

The 22nd Biennial Meeting of the ISN/APSN Joint Meeting Taiwan Satellite Conference
Novel Strategies for Intervention in Neurodegenerative Diseases

Program at a glance

Sunday (Aug 30)	Monday (Aug 31)	Tuesday (Sept 1)	Wednesday (Sept 2)
	8:00 – 17:00 Registration	8:30 – 17:00 Registration	8:30 – 17:00 Registration
	8:30 – 8:45 Opening ceremony Gibson Wood Andrew HJ. Wang (Vice President of Academia Sinica) Ing-Kang Ho (Vice President of NHRI) Chok-Yung Chai (Director of Foundation of Biomedical Sciences) Yuan-Tsong Chen (Director of IBMS)		
	8:45 – 9:00 A tribute to Dr. Lloyd A. Horrocks (1932-2007) Grace Sun		
	9:00 - 9:45 Chair: <u>Grace Y. Sun</u> Plenary Speaker Nicolas G. Bazan	9:00 - 9:45 Chair: <u>Chung Y. Hsu</u> Plenary Speaker Pak H. Chan	9:00 - 9:45 Chair: <u>Andrew HJ. Wang</u> Plenary Speaker Stuart A. Lipton
		Session 4 Stroke Chair: <u>Albert Sun & SZ. Lin</u> 9:45 - 10:15 Yau-Huei Wei <i>National Yang Ming University</i> 10:15 - 10:30 Teng-Nan Lin <i>Academia Sinica</i>	Session 7 PD Chair: <u>De-Maw Chuang & FC. Liu</u> 9:45 - 10:15 Jau-Shyong Hong <i>National Institute of Environmental Health Science</i> 10:15 - 10:30 Lung-Sen Kao <i>National Yang Ming University</i>
	9:45 – 10:15 Break (Photo session)	10:30 – 10:45 Break	10:30 – 10:45 Break
	Session 1 AD–Mitochondria Chair: <u>Gibson Wood & JG. Chung</u> 10:15 – 10:45 Gary Gibson <i>Cornell University</i> 10:45 - 11:15 Walter Müller <i>University Frankfurt</i> 11:15 - 11:45 Xiongwei Zhu <i>Case Western University</i> 11:45 - 12:00 Frank Lu <i>National Cheng-Kung University</i> 12:00-12:15 Yi-Hsuan Lee <i>Taipei Medical University</i>	Session 4 Stroke (continued) 10:45 – 11:15 De-Maw Chuang <i>NIH/National Institutes of Mental Health</i> 11:15 - 11:45 Xiao-Ming Xu <i>University of Indiana</i> 11:45 - 12:15 Albert Sun <i>University of Missouri</i> 12:15 - 12:30 Alessandro Prinetti <i>University of Milan</i>	Session 7 PD (continued) 10:45 – 11:15 Zezong Gu <i>University of Missouri</i> 11:15 - 11:45 Jang-Yen Wu <i>Florida Atlantic University</i> 11:45 - 12:15 Albert Yu <i>Peking University</i> 12:15 - 12:30 Ben Tu <i>Academia Sinica</i>
	12:15 – 13:00 Lunch Poster Presentation	12:30 – 13:15 Lunch Poster Presentation	12:30 – 13:15 Lunch Poster Presentation
	Session 2 AD–Ox-Inflam Chairs: <u>Eric Klann & Julie Chan</u> 13:00 - 13:30 Guy Brown <i>Cambridge University</i> 13:30 - 14:00 Eric Klann <i>New York University</i> 14:00 - 14:30 Lih-Fen Lue <i>Sun Health Research Institute</i> 14:30 - 15:00 Xianlin Han <i>Washington University</i>	Session 5 Visual Degeneration Chairs: <u>Joe Hollyfield & CT. Chien</u> 13:15 - 13:45 Haydee Bazan <i>Louisiana State University</i> 13:45 - 14:15 Robert Anderson <i>University of Oklahoma</i> 14:15 - 14:45 Joe Hollyfield <i>Cleveland Clinic Foundation</i> 14:45 - 15:00 Yi-Shuihan Huang <i>Academia Sinica</i>	Session 8 Other Neuro-Diseases and Therapy Chairs: <u>Michael Collins & BW. Soong</u> 13:15 - 13:45 Anne Eckert <i>University of Basel</i> 13:45 - 14:15 Michael Collins <i>Loyola University</i> 14:15 - 14:45 Shi Du Yan <i>Columbia University</i> 14:45 - 15:00 Yijuang Chern <i>Academia Sinica</i>
	15:00 -15:15 break	15:00-15:15 break	15:00-15:15 break
	Session 3 AD–Lipids and their Enzymes Chairs: <u>Franco Goracci & CK. Su</u> 15:15 – 15:45 Akhlaq Farooqui <i>Ohio State University</i> 15:45 - 16:15 Grace Sun <i>University of Missouri</i> 16:15 - 16:45 Franco Goracci <i>University of Perugia</i> 16:45 - 17:15 Gunter Eckert <i>University Frankfurt</i>	Session 6 Receptor-Signal Pathways Chairs: <u>Gary Weisman & Eminy Lee</u> 15:15 - 15:45 Joanna Strosznajder <i>Polish Academy of Sciences</i> 15:45 - 16:15 Gary Weisman <i>University of Missouri</i> 16:15 - 16:45 James Lee <i>University of Missouri</i> 16:45 – 17:15 Wei-Yi Ong <i>National University of Singapore</i> 17:15 - 17:30 Jameel Dennis <i>Virginia Commonwealth University</i> 17:30 - 17:45 Synthia Sun <i>National Yang Ming University</i>	Session 8 Other Neuro-Diseases and Therapy (continued) Chair: <u>Terry BJ. Kuo</u> 15:15 - 15:45 Gibson Wood <i>University of Minnesota</i> 15:45 - 16:15 Sally Frautschy <i>University of California, Los Angeles</i> 16:15 - 16:30 Li-Kai Tsai <i>National Taiwan University Hospital</i> 16:30 – 17:00 (Poster Competition Awards) Gibson Wood 17:00 – 17:30 Session 9 Closing Remarks and Future Directions Moderators: <u>Grace Sun and Gibson Wood</u> Panel discussants: <u>Nicolas Bazan, Pak Chan, Stuart Lipton, and Greg Cole</u>
17:00 – 19:00 Registration & Reception	18:00 – Welcome dinner, Activity Center banquet room	Free night	19:00 – Farewell dinner, San Want Hotel

