006

Epilepsy

3310101018 "A multi-center, double-blind, placebo-controlled, randomized, parallel-group trial of Rufinamide as adjunctive therapy in patients with inadequately controlled primary generalized tonic-clonic seizures", Sub Investigator, 1997 - 2001

M92-813 "Tiagabine HCl administration in patients with epilepsy", Principal Investigator, 1995 – 1998

E2080-A001-301 "A Double-Blind, Placebo-Controlled, Parallel-Group Study of Rufinamide Given as Adjunctive Therapy in Patients with Refractory Partial Seizures". Sub Investigator, 2006

Migraine

M/3275/0008 “Oral Almotriptan (LAS31416) vs. Oral Sumatriptan in a double Blind, Randomized, Parallel Group Study of Cost-Effectiveness and Quality of life in Migraine.” -Sub-Investigator- 1988-1999.

M/3275/0011 “A long-term open label safety study of Almotriptan 12.5 mg orally in migraine patients”. -Sub-Investigator- 1988-1999.

S2WA3003 “A randomized, double-blind, placebo-controlled, crossover study to evaluate the safety and efficacy of oral Naratriptan in the acute treatment of four migraine attacks.” –Principal Investigator- 1995-96.

S2b-350 “Imitrex (Sumatriptan Succinate) injection, post-marketing surveillance study.” -Sub-Investigator- 1995.

S2WA 3001 - “A Randomized, Double-Blind, Placebo-Controlled, Dose Ranging Study to Evaluate the Efficacy and Safety of Four Doses of Oral Naratriptan in the Acute Treatment of a Single Migraine Attack” -Sub-Investigator- – 1995.

S2WA 1007 - “A Study to Evaluate the Pharmacokinetics and Pharmacodynamics of Oral Naratriptan in Migraine Subjects” -Sub-Investigator- 1995-1996.

CN115-0038—22 “An open label long-term trial evaluating the safety of BMS-180048 150mg in the treatment of patients with migraine headache with or without aura.” -Sub-Investigator- 1996.

ALN-INT-16 “The efficacy and safety of Alniditan (1.4 or 1.8 mg SC) vs. Sumatriptan (6 mg SC) in the acute treatment of migraine: A randomized, double-blind, placebo-controlled, single-dose trial.” -Sub-Investigator- 1996.

ALN-USA-18 “Open evaluation of the long-term efficacy, safety and tolerability of 1.4 mg SC Alniditan in the acute treatment of migraine attacks.” -Sub-Investigator- 1996-97.

SUMA4015 “A randomized, double-blind, placebo-controlled study to evaluate the impact of sumatriptan injection on workplace productivity loss due to migraine” (Imitrex). -Sub-Investigator- 1996 - 1997.

CN102-021 - “A Randomized, Double-Blind Trial Comparing the Safety and Efficacy of Butorphanol Tartrate Nasal Spray Versus Acetaminophen and Codeine Phosphate Capsules Versus Placebo in Patients with Acute Migraine Headache Pain” -Sub-Investigator- 1996.

CN115-038-031 - “An Open Label Long-Term Trial Evaluating the Safety of BMS-180048 150 mg in the Treatment of Patients with Migraine Headache With or Without Aura” -Sub-Investigator- 1996.

SUMA 4014 - “A Double-Blind, Placebo-Controlled Parallel Group Study to Evaluate the Efficacy of a Second Sumatriptan Succinate Tablet (25 or 50 mg.) In the Acute Treatment of Migraine” -Sub-Investigator- 1996-1997.

VML 251/96/07 “A double-blind placebo-controlled, parallel-group study to assess the efficacy and safety of up to two doses of VML251 in the acute treatment of migraine.” (Vanguard) -Sub-Investigator- 1997.

Migraine continued

311c90 - "A Double Blind, Randomized Comparison of Zolmatriptan and Sumatriptan in the Acute Treatment of Multiple Migraine Headaches" -Sub-Investigator- 1997.

