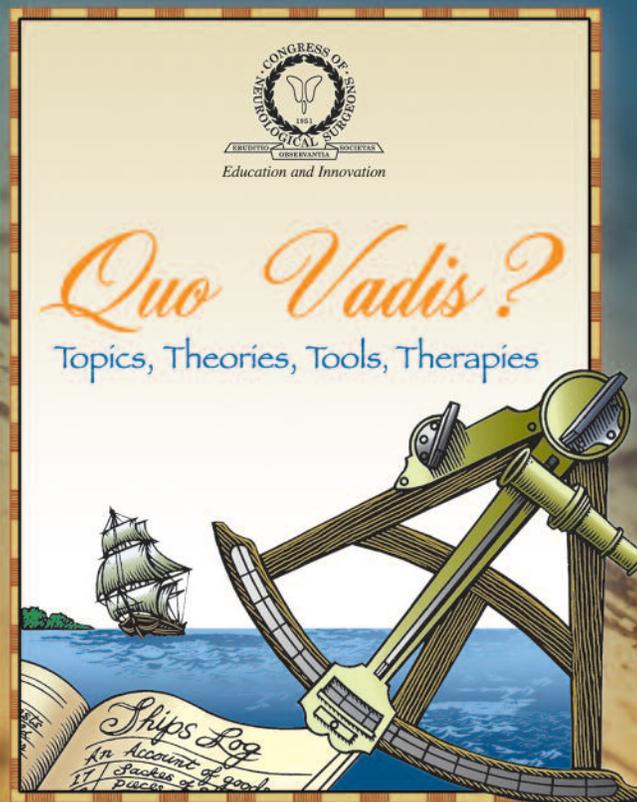


Congress of Neurological Surgeons

Quo Vadis?

Topics, Theories, Tools, Therapies



55TH ANNUAL MEETING

Boston, Massachusetts

October 8-13, 2005

Preliminary Program

2005 CNS At-a-Glance

	7AM	8AM	9AM	10AM	11AM	12PM	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM
SATURDAY															
Afternoon Practical Courses (PC01 – PC08)															
Open Evening															
SUNDAY															
All Day Practical Courses (PC09 – PC16)															
Morning Practical Courses (PC17 – PC20)															
Afternoon Practical Courses (PC21 – PC28)															
Opening Reception															
MONDAY															
General Scientific Session I: Neurosurgical Topics															
Vilayanur S. Ramachandran, Special Lecturer															
Nelson M. Oyesiku, Presidential Address															
Coffee with Exhibitors															
Roberto C. Heros, Honored Guest Presentation															
Visit Exhibits															
Luncheon Seminars															
Special Course I and Section Sessions*															
Refreshments with Exhibitors															
ABNS															
TUESDAY															
General Scientific Session II: Theories of Disease															
Roberto C. Heros, Honored Guest Presentation															
CNS Resident Award															
E. Sidney Watkins, Special Lecturer															
Coffee with Exhibitors															
Ian Wilmut, Special Lecturer on Creativity and Innovation															
Luncheon Seminars															
Special Course II and Section Sessions**															
Refreshments with Exhibitors															
Annual Business Meeting															
Digital Masters Video Symposium															
WEDNESDAY															
General Scientific Session III: Tools															
Robert S. Langer, Special Lecturer															
Roberto C. Heros, Honored Guest Presentation															
Coffee with Exhibitors															
Sixth Annual Walter E. Dandy Orator Professor Wole Soyinka															
Luncheon Seminars															
Special Course III and Section Sessions***															
Refreshments with Exhibitors															
THURSDAY															
General Scientific Session IV: Therapies															
Roberto C. Heros, Honored Guest Presentation															
Coffee Break															
Story Landis, Special Lecturer															

* Section on Cerebrovascular Surgery I
 Section on Disorders of the Spine and Peripheral Nerves I
 Section on Neurotrauma and Critical Care I
 Section on Stereotactic and Functional Neurosurgery I
 Council of State Neurosurgical Societies

** Section on Tumors I
 Section on Pain I
 Section on Pediatric Neurological Surgery I
 Section on Cerebrovascular Surgery II
 Section on Disorders of the Spine and Peripheral Nerves II

*** Section on Stereotactic and Functional Neurosurgery II
 Section on Tumors II
 Section on Neurotrauma and Critical Care II
 Section on Pediatric Neurological Surgery II



TOPICS

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Dear Colleagues:

The Congress of Neurological Surgeons Annual Meeting grows in breadth and depth every year. The 55th Annual Meeting of the CNS continues this proud tradition and promises to be an outstanding event. The meeting theme, “Quo Vadis? Topics, Theories, Tools, Therapies” expresses our desire to continuously improve our specialty scientifically and looks to the future.

Christopher E. Wolfla, Annual Meeting Chairman, and Christopher C. Getch, Scientific Program Committee Chairman, have worked intensely with their large volunteer committees for almost two years. Their hard work has resulted in the creation of an outstanding Scientific Program.

Practical Courses and Luncheon Seminars are designed to provide comprehensive and contemporary information. The General Scientific Sessions focus on complementary themes leading to a cohesive educational experience. There are Special Course sessions on managing neurosurgical complications, clinical trials from European schools and advances in neuroimaging. Digital posters promise a novel experience for poster viewing. Selected paper presentations and the always-excellent Section Symposia complete this extraordinary program.

A stellar array of Special Lecturers will enhance our General Sessions. On Monday, Professor Vilayanur Ramachandran will discuss “The Neurology of Human Nature”. Tuesday will feature Professor E. Sidney Watkins speaking on “The Physiology and Pathology of Motor Racing: Triumph and Tragedy in Formula One” and our Special Lecturer on Creativity and Innovation, Professor Ian Wilmut, will discuss “Cells from Cloned Human Embryos in Research and Therapy”. Wednesday brings Professor Robert A. Langer with a presentation on “Polymers in the Delivery of Drug Treatments.” Also on Wednesday, our Dandy Orator, Nobel Prize-winning playwright Wole Soyinka will inspire us. On Thursday, Dr. Story Landis, Director of the National Institute of Neurological Disorders and Stroke will discuss NIH efforts in neurosurgical research.

This year's Honored Guest Dr. Roberto C. Heros will address us each morning in the General Scientific Sessions. Dr. Heros is a gifted neurosurgeon who has made major contributions in the fields of cerebral protection from ischemia, particularly with hemodilution. He will share his experiences and the surgical wisdom he has acquired throughout his career.

The 55th CNS Annual Meeting is a joint meeting with the European Association of Neurological Surgeons. Our EANS colleagues will enhance the Scientific Program in numerous ways. I know each of you will join me in welcoming our European partners and their President, Kenneth Lindsay.

Boston is an outstanding host city. This large cosmopolitan city has a rich history, an enviable arts heritage and culinary options of international renown. A full social program makes it easy to sample the offerings of this delightful and diverse city.

Lola and I enthusiastically invite you to enjoy the CNS in Boston this autumn for what is certain to be a tremendous meeting in an outstanding venue.

Nelson M. Oyesiku, MD, PhD, FACS
President, Congress of Neurological Surgeons

Welcome to Boston

Boston is paradise for shoppers, restaurant connoisseurs, and people who simply enjoy walking around town discovering new sights. Pack your walking shoes! Founded in 1630, ten years after the Pilgrims landed at Plymouth, Boston offers tours through significant landmarks and re-enactment of the battles of Lexington and Concord. Come and experience history with us! Boston is unique as it is almost completely surrounded by water, with the Atlantic Ocean on two sides and the Charles River along the back of the city. Whether you are enjoying whale watching, harbor cruises, island hopping, sailing along the Charles River, there is plenty to do in Boston. And don't forget the lobster...

Stay a few extra days and experience The Freedom Trail which links 16 historically significant sites of the Revolutionary era by a red brick path.

The performing arts come alive with performances by Boston Ballet, Boston Symphony Orchestra and the Boston Pops. Also, visit the active theater district, regularly offering Broadway and pre-Broadway shows.

Many ethnic restaurants can be found in the neighborhoods of Boston and Cambridge, from small, family-owned restaurants at every corner of the Italian North End to Thai, Vietnamese and Polynesian in Chinatown. Boston's South End offers an array of choices from home style cooking to trendy cafes.

Families can enjoy visiting Boston's many museums and discover its nautical history by visiting the U.S.S. Constitution (the oldest commissioned warship afloat in the world), the Boston Tea Party Ship and the New England Aquarium.

For more information on what Boston has to offer, visit www.bostonusa.com.



TOPICS

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Welcome to Boston



2005 CNS ANNUAL MEETING HIGHLIGHTS

Joint meeting with the European Association of Neurosurgical Societies – EANS

- **NEW! Digital Poster Center**
See hundreds of Scientific Posters via this new state-of-the-art digital format
- Two floors of Exhibit Hall space – featuring the latest in neurosurgical innovation
- 26.25 CME credit hours (and up to 16.5 optional credit hours)
- Exclusive benefits for CNS Resident Member attendees
- **STAY IN TOUCH** While at the Hynes Convention Center!
As a benefit to you, the CNS has funded Wireless Internet throughout the Convention Center for your convenience.



Honored Guest



Honored Guest
Roberto C. Heros, MD

Roberto C. Heros was born in 1942 in Havana, Cuba. After the Communist takeover in 1960, he left Cuba for exile. He participated as a paratrooper platoon commander in the Bay of Pigs invasion and was captured. After serving two years in prison, Dr. Heros was released as a result of an exchange with the United States Government. He attended medical school at the University of Tennessee where he graduated, first in his class, in 1968.

Dr. Heros had his internship and his first year general surgery residency at the Massachusetts General Hospital in Boston and then served in the US Air Force as Major for two years. He then completed his residency at the Massachusetts General Hospital, Harvard Medical School and then was recruited to the University of Pittsburgh as

Assistant Professor. He returned to the Massachusetts General Hospital in 1980 to become Director of Cerebrovascular Surgery. Dr. Heros advanced through the academic ranks at Harvard to reach full professorship in 1989 at which time he moved to the University of Minnesota as the Lyle A. French Professor and Chairman of the Department of Neurosurgery. Dr. Heros moved to the University of Miami in 1995 as Professor, Co-Chairman and Program Director of the Department of Neurosurgery and the founding Director of the University of Miami International Health Center.

Dr. Heros has authored or co-authored four textbooks and has published about 150 refereed articles and approximately 70 textbook chapters dealing with cerebral aneurysms, arteriovenous malformations, experimental cerebral ischemia and skull base surgical approaches. His research has been in the area of cerebral protection from ischemia, particularly with hemodilution; he held NIH funding as primary investigator in this area for twelve years. He has been Visiting Professor at over 50 institutions in this country and abroad and he has given over 500 invited national and international presentations. Dr. Heros holds honorary memberships in several Latin American and European neurosurgical societies. He has been Chairman of the Editorial Board of **Neurosurgery**[®] and currently serves on the Editorial Board of seven journals. He was the founding Chairman of the Neurovascular Committee of the World Federation of Neurosurgical Societies and is Past President of the American Academy of Neurological Surgeons and the American Association of Neurological Surgery. He was the Honored Guest of the Federation of Latin American Neurosurgical Societies last year. He has been elected as the President of the Congress of the World Federation of Neurosurgical Societies which will take place in Boston in 2009.

Dr. Heros is married to Dr. Deborah O. Heros who is currently Director of the Neuro-oncology Service at the University of Miami Sylvester Comprehensive Cancer Center. He has three children; Elsie who received her Master's Degree in Nursing at Yale University, Robert who is a physician psychiatrist serving in the US Army and Carlos who is ten and sure to follow in his father's footsteps.

Continued on next page



Honored Guest (continued)

Dr. Heros will give the following presentations

General Scientific Sessions

Monday, October 10, 2005, 11:05 am - 11:30 am

Changing Paradigms in Education of the Neurosurgical Resident

Tuesday, October 11, 2005, 8:15 am - 8:45 am

Cerebral AVMs: Changing Concepts in Treatment Alternatives

Wednesday, October 12, 2005, 9:00 am - 9:30 am

Cerebral Aneurysms: Effect of New Knowledge and Technology on Current Practice

Thursday, October 13, 2005, 9:00 am - 9:30 am

Hemodilution and Fluid Management in Neurosurgery: A Clinician's Research

Practical Course

Sunday, October 9, 2005, 1:00 pm - 5:00 pm

PC21 Operative Colloquium: Masters of Neurological Surgery

Luncheon Seminar

Monday, October 10, 2005, 12:30 pm - 2:00 pm

M01 Resident/Honored Guest Luncheon



Professor Wole Soyinka
Walter E. Dandy Orator

The Sixth Annual Walter E. Dandy Orator

Professor Wole Soyinka

Wednesday, October 12, 10:30 am

Rapture and Rupture in the Liminal World

Educated in Ibadan, Nigeria, and Leeds, England, where he obtained an Honours degree in Literature, Wole Soyinka has held Fellowship and Professorial positions in Theatre and Comparative Literature at the Universities of Ibadan, Lagos and Ife (Nigeria), Legon (Ghana), Sheffield and Cambridge (England), Yale, Cornell, Harvard, Emory (U.S.A.) He frequently lectures as Visiting Professor/Distinguished Scholar in other American, European and African universities.

Essentially a playwright, Wole Soyinka is also active as essayist, poet, novelist and theatre director. He writes mainly in English, but his works are distinguished by their exploration of "the African world view, and are steeped in Yoruba mythology, imagery and dramatic idioms."

From 1967 to 1969, he was imprisoned during the Nigerian Civil War, most of it in solitary confinement; from this experience emerged *The Man Died*. A very different prose work, *AKE*, his childhood biography, has been acclaimed a classic, as has also been his tragic drama, *Death and The King's Horseman*. Other plays, nearly all produced within and outside Nigeria, include *The Strong Breed*, *The Lion and the Jewel*, *A Dance of the Forests*, *The Road*, *A Play of Giants*, *From Zia With Love* and *Beatification of Area Boy*. His adaptation of Euripedes' classic, *The Bacchae*, was performed by the English National Theatre as *The Bacchae of Euripedes*. Other adaptations include Brecht's *Threepenny Opera*, re-titled *Opera Wonyosi*, and *King Baabu*, from Alfred Jarry's *Ubu Roi*.