Outline of Program

Sunday (Aug 30)

17:00 - 19:00 Registration & Reception

Monday (Aug 31)

08:00 - 17:00 Registration

08:30 - 08:45 Opening ceremony

Dr. Gibson Wood

Dr. Andrew HJ. Wang (Vice President of Academia Sinica)

Dr. Ing-Kang Ho (Vice President of NHRI)

Dr. Chok-Yung Chai (Director of Foundation of Biomedical Sciences)

Dr. Yuan-Tsong Chen (Director of IBMS, Academia Sinica)

08:45 - 09:00 A tribute to Dr. Lloyd A. Horrocks (1932-2007) Grace Sun

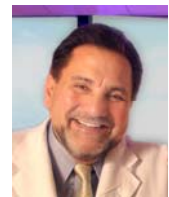
09:00 - 09:45 Chair: Grace Y. Sun

Plenary Speaker 1

Omega-3 essential fatty acids modulates initiation and progression of neurodegenerative diseases

Dr. Nicolas G. Bazan

Professor and director of Neuroscience Center, LSU Health Science Center, New Orleans, LA, USA



09:45 - 10:15 **Break (photo session)**

Session 1 AD –Mitochondria

Chairs: Gibson Wood & Jing-Gung Chung (China Medical University)

10:15 - 10:45 Diminished metabolism and/or oxidative stress in neurodegenerative diseases, a double edged sword?

Dr. Gary E. Gibson

Professor of Weill Medical College of Cornell University, Burke Medical Research Institute, White Plains, NY, USA



10:45 - 11:15 Mitochondrial dysfunction: common domino in brain aging and Alzheimer's disease. Therapeutical aspects

Dr. Walter E. Müller

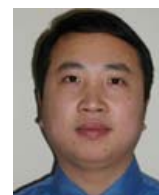
Professor of Dept Pharmacology, Biocenter Univ Frankfurt, Frankfurt, Germany



11:15 - 11:45 Mitochondrial dynamics as a novel therapeutic target for AD

Dr. Xiongwei Zhu

Associate Professor of Department of Pathology, Case Western Reserve University, Cleveland, Ohio, USA



11:45 - 12:00 Prolyl isomerase Pin1: a potential therapeutic target for Alzheimer's disease

Dr. Pei-Jung Frank Lu

Associate Professor of Institute of Clinical Medicine, National Cheng-Kung University, School of Medicine, Tainan, Taiwan