VML251/90/06 - "A Double Blind, Placebo Controlled, Parallel Group Study to Assess the Efficiency and Safety of a Single Dose of VML251 (2.5mg) in the Acute Treatment of Migraine". -Sub-Investigator- 1997.

LY303870 - "Dose Comparison of LY303870 in the Long Term Prophylaxis of Migraine" -Sub-Investigator- 1997.

1042-0117.12 "A Double-Blind, Parallel, Placebo-Controlled, Single-Dose, Outpatient Study of Ganaxolone for the Treatment of Migraine With or Without an Aura." -Sub-Investigator- 1998-2000.

191622-024-00 "A Multicenter, Double-Blind, Randomized, Placebo-Controlled, Parallel Group Study of the Safety and Efficacy of three dosages of BOTOX♦ (Botulinum Toxin, Type A) Purified Neurotoxin Complex for the Prophylactic Treatment of Migraine Headaches." -Sub-Investigator- 2000.

SUM40274 – "A Randomized, Double-Blind, Placebo-Controlled, Parallel Group, Single-Attack Evaluation of Sumatriptan 50mg and 100mg Versus Placebo During a Migraine Headache at the First Sign of Pain." -Sub-Investigator- 2000.

A1601022 "A Multicenter Trial to Evaluate the Efficacy, Tolerability and Subject Satisfaction with Eletriptan in the Treatment of Migraine Headache Attacks in Neurology Practices." -Sub-Investigator- 2000

191622-036 – "A Multicenter, Double-Blind, Randomized, Placebo-Controlled, Parallel Group Study of the Continuation of Benefit of Two Dosages of BOTOX® (Botulinum Toxin Type A) Purified Neurotoxin Complex for the Prophylactic Treatment of Migraine Headaches." -Sub-Investigator- 2002.

MT100-304 – "A Single Dose, Double-Blind, Safety and Efficacy Study of MT 100, Metoclopramide Hydrochloride and Naproxen Sodium in Subjects With Acute Migraine Attacks." –Principal Investigator- 2000.

SUM40276 – "An Open-label, Long-term Observational Study of the Safety and Tolerability of Sumatriptan Nasal Spray in the Treatment of Migraine in Adolescents", Sub-Investigator, 2001

061-00 – "A Randomized, Open-Label, Parallel-Groups, Outpatient Study to Examine the Long Term Safety and Tolerability of Rizatriptan 5mg P.O. for the Acute Treatment of Migraine in Adolescents." -Sub-Investigator-2001.

191622-037-01 – "A Multicenter, Double-Blind, Randomized, Placebo-Controlled, Parallel Group Study of BOTOX® (Botulinum Toxin Type A) Parodied Neurotoxin Complex for the Prophylactic Treatment of Migraine Headaches in the Episodic Migraine Population." Sub-Investigator, 2004

191622-038 – "A Multicenter, Double-Blind, Randomized, Placebo-Controlled, Parallel Group Study of BOTOX® (Botulinum Toxin Type A) Purified Neurotoxin Complex for the Prophylactic Treatment of Headaches in the Chronic Headache Population." – Sub-Investigator – 2004

CAPSS-155 – "A Comparison of the Efficacy and Safety of Topamax® (Topiramate) Tablets Versus Placebo for the Prophylaxis of Migraine." – Sub-Investigator – 2001

Migraine continued

MT100-308 – “A Double Blind, Placebo-Controlled, Study to Evaluate the Safety and Efficacy of MT 100 Versus Over-Encapsulated Sumatriptan in Subjects with Acute Migraine Attacks.” – Sub-Investigator – 2001

MT100-402 – “A Double Blind, Randomized Placebo-Controlled, Study to Evaluate the Safety and Efficacy of MT 100 for the Treatment of Migraine in Subjects Who Are Intolerant to 5-HT Agonists or Have Cardiovascular Risk Factors.” – Sub-Investigator – 2001

MT100-401A – “A Double Blind, Randomized, Placebo-Controlled Study to Evaluate the Safety and Efficacy of a Two Tablet Dose of MT 100 for Treatment of Migraine in Imitrex® Non-responders.” – Sub-Investigator – 2001.