Wole Soyinka's poems are collected under the titles: *Idanre and Other Poems*; *A Shuttle in the Crypt*; *Ogun Abibiman*; *Mandela's Earth and Other Poems*. Essay collections are titled: *Myth, Literature and the African World*; *Art, Dialogue and Outrage*; *Continuity and Amnesia*; *The Open Sore of a Continent*; *The Burden of Memory and Muse of Forgiveness* and *Climate Of Fear*, a collection of his BBC REITH Lectures for 2004.

Wole Soyinka has been honored with doctorates by the universities of Leeds, Manchester, England; Yale, Harvard, Emory, Morehouse College, U.S.A.; Toronto, Canada; Paul Valery, Montpellier - France; Bayreuth, Germany; Cape Town, South Africa; and Havana, Cuba. He is Fellow of the Royal Society of Literature of the United Kingdom, Academie Universelle des Cultures, France, the Academy of Arts and Letters, Germany, The American Academy of Arts and Letters, the Pan-African Writers Association, Association of Nigerian Authors. He is past President of the International Parliament of Writers.

Civic Honors include: The Akogun of Isara, the Akinlatun of Egba (Nigeria); Honorary citizen of Montpellier, Houston, New Orleans, etc.; Commander of the Legion of Honour, France; Commander of the Order of Merit of the Italian Republic; and the Felix Varela Award of Cuba.

Among his artistic recognitions, Wole Soyinka has received the Enrico Mattei Award for the Humanities, the Leopold Sedar Senghor Award for the Arts, the John Whiting Literary Prize, the Benson Medal of the Royal Society for Literature, the Premio Grinzane Cavour, The Premio Litterario Internazionale Mondello, Italy, the UNESCO Medal for the Arts, and the Nobel Prize for Literature, '86.

Professor Soyinka is currently Professor Emeritus at Obafemi Awolowo University, Ile-Ife, Nigeria, Director of Literary Arts at the International Institute of Modern Letters, University of Nevada, and Fellow, Du Bois Institute, Harvard University. Wole Soyinka is married, with children.



Special Lecturer

Professor Vilayanur S. Ramachandran, MD, PhD

Monday, October 10, 8:30 am

The Neurology of Human Nature

Vilayanur S. Ramachandran is Director of the Center for Brain and Cognition and Professor with the neuroscience program and Psychology Department at the University of California, San Diego, and Adjunct Professor of Biology at the Salk Institute. Dr. Ramachandran trained as a Physician and subsequently obtained a PhD from Trinity College at the University of Cambridge.

Dr. Ramachandran's early research was on visual perception but he is best known for his work in Behavioral Neurology. Two topics that were once regarded largely as curiosities – phantom limbs and synesthesia – have now become part of "mainstream" research in neuroscience thanks to his pioneering work. He has received many honors and awards including a fellowship from All Souls College, Oxford, an honorary doctorate from Connecticut College, an honorary doctorate from IIT, Madras, the Ariens Kappers Gold Medal from the Royal Netherlands Academy of Sciences for landmark contributions in neuroscience, a Gold Medal from the Australian National University, the Ramon Y Cajal Award from the International Neuropsychiatry Association, and the Presidential Lecture Award from the American Academy of Neurology. In 2003 he gave the annual Reith lectures on the BBC, broadcast internationally. He was the first physician/psychologist to give these lectures since they were begun by Bertrand Russell in 1949.

In 1995 he gave the Decade of the Brain Lecture at the 25th annual (Silver Jubilee) meeting of the Society for Neuroscience and more recently the Inaugural keynote lecture at the Decade of the Brain Conference held by NIMH at the Library of Congress and a public lecture at the Getty Museum in Los Angeles. He also gave the first Hans Lucas Teuber Lecture at MIT, the Rudel-Moses Lecture at Columbia, the Dorcas Cumming (inaugural keynote) Lecture at Cold Spring Harbor, the Raymond Adams lecture (grand rounds) at Massachusetts General Hospital, Harvard, the Jonas Salk Memorial Lecture, Salk Institute, and the keynote plenary lecture at the annual meeting of the American Academy of Neurology and inaugural Keynote lecture at the first annual dementia conference in Chicago. He will give the Alfred Deakin Lectures in Australia next year. (Deakin was the founder of Australia.)

Dr. Ramachandran is a trustee for the San Diego Museum of Art and has lectured widely on art, visual perception and the brain.

Dr. Ramachandran has published over 120 papers in scientific journals (including five invited review articles in the *Scientific American*), is Editor-in-Chief of the *Encyclopedia of Human Behaviour*, the *Encyclopedia of the Human Brain* and author of the critically acclaimed book "Phantoms in the Brain" that has been translated into eight languages and formed the basis for a two-part series on Channel Four TV UK and a 1 hour PBS special in the USA.

His work is featured frequently in the major news media. *NEWSWEEK* magazine recently named him a member of "the century club" – one of the "hundred most prominent people to watch in the next century."



Professor Vilayanur S. Ramachandran
Special Lecturer



Professor Ian Wilmut
Special Lecturer

Special Lecturer on Creativity and Innovation

Professor Ian Wilmut, PhD

Tuesday, October 11, 10:45 am

Cells from Cloned Embryos in Research and Therapy

Ian Wilmut is the leader of the team that produced Dolly, the first animal to develop after nuclear transfer from an adult cell. The present objectives of the research group are to determine the molecular mechanisms that are important for normal development of cloned embryos and to use that knowledge in biology, medicine and agriculture.

Professor Wilmut was born in Hampton Lucy in Warwickshire in 1944, is married and has three children and five grandchildren. He lives in the Border countryside south of Edinburgh and enjoys walking, photography, classical music, gardening and curling.

Professor Wilmut obtained a B.Sc. in Agricultural Science at the University of Nottingham before studying with Professor "Chris" Polge FRS at the University of Cambridge. His research has all been concerned with understanding gametes and embryos. His PhD degree was awarded in 1971 for research on the Deep Freeze Preservation of Boar Semen and subsequent research in Cambridge led to the birth of the first calf from a frozen embryo - Frosty.

Over the past nine years, research has been focused on the factors regulating embryo development after nuclear transfer. This work led to the first birth of live lambs from embryo-derived cells and then to the birth of lambs derived from foetal and adult cells, including Dolly. Subsequently, genetic changes were introduced into sheep by nuclear transfer from cultured modified cells.

This research has been recognized by the award of an OBE in the Queen's birthday honors of 1999, election to Fellowship of the Royal Society of Edinburgh, 2000 and the Royal Society 2002 and election as Foreign Associate of the National Academies of Science, April 2004.

Special Lecturer

Professor E. Sidney Watkins, MD, FRCS, OBE

Tuesday, October 11, 9:10 am

The Physiology and Pathology of Motor Racing: Triumph and Tragedy in Formula One

As the Grand Prix on-track Surgeon for over 26 years, Professor Watkins has constantly campaigned for better safety measures and medical support at circuits round the world. He qualified at Liverpool University Medical School and subsequently trained as a Neurosurgeon at the Radcliffe Infirmary Oxford where the Neurosurgical Unit is an integral part of a world-renowned Head Injury and Accident Service providing unequalled experience in treating major, complex trauma.

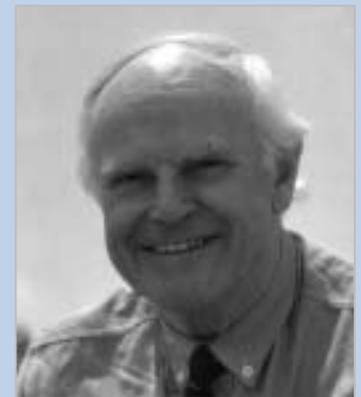
Appointed Professor of Neurosurgery in New York in 1962, he returned to the UK in 1970 to become the first Professor of Neurosurgery at The London Hospital, famed for its neurosurgical excellence. His research work has led to great improvements in the treatment of Parkinson's tremor, movement disorders, intractable pain and cerebral palsy.

His interest in motor cars dates from his childhood in Liverpool where his family had a bike shop and garage. He was later able to indulge a growing fascination with Grand Prix racing by slipping away from Oxford to Silverstone. Wide experience of all types of motor racing at Watkins Glen in New York State led to the invitation to join the RAC medical panel in 1970 and to becoming Grand Prix Surgeon in 1978.

Sid Watkins was honored to be presented by the Duke of Kent with the Labatts Award for Safety in 1992. He continues to practice as a Neurosurgeon in London, to be President of the Medical Commission and President of the Expert Advisory Safety Committees for Open Car, Closed Car and Go-cart Racing of the FIA, the World Governing Body of Motor Sport.

Recently in 2004 he was elected to be President of the new FIA Institute for Motor Sport Safety based in Paris.

He was appointed Officer of the Order of the British Empire in the Queen's Jubilee Honors in 2000.



Professor E. Sidney Watkins
Special Lecturer



Special Lecturer

Professor Robert S. Langer Jr., ScD

Wednesday, October 12, 7:55 am

Polymers in the Delivery of Drug Treatments

Robert S. Langer is the Kenneth J. Germeshausen Professor of Chemical and Biomedical Engineering at the Massachusetts Institute of Technology. Dr. Langer has written over 800 articles. He also has over 500 issued or pending patents worldwide, one of which was cited as the outstanding patent in Massachusetts in 1988 and one of 20 outstanding patents in the United States. Dr. Langer's patents have been licensed or sublicensed to over 100 pharmaceutical, chemical, biotechnology and medical device companies; a number of these companies were launched on the basis of these patent licenses. He served as a member of the United States Food and Drug Administration's SCIENCE Board, the FDA's highest advisory board, from 1995 – 2002 and as its Chairman from 1999 – 2002.

Dr. Langer has received over 130 major awards. In 2002, he received the Charles Stark Draper Prize, considered the equivalent of the Nobel Prize for engineers and the world's most prestigious engineering prize, from the National Academy of Engineering. He is also the only engineer to receive the Gairdner Foundation International Award; 64 recipients of this award have subsequently received a Nobel Prize. Among numerous other awards Langer has received are the Dickson Prize for Science (2002), Heinz Award for Technology, Economy and Employment (2003), the Harvey Prize (2003), the John Fritz Award (2003) (given previously to inventors such as Thomas Edison and Orville Wright) and the General Motors Kettering Prize for Cancer Research (2004). In 1998, he received the Lemelson-MIT prize, the world's largest prize for invention for being "one of history's most prolific inventors in medicine." In 1989 Dr. Langer was elected to the Institute of Medicine of the National Academy of Sciences and in 1992 he was elected to both the National Academy of Engineering and to the National Academy of Sciences. He is one of very few people ever elected to all three United States National Academies and the youngest in history (at age 43) to ever receive this distinction.

Forbes Magazine (1999) and Bio World (1990) have named Langer as one of the 25 most important individuals in biotechnology in the world. Discover Magazine (2002) named him as one of the 20 most important people in this area. Forbes Magazine (2002) selected Langer as one of the 15 innovators world wide who will reinvent our future. Time Magazine and CNN (2001) named Langer as one of the 100 most important people in America and one of the 18 top people in science or medicine in America. Parade Magazine (2004) selected Langer as one of 6 "Heroes whose research may save your life." He has served, at various times, on 15 boards of directors and 30 Scientific Advisory Boards of such companies as Wyeth, Alkermes, Mitsubishi Pharmaceuticals, Warner-Lambert, and Momenta Pharmaceuticals. Dr. Langer has received honorary doctorates from the ETH (Switzerland), the Technion (Israel), the Hebrew University of Jerusalem (Israel), the Universite Catholique de Louvain (Belgium), the University of Liverpool (England), the University of Nottingham (England), the Pennsylvania State University, and Uppsala University (Sweden). He received his Bachelor's Degree from Cornell University in 1970 and his ScD from the Massachusetts Institute of Technology in 1974, both in Chemical Engineering.



Professor Robert S. Langer Jr.
Special Lecturer

Special Lecturer

Professor Story C. Landis, PhD

Thursday, October 13, 10:30 am

NIH Funding for Neurosurgery Research

Story C. Landis, Ph.D., is the current Director of the National Institute of Neurological Disorders and Stroke (NINDS). A native of New England, Dr. Landis received her undergraduate degree in biology from Wellesley College in 1967 and her master's degree (1970) and her Ph.D. (1973) from Harvard University. After postdoctoral work at Harvard University, she served on the faculty of the Harvard Medical School Department of Neurobiology. In 1985 she joined the faculty of Case Western Reserve University School of Medicine where she held many academic positions including Chairman of the Department of Neurosciences, a department she was instrumental in establishing. Dr. Landis joined the NINDS in 1995 as Scientific Director of the NINDS intramural program, a position that she held until being appointed Director in 2003.



Professor Story C. Landis, PhD
Special Lecturer

Throughout her research career, Dr. Landis has made many fundamental contributions to the understanding of developmental interactions required for synapse formation in synaptogenesis. She has garnered many honors and awards and is an elected fellow of the Academy of Arts and Sciences, the American Association for the Advancement of Science, and the American Neurological Association. In 2002, she was named the President-Elect of the Society for Neuroscience.



MISSION STATEMENT

The Congress of Neurological Surgeons exists for the purpose of promoting the public welfare through the advancement of neurosurgery, by a commitment to excellence in education, and by dedication to research and scientific knowledge. The Congress of Neurological Surgeons maintains the vitality of our learned profession through the altruistic volunteer efforts of our members and the development of leadership in service to the public, to our colleagues in other disciplines, and to the special needs of our fellow neurosurgeons throughout the world and at every stage of their professional lives.



Education and Innovation

MEETING PURPOSE

The purpose of the 2005 Annual Meeting of the Congress of Neurological Surgeons is to provide continuing medical education for practicing neurosurgeons, neurosurgical residents in training, and post-graduate neurosurgical fellows, as well as allied health professionals including nurses, physician assistants and clinical specialists.

This education is provided in many forms:

- didactic lectures
- practical (hands-on) courses demonstrating neurosurgical techniques
- small group sessions to provide in-depth coverage of selected topics
- exhibits demonstrating the newest instruments and information known to the neurosurgical community
- digital posters to provide the latest information regarding clinical and laboratory advances in neurological surgery.