12:00 - 12:15 Dioxin activates the aryl hydrocarbon receptor to regulate NMDA receptor expression and functions in cortical neurons

Dr. Yi-Hsuan Lee

Professor and Chairman of Department of Physiology, Taipei Medical University, Taipei, Taiwan



12:15 - 13:00 **Lunch (Poster)**

Session 2 AD – Ox-Inflam

Chairs: Eric Klann & Julie Y.H. Chan (Kaohsiung Veterans General Hospital)

13:00 - 13:30 iNOS, PHOX & phagocytosis: three axes of inflammatory neurodegeneration

Dr. Guy C. Brown

Senior lecturer of Department of Biochemistry University of Cambridge, UK



13:30 - 14:00 Preventing aging- and AD-related memory impairments with overexpression of SODs

Dr. Eric Klann

Professor of Center for Neural Science, New York Univ, New York, NY, USA



14:00 - 14:30 Enhancing endogenous soluble receptor for advanced glycation endproducts (sRAGE) as alternative anti-inflammatory treatments for Alzheimer's disease

Dr. Lih-Fen Lue

Senior Scientist, Head of Lab Neuroinflammation, Sun Health Res Inst., Sun City, AZ, USA



14:30 - 15:00 P2Y₂ nucleotide receptors mediate neuroprotective and neuroinflammatory responses. Sulfatide and Alzheimer's Disease

Dr. Xianlin Han

Associate Professor of Department of Medicine, Washington University, St. Louis, MO, USA



15:00 – 15:15 **Break**

Session 3 AD – Lipids and their Enzymes

Chairs: Franco Goracci & Chun-Kuei Su (IBMS, Academia Sinica)

15:15 - 15:45 Plasmalogen-selective PLA₂ in kainic acid neurotoxicity and Alzheimer disease: A tribute to late Lloyd A. Horrocks
Dr. Akhlaq A. Farooqui
Research scientist of Dept Molecular and Cellular Biochemistry, The Ohio State University, Columbus, OH, USA



15:45 - 16:15 Targeting NADPH oxidase and phospholipase A₂ as an intervention strategy for suppressing oxidative-degradative responses in AD
Dr. Grace Y. Sun
Professor of Biochemistry Department, Univ Missouri, Columbia, MO, USA



16:15 - 16:45 Role of low molecular weight phospholipases A₂ in brain functions and dysfunctions
Dr. Gianfrancesco Goracci
Professor of Biochemistry Department, Univ Perugia, Perugia, Italy;
President of the European Society for Neurochemistry



16:45 - 17:15 Regulation of the isoprenoids FPP and GGPP in the brain during aging and in Alzheimer's disease
Dr. Gunter Eckert
Senior researcher of Dept Pharmacol, Univ Frankfurt, Frankfurt, Germany



18:00 - Welcome dinner, Activity Center banquet room (by invitation)

Tuesday (Sept 1)

08:30 - 17:00 Registration

09:00 - 09:45 Chair: Chung Y. Hsu (China Medical University)

Plenary Speaker 2

Reperfusion and neurovascular dysfunction in stroke: from basic mechanisms to potential strategies for neuroprotection

Dr. Pak H. Chan

Professor and Director of Research, Department of Neurosurgery,
Stanford University School of Medicine, Palo Alto, CA, USA



Session 4 Stroke

Chair: Albert Sun & Shinn-Zong Lin (China Medical University)

09:45 - 10:15 Oxidative stress response elicited by pathogenic mitochondrial DNA mutations: implications in the antioxidant therapy of mitochondrial diseases

Dr. Yau-Huei Wei

Professor of Dept Biochem and Molecular Biology,
National Yang Ming Univ; President of Mackay Medical College, Taipei,
Taiwan



10:15 - 10:30 Peroxisome proliferator-activated receptor-gamma (PPAR- γ) attenuates ischemic brain injury: mechanisms and clinical perspective

Dr. Teng-Nan Lin

Associate Research Fellow of Institute of Biomedical Sciences (IBMS),
Academia Sinica, Taipei, Taiwan



10:30 - 10:45 **Break**

Session 4 Stroke (continued)

10:45 - 11:15 Neuroprotective, neurotrophic and anti-inflammatory actions of mood stabilizers: an update from preclinical studies

Dr. De-Maw Chuang

Chief of Section on Molecular Neurobiology, NIMH, NIH, Bethesda, MD, USA



11:15 - 11:45 Neuroprotective and regenerative strategies for the repair of spinal cord injury