MT 300-302 – “A Randomized-Double-Blind, Placebo Controlled Evaluation of the Safety and Efficacy of MT 300 in the Acute Treatment of Migraine.” – Sub-Investigator – 2003.

SUM40298 – “A Randomized, Double-Blind, Placebo-Controlled, Single Attack, Parallel-Group Evaluation of the Efficacy of Sumatriptan 50mg Tablets versus Placebo in the Treatment of Self-

Described and/or Physician-Diagnosed Sinus Headaches that Meet International Headache Society (HIS) Criteria for Migraine Headache.” – Sub-Investigator – 2002.

VML251/00/02 – “A Double-Blind, Placebo-Controlled, Three-Way Crossover clinical Study to Assess the Safety and Efficacy of Two Dose Regimens of Frovatriptan, Compared with Placebo, in Preventing Menstrually Associated Migraine (MAM) Headaches.” – Sub-Investigator – 2002-2003.

311CUS/0022 “A Multicenter, Randomized, Placebo-Controlled, Double-Blind, Parallel-Group Trial to Evaluate Early Efficacy and Tolerability of Zolmitriptan (Zomig) Nasal Spray in the Acute Treatment of Adult Subjects with Migraine” – Sub-Investigator – October 2002 – 2003

E2020-A001-211 “A 20-week Multicenter, Randomized, Double-Blind, Placebo-Controlled, Preliminary Study to Evaluate The Efficacy and Safety of Two Fixed Doses (5mg and 10 mg) of Donepezil Hydrochloride (E2020) in Migraine Prophylaxis – Sub-Investigator – July 2002- November 2002.

SUM40299 “A Randomized, Double-Blind, Placebo-Controlled, Parallel-Group Study to Evaluate the Efficacy and Tolerability of Oral Sumatriptan 25mg, 50mg, and 100mg tablets for a Single Moderate or Severe Headache in Adults Diagnosed with Migrainous Disorder (HIS 1.7) – Principal Investigator – October 2002.

MT300-401 “A Muticenter Randomized, Single-Blind, Evaluation of Three Injectable Anti-Migraine Drugs” - Sub-Investigator – February 2003

CL1776-005 – “A Phase 2 Safety and Efficacy Study of NPS 1776 for the Acute Treatment of Migraine Headaches” – Sub Investigator – 2004

001 – “A Randomized, Evaluator-Masked Trial to Evaluate the Efficacy of Botox Compared with Depakote in Migraine Prevention” – Principal Investigator – 2004

3420AG1 – “Program to Assess Treatment Strategies: A Botox Observational Program” – Sub Investigator – 2003

Migraine continued

MT400-303 “An Open-label, Repeat Dose Study of the Safety of Combo Formulation in the Treatment of Multiple Episodes of Acute Migraine Over 12 Months”, Sub – Investigator, 2004

065-00- (Maxalt) “A Multicenter, Double-Blind, Randomized, Parallel, Placebo-Controlled Study to Examine the Efficacy of Rizatriptan 10-mg Tablet Administered Early During a Migraine Attack While the Pain is Mild”, Sub-Investigator, 2004

MT400-301 (POZEN) “A Double-Blind, Multicenter, Randomized, Placebo-Controlled Single Dose Study to Evaluate the Safety and Efficacy of Trexima in the Acute Treatment of Migraine Headaches”, Sub-Investigator, 2004

VML251-3MRM/02 “A double-blind, placebo-controlled, parallel group study, with an open-label extension phase, to assess the efficacy, tolerability and safety of oral frovatriptan in the prevention of menstrually related migraine (MRM) headaches in a “difficult to treat” population. Sub-Investigator, 2005.

E2007-A001-210- A Randomized, Double-Blind, Placebo-Controlled, Multi-Center, Parallel-Group Study to Evaluate the Efficacy and Safety of E2007 in Migraine Prophylaxis. Sub-Investigator, 2005.