DISCLAIMER

The material presented at the 55th Annual Meeting has been made available by the Congress of Neurological Surgeons for educational purposes only. The material is not intended to represent the only, nor necessarily the best, method or procedure appropriate for the medical situations discussed, but rather is intended to present an approach, view, statement, or opinion of the faculty which may be helpful to others who face similar situations.

Neither the content (whether written or oral) of any course, seminar, or other presentation in the program, nor the use of a specific product in conjunction therewith, nor the exhibition of any materials by any parties coincident with the program, should be construed as indicating endorsement or approval of the views presented, the products used, or the materials exhibited by the CNS or by its Committees or Affiliates.

The CNS disclaims any and all liability for injury or other damages resulting to any individual attending the Annual Meeting, and for all claims which may arise out of the use of the techniques demonstrated therein by such individuals, whether these claims shall be asserted by physicians or any other person.

No reproductions of any kind, including audiotapes and videotape, may be made of the presentations at the CNS Annual Meeting. CNS reserves all of its rights to such material, and commercial reproduction is specifically prohibited.



TOPICS

THEORIES

TOOLS

THERAPIES

Committees

Annual Meeting Committee

Annual Meeting Chair

Christopher E. Wolfla

Scientific Program Chair	Christopher C. Getch
Exhibits and Marketing Chair	Saleem I. Abdulrauf
Local Arrangements Chair	Eric J. Woodard
Public Relations Co-chairs	C. Michael Cawley, III, Timothy Ryken, Sanjay Gupta
Registration Co-chairs	Carl B. Heilman, Peter C. Gerstzen
Sergeant-at-Arms Co-chairs	Benjamin White, Joseph S. Cheng, Charles Liu, Robert A. Mericle
Honored Guest Liaisons	Jacques J. Morcos, Mark N. Hadley
Past Presidents Liaison	H. Hunt Batjer
Dandy Orator Host	Gerald E. Rodts, Jr.
International Liaison	Gail Linskey Rosseau
EANS Liason	Shlomi Constantini
Information and Technology Chair	Joel D. MacDonald
WINS Liaison	Holly Gilmer-Hill
Auxiliary Program Chair	Catherine Wolfla



Christopher E. Wolfla

Scientific Program Committee

Scientific Program Chair

Christopher C. Getch

CME Liaison	Daniel K. Resnick
CSNS Liaison	William E. Bingaman
General Session I	Jaimie M. Henderson, Mark R. McLaughlin
General Session II	Mitesh V. Shah, Robert B. Friedlander
General Session III	Sean Salehi, Praveen V. Mummaneni
General Session IV	Anthony L. Asher, Guy M. McKhann, II
Joint Section Programs	Karin M. Muraszko
Luncheon Seminars	Russell R. Lonser, Mark H. Bilsky, Holly Gilmer-Hill
Affiliate Members Program	Michael W. Groff
Open Scientific Session	Jack I. Jallo, Joshua M. Rosenow, Rajiv Midha, Langston Holly, Mark R. Proctor
Poster Session	Charles S. Cobbs, Kenneth M. Liebman, Bernard R. Bendok, Steven D. Chang
Practical Courses	Saleem I. Abdulrauf, Ali R. Rezai
Special Course I	Mark E. Linskey, Wesley A. King
Special Course II	Kenneth W. Lindsay, Gail Linskey Rosseau
Special Course III	Cargill H. Alleyne, Jr., Linda M. Liau
Resident Program	Michael P. Steinmetz
EANS Scientific Program Liaisons	Kenneth W. Lindsay, Manfred Westphal, Jan Jakob Mooij, Johannes Schramm, Roberto Delfini, Marc Sindou, Nicolas De Tribolet
Digital Masters Video Symposium	Ganesh Rao, Brian T. Ragel, Hugh J.L. Garton



Christopher C. Getch

Education and Innovation

Our sincere thanks and appreciation go out to each committee for their dedication in organizing the 55th CNS Annual Meeting. It is due to each member's never-ending commitment to serve the CNS that we are able to provide excellence in Education and Innovation.



Education and Innovation



Dear Residents:

Do not let this opportunity pass you by – register for the 2005 Congress of Neurological Surgeons Annual Meeting today! The comprehensive Scientific Program that is offered, as well as the extraordinary invited speakers, will educate and inspire you. CNS resident members receive reduced registration fees and complimentary housing (provided on a first come, first served basis). Do not delay....register today!

At the CNS, you will find the latest information on current breakthroughs in research and treatment options, exceptional programs for continuing education, plus invaluable opportunities to develop relationships with other up and coming neurosurgical leaders.

I would like to take the opportunity to invite you to become a member of the Congress of Neurological Surgeons. The application process is simple and can be an important part of your ongoing professional development. CNS Resident members are afforded a plethora of outstanding benefits and we hope you will take full advantage of them. Outstanding achievement in the field of neurosurgery begins with a strong foundation. That is why we are inviting you to join the Congress of Neurological Surgeons today!

If you have any questions or would like to apply for membership, please contact Member Services toll free at 877-517-1CNS or via e-mail at info@1cns.org.

On behalf of the Congress of Neurological Surgeons, I look forward to helping you succeed in the growing field of neurosurgery.

Sincerely,

Michael Steinmetz
Chair, Resident Committee

Why become a CNS Resident Member?

In keeping with our dedication to neurosurgical education, the CNS continues to offer special programs to assist and encourage resident members to attend the Annual Meeting by providing:

- Reduced Annual Meeting registration fee – *a savings of \$100!*
- Complimentary housing (Limited availability – apply now!). If you are not currently a CNS Resident Member, your membership application must be received by August 1st for resident housing consideration.
- Complimentary ticket to Opening Reception – *valued at \$100!*
- CNS funded Resident Award
- Complimentary Residents/Honored Guest Luncheon (limited capacity – register early!)
- Reduced fees for Luncheon Seminars
- Resident Recruitment Social - see page 35 (Outstanding opportunity for career advancement!)
- See additional member benefits on page 19
- Young Neurosurgeons Directory

Sergeant-at-Arms Program

What better way to become part of the Congress of Neurological Surgeons volunteer-based organization than to participate in the Sergeant-at-Arms Program! And what better way to attend a Practical Course or Luncheon Seminar at no charge?

The Sergeant-at-Arms Program depends on volunteers like you to ensure the quality and success of our scientific sessions. Not only do you become part of the volunteer force of the CNS, you attend the session you are assigned to free of charge. Sergeant-at-Arms' responsibilities include collecting tickets, distributing and collecting evaluations and giving audio-visual assistance when necessary. Fill out and submit the Sergeant-at-Arms form enclosed in your preliminary program packet. Your participation is greatly appreciated.



At-A-GLANCE

1:00 pm – 5:00 pm
5:00 pm – 9:00 pm

Afternoon Practical Courses (PC01 – PC08)
Open Evening

Afternoon Practical Courses (PC01 – PC08)

1:00 pm – 5:00 pm

PC01 CPT Coding: What's New

Course Director: Gregory J. Przybylski

Faculty: Samuel Hassenbusch, Robert R. Johnson, William Mitchell, Kimberly Pollock, Richard A. Roski

Learning Objective: This course provides a summary of the CPT 2006 coding changes and reviews the 2005 coding changes as well. Subspecialty areas of spine, intracranial, functional/pain and vascular surgery will be highlighted. Upon completion of this course, participants will have gained exposure to coding changes, their proper applications and understand compliance issues with regard to new regulations.

Course Fee: \$375

PC02 Applied Spinal Biomechanics

Course Director: Edward C. Benzel

Faculty: Richard P. Schlenk, Michael A. Morone, James Harrop, Praveen V. Mummaneni

Learning Objective: This course presents the physical principles and biomechanical foundations of spinal surgery and stabilization via a didactic and interactive case discussion format. Upon completion of this course, participants will be able to discuss biomechanical principles and strategies to address clinical problems.

Course Fee: \$250

PC03 Three Dimensional Neurosurgical Anatomy

Course Director: Albert L. Rhoton, Jr.

Learning Objective: This course will provide three-dimensional microsurgical instruction regarding the anatomy and operative approaches to the ventricles, basal cisterns, cavernous sinus, posterior fossa and cranial nerves. Stepwise operative approaches will be shown in 3D. Upon completion of this course, participants will be able to describe the anatomy of these areas and develop an appreciation for the three-dimensional neurovascular relationships of each region.

Course Fee: \$250

PC04 Operating in the Eloquent Cortex

Course Director: Jeffrey P. Blount

Faculty: Matthew D. Smyth, Webster H. Pilcher, Isabelle M. Germano, Michael M. Haglund

Learning Objective: This course will provide an in-depth review of techniques and technologies that can be applied to identify and work within eloquent regions of the cerebral hemispheres. Upon completion of this course, the participant will be able to discuss the available technologies for performing safer and more effective procedures within and around eloquent cortex.

Course Fee: \$250

PC05 Surgical Arthrodesis of the Cervical Spine

Course Director: Daniel K. Resnick

Faculty: Michael Y. Wang, Frank La Marca, Hiroshi Nakagawa, Vincent C. Traynelis, Praveen V. Mummaneni

Learning Objective: The indications, techniques, and complications of arthrodesis and instrumentation of the cervical spine, including the craniovertebral junction, will be reviewed using lectures, case presentation, and hands-on study using anatomical models. Upon completion of this course, participants will be able to discuss the indications for cervical and craniovertebral junction arthrodesis and instrumentation, and will also be able to describe the technical application of these procedures.

Course Fee: \$425

PC06 **Intraoperative Imaging: Hands-on Experience**

NEW!

This course will be held at Brigham and Children's Hospital. Shuttles will leave from the Boylston Street entrance of the Hynes Convention Center at 12:30 pm.

Course Directors: Mark R. Proctor, Peter Mclaren Black

Faculty: Michael Schulder, Ronald E. Warnick, Walter A. Hall, Garnette A. Sutherland, Rudolf Fahlbusch

Learning Objective: This off-site hospital based course will review several different types of intraoperative MR imaging systems available to neurosurgeons. System types which will be reviewed include those in which the patient is physically located in the magnet throughout the operation, systems where the patient is moved into the magnet for imaging purposes, and those in which the magnet is moved to the patient during imaging phases of the operation. These systems will be reviewed didactically by experienced panelists, without the influence of commercial bias. Following the lectures, three on-site systems will be toured at Children's Hospital and Brigham and Women's Hospital so that participants can get a feel for the real life environment, and challenges, of running an intraoperative MRI unit. Upon completion of this course, participants will be able to discuss the potential uses and benefits of intraoperative MR imaging in neurosurgery and describe the various types of commercially available systems for intraoperative MR imaging, with the benefits and pitfalls of each system.

Course Fee: \$425

PC07 **Spinal Radiosurgery**

NEW!

Course Director: Peter C. Gerszten

Faculty: Mark H. Bilsky, John Adler, Deborah Benzil, Andrew E. Sloan, Steven D. Chang, Jason P. Sheehan

Learning Objective: This course will provide the attendee with an exposure to the background of spinal radiosurgery, including radiobiological principles of hypofractionated radiotherapy. An emphasis will be placed on the indications and limitations of spinal radiosurgery. The various technologies available to perform spinal radiosurgery will also be described and compared. The attendee will be able to 1) Discuss the indications for spinal radiosurgery, 2) Describe the limitations of spinal radiosurgery, 3) Describe the different technologies available to perform spinal radiosurgery and, 4) Describe what clinical outcomes are available regarding spinal radiosurgery.

Course Fee: \$425

PC08 **Introduction to Endovascular Neurosurgery with Hands on Simulation**

NEW!

Course Directors: Lee Guterman, Bernard R. Bendok, Elad I. Levy

Faculty: Richard J. Parkinson, Rocco Armonda, Howard A. Riina, Alan S. Boulos, Eric Sauvageau

Learning Objective: At the completion of this course, the participants will (1) have hands-on experience with realistic simulators of carotid stenting, aneurysm coiling, and stroke thrombolysis, (2) be exposed to basic concepts and techniques in endovascular neurosurgery, and (3) be able to discuss endovascular device capabilities.

Course Fee: \$425



At-A-GLANCE

8:00 am – 5:00pm	All Day Practical Courses (PC09 – PC16)
8:00 am – 12:00 pm	Morning Practical Courses (PC17 – PC20)
1:00 pm – 5:00 pm	Afternoon Practical Courses (PC21 – PC28)
6:30 pm – 8:30 pm	Opening Reception

All Day Practical Courses (PC09 – PC16)

8:00 am – 5:00 pm

PC09 Neurosurgical Practice Development, Negotiation and Professional Liability: What the Neurosurgeon Needs to Know

NEW!

Course Directors: Michael P. Steinmetz, William E. Bingaman

Faculty: William Mitchell, Mark E. Linskey, Paul R. Schwetschenau, Mark Mason, Gregory J. Przybylski, Thomas E. Hoyt, Robert R. Johnson, Aaron A. Cohen-Gadol, Edie E. Zusman, Richard G. Ellenbogen, Stanley W. Fronczak, Alan M. Scarrow, Victoria Vance, James R. Bean, Fernando G. Diaz, Robert D. Gillen, JD

Learning Objective: Techniques to effectively build and develop a neurosurgical practice will be presented. The mechanics of operating a practice will be explored. Key aspects of medical liability will be discussed. Participants will be able to describe the neurosurgical political process and how to get involved in the process.

Course Fee: \$375

PC10 Microsurgical Anatomy

Course Director: Albert L. Rhoton, Jr.

Co-Directors: Stephen B. Lewis, Evandro De Oliveira

Faculty: Ronald L. Smith, Hatem Elkhoully, Hiroshi Abe, Yukata Fukushima, Juan Carlos Fernandez

Learning Objective: This hands-on course will provide instruction in the exposure of the lateral, third, and fourth ventricles, cavernous sinus, basal cisterns, and cranial nerves with the operating microscope. Upon completion of this course, participants will be able to describe the techniques for exposing the third ventricle and basal cisterns and complete an extradural approach to the cavernous sinus and petrous apex and expose the cranial nerves in the cerebellopontine angle and internal acoustic meatus in a cadaver.