Dr. Xiao-Ming Xu

Professor and Scientific Director of Spinal Cord and Brain Injury Research Group, Indiana University School of Medicine, Indianapolis, IN, USA



11:45 - 12:15 Neuroprotective effects of resveratrol: implication for stroke damage

Dr. Albert Y. Sun

Professor of Department of Medical Pharmacology and Physiology, Univ Missouri, Columbia, MO, USA



12:15 - 12:30 Deregulated sphingolipid metabolism in neurodegenerative disorders: lessons from acidic sphingomyelinase knockout mice, an animal model for Niemann-Pick disease type A

Dr. Alessandro Prinetti

Professor of Biochemistry, Department of Medical Chemistry, Biochemistry and Biotechnology, School of Medicine, University of Milan, Milan, Italy



12:30 - 13:15 **Lunch (Poster)**

Session 5 Visual Degeneration

Chair: Joe Hollyfield & Cheng-Ting Chien (IMB, Academia Sinica)

13:15 - 13:45 Neurotrophins and DHA induce nerve regeneration

Dr. Haydee E. P. Bazan

Professor of Ophthalmology, and Biochemistry and Molecular Biology and Neuroscience, LSU Health Science Center, New Orleans, LA, USA



13:45 - 14:15 Neuroprotection of the retina through light activation of the insulin receptor

Dr. Robert E. Anderson

Professor of Ophthalmology and Cell Biology, The University of Oklahoma Health Sciences Center, Oklahoma City, OK, USA



14:15 - 14:45 A hapten generated from an oxidation fragment of docosahexaenoic acid is sufficient to initiate age-related macular degeneration

Dr. Joe G. Hollyfield

Professor of Department of Ophthalmology, Cleveland Clinic Lerner College of Medicine of Case Western Reserve University, Cleveland, OH, USA



14:45 - 15:00 Is the mitogenic growth factor receptor, EGFR, a plasticity-related protein?

Dr. Yi-Shuian Huang

Assistant Research Fellow of Institute of Biomedical Sciences (IBMS), Academia Sinica, Taipei, Taiwan



15:00 - 15:15 **Break**

Session 6 Receptor-Signal Pathways

Chairs: Gary Weisman & Eminy HY. Lee (IBMS, Academia Sinica)

15:15 - 15:45 The role of Nitric oxide/cGMP signaling in brain aging and experimental model of Alzheimer disease. The effects of selected novel protectants

Dr. Joanna B. Strosznajder

Professor and Head of Neurology and Neurochemistry, Dept of Cellular Signaling, Medical Research Center, Polish Academy of Sciences, Warsaw, Poland



15:45 - 16:15 P2Y₂ nucleotide receptors mediate neuroprotective and neuroinflammatory responses

Dr. Gary A. Weisman

Professor of Dept Biochem, Univ. Missouri, Columbia, MO, USA



16:15 - 16:45 Membrane Biophysics and Mechanics in Alzheimer's disease

Dr. James C. Lee

Associate Professor of Department of Biological Engineering, Univ Missouri, Columbia, MO, USA



16:45 - 17:15 Changes in cholesterol metabolome after excitotoxicity

Dr. Wei-Yi Ong

Associate Professor of Dept Anatomy, National Univ Singapore, Singapore



17:15 - 17:30 Nucleotide receptor P2Y₁₂R and multiple sclerosis: a novel approach to re-myelination

Dr. Jameel Dennis

Post Doctoral Associate of Anatomy and Neurobiology Department,
Virginia Commonwealth University, Richmond, VA, USA



17:30 - 17:45 P2X₇ receptor selective antagonists inhibit growth and viability of neuroblastoma and glioblastoma cells

Dr. Synthia Hsing-Hsiang Sun

Professor of Neuroscience Institute, National Yang Ming Univ, Taipei,
Taiwan



18:00 - Free night

Wednesday (Sept 2)

08:00 - 17:00 Registration

09:00 - 09:45 Chair: Andrew HJ. Wang (Vice President of Academia Sinica)

Plenary Speaker 3

S-nitrosylation/redox signaling mediates protein misfolding and mitochondrial fragmentation in neurodegenerative diseases

Dr. Stuart A. Lipton

Professor and Scientific Director of Burham Center for Neuroscience and Aging, and Stem Cell Research, Burham

Inst for Med Research, La Jolla, CA, USA



Session 7 AD-Receptor

Chairs: De-Maw Chuang & Fu-Chin Liu (National Yang-Ming University)