A Single-Center, Double-Blind Comparison of BOTOX® (Botulinum Toxin Type A) and DEPAKOTE® for the Prophylactic Treatment of Migraine Headaches- Pilot Study. Sub-Investigator. 2004

“A Single-Center, Double-Blind Comparison of Botox and Topiramate for the Prophylactic Treatment of Chronic Migraine Headache”. 2005

1602 “A Multi-Center, Randomized, Single-Blind, Controlled Study to Obtain Preliminary Safety and Efficacy Data for ONS Treatment of Chronic Migraine Headache”. Sub-Investigator, 2005

191622-079/080 “A Multicenter Study Evaluating the Efficacy and Safety of Botox Purified Neurotoxin complex as Headache Prophylaxis In Migraine Patients with 15 or More headache Days per 4-Week Period in a 24 week, Double-Blind, Randomized, Placebo Controlled, Parallel-Group Phase Followed by a 32 Week Open-Label Phase”. Sub-Investigator 2006

TRX103632/635 “A Randomized, Double-Blind, Multi-Center, Placebo Controlled, Cross-Over Study to Determine the Consistency of Response for TREXIMA (Sumatriptan 85mg/Naproxen Sodium 500mg) in the Acute Treatment of Multiple Migraine Attacks”. Sub-Investigator 2006

TRX106573 “A Randomized, Double-Blind, Multi-Center, Placebo-Controlled, Cross-Over Study of Trexima® in Migraine Subjects Who Report Poor Response or Intolerance to Relpax®“. Sub-Investigator, 2006

NL-2006-001 “A Phase III Randomized, Double-Blind, Parallel Group, Sham-Controlled Study Evaluating the Efficacy and Safety of Non-Invasive, Non-Repetitive Transcranial TMS Stimulation (TMS) for the Acute Preemptive Treatment of the Aura Phase of Migraine Headache”. Sub-Investigator 2007

Multiple Sclerosis

01-9002 - "A Long-Term Open Label Study to Evaluate the Safety of Copolymer I and to Extend Its Availability to Patients with Relapsing-Remitting Multiple Sclerosis, SubInvestigator, 1994-97

BL01-3112 - "Phase III, Double-Masked, Placebo-Controlled Study to Evaluate the Safety and Efficacy of Two Doses of Betaseron in Patients with Secondary-Progressive Multiple Sclerosis" - Sub-Investigator- 1996-1997

6002i - "Phase II Study of Hu23F2G in Acute Exacerbation of Multiple Sclerosis" - Sub-Investigator - 1997

IAMS05- "Phase 2 Study of Hu23F2G Multi-dose in Acute Exacerbation of Multiple Sclerosis." -Sub-Investigator- 1998-2000

CAMMS223 – "A Phase II, Randomized, Open-Label, Three-Arm Study Comparing Low and High Dose CAMPATH (MABCAMPATH) and High Dose Rebif in Patient with Early, Active Relapsing-Remitting Multiple Sclerosis." – Principal Investigator – 2003

9006- (TEVA) "A Multi-Center, Randomized, Double-Blind, Parallel Group Study to Evaluate the Efficacy, Tolerability, and Safety of 40mg of Copaxone in the Treatment of Relapsing-Remitting Multiple Sclerosis Patients", Principal-Investigator, 2004

FTY20D2309 "A 24-Month Double-Blind, Randomized, Multi-Centre, Placebo Controlled, Parallel Group Study Comparing the Efficacy and Safety of 0.5 mg and 1.25 mg Fingolimod (FTY720) Administered Orally Once Daily Versus Placebo in Patients with Relapsing-Remitting Multiple Sclerosis". Principal Investigator, 2006

CFTY720D2302 "A 12-Month Double-Blind, Randomized, Multi-Centre, Active-Controlled, Parallel-Group Study Comparing the Efficacy and Safety of 0.5 mg and 1.25 mg Fingolimod (FTY720) Administered Orally Once Daily Versus Interferon β -1a (Avonex[®]) Administered I.M. Once Weekly in Patients with Relapsing-Remitting Multiple Sclerosis". Principal Investigator, 2007

Pain

BTOX 144-8051 "A multicenter, double-blind, placebo-controlled, parallel, graduated-dose clinical trial of Botox (botulinum toxin type A) purified neurotoxin complex for the treatment of chronic low back muscle spasm." -Sub-Investigator- 1996-97.