Course Fee: \$875

PC11 Surgical Principles of Peripheral Nerve Surgery

Course Directors: David G. Kline, Allan H. Friedman

Faculty: Eric L. Zager, John E. McGillicuddy, Robert J. Spinner, Allan J. Belzberg, Robert L. Tiel

Learning Objective: This course will include a hands-on dissection lab with cadavers. Upon completion of this course, participants will be able to identify the appropriate exposures for specific nerve injuries and entrapment syndromes, perform the anatomical exposure for peripheral nerves in the cadaver, and describe the indications and contraindications for surgical treatment of peripheral nerve disorders.

Course Fee: \$800

PC12 Inpatient and Outpatient Management Dilemmas: For Nurses and Physician Assistants

Course Directors: Sarah Dawson, RN, BSN, Andrea Strayer, MS, APNP, CNRN

Faculty: Shannon Hagy, Ellen Dooling, Yvonne Layton, PA, Gregory R. Trost

Learning Objective: Upon completion of this course, the participant will be able to discuss clinical indications for a variety of cranial and spinal conditions illustrating the required clinical decision making for allied health professionals in outpatient and inpatient settings. Inpatient unexpected neurological decline, outpatient triage, as well as, complication recognition in both settings will be discussed. Physician attendees will not be awarded CME credit for this course. Nursing contact hours will be provided through AANN. Physician Assistants will receive CME credits for attendance. Each physician assistant will need to contact his or her individual membership association and certification board to determine the requirements for accepting CME credits. All attendees will receive a confirmation of attendance.

Course Fee: \$375





PC13 Traumatic Adult and Pediatric Brain Injury

Course Directors: John Ragheb, Raj K. Narayan

Faculty: Shelly D. Timmons, Anthony Marmarou, PhD, Lori Anne Shutter, Jack E. Wilberger, Alex B. Valadka, Domenic P. Esposito, Geoffrey T. Manley, Douglas Brockmeyer

Learning Objective: This course focuses on current thinking regarding the non-surgical and surgical treatment of traumatic brain injury in adults and children. Newer monitoring techniques, as well as promising new therapies, will be discussed. The differences between the management of adult and pediatric patients with traumatic brain injury will be emphasized. Upon completion of this course, participants will have gained exposure to current management strategies which incorporate appropriate management guidelines.

Course Fee: \$425

PC14 Thoracic and Lumbar Fusion: Emerging Technologies

Course Directors: Daniel K. Resnick, Robert F. Heary, Steven L. Ondra

Faculty: Michael K. Rosner, Gregory R. Trost, Daniel H. Kim, Langston Holly, Richard P. Schlenk, Junichi Mizuno, Tyler R. Koski, Aruna Ganju, Shekar N. Kurpad, Charles Kuntz, IV

Learning Objective: This course provides hands-on experience with exposure, decompression, and reconstruction of the thoracic and lumbar spine from the cervical-thoracic junction to the sacrum. The course will include an in-depth review of current and future technologies applicable to arthrodesis of the thoracolumbar spine. Upon completion of this course, participants will be able to describe anterior, posterior, and posterior-lateral approaches to these regions along with the appropriate instrumentation systems and describe technologies appropriate for specific clinical conditions.

Course Fee: \$850

PC15 Practical Update on Brain Tumors

Course Directors: Jeffrey Bruce, Frederick F. Lang

Faculty: Frederick G. Barker, II, Gene H. Barnett, E. Antonio Chioocca, Franco DeMonte, Mark E. Linskey, Michael William McDermott, Andrew T. Parsa, Ian F. Pollack, Andrew E. Sloan

Learning Objective: This course will provide the practicing clinician with an up-to-date overview of current management strategies for major types of benign and malignant brain tumors. The seminar includes current research topics but emphasizes practical management issues. Upon completion of this course, participants will be able to discuss the state-of-the-art management of benign and malignant brain tumors including glial tumors, meningiomas, acoustic neuromas, skull base tumors, pediatric tumors and metastases; discuss current concepts in glioma management including surgical techniques, adjuvant treatments, tumor biology and practical clinical management decisions; and apply current knowledge about brain tumors to daily clinical practice decision making.

Course Fee: \$425

PC16 Skull-Base Approaches for Cerebral Aneurysms

Course Director: Saleem I. Abdulrauf

Faculty: Michiyasu Suzuki, Basat Kumar Misra, Siviero Agazzi, Arthur L. Day, Neil A. Martin, H. Hunt Batjer, Harry R. Van Loveren, Steven L. Giannotta, Evandro de Oliveira

Learning Objective: The course will consist of two components, a hands-on practical part and a didactic part. The practical portion will consist of a hands-on cadaveric dissection and instruction of skull base (cranio-orbital-zygomatic, petrosal, and trans-condylar) approaches for cerebral aneurysms. The potential for increased access using these approaches for the microsurgical treatment of complex aneurysms will be demonstrated. The didactic portion of the course will also provide an in-depth review of microsurgical techniques necessary for clip reconstruction of cerebral aneurysms. Upon completion of this course, participants will have gained an exposure to intra-operative decision making strategies for complication avoidance and the potential practical applicability of skull base approaches for cerebral aneurysms.

Course Fee: \$800

Morning Practical Courses (PC17 – PC20)

8:00 am – 12:00 pm

PC17 Endovascular Aneurysm Therapy: Intra- and Peri-Procedural Management

Course Directors: C. Michael Cawley, III, Henry H. Woo

Faculty: Peter Kim Nelson, David Fiorella, William E. Thorell, Cameron G. McDougall

Learning Objective: This course will discuss new literature and potential future technology in the endovascular treatment of intracranial aneurysms. Upon completion of this course, participants will have gained exposure to newly developed coil and stent technology in the treatment of wide-necked aneurysms and will observe hands-on delivery of these devices in flow models.

Course Fee: \$375



PC18 Adult and Pediatric Spinal Trauma Surgery

Course Directors: Dachling Pang, Ashwini Dayal Sharan

Faculty: R. John Hurlbert, Eric M. Massicotte, Christopher I. Shaffrey, Douglas L. Brockmeyer

Learning Objective: This course focuses on the non-surgical and surgical treatment of spinal trauma in adults and children. Indications for decompression, arthrodesis, instrumentation, and bracing will be discussed. The differences between the management of adult and pediatric patients with spinal injuries will be emphasized. Upon completion of this course, participants will gain exposure to current management strategies which incorporate appropriate management guidelines.

Course Fee: \$375

PC19 Spinal Arthroplasty

Course Director: Regis William Haid, Jr

Faculty: Rick Delamarter, Fred H. Geisler, Robert J. Hacker, Bruce E. Mathern, Stephen M. Papadopoulos, Vincent C. Traynelis

Learning Objective: This course will provide a detailed discussion of the current status of arthroplasty. Upon completion of this course, participants will gain exposure to the indications, instrumentation, and techniques involved in this procedure.

Course Fee: \$425

PC20 Vertebroplasty and Kyphoplasty: Novel Technologies

Course Directors: Lee R. Guterman, Elad I. Levy, Bernard R. Bendok

Faculty: Andrew J. Ringer, Richard M. Spiro, Jay U. Howington, Peter C. Gerszten, Dometrius K. Lopes

Learning Objective: Upon completion of this course, participants will gain exposure to the indications, techniques, and complication avoidance strategies related to vertebroplasty and kyphoplasty. Hands-on cadaver experience will allow participants to perform the technique using fluoroscopy at multiple lumbar and thoracic levels.

Course Fee: \$800

Afternoon Practical Courses (PC21 – PC28)

1:00 pm – 5:00 pm

PC21 Operative Colloquium: Masters of Neurological Surgery

Course Director: Roberto C. Heros

Faculty: Robert F. Spetzler, Madjid Samii, James T. Rutka, Richard G. Fessler, Ugur Ture, Francesco Tomasello, Jacques Morcos, Shige Kobayashi, Albino Bricolo

Learning Objective: Using lecture, demonstration and question-and-answer sessions, this unique course will provide participants insight into the techniques of our neurosurgical masters in dealing with complex and common neurosurgical problems. State-of-the-art technology will be used to display refinements in operative techniques, complication avoidance, and resident education. Upon completion of this course, participants should be able to describe novel and useful techniques for the management and surgical options involved in the care of common and complex neurosurgical problems.

Course Fee: \$350

PC22 Mastering Spinal Disorders: Dealing with Complexities

Course Directors: Christopher I. Shaffrey, Charles Kuntz, IV

Faculty: Robert J. Bohinski, Praveen V. Mummaneni, Stephen L. Ondra, Regis W. Haid, Jr.

Learning Objective: Using lecture, question-and-answer and practical sessions, this unique course will provide participants insight into the mastery of complex spinal disorders, including the role of minimal access techniques and the artificial disc. Upon completion of this course, participants will be able to describe novel and useful surgical techniques for handling cases such as occipitocervical fusions, thoracic pedicle screws, spinal tumors and deformity, including strategies for complication avoidance and management.

Course Fee: \$600

PC23 Cerebrovascular Critical Care

Course Director: E. Sander Connolly, Jr., Joshua B. Bederson

Faculty: Sean D. Lavine, Aman B. Patel, Andrew Mark Naidech, Owen Samuels, David Palstrandt

Learning Objective: This course will discuss diagnostic and therapeutic options, as well as perioperative management in the following conditions: ischemic stroke, intracerebral hemorrhage, subarachnoid hemorrhage and vasospasm. Upon completion of this course, participants will be able to describe the diagnosis and treatment of ischemic stroke, including the use of tissue plasminogen activator and decompressive craniectomy, describe the pathophysiology and treatment of subarachnoid hemorrhage, including prevention of early rebleeding and treatment of vasospasm; and discuss treatment options for intraparenchymal hemorrhage.

Course Fee: \$375

PC24 Contracting and Financial Management: What You Must Know

Course Director: Karen Zupko, President, Karen Zupko & Associates

Learning Objective: Developing a strong financial foundation for your practice and using financial reports to make better business decisions is the focus of this course. This course is designed for neurological surgeons who want a firmer hold on the financial issues and contracting strategies in their practice. You'll see how to make your P & L a more informative and useful tool; setup key financial benchmarks; design a monthly reporting system that can be easily monitored; prevent or limit embezzlement; create an RBRVS-based fee schedule that allows you to measure health plan performance; build the file architecture within your computer system to provide for optimal reporting; and develop a negotiating strategy with health plans that results in bureaucratic reductions and better payments. Practical examples serve as illustration of "how to" do this back in your practice.

Course Fee: \$375

PC25 Minimally Invasive Lumbar Spine Surgery

Course Directors: Maurice M. Smith, Noel I. Perin

Faculty: Seong-Hoon Oh, Bruce M. McCormack, Richard G. Fessler, Kevin T. Foley, Arthur L. Jenkins, III, Hyun-Chul Shin

Learning Objective: This course focuses on the indications for and limitations of minimally invasive techniques in the lumbar spine. Upon completion of this course, participants will have gained exposure to current minimally invasive surgical techniques, their applications and limitations.

Course Fee: \$800

PC26 Pain of Spinal Origin: A Comprehensive Approach

Course Directors: Edward C. Benzel, Jaimie M. Henderson

Faculty: Kevin T. Foley, John C. Oakley

Learning Objective: This course reviews the practical aspects of pain physiology through a discussion of the anatomical structures that have the potential to be painful. Participants will be exposed to the skills necessary to make an accurate structural diagnosis using the history, physical examination, radiological findings, and confirmatory diagnostic injections. Upon completion of this course, participants will be able to describe therapeutic options for spinal pain management, including the use of rehabilitation techniques, medications, radiofrequency neurotomy, spinal cord stimulation, and surgery.

Course Fee: \$350

PC27 Cranial Endoscopic Procedures in Neurosurgery

Course Directors: David F. Jimenez, Mark G. Luciano

Faculty: John G. Frazee, Paolo Cappabianca, Jacques Caemaert, Axel Perneczky

Learning Objective: Upon completion of this course, through didactic and hands-on instruction, participants will have gained exposure to the use of endoscopy for intracranial applications, including management of hydrocephalus, intraventricular tumors, microneurosurgery, and transsphenoidal procedures. Participants will have gained exposure to the latest endoscopic instrumentation available.

Course Fee: \$800

PC28 Neurosurgery: 2005 Literature in Review

Course Directors: Peter McL. Black, Issam A. Awad

Faculty: Michael J. Apuzzo, Philip H. Gutin, H. Hunt Batjer, L. Nelson Hopkins, III, Volker K. Sonntag, Lawrence F. Marshall, Robert C. Cantu, J. Gordon McComb, Douglas S. Kondziolka, Giovanni Broggi, Joseph M. Piepmeyer, Edward R. Laws, Robert G. Grossman, Francis W. Gamache

Learning Objective: Upon completion of this course, participants will have gained exposure to relevant advances in each of the neurosurgical subspecialties as published in the literature during the past year and will have had an opportunity to discuss and summarize novel basic science concepts applicable to neurosurgery. Upon completion of this course, participants should be able to articulate current controversies reflecting bias and conflict of interest in the published literature.

Course Fee: \$375

NEW!

OPENING RECEPTION 6:30 PM TO 8:30 PM

The Congress of Neurological Surgeons invites you to step back in time and into the rich history of Boston. Follow The Freedom Trail through the streets of Boston – America's Walking City on Sunday, October 9 from 6:30 pm – 8:30 pm in the Hynes Convention Center Auditorium. Experience the 16th, 17th, and 18th Century of rich Bostonian history and charm. From neighborhoods to historical icons and events; you will be taken through three centuries while you witness how Bostonian history was made.

Join your colleagues to enjoy an assortment of sumptuous hors d'oeuvres and beverages as you build a lifetime of memories and camaraderie.

Each Annual Meeting registrant will receive one complimentary ticket to the Opening Reception.





TOPICS

THEORIES

TOOLS

THERAPIES

Membership Services

OUTSTANDING CNS Membership Services!!!

Booth # 318



Membership

CNS Staff is available to answer any questions regarding individual membership status, dues balances, new membership questions and member benefits.

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As a benefit to you, the CNS has funded Wireless Internet throughout the Convention Center for your convenience.