09:45 - 10:15 Role of inflammation in the pathogenesis of Parkinson's disease

Dr. Jau-Shyong Hong

Head of Neuropharmacology Section, National Institute of Environmental Health Science (NIEHS), NIH, Research Triangle Park, NC, USA



10:15 - 10:30 α -synuclein and Rab3A independently regulate fusion pore dilation of the same population of secretory vesicles in PC12 cells

Dr. Lung-Sen Kao

Professor of Dept. of Life Sciences, National Yang-Ming University, Taipei, Taiwan



10:30 - 10:45 **Break**

Session 7 PD (continued)

10:45 - 11:15 Oxidation of the parkin cysteine-rich regions perturbs its E3 ligase activity and contributes to parkin aggregation

Dr. Zezong Gu

Assistant Professor of Department of Pathology and Anatomical Sciences, University of Missouri, Columbia, MO, USA



11:15 - 11:45 Demonstration of efficacy of granulocyte colony-stimulating factor (G-CSF) in Parkinson's disease

Dr. Jang-Yen Wu

Professor and Schmidt Senior Fellow of College of Biomedical Science, Florida Atlantic University, FL, USA



11:45 - 12:15 Intrinsic protective proteins: factor to protect us from neural injury

Dr. Albert CH. Yu

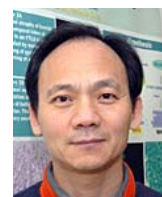
Professor of Neuroscience Research Institute, Peking University, China



12:15 - 12:30 The sequence requirement for TARDBP protein to form inclusions

Dr. Benjamin Pang-Hsien Tu

Assistant Research Fellow of Institute of Biomedical Sciences (IBMS), Academia Sinica, Taipei, Taiwan



12:30 - 13:15 **Lunch (Poster)**

Session 8 Other Neuro-Diseases and Therapy

Chairs: Michael Collins & Bing-Wen Soong (Taipei Veterans General Hospital)

13:15 - 13:45 Role of neurosteroids and oxidative stress in neurodegeneration: basic knowledge and therapeutic perspectives

Dr. Anne Eckert

Professor and head of Neurobiology Lab for Brain Aging and Mental Health, Biomedicine Univ of Basel, Basel, Switzerland



13:45 - 14:15 Binge alcohol-induced neurodegeneration: suppression of underlying neuroinflammatory mechanisms by PLA2 inhibitors or omega-3 polyunsaturated fatty acid, DHA

Dr. Michael A. Collins

Professor of Biochemistry, Dept. Cell Biol., Neurobiol. & Anatomy, Loyola University Chicago, Stritch School of Medicine, Maywood, IL, USA



14:15 - 14:45 Genetic deficiency of RAGE protects against A β -mediated synaptic and cognitive deficits and reduces A β accumulation in a transgenic mouse model of Alzheimer's disease

Dr. Shi Du Yan

Professor of Department of Pathology and Surgery, Taub Institute for Research on Alzheimer's disease and Aging Brain, College of Physician and Surgeon, Columbia University, New York, NY, USA



14:45 - 15:00 Targeting astrocytes for the pathogenesis of Huntington's disease

Dr. Yijuang Chern

Research Fellow of Institute of Biomedical Science, Academia Sinica, Taiwan



15:30 - 15:30 **Break**

Session 8 Other Neuro-Disease and Therapy (continued)

Chair: Terry BJ. Kuo (National Yang-Ming University)

15:15 - 15:45 A novel mechanism of statin-induced neuroprotection: Endothelin-1

→ NFATc3/4 → Bcl-2

Dr. W. Gibson Wood

Professor and Associate director of Pharmacology Department and GRECC, University of Minnesota, Minneapolis, MN, USA



15:45 - 16:15 Pleiotropic targets in Alzheimer's, rationale for use of Curcumin and DHA based on Alzheimer's models

Dr. Sally A. Frautschy

Professor of Medicine and Neurology, VA Medical Center, GRECC, UCLA (Sepulveda, CA) USA



16:15 - 16:30 Effects of valproic acid treatment in spinal muscular atrophy

Dr. Li-Kai Tsai

Attending Staff of Department of Neurology, National Taiwan University Hospital, Taipei, Taiwan



16:30 - 17:00 Poster Competition Awards

Session 9 Closing Remarks and Future Directions

Moderators: Grace Sun & Gibson Wood

17:00 - 17:30 Panel discussants: Dr. Nicolas Bazan, Dr. Pak Chan, Dr. Stuart Lipton and Dr. Greg M. Cole (UCLA)

19:00 - Farewell dinner, San Want Hotel (by invitation)