BTOX-145-8051 "A multicenter, double-blind, placebo-controlled, parallel, graduated-dose clinical trial of Botox (Botulinum Toxin Type A) purified neurotoxin complex for the treatment of chronic low back muscle spasm" -Sub-Investigator- 1997.

A1A20004 "A Multicenter, Randomized, Double-Blind, Placebo-Controlled, Parallel Group Study to Evaluate the Efficacy and Tolerability of a 14 Day Treatment Course of GW493838 50mg Compared to Placebo in Subjects with Peripheral Neuropathic Pain. – Sub-Investigator – November 2002 – 2003.

Parkinson's Disease

HL18317 "An open, randomized, multicenter study to assess the efficacy and safety of 1.25mg O.D. and 5 mg B.D. (or 10mg O.D.) Zydys Selegiline in the control of symptoms of Parkinson's Disease in patients stabilized in a regimen including Selegiline." -Sub-Investigator- 1996

NR15440/M35016 "Non-comparative Open Label Study to Identify Tasmar Dosage Regimen in Non-Fluctuating Parkinson's Disease Patients Treated with Sinemet; with Follow-Up Extension of Tasmar" -Sub-Investigator- 1997.

Z/SEL/95/008 EXTENSION – "An open, multicenter parallel group continuation study to assess the safety of 1.25mg qd and 10mg qd Zydys Selegiline in the control of symptoms of Parkinson's disease in patients stabilized on a regimen including Selegiline." –Principal Investigator- 1998.

"A/SEL/97/026, A randomized, double-blind, parallel-group study to compare the safety and efficacy of Zydys Selegiline 1.25 to 2.5 mg Q.D. with placebo as an adjunct in the management of Parkinsonian patients being treated with Levodopa who exhibit deterioration in the quality of their response to this therapy. " -Sub-Investigator- 1998.

RP54274X-320 "A Phase III Multicenter, Double-Blind, Parallel-Group, Placebo Controlled Study of the Effect of Riluzole 50 mg BID or 100 mg BID for Two Years on the Progression of Parkinson's Disease in 1050 Patients." -Sub-Investigator- 2000.

RP54274X-321 "A Phase III Multicenter, Double Blind, Parallel-Group Placebo Controlled Study of the Effect of Riluzole 50 mg BID or 100 mg BID on the Progression of Parkinson's Disease in Patients Treated With L-DOPA or Dopamine Agonist" -Sub-Investigator - 2001.

Z/SEL/97/027 "An Open Extension Study of the Safety and Efficacy of Zydys Selegiline 1.25 to 2.5 mg Q.D. as an Adjunct in the Management of Parkinsonian Patients being treated with Levodopa." -Sub-Investigator- 2003.

666E-CNS-0075-021 "A Phase III, Double-Blind, Placebo-Controlled, Randomized Study Comparing the Efficacy, Safety, and Tolerability of Sumanriole Versus Placebo or Ropinirole in Patients with Early Parkinson's Disease." Sub-Investigator – 2002-2003

M/2760/0011 "PNU-95666E: Open-Label, Long Term, Flexible Dose Study of Safety, Tolerability and Therapeutic Response in Patients with Parkinson's Disease." Sub-Investigator – 2003

DA2APD-0075-031 "A Phase III, Double-blind, Fixed Dose Response Study Comparing the Efficacy and Safety of Sumanriole vs. Placebo in Patients with Early Parkinson's Disease." Sub-Investigator – 2003

1198.100 NS2330 "A Fourteen-Week Placebo-Controlled Dose-Response Efficacy and Safety Study of NS 2330 in Early Parkinson's Disease Patients (Study for Proof of Concept in Early Parkinson's Disease of a Triple Reuptake Inhibitor, NS2330 / SCEPTRE)"