2005 Exhibitors

A - C

4-D Neuroimaging
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Abbott Spine
Accuray, Inc.
Acra-Cut, Inc.
Ad-Tech Medical Instrument Corp.
Advanced Bionics, A Boston Scientific Company
Advanced Neuromodulation Systems
Advanced Spine
Aesculap, Inc.
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American Spine, Inc.
American Surgical Sponges
Anspach Companies
AOSpine North America
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Aspen Medical Products, Inc.
Axiom Worldwide
Axon Systems, Inc.
B-K Medical Systems, Inc.
Baptist Health
Baxter
Berkeley Advanced Biomaterials, Inc.
BFW, Inc.
Blackstone Medical, Inc.
BOSS Instruments, Ltd.
Boston Scientific
The Brain Aneurysm Foundation
Buxton BioMedical, Inc.
Cardinal Health, V. Mueller Neuro/Spine Products
Carl Zeiss Surgical, Inc.
Cervitech, Inc.
ChartLogic, Inc.
Clarus Medical, LLC
CLOWARD Instrument Corp.
CMA Microdialysis AB
Codman, a Johnson & Johnson Company
Collagen Matrix, Inc.
Community Tissue Services
Confluent Surgical, Inc.
Congress of Neurological Surgeons
Cook Incorporated
Cordis Neurovascular, Inc.
Cortek, Inc.
Cosman Medical, Inc.
Cryolife, Inc.
Cyberonics, Inc.

D - F

DePuy Spine, Inc., a Johnson & Johnson Company
Designs For Vision, Inc.
EBI/Interpore Cross
Electrical Geodesics, Inc.
Elekta Instruments, Inc.

Ellman Innovations
Endure Medical, Inc.
ERBE USA, Inc.
Fehling Surgical Instruments, Inc.
FHC, Inc.
Flowtronics, Inc.
Fonar Corporation

G - I

GE Healthcare
Globus Medical
Gore & Associates
Guilford Pharmaceuticals, Inc.
HCA Healthcare
Hospira Worldwide, Inc.
HydroCision
Image Stream Medical
Image-Guided Neurologics, Inc.
IMRIS
Integra NeuroSciences

J - L

Johnson & Johnson Wound Mgmt. a division of ETHICON
Journal of Neurosurgery
Karl Storz Endoscopy-America, Inc.
Keeler Instruments, Inc.
Kinamed, Inc.
Kirwan Surgical Products, Inc.
KLS - MARTIN L.P.
Koros USA, Inc.
Kyphon, Inc.
LDR Spine USA, Inc.
Leica Microsystems, Inc.
Life Instrument Corp.
Lippincott, Williams & Wilkins

M - O

Market Access Partners
MD Logic, Inc.
Medical Designs, LLC
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Medical Justice
Medicon
Medivance
Medtronic Sofamor Danek
Medtronic Navigation
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MercuryMD, Inc.
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Micrus Corporation
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National Library of Medicine
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Nihon Kohden America, Inc.
Novo Nordisk
NS Recruitment Incorporated
NuVasive
Ortho Development Corporation

Orthofix, Inc.
OSI
OsteoMed L.P.
Osteoplastics Corporation

P - R

Pacific Research/Sawbones
Phoenix Vygon Neuro
Pikeville Methodist Hospital
Pioneer Surgical Technology
PMT® Corp.
Porex Surgical, Inc.
Prescott's, Inc.
Priority Consult
Pro Med Instruments, Inc.
Proneuron Biotechnologies
Quality Medical Publishing
Radionics, Inc. a division of Tyco
Regeneration Technologies, Inc.
Regent Surgical Health
RSB Spine

S - Z

Saunders/Mosby - Elsevier
Scanlan International, Inc.
Schaerer Mayfield, USA, Inc.
Schering-Plough
Scient' X
Scientia, Rare Medical Books
Signus Medical, LLC
SILVERGlide Surgical Technologies, Inc.
Sophysa
Spine Surgical Innovation
Spine Wave, Inc.
Spineology, Inc.
Springer New York
SSI Ultra Instruments
St. Francis Medical Technologies, Inc.
Stealth Surgical
Stryker
SurgiTel/General Scientific Corp.
Synergetics, Inc.
Synthes, Inc.
Thieme Medical Publishers
Think First National Injury Prevention Foundation
Thompson Surgical Instruments
Tissuelink Medical, Inc.
TomoTherapy Incorporated
TotalChart, Inc.
Transmolecular, Inc.
UCB
UMass Memorial Healthcare, Inc.
USA Sport & Health
Varian Medical Systems
VisionTree, Inc.
Volume Interactions
VSM Medtech / CTF Systems
W. Lorenz Surgical
Webb Dordick, Rare Medical Books
Zeiss Certified
Ziehm Imaging, Inc.
Zimmer Spine

As of April 8, 2005

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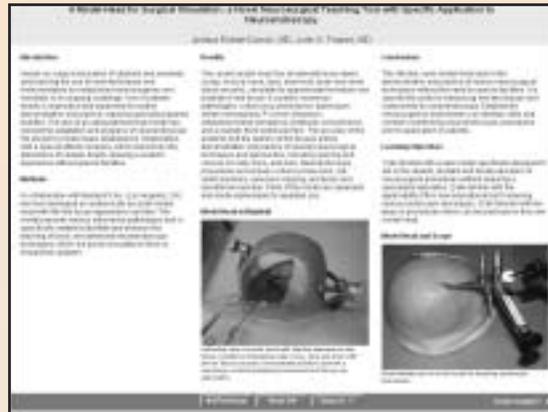
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- Stop by Publishers Row.
- **NEW** Stop by for a complimentary massage at the CNS Relaxation Center.
- Enjoy a Complimentary Beverage: Monday - Wednesday 9:30 am – 10:30 am
3:30 pm – 4:00 pm



CNS Member Services Center Booth #318

- Online Demonstrations **sans wired** power up your mind!
- CNS Personal Assistant service (CNS PA).
- CNS Job Placement Service.
- Video Theater (view neurosurgical techniques by master neurosurgeons).
- Email Café - Check or send emails.
- CNS Member Services Get answers to your membership questions.

- **Neurosurgery®**, the official journal of the CNS Pick up your copy or talk to staff.
- View neurosurgical techniques by master neurosurgeons in the CNS Video Theater.

Exhibit Hall Hours	Monday	9:00 am – 4:30pm
	Tuesday	9:00 am – 4:30pm
	Wednesday	9:00 am – 4:00pm

Online Product Locator

Save time! Retrieve exhibitor and product information online before attending the meeting. Visit www.neurosurgeon.org for more information.

NOTE:

Admittance to the Exhibit Hall is by CNS name badge only. Children under 18 years old are not permitted inside the Exhibit Hall.

TOPICS

THEORIES

TOOLS

THERAPIES

Exhibits

EUROPEAN ASSOCIATION OF NEUROSURGICAL SOCIETIES

The CNS Welcomes the European Association of Neurosurgical Societies -
EANS to the 55th CNS Annual Meeting

The EANS is a supranational and independent association of national
European neurosurgical societies and individual members.

President	.....Kenneth W. Lindsay	.....United Kingdom
Vice-President	.....Geirmund Unsgaard	.....Norway
Vice-President	.....Andries Bosch	.....Netherlands
Vice-President	.....Guy Matge	.....Luxembourg
Vice-President	.....Yucel Kanpolat	.....Turkey
Past-President	.....Joao Lobo Antunes	.....Portugal
Secretary	.....Manfred Westphal	.....Germany
Treasurer	.....Simo Valtonen	.....Finland



Education and Innovation



SPECIAL PRESENTATIONS

Monday, October 10 – Luncheon Seminar

European Masters of Neurosurgery I (M17)

Moderator: Kenneth W. Lindsay

Tuesday, October 11 – Special Course II

Clinical Trials from European Schools

Tuesday, October 11 – Luncheon Seminars

European Approach to Aneurysm Management (T30)

Moderator: Richard Kerr

European Masters of Neurosurgery II (T36)

Moderator: Manfred Westphal

Thursday, October 13

General Scientific Session IV

Kenneth W. Lindsay

Reduced Work Hours: Who Benefits?

Register On-Line at
www.neurosurgeon.org



At-A-GLANCE

7:00 am – 11:30 am	General Scientific Session I: Neurosurgical Topics
8:30 am – 8:50 am	Vilayanur S. Ramachandran, Special Lecturer
9:00 am – 9:30 am	Nelson M. Oyesiku, Presidential Address
9:30 am – 10:30 am	Coffee with Exhibitors
11:00 am – 11:30 am	Roberto C. Heros, Honored Guest Presentation
9:00 am – 4:30 pm	Visit Exhibits
12:30 pm – 2:00 pm	Luncheon Seminars
2:00 pm – 5:30 pm	Special Course I
	Section on Cerebrovascular Surgery I
	Section on Disorders of the Spine and Peripheral Nerves I
	Section on Neurotrauma and Critical Care I
	Section on Stereotactic and Functional Neurosurgery I
	Council of State Neurosurgical Societies
3:30 pm – 4:00 pm	Refreshments with Exhibitors
5:00 pm – 6:00 pm	American Board of Neurological Surgery (ABNS)
	Maintenance of Certification Town Hall Meeting
6:00 pm – 9:00 pm	Open Evening

General Scientific Session I: Neurosurgical Topics

7:00 am – 11:30 am

Moderators: Jaimie M. Henderson, Mark R. McLaughlin

Presiding Officer: Richard G. Ellenbogen

Learning Objectives: This session will explore commonly encountered neurosurgical diagnoses from a historical perspective. Participants will gain exposure to the pathophysiology, diagnosis, and treatment of these conditions. Following this session, participants will be able to discuss current management dilemmas and promising directions for future scientific investigation.

7:00 – 7:15	Insights into Peripheral Nerve Surgery	David G. Kline
7:15 – 7:30	Subarachnoid Hemorrhage	Eelco F.M. Wijdicks
7:30 – 7:45	Gliomas: Quo Vadis?	James T. Rutka
7:45 – 8:00	Hydrocephalus: History and Current Perspectives	Joseph R. Madsen
8:00 – 8:15	Head Injury: From GCS to Quo Vadis	Graham Teasdale
8:15 – 8:30	The Evolution of Spinal Pain Treatment	Philip L. Gildenberg
8:30 – 8:35	Introduction of Special Lecturer Vilayanur S. Ramachandran	Nelson M. Oyesiku
8:35 – 8:50	<i>Special Lecture</i> – The Neurology of Human Nature	Vilayanur S. Ramachandran
8:50 – 9:00	Introduction of President Nelson M. Oyesiku	Daniel L. Barrow
9:00 – 9:30	Presidential Address	
	Homogeneity and Heterogeneity: Lessons from Nature and Society	Nelson M. Oyesiku
9:30 – 10:30	Coffee with Exhibitors	
10:30 – 10:45	The Degenerative Lumbar Disc: Management, Mechanics, and Confusion	Charles L. Branch
10:45 – 11:00	Epilepsy Surgery: Overview of Current Techniques and Outcomes	Andre Olivier
11:00 – 11:05	Introduction of Honored Guest Roberto C. Heros	Nelson M. Oyesiku
11:05 – 11:30	<i>Honored Guest Presentation</i> – Changing Paradigms in Education of the Neurosurgical Resident	Roberto C. Heros



Luncheon Seminars

12:30 pm – 2:00 pm

All Luncheon Seminars include a seated lunch served in the seminar room. Luncheon Seminar fees are \$60 each (\$45 Residents/Fellows/Nurses).

M01 Resident/Honored Guest Luncheon - COMPLIMENTARY TO CNS RESIDENT MEMBERS

Moderator: Michael P. Steinmetz

Honored Guest: Roberto C. Heros

Learning Objective: Participants and our Honored Guest will review and discuss the Honored Guest's thoughts on neurosurgical education, career development, and life-long learning. At the conclusion of this seminar, participants will have a greater exposure to aspects of neurosurgical education, career development, and life-long learning from the perspective of an experienced and honored neurosurgical educator. **Register early - space is limited**

M02 Disk Arthroplasty of the Cervical and Lumbar Spine

Moderator: Richard G. Fessler

Faculty: Adrian T.H. Casey, Guy O. Danielson, Kevin T. Foley, Fred H. Geisler, Vincent C. Traynelis

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the state of the art in cervical and lumbar disc arthroplasty technology and be able to discuss the indications and relevant applications for this technology.

M03 Minimally Invasive Spine Surgery

Moderator: Robert F. Heary

Faculty: John A. Boockvar, Iain H. Kalfas, Stephen M. Papadopoulos, Noel I. Perin, Charles J. Riedel

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the current indications and techniques appropriate for minimally invasive spinal surgery and be able to describe the expected outcomes and complications associated with these techniques.

M04 Anterior Skull Base Approaches: What, When, and How?

Moderator: Franco DeMonte

Faculty: James P. Chandler, Alexandru Vlad Ciurea, Amin Kassam, Anil Nanda, Jon H. Robertson

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the techniques available in anterior skull base surgery and be able to discuss when these techniques are appropriate to use. Participants will be able to discuss the key steps in the successful execution of a particular anterior skull base approach.

M05 Acoustic Schwannomas: Options, Approaches, and Results

Moderator: Madjid Samii

Faculty: Steven L. Giannotta, John G. Golfinos, Stephen J. Haines, Kazuhiro Hongo, Douglas S. Kondziolka

Learning Objective: At the conclusion of this seminar, participants will be able to discuss treatment options for acoustic schwannomas, be able to discuss the surgical approaches, and be able to discuss treatment results of acoustic schwannomas, including surgical and radiosurgical techniques.

M06 State of the Art Management of Brain Metastases

Moderator: Raymond Sawaya

Faculty: Alessandro Ducati, Linda M. Liau, Bruce E. Pollock, Viviane S. Tabar, Steven A. Toms, Jorg-Christian Tonn

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the current status of research pertaining to the treatment of brain metastases and comprehend surgical and radiosurgical treatment options appropriate for treating intracranial metastases, their complications and results.



- M07** **Malignant Gliomas: Current Surgical and Adjuvant Strategies**
Moderator: James T. Rutka
Faculty: Charles S. Cobbs, Jeffrey J. Olson, Mark L. Rosenblum, Ronald E. Warnick, Manfred Westphal
Learning Objective: At the conclusion of this seminar, participants will be able to discuss current and emerging techniques in the treatment of malignant gliomas. Participants will also be able to discuss the role of these techniques in the development and implementation of new therapies for malignant glioma tumor patients.
- M08** **Cranial Minimally Invasive Techniques Including Endoscopy**
Moderator: Mark G. Luciano
Faculty: Alan Cohen, Christian Sainte-Rose, Henry W.S. Schroeder, Charles Teo
Learning Objective: At the conclusion of this seminar, participants will be able to discuss the available techniques and technologies relevant to minimally invasive cranial surgery and neuroendoscopy and discuss the key technical steps and outcomes for a variety of minimally invasive procedures.
- M09** **Management of Posterior Circulation Aneurysms**
Moderator: Michael T. Lawton
Faculty: Daniel L. Barrow, Renato Galzio, Duke S. Samson, Hirotohi Sano, Philip E. Stieg
Learning Objective: At the conclusion of this seminar, participants will have been exposed to relevant research data pertaining to the management of posterior circulation intracranial aneurysms and be able to discuss the surgical options for treating the various types of posterior circulation aneurysms, including fusiform and saccular giant aneurysms.
- M10** **Cerebral Revascularization in Symptomatic Patients: Current and Future Treatments**
Moderator: Jacques J. Morcos
Faculty: Saleem I. Abdulrauf, Frank Culicchia, Sean D. Lavine, Robert L. Macdonald, Gary K. Steinberg
Learning Objective: At the conclusion of this seminar, participants will be able to discuss the role of cerebral revascularization in symptomatic patients. Participants will be able to discuss the specific techniques best suited for revascularization, as well as emerging treatments for patients needing revascularization procedures.
- M11** **Carotid Disease: Surgical and Endovascular Treatment**
Moderator: Marc R. Mayberg
Faculty: Vladimir Benes, Jr., Andrew J. Ringer, Robert H. Rosenwasser, Byron Gregory Thompson
Learning Objective: At the conclusion of this seminar, participants will be able to discuss the indications for surgical and endovascular management of carotid artery disease and be able to discuss the limitations and complications associated with both the surgical and endovascular management of carotid disease.
- M12** **Craniosynostosis**
Moderator: Robert F. Keating
Faculty: James T. Goodrich, Mark Hamilton, David F. Jimenez, Karin M. Muraszko, Dominique Renier
Learning Objective: At the conclusion of this seminar, participants will be able to discuss the craniosynostosis syndromes and discuss the appropriate indications for microsurgical management for each type and comprehend the management of syndromic craniosynostosis. Participants will be exposed to new techniques and techniques relevant in the management of craniosynostosis.

- M13** **Functional Neurosurgery: Emerging Applications**
Moderator: Andres M. Lozano
Faculty: Michael L.J. Apuzzo, Giovanni Broggi, Rees Cosgrove, Alain C.J. de Lotbiniere, Ali R. Rezaï
Learning Objective: At the conclusion of this seminar, participants will be able to discuss emerging applications in functional neurosurgery. Participants will be knowledgeable about cutting edge functional neurosurgery and future technology, as well as indications and complication avoidance for these procedures.
- M14** **Hydrocephalus: Current and Emerging Therapies**
Moderator: Marion L. Walker
Faculty: Paul Chumas, James M. Drake, Joseph R. Madsen, Andrew Reisner, Anne Ritter
Learning Objective: At the conclusion of this seminar, participants will be able to discuss the available and emerging technologies relevant to the treatment of hydrocephalus. Participants will be knowledgeable about complication avoidance and outcomes in the treatment of hydrocephalus
- M15** **The Business of Neurosurgery**
Moderator: Gregory J. Przybylski
Faculty: Mark E. Linskey, John H. McVicker, Richard A. Roski, Craig A. Van Der Veer, Edie E. Zusman
Learning Objective: At the conclusion of this seminar, participants will be able to discuss various techniques that can enhance neurosurgical practice, discuss topics relevant to the business of neurosurgery and be aware of various tools helpful in the development of a neurosurgical practice.
- M16** **Treatment of Intradural Spinal Tumors**
Moderator: Paul C. McCormick
Faculty: Roberto Delfini, Ziya L. Gokaslan, George Jallo, Russell R. Lonser, Laurence D. Rhines
Learning Objective: At the conclusion of this seminar, the participant will be able to discuss indications, surgical options, and expected outcomes for the treatment of intradural spinal tumors.
- M17** **European Masters of Neurosurgery I**
Moderator: Kenneth Lindsay
Faculty: Fabio Calbucci, Nicolas de Tribolet, Rudolf Fahlbusch, Yves Keravel, Volker Seifert, Geirmund Unsgard
Learning Objective: At the conclusion of this seminar, the participant will gain exposure to the operative nuances and strategies associated with a variety of surgical approaches to central nervous system disorders as detailed by European neurosurgical masters.



STAY IN TOUCH While at the Hynes Convention Center!
 As a benefit to you, the CNS has funded Wireless Internet throughout the Convention Center for your convenience.



Special Course I: Managing Neurosurgical Complications

2:00 pm – 5:30 pm

Course Directors: Mark E. Linskey, Wesley A. King

Learning Objectives: Participants will be exposed to the root causes, means for avoidance, and means of management for endovascular surgery complications, skull base vascular injury, cerebral radiation necrosis, wrong level or wrong side spinal surgery, poor myelomenigocele or scalp flap wound healing, bleeding during stereotactic procedures, failed spinal fusion constructs, and anesthetic complications. The registrant will also be able to discuss the relationships between coordinated team care, case volume and personal learning curve to the incidence of neurosurgical complications and clinical outcome.

2:00 – 2:15	Managing Endovascular Surgery Complications	Michael B. Horowitz
2:15 – 2:30	Managing Unexpected Vascular Injury during Skull Base Surgery	Chandranath N. Sen
2:30 – 2:35	Discussion	
2:35 – 2:50	Managing Radiation Necrosis when Treating Malignant Brain Tumors	Jeffrey Bruce
2:50 – 3:05	Wrong Level or Wrong Side Spine Surgery	Neil Duggan
3:05 – 3:10	Discussion	
3:10 – 3:25	Surgery and Complication Avoidance in the Repair of Frontoethmoidal Encephaloceles	Eelco Hoving
3:25 – 3:30	Discussion	
3:30 – 4:00	Refreshments with Exhibitors	
4:00 – 4:15	The Personal Learning Curve and Center Team Experience: The Relationship of Case Volume to Complication Rates	Frederick G. Barker, III
4:15 – 4:20	Discussion	
4:20 – 4:35	Post-operative Spinal Fixation Constructs: What Patient Treatment Failures Have Taught Us	Stephen L. Ondra
4:35 – 4:50	Managing Bleeding during Stereotactic Procedures	Michael Schulder
4:50 – 4:55	Discussion	
4:55 – 5:10	Managing Anesthetic Complications Intraoperatively	Michelle Diane Szabo
5:10 – 5:25	Managing Failed, Infected and/or Necrosed Scalp Flaps	Thomas C. Origitano
5:25 – 5:30	Discussion	

Section on Cerebrovascular Surgery I

Advanced Strategies for the Treatment of Intracranial Aneurysms

2:00 pm – 5:30 pm

Moderators: Howard A. Riina, Michael T. Lawton

Learning Objectives: The participant will be able to discuss the latest treatment strategies (both surgical and endovascular) in the management of intracranial aneurysms.

2:00 – 2:05	Introduction of the Charles Drake Lecturer	Philip E. Stieg
2:05 – 2:40	Charles Drake Lecturer	Steven L. Giannotta
2:40 – 3:00	Advanced Surgical Aneurysm Treatment	Fady T. Charbel
3:00 – 3:20	Advanced Endovascular Aneurysm Treatment	Y. Pierre Gobin
3:20 – 3:30	Panel Discussion with Cases	
3:30 – 4:00	Refreshments with Exhibitors	
4:00 – 4:15	Oral Posters 1 – 5	
4:15 – 5:15	Open Papers 800 – 805	
5:15 – 5:30	Oral Posters 6 – 10	

MONDAY
 Scientific Program / Special Course / Sections



Section on Disorders of the Spine and Peripheral Nerves I

Sagittal Balance in the Adult Spine

2:00 pm – 5:30 pm

Moderators: R. John Hurlbert, Christopher E. Wolfla

Learning Objectives: The purpose of this session is to provide attendees with an update of spinal column anatomy, physiology, and surgical pathology as it pertains to sagittal plane alignment and function. At the end of the seminar participants will be able to discuss what constitutes normal spinal balance in the sagittal plane and why the maintenance of this balance is important to normal spinal function. The participants will also be exposed to operative techniques for preserving and reconstructing sagittal alignment through neurosurgical spinal procedures.

2:00 – 2:15	Evaluation of Sagittal Spinal Alignment from the Occiput to the Pelvis-Normal and Abnormal	Charles Kuntz, IV
2:15 – 2:30	Importance of Sagittal Spinal Alignment in Spinal Fusions	Christopher I. Shaffrey
2:30 – 2:45	Restoring Sagittal Spinal Alignment in the Cervical Spine	Edward C. Benzel
2:45 – 3:00	Restoring Sagittal Spinal Alignment in the Lumbar and Thoracic Spine	Steven L. Ondra
3:00 – 3:15	Discussion	
3:15 – 3:30	Oral Posters 88 – 92	
3:30 – 4:00	Refreshments with Exhibitors	
4:00 – 5:15	Open Papers 806 – 813	
5:15 – 5:30	Oral Posters 93 – 97	

Section on Neurotrauma and Critical Care I

2:00 pm – 5:30 pm

Moderators: Geoffrey T. Manley, Guy Rosenthal

Learning Objectives: Participants will be exposed to emerging concepts and new directions in the management of the brain- and spinal cord-injured patient. Participants will be able to discuss future opportunities and potential barriers to improving outcome.

2:00 – 2:15	Synthes Award for Resident Research on Craniofacial and Brain Injury	
2:15 – 2:30	Synthes Award for Resident Research on Spinal Cord and Spinal Column Injury	
2:30 – 2:45	Codman Neurotrauma Research Fellowship Presentation	
2:45 – 2:50	J. Douglas Miller Award	
2:50 – 3:20	Integra Lecture – Neurotrauma: A 30-year Perspective	Graham Teasdale
3:20 – 3:30	Discussion	
3:30 – 4:00	Refreshments with Exhibitors	
4:00 – 5:15	Open Papers 824 – 831	
5:15 – 5:30	Oral Posters 37 – 41	



Section on Stereotactic and Functional Neurosurgery I

Reexamining Surgery for Psychiatric Disorders

2:00 pm – 5:30 pm

Moderators: Andres M. Lozano, Ali R. Rezai

Learning Objectives: This session will revisit historical surgical treatment paradigms. Participants will be exposed to the biological basis and circuitry involved in psychiatric disorders. Participants will be exposed to current concepts on the role of surgery for the treatment of psychiatric disorders.

2:00 – 2:20	Tourett's Surgery	Robert J. Maciunas
2:20 – 2:40	Obsessive Compulsive Disorder	Ali R. Rezai
2:40 – 3:00	Depression Surgery	Andres M. Lozano
3:00 – 3:15	Discussion	
3:15 – 3:30	Oral Posters 108 – 112	
3:30 – 4:00	Refreshments with Exhibitors	
4:00 – 5:15	Open Papers 814 – 821	Moderator: Michael Schulder
5:15 – 5:30	Oral Posters 113 – 117	

Council of State Neurosurgical Societies

Paying for Quality Care

2:00 pm – 5:30 pm

Moderator: Joshua Rosenow

Learning Objectives: Participants will be exposed to the concept of "pay for performance" compensation models and their applicability to neurosurgical practice.

2:00 – 2:20	Paying for Performance Options for Neurosurgery	Robert E. Harbaugh
2:20 – 2:40	Pay for Performance for Surgeons	Rick Gliklich, Outcome.com
2:40 – 3:00	Pay for Performance: The Payer's Perspective	Joe Schiedler, Blue Cross Blue Shield Association
3:00 – 3:15	CSNS Resident Award	
3:15 – 3:30	CSNS Young Neurosurgeon Award	
3:30 – 4:00	Refreshments with Exhibitors	
4:00 – 4:30	Oral Posters 27 – 36	
4:30 – 5:30	Open Papers 834 – 839	

MONDAY
 Scientific Program / Special Course / Sections



American Board of Neurological Surgery Maintenance of Certification Town Hall Meeting

5:00 pm – 6:00 pm

Course Director: H. Hunt Batjer

Faculty: M. Sean Grady, Secretary ABNS; Ralph G. Dacey, Past Chairman ABNS

Learning Objective: At the conclusion of this seminar, participants will have gained greater exposure to the most current information on the requirements and mechanism for American Board of Neurological Surgery recertification. In addition to didactic presentations, participants will have the opportunity to interact with ABNS designees through an extended question and answer period.

MONDAY
Scientific Program / Special Course / Sections

CELEBRATE THE CNS Special Awards!

Join us in General Session II

on Tuesday, October 11 at 10:30 am
for the presentation of the

Distinguished Service Award to Beverly C. Walters



This prestigious award is designed to honor the contributions and activities of outstanding individuals and members of the Congress of Neurological Surgeons. This award is based on exceptional service and leadership to the CNS, contributions to the educational mission of the CNS by acting as a mentor, teacher and a professional role model.

Join us in General Scientific Session III

on Wednesday, October 12 at 8:25 am
for the presentation of the

CNS Founders' Laurel to John A. Jane, Sr.



Based on its founding principles, the Congress of Neurological Surgeons bestows the Founders' Laurel Award in recognition of exceptional service, life-long dedication and/or meritorious accomplishments in the field of medical education.