S308-3-003 " A Multi-Centre, Randomized, Double-Blind, Parallel-Group Placebo and Pramipexole Controlled Study to Assess Efficacy and Safety of SLV308 Monotherapy in the Treatment of Patients with Early Stage Parkinson's Disease". Sub-Investigator, 2006

Stroke

A-120-A "S*T*A*T stroke treatment with Ancrod (Arvin) trial, parallel, group sequential, double-blind, randomized, placebo-controlled study of the safety and efficacy of IV Ancrod (Arvin) given within 3 hours after the onset of acute ischemic stroke." -Principal Investigator - 1993 - 1998.

CAPRIE/P-1633 "Clopidogrel vs. aspirin in patients at risk of ischemic events" -Principal Investigator - 1993-1996.

510.1067 "Double-blind, randomized, placebo-controlled parallel-group trial of the efficacy and safety of Enlimomab Anti-Icam-1 compared to placebo administered within 6 hours of the onset of stroke symptoms, for treatment of acute ischemic stroke." -Sub-Investigator- 1995-1996.

534.11 "A phase II/III Multicenter, double-blind, placebo-controlled, parallel group study to evaluate the efficacy, safety, tolerability, and pharmacokinetics of intravenous aptiganel hydrochloride in patients with an acute ischemic stroke" (Cerestat). -Sub-Investigator- 1996 - 1997.

IP302-007 "A placebo-controlled study to determine the effects of 500mg of Citicoline in ischemic stroke patients." -Sub-Investigator- 1996 – 1997.

03062k1-200-US "A randomized, double-blind, placebo-controlled parallel group multicenter trial of Fiblast®." -Sub-Investigator- October 1997- 1998.

SA-CMZ-009 "The Clomethiazole Acute Stroke Study in Ischemic Stroke (CLASS-I): A double blind, parallel group, multinational, multicenter study of the efficacy and safety of i.v.

Clomethiazole compared to placebo in patients with acute ischemic stroke." -Sub-Investigator- 1998-2000.

SA-CMZ-0010 " The Clomethiazole Acute Stroke Study in acute intracerebral hemorrhage (CLASS-H): A double blind, parallel group, multinational, multicenter study of safety of i.v. Clomethiazole compared to placebo in patients with acute intracerebral hemorrhage." -Sub-Investigator- 1998-2000.

SA-CMZ-0011 "The Clomethiazole Acute Stroke Study in t-PA Treated Ischemic Stroke (CLASS-T): A double blind, parallel group, multinational, multicenter study of safety of i.v. Clomethiazole compared to placebo in patients treated with t-PA (tissue Plasminogen activator) for acute ischemic stroke." -Sub-Investigator- 1998-2000.

YM872 "A Randomized, Double-Blind, Placebo-Controlled, Sequential Dose-Escalation Study to evaluate the Safety of YM872 in Patients with Acute Ischemic Stroke." -Sub-Investigator- 1998-2003.

981-124 "A double-blind, randomized, placebo-controlled study of Atorvastatin as prevention of cerebrovascular events in patients with a previous transient ischemic attack (TIA) or stroke" – Principal Investigator

SB 214857/030 BRAVO "Blockade of the GP IIB/IIIA receptor to avoid vascular occlusion." – Principal Investigator – 1999.

CP101-606 MRI/DIFF/Perf. Stroke "A double-blind placebo controlled, multi-center study to evaluate the safety and efficacy of a 72-hour infusion of CP-101, 606 in subjects with acute ischemic stroke in the forebrain, study #161-106-5078." –Principal Investigator- 2000.

Stroke continued

GAIN-America- Protocol GLYA3002: An International, Multi-Center, Randomized, Double-Blind, Placebo-Controlled, Parallel-Group Study to Assess over 3 Months the Safety, Efficacy and Pharmacoeconomics of an 800mg Loading Dose and Five 200mg Maintenance Doses of

GV150526 in the Treatment of Patients with a Clinical Diagnosis of Acute Stroke. -Sub-Investigator- 2001.