At-A-GLANCE

7:00 am – 11:30 am	General Scientific Session II: Theories of Disease
8:15 am – 8:45 am	Roberto C. Heros, Honored Guest Presentation
9:00 am – 9:10 am	CNS Resident Award
9:10 am – 9:30 am	E. Sidney Watkins, Special Lecturer
9:30 am – 10:30 am	Coffee with Exhibitors
10:30 am – 10:35 am	Distinguished Service Award
10:40 am – 11:30 am	Ian Wilmut, Special Lecturer on Creativity and Innovation
12:30 pm – 2:00 pm	Luncheon Seminars
2:00 pm – 5:30 pm	Special Course II Section on Tumors I Section on Pain I Section on Pediatric Neurological Surgery I Section on Cerebrovascular Surgery II Section on Disorders of the Spine and Peripheral Nerves II
3:30 pm – 4:00 pm	Refreshments with Exhibitors
5:30 pm – 6:30 pm	Annual Business Meeting
6:00 pm – 8:30 pm	Digital Masters Video Symposium
8:00 pm – 9:00 pm	Open Evening

General Scientific Session II: Theories of Disease

7:00 am – 11:30 am

Moderators: Mitesh V. Shah, Robert M. Friedlander

Presiding Officer: Nelson M. Oyesiku

Learning Objectives: This session will explore from a basic science perspective of commonly encountered neurosurgical diagnoses. Participants will gain exposure to the current avenues of basic and translational research for these conditions. Following this session, participants will be able to discuss potential directions for future basic science and translational research

7:00 – 7:15	Neurobiology of Epilepsy Neurobiology and Novel Human Treatments	Matthew During, PhD
7:15 – 7:30	Glial Tumors: The Current State of Scientific Knowledge	Susan Chang
7:30 – 7:45	Neuronal Injury: Mechanisms and Implications for Drug Development	Dennis W. Choi
7:45 – 8:00	Spinal Biomechanics: Fundamentals and Future	Edward C. Benzel
8:00 – 8:15	Scientific Basis of Cerebral Vasospasm	Ralph G. Dacey, Jr.
8:15 – 8:45	<i>Honored Guest Presentation</i> Cerebral AVMs: Changing Concepts in Treatment Alternatives	Roberto C. Heros
8:45 – 9:00	Molecular Basis and Therapy of Chronic Pain	Nicholas M. Boulis
9:00 – 9:10	CNS Resident Award	
9:10 – 9:13	Introduction of Special Lecturer E. Sidney Watkins, MD, FRCS	Nelson M. Oyesiku
9:13 – 9:30	<i>Special Lecture</i> The Physiology and Pathology of Motor Racing: Triumph and Tragedy in Formula One	E. Sidney Watkins, MD, FRCS
9:30 – 10:30	Coffee with Exhibitors	
10:30 – 10:35	Distinguished Service Award Presentation to Beverly C. Walters	Vincent C. Traynelis
10:35 – 10:40	CNS Fellowship Program and Fellowship Presentations	Kristen O. Riley
10:40 – 10:45	Introduction of Ian Wilmut, Special Lecturer on Creativity and Innovation	Nelson M. Oyesiku
10:45 – 11:30	Special Lecture on Creativity and Innovation Cells from Cloned Human Embryos in Research and Therapy	Ian Wilmut, PhD



Luncheon Seminars

12:30 pm – 2:00 pm

All Luncheon Seminars include a seated lunch served in the seminar room. Luncheon Seminar fees are \$60 each (\$45 Residents/Fellows/Nurses).

T18 Lumbar Spine Treatment: What the Literature Supports

Moderator: Daniel K. Resnick

Faculty: Tanvir Choudhri, Michael W. Groff, Larry Khoo, Paul G. Matz, Beverly C. Walters

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the current literature on surgical treatment of degenerative lumbar spine disease. Participants will be able to discuss the indications and expected outcomes for various lumbar spine surgical procedures.

T19 Cervical Spondylotic Myelopathy

Moderator: Mark R. McLaughlin

Faculty: Paul R. Cooper, H. Alan Crockard, Roger Hartl, Hiroshi Nakagawa

Learning Objective: At the conclusion of this seminar, participants will be able to discuss how to diagnose the syndrome of cervical spondylotic myelopathy and evaluate the treatment options available. Participants will be able to discuss outcomes of treatment in patients with cervical spondylotic myelopathy.

T20 Spinal Motion Preservation Technology

Moderator: John C. Liu

Faculty: Edward C. Benzel, Fred H. Geisler, Carl Laurysen, Luis Pimenta

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the current state of the art in motion sparing techniques in lumbar surgery, including lumbar arthroplasty. Participants will gain exposure to emerging technology and be able to discuss the applications for this technology.

T21 Intraoperative Salvage Techniques: “Getting Out of Trouble in Spinal Surgery”

Moderator: Stephen L. Ondra

Faculty: Regis W. Haid, Jr., R. Patrick Jacob, Arnold H. Menezes, Volker K. Sonntag, Eric J. Woodard

Learning Objective: At the conclusion of this seminar, participants will have been exposed to situations when intra-operative salvage techniques are necessary in spinal surgery and be able to discuss the steps and techniques necessary to rectify intra-operative difficulties.

T22 Peripheral Nerve Entrapment Neuropathies

Moderator: Robert J. Spinner

Faculty: Allan J. Belzberg, Giovanni Gazzeri, Line Jacques, Daniel H. Kim, Robert L. Tiel

Learning Objective: At the conclusion of this seminar, participants will be able to discuss basic nerve entrapment syndromes and their medical and surgical management and will have been exposed to the indications and techniques associated with peripheral nerve surgery. Participants will be able to discuss techniques to augment or include peripheral nerve surgery in one’s practice.

T23 Spinal Radiosurgery: Emerging Management Strategies

Moderator: Steven D. Chang

Faculty: John Adler, Deborah Benzil, Peter C. Gerszten, Jay Steven Loeffler, Jack P. Rock

Learning Objective: At the conclusion of this seminar, participants will be able to discuss emerging conformal radiation techniques for the treatment of spinal pathology. Participants will be able to discuss the indications, complications, and outcomes associated with spinal radiosurgery.



- T24** **Management of Low Grade Gliomas: Current Strategies and Dilemmas**
Moderator: Abhijit Guha
Faculty: Jeffrey Bruce, Jan J.A. Mooji, Joseph M. Piepmeier, John H. Sampson, Robert Weil
Learning Objective: At the conclusion of this seminar, participants will gain exposure to the various surgical and medical modalities appropriate for the treatment of low grade gliomas and be able to discuss current research pertaining to the management of these tumors. Participants will be able to discuss various medical and surgical strategies used to manage low grade gliomas.
- T25** **Intraoperative Imaging: Current Applications**
Moderator: Rudolf Fahlbusch
Faculty: Peter McLaren Black, Moshe Hadani, Walter A. Hall, Thomas M. Moriarty, Michael Vogelbaum
Learning Objective: At the conclusion of this seminar, participants will comprehend the current applications of various intraoperative imaging modalities and be able to select intra-operative imaging techniques appropriate for a given surgical situation.
- T26** **Mastery of Pituitary Surgery**
Moderator: Edward H. Oldfield
Faculty: William T. Couldwell, Edward R. Laws, Dieter Ludecke, Kalmon D. Post, Brooke Swearingen
Learning Objective: At the conclusion of this seminar, participants will gain exposure to the fundamentals and nuances in performing pituitary surgery and be able to discuss new techniques and advances in treatment.
- T27** **Management of Anterior Circulation Aneurysms**
Moderator: Arthur L. Day
Faculty: Robert J. Dempsey, Yoko Kato, Neil A. Martin, Robert H. Rosenwasser, Warren R. Selman
Learning Objective: At the conclusion of this seminar, participants will gain exposure to relevant data pertaining to the management of anterior circulation intracranial aneurysms and be able to discuss the endovascular and surgical options for various types of anterior circulation aneurysms, including giant aneurysms.
- T28** **Arteriovenous Malformations: Multimodality Management**
Moderator: Robert F. Spetzler
Faculty: Issam Awad, Alberto Vincenzo Pasqualin, Francois-Xavier Roux, Gary K. Steinberg, Rafael J. Tamargo, Chris M. Wallace
Learning Objective: At the conclusion of this seminar, participants will be able to discuss the various treatment modalities available for the treatment of intracranial arteriovenous malformations, be able to discuss multimodality management strategies, and be able to discuss the risks and complications association with each treatment modality.
- T29** **Surgical Treatment of Movement Disorders**
Moderator: Frederick A. Lenz
Faculty: Aviva Abosch, Roy A.E. Bakay, Alim Benabid, Kelly Foote, Michael G. Kaplitt
Learning Objective: At the conclusion of this seminar, participants will have been exposed to types of movement disorders amenable to surgical treatment and be able to discuss the surgical techniques, indications, and outcomes for treating specific movement disorders.
- T30** **European Approach to Aneurysm Management**
Moderator: Richard Kerr
Faculty: Jean-Pierre Castel, Juha Antero Hernesniemi, Jacques Moret, Christian Raftopoulos, Robin Sengupta
Learning Objective: At the conclusion of this seminar, participants will be able to discuss the specific roles that endovascular and surgical therapies play in aneurysm management by European surgeons. Participants will be able to discuss the ISAT study and its implication in the management of ruptured cerebral aneurysms.

T31

Traumatic Brain Injury: Lessons Learned and Future Directions

Moderator: Alex B. Valadka

Faculty: Austin R.T. Colohan, Andrew Maas, Geoffrey T. Manley, Raj K. Narayan, John Douglas Pickard

Learning Objective: At the conclusion of this seminar, participants will have been exposed to research advances in traumatic brain injury and be able to discuss various medical and surgical treatment options associated with traumatic brain injury.

T32

Neurosurgical ICD-9 and CPT Coding: Questions and Answers

Moderator: John Allen Wilson, Jr.

Faculty: Frederick A. Boop, Samuel Hassenbusch, Robert R. Johnson, William Mitchell, Gregory J. Przybylski

Learning Objective: At the conclusion of the seminar, participants will be able to discuss complex neurosurgical coding problems in both spine and cranial surgery and will have been exposed to various strategies for improving neurosurgical coding procedures in one's practice.

T33

Allied Health Providers in Neurosurgery: The Opportunities and the Impact

Moderator: Andrea Strayer, MS, APNP, CNRN

Faculty: Ellen Dooling, CNP, Yvonne Layton, PA, Mark Mason

Learning Objective: At the conclusion of this symposium the participant will be able to discuss the impact allied health providers have in the health care environment, in particular in terms of role, patient outcomes and cost effectiveness and discuss the variety of allied health provider role opportunities available in neurosurgery. Physician attendees will not be awarded CME credit for this course. Nursing contact hours will be provided through AANN. Physician Assistants will receive credit for attendance. Each physician assistant will need to contact his or her individual membership association and certification board to determine the requirements for accepting credits. All attendees will receive a confirmation of attendance.



T34

Past Presidents (Congress of Neurological Surgeons)

Moderator: H. Hunt Batjer

Faculty: William F. Chandler, Hal Hankinson, Robert A. Ratcheson, Donald O. Quest

Learning Objective: This course provides an in depth exposure to the various organizations within Neurosurgery and their role in neurosurgical education, the clinical practice of neurosurgery, and in neuroscience research. Upon completion of this course, participants will be able to discuss: The matrix of organizations that allow neurosurgery to interface with other specialties, government, and American business, the roles that neurosurgeons in private or academic practice can play in organized neurosurgery, and the way that policy decisions are made in neurosurgery regarding neurosurgical education, clinical practice, and research priorities.

T35

Pediatric Brain Tumors

Moderator: Mark M. Souweidane

Faculty: Derek Bruce, Michael H. Handler, Timothy B. Mapstone, Christian Sainte-Rose, Tadanori Tomita

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the various treatment modalities appropriate for the treatment of brain tumors in the pediatric population. Participants will be able to discuss strategies associated with various types of pediatric brain tumors.

T36

European Masters of Neurosurgery II

Moderator: Manfred Westphal

Faculty: Joao Lobo Antunes, Albino Bricolo, Alexander N. Kononov, Tiit Mathiesen, Johannes Schramm

Learning Objective: At the conclusion of this seminar, the participant will gain exposure to the operative nuances and strategies associated with a variety of surgical approaches to central nervous system disorders as detailed by European neurosurgical masters.



Special Course II: Clinical Trials from European Schools

2:00 pm – 5:30 pm

Course Director: Kenneth W. Lindsay

Learning Objective: This special course will focus on clinical trials conducted principally in Europe. Upon completion of the course the participant will be exposed to the results of clinical research trials addressing a variety of challenging neurosurgical problems.

2:00 – 2:15	Temozolamide as a Targeted Therapy in Glioblastoma: New Insights and Predictive Value of MGMT Silencing	Nicolas De Tribolet
2:15 – 2:30	Cognitive Enhancers after Brain Surgery	John Douglas Pickard
2:30 – 2:35	Discussion	
2:35 – 2:50	Single Stage Embolization and Resection of AVMs with Ethibloc	Manfred Westphal
2:50 – 3:05	Stem Cells in the Treatment of Huntington's Disease	Colin Watts
3:05 – 3:10	Discussion	
3:10 – 3:25	Intraoperative Fluorescence with 5-ALA	Walter Stummer
3:25 – 3:30	Discussion	
3:30 – 4:00	Refreshments with Exhibitors	
4:00 – 4:15	Pallidal Neurostimulation in the Treatment of Dystonia	Giovanni Broggi
4:15 – 4:20	Discussion	
4:20 – 4:35	Axovan (Endothelin Receptor Antagonist) in the Prevention of Vasospasm	Johannes Schramm
4:35 – 4:50	Pravastatin in the Prevention of Vasospasm	Peter Kirkpatrick
4:50 – 4:55	Discussion	
4:55 – 5:10	Integration of fMRI, MEG and Intraoperative MRI	Rudolf Fahlbusch
5:10 – 5:25	MRC Spine Stabilization of Surgery versus Rehabilitation	Jeremy Fairbank
5:25 – 5:30	Discussion	

TUESDAY
 Scientific Program / Special Course / Sections

You're Invited! CNS Resident Recruitment Social

Tuesday, October 11, 2005

5:30 pm – 7:00 pm

John B. Hynes Convention Center



Residents

If you are within 2-3 years of completing your residency, you won't want to miss this important and complimentary networking event. This is your opportunity to meet exhibiting recruiters and/or practicing physicians who are looking to add partners/colleagues to their practice.

Recruiters

If you are an official exhibitor of the CNS Annual Meeting and are looking to fill positions, this is your opportunity to meet young neurosurgeons who may fit your requirements.

Come build relationships in a relaxed and informal environment. The Resident Recruitment Social is coordinated in close conjunction with the CNS Job Placement Service.

Make Your Reservation Today!

info@1cns.org or
call 877 517 1CNS

Residents and Recruiters:
Reservations accepted through
September 22, 2005.



Education and Innovation



Section on Tumors I

Roundtable: Neurosurgeons as Clinical Investigators – An Open Forum on the Future of Brain Tumor Research

2:00 pm – 5:30 pm

Moderators: Michael Vogelbaum, Allesandro Olivi

Learning Objectives: Participants will be able to discuss with a selected group of panelists the main issues related to a successful involvement of neurosurgeons in clinical research. In particular, participants will be able to describe the most effective ways to acquire the necessary skills to design and conduct clinical trials.

2:00 – 2:05	Introduction, Overview, Goals for Session, Review of Pre-roundtable Survey	Michael Vogelbaum
2:05 – 2:15	Opportunities: Role of Neurosurgeons in Clinical Research – Perspectives from NCI and NINDS	Jeffrey Abrams, Thomas P. Jacobs, PhD
2:15 – 2:25	Challenges: Barriers to Neurosurgical Participation in Clinical Research (Costs of Time, Effort, Education and Regulation)	Anthony L. Asher, Frederick G. Barker
2:25 – 2:45	Discussion: <ul style="list-style-type: none"> • Clinical Investigators • Industry Based Trials and Conflicts of Interest • Education and Reward Paradigms • Mechanisms by Which AANS/CNS Can Promote Clinical Research • Funding for Clinical Research 	
	Anthony L. Asher, Frederick G. Barker, Jeffrey Abrams, Thomas P. Jacobs, Steven D. Chang, Henry Brem	
2:45 – 3:00	Strategies: Review and Presentation of Plan of Action	Michael Vogelbaum
3:00 – 3:10	Preuss Resident Research Award	
3:10 – 3:20	Tumor Young Investigator Award	
3:20 – 3:30	Mahaley Clinical Research Award	
3:30 – 4:00	Refreshments with Exhibitors	
4:00 – 4:09	Integra Foundation Award	
4:09 – 5:15	Open Papers 845 – 851	
5:15 – 5:30	Oral Posters 128 - 132	

Section on Pain I

Low Back Pain Interventions: Where is the Evidence?

2:00 pm – 5:30 pm

Moderators: Oren Sagher, Richard K. Osenbach

Learning Objectives: This session will address modern-day interventions for the treatment of low back pain and examine the quality of evidence supporting each modality. Participants will gain exposure to different neurosurgical strategies for the management of low back pain.

2:00 – 2:05	Introduction	Oren Sagher, Richard K. Osenbach
2:05 – 2:20	Fusion for Low Back Pain	Kevin T. Foley
2:20 – 2:25	Discussion	
2:25 – 2:40	Intrathecal Drug Administration for Low Back Pain	Samuel Hassenbusch
2:40 – 2:45	Discussion	
2:45 – 3:00	Spinal Cord Stimulation for Low Back Pain	Richard B. North
3:00 – 3:05	Discussion	
3:05 – 3:20	Kyphoplasty/Vertebroplasty for Low Back Pain	Ziya L. Gokaslan
3:20 – 3:30	Discussion with Panel	
3:30 – 4:00	Refreshments with Exhibitors	
4:00 – 4:09	Ronald Tasker Award	
4:09 – 5:05	Open Papers 853 – 858	
5:05 – 5:30	Oral Posters 56 - 62	



Section on Pediatric Neurological Surgery I

Science and Surgery of Cortical Dysplasia

2:00 pm – 5:30 pm

Moderators: Joseph R. Madsen, Rick Abbott

Learning Objectives: After the symposium, the attendee should be able to: 1) describe current understanding of the mechanisms of embryological cortical disorganization, 2) describe how disordered networks may generate seizure foci, 3) distinguish focal from generalized cortical dysplasia, 4) describe current MRI and related methods useful in diagnosis, and 5) discuss the surgical implications of patterns of cortical dysplasia.

2:00 – 2:15	Control of Neuronal Migration	Christopher Walsh
2:15 – 2:30	Spikes from Twisted Networks	Eric Halgren
2:30 – 2:45	Imaging of Dysplasia	Ellen Grant
2:45 – 3:00	Resection of Cortical Dysplasia	Howard L. Weiner
3:00 – 3:15	Discussion	
3:15 – 3:30	Oral Posters 63 – 67	Moderators: Ann Marie Flannery, Michael R. Egnor
3:30 – 4:00	Refreshments with Exhibitors	
4:00 – 5:15	Open Papers 859 – 866	
5:15 – 5:30	Oral Posters 68 - 72	

Section on Cerebrovascular Surgery II

Current Strategies in the Management of Carotid Occlusive Disease

2:00 pm – 5:30 pm

Moderators: Sean D. Lavine, Giuseppe Lanzino

Learning Objectives: The participant will be exposed to the current indications for using carotid endarterectomy and carotid stenting in the management of carotid occlusive disease.

2:00 – 2:15	Galbraith Award	
2:15 – 2:30	Carotid Endarterectomy: Current Strategies	Robert E. Harbaugh
2:30 – 2:45	Carotid Stenting: Current Indications and Outcomes	Robert H. Rosenwasser
2:45 – 3:00	Panel Discussion with Cases	
3:00 – 3:30	Oral Posters 11 – 20	
3:30 – 4:00	Refreshments with Exhibitors	
4:00 – 4:20	Oral Posters 21 – 26	
4:20 – 5:30	Open Papers 868 - 874	



Section on Disorders of the Spine and Peripheral Nerves II

Primer on Managing Common Peripheral Nerve Problems

2:00 pm – 5:30 pm

Moderators: Rajiv Midha, John E. McGillicuddy

Learning Objectives: Following this session, participants should be able to: 1. Describe the management of sports related nerve injuries, 2. Describe the selection criteria for patients requiring emergency nerve surgery including the decision to refer, 3. Discuss the avoidance and management of iatrogenic nerve injuries.

2:00 – 2:20	Sports Related Nerve Injuries	Eric L. Zager
2:20 – 2:40	Managing Nerve Emergencies	Allen H. Maniker
2:40 – 3:00	Iatrogenic Nerve Injuries	Robert L. Tiel
3:00 – 3:15	Discussion	
3:15 – 3:30	Oral Posters 98 – 102	
3:30 – 4:00	Refreshments with Exhibitors	
4:00 – 5:15	Open Papers 875 – 882	
5:15 – 5:30	Oral Posters 103 – 107	

Annual Business Meeting

5:30 pm – 6:30 pm

Digital Masters Video Symposium

6:00 pm – 8:30 pm

Moderators: Ganesh Rao, Brian T. Ragel, Hugh J.L. Garton

Faculty: Saleem I. Abdulrauf, Ossama Al-Mefty, Edward C. Benzel, Jeffrey A. Brown, William T. Couldwell, H. Alan Crockard, Arthur L. Day, Richard G. Fessler, Ziya L. Gokaslan, Lee R. Guterman, J. Patrick Johnson, David G. Kline, Frederick F. Lang, Edward R. Laws, Jr., Iver A. Longmoen, Jacques J. Morcos, Edward H. Oldfield, Christian Raftopoulos, Luca Regli, Albert L. Rhoton, Jr., Johannes Schramm, Marc Sindou, Dennis D. Spencer, Robert F. Spetzler, Rafael J. Tamargo, Graham Teasdale, David G.T. Thomas, Marion L. Walker

Learning Objectives: Participants will be able to describe the surgical approach and pitfalls to a variety of neurosurgical disorders. A series of authorities will present brief video demonstrations of surgical management.



At-A-GLANCE

7:00 am – 11:30 am	General Scientific Session III: Tools
7:55 am – 8:20 am	Robert S. Langer, Special Lecturer
8:20 am – 8:30 am	CNS Founders' Laurel
9:00 am – 9:30 am	Roberto C. Heros, Honored Guest Presentation
9:30 am – 10:30 am	Coffee with Exhibitors
10:30 am – 11:15 am	Sixth Annual Walter E. Dandy Orator
	Professor Wole Soyinka
12:30 pm – 2:00 pm	Luncheon Seminars
2:00 pm – 5:30 pm	Special Course III
	Section on Stereotactic and Functional Neurosurgery II
	Section on Tumors II
	Section on Neurotrauma and Critical Care II
	Section on Pediatric Neurological Surgery II
3:30 pm – 4:00 pm	Refreshments with Exhibitors
5:30 – 9:00 pm	Open Evening
7:00 pm	International Reception

General Scientific Session III: Tools

7:00 am – 11:30 am

Moderators: Praveen V. Mummaneni, Russell R. Lonser

Presiding Officer: Anthony L. Asher

Learning Objectives: This session will focus on the application of new tools and advances in technology in the treatment of commonly encountered neurosurgical diagnoses. Participants will gain exposure to new devices, technological advances, and emerging techniques for the treatment of these conditions. Additionally participants will gain exposure to the incorporation of new technology into clinical treatment paradigms.

7:00 – 7:15	Technology: Novel Implantable Devices to Treat Epilepsy: Brain Pacemakers, Focal Cooling, and Focal Drug Delivery	Guy M. McKhann, II
7:15 – 7:30	Disc Arthroplasty	Vincent C. Traynelis
7:30 – 7:45	The Evolution and Future Direction of Endovascular Technologies	Robert H. Rosenwasser
7:45 – 7:55	Presidential Acknowledgement	Nelson M. Oyesiku
7:55 – 8:00	Introduction of Special Lecturer Professor Robert S. Langer	Christopher E. Wolfla
8:00 – 8:20	Special Lecture Polymers in the Delivery of Drug Treatments	Robert S. Langer, PhD
8:20 – 8:25	CNS Founders' Laurel Presentation	Vincent C. Traynelis
8:25 – 8:30	CNS Founders' Laurel Recipient	John A. Jane, Sr
8:30 – 8:45	Emerging Techniques for Nerve Repair: Nerve Transfers and Nerve Guidance Tubes	Rajiv Midha
8:45 – 9:00	Translational Research for Gliomas: Quo Vadis?	Gene Barnett
9:00 – 9:30	Honored Guest Presentation Cerebral Aneurysms: Effect of New Knowledge and Technology on Current Practice	Roberto C. Heros
9:30 – 10:30	Coffee with Exhibitors	
10:30 – 10:35	Introduction of Wole Soyinka, the Sixth Annual Walter E. Dandy Orator	Nelson M. Oyesiku
10:35 – 11:15	The Sixth Annual Walter E. Dandy Orator Rapture and Rupture in the Liminal World	Wole Soyinka
11:15 – 11:30	Intracerebral Physiological Monitoring in Traumatic Brain Injury	Jurgen Meixensberger



Luncheon Seminars

12:30 pm – 2:00 pm

All Luncheon Seminars include a seated lunch served in the seminar room. Luncheon Seminar fees are \$60 each (\$45 Residents/Fellows/Nurses).

W37 Kyphoplasty and Vertebroplasty

Moderator: Peter C. Gerszten

Faculty: Arun P. Amar, Bernard R. Bendok, Richard D. Fessler, Jon Taylor Ledlie, Ehud Mendel

Learning Objective: At the conclusion of this seminar, participants will be able to discuss appropriate indications and surgical techniques for kyphoplasty and vertebroplasty. They will also be able to discuss the complications and outcomes associated with these procedures.

W38 Cervical Spine Trauma and Spinal Cord Injury: Advances in Medical and Surgical Management

Moderator: Christopher I. Shaffrey

Faculty: Douglas L. Brockmeyer, R. John Hurlbert, Daniel H. Kim, Scott Shapiro, Andreas Weidner

Learning Objective: At the conclusion of this seminar, participants will be able to discuss advances in the medical treatment of traumatic spinal cord injury and be able to discuss state of the art surgical management of cervical spine trauma and spinal cord injury. Participants will be able to discuss how to clear the spine in a comatose patient.

W39 Spinal Fusion: Biochemical and Biomechanical Approaches

Moderator: Ronald I. Apfelbaum

Faculty: Edward C. Benzel, Darryl J. Dirisio, Robert Schonmayr, Khalid Sethi, John Strugar

Learning Objective: At the conclusion of this seminar, participants will be able to discuss how to evaluate new biochemical advances for augmentation of spinal fusion and discuss the biomechanics relevant to spinal fusions in the cervical, thoracic and lumbar spine.

W40 Metastatic Spinal Disease: Roles of Radiation and Surgery

Moderator: Mark H. Bilsky

Faculty: John Adler, Daryl R. Founery, Ziya L. Gokaslan, Laurence D. Rhines, Jeremy C. Wang

Learning Objective: At the conclusion of this seminar, participants will be aware of current diagnostic and treatment strategies for metastatic tumors of the spine. Participants will be provided with a conceptual framework to make decisions about surgery, conventional radiation, radiosurgery, and vertebral augmentation. Approaches, decompressive and instrumentation techniques, and complication avoidance will be emphasized.

W41 Intraoperative Salvage Techniques: "Getting Out of Trouble in Cranial Surgery"

Moderator: Laligam N. Sekhar

Faculty: Ossama Al-Mefty, Ralph G. Dacey, Evandro De Oliveira, Chandranath N. Sen

Learning Objective: At the conclusion of this seminar, participants will be able to describe indications for intra-operative salvage techniques in cranial surgery and be able to discuss indications for specific techniques for rectifying difficulties in cranial surgery.

W42 Practical Management of Peripheral Nerve Injury

Moderator: David G. Kline

Faculty: Allan J. Belzberg, Holly Gilmer-Hill, Rajiv Midha, Lynda Jun-San Yang, Eric L. Zager

Learning Objective: At the conclusion of this seminar, participants will be able to discuss practical strategies for the management of various peripheral nerve injuries. Participants will be able to discuss various diagnostic paradigms, treatment indications and timing, as well as surgical techniques used in the management of different types of injury.



- W43** **Endovascular Management of Intracranial Aneurysms: Indications, Techniques, and Results**
Moderator: Robert A. Mericle