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003SE062601 – “A Randomized, Parallel Study to Assess the Outcomes of Treating obstructive Sleep Apnea (OSA) with Auto Set T in Patients Recovering from Stroke.” Sub-Investigator 2003

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Botox vs. Zanaflex “Placebo Controlled Trial of BOTOX ® versus Zanaflex ® for the Treatment of Subjects with Post- Stroke Upper Limb Spasticity” Principal Investigator March 2003

100282 Bayer Study “A Randomized, Double-Blind, Placebo-Controlled Trial to Evaluate the Efficacy, Safety, Tolerability, and Pharmacokinetic/Pharmacodynamic Effects of a Targeted

Exposure of Intravenous Repinotan in Patients with Acute Ischemic Stroke” Sub-Investigator, 2003

9.159 “PRoFESS – Prevention Regimen for Effectively avoiding Second Strokes: A double-blind, active and placebo controlled study of Aggrenox vs. clopidogrel + aspirin, with and without Micardis”, Sub Investigator, 2004

SA-NXY-0007: “A Double-Blind, Randomized, Placebo Controlled, Parallel Group, Multicenter, Phase IIb/III Study to Assess the Efficacy and Safety of Intravenous NXY-059 in Acute Ischemic Stroke”, Sub Investigator, 2004

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NTI-ASP-0502 “A Randomized, Double-Blind, Placebo Controlled Study of Ancrod (Viprinex) in Subjects Beginning Treatment within 6 Hours of the Onset of Acute Ischemic Stroke”. Principal Investigator, 2006

CD-0125 “Safety and Efficacy of NeuroFlo Technology in Ischemic Stroke”. Sub Investigator, 2006

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Other

NAL0396 – “A Multicenter, randomized, double-blind, placebo-controlled, phase IIb study of oral Naloxone for the treatment of opioid-induced constipation in patients with chronic, non-malignant pain.” -Sub-Investigator- 1997-1998.

SR 90107A/ORG 31540 “ A Multicenter, randomized, parallel, double-blind, dose ranging study of subcutaneous SR 90107 A/ORG 31540 with an assessor blind, comparative control group of subcutaneous LMWH in the prevention of deep vein thrombosis after elective total hip replacement.” -Sub-Investigator- 1997.

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97040B- “A Double Blind Randomized, Placebo Controlled Multicenter Study to Evaluate the Efficacy and Safety of 4 Doses of Intramuscular Phenoxybenzamine Hydrochloride Injection versus Placebo in Chronic Muscle Pain.” – Principal Investigator - 1998-1999.

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“Schneider (USA) Inc. Carotid Stent Therapy vs. Carotid Endarterectomy.” -Sub-Investigator-

191622-013-01 “A Multicenter, Double-Blind, Randomized, Placebo-Controlled, Parallel Group, Clinical Study of the Safety and Efficacy of BOTOX♦ (Botulinum Toxin Type A) Purified Neurotoxin complex injections into Areas of Focal Tenderness in subjects with Chronic Low Back Pain.” -Sub-Investigator- 2000.

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A1481066 – “A Multi-Center, Double-Blind, Placebo-Controlled Flexible Dose Study to Evaluate the Efficacy and Safety of Viagra ® in Women Who Have Female Sexual Arousal Disorder Resulting From a Traumatic Spinal Cord Injury.” – Sub-Investigator – 2003

GAL-COG-3002- “An Analysis of Mortality in Subjects who Participated in Three Studies of Galantamine in Mild Cognitive Impairment”, Principal-Investigator, 2004

101468/205: A 12-Week, Double-Blind, Placebo Controlled, Parallel Group Study to Assess the Efficacy and Safety of Ropinirole XR (Extended Release) in Patients with Restless Legs Syndrome, Sub-Investigator, 2005

E2020-A001-412: A One Year, Multicenter, Randomized, Double-Blind, Placebo-Controlled Evaluation of the Efficacy and Safety of Donepezil Hydrochloride (E2020) in Subjects with Mild Cognitive Impairment, Sub-Investigator, 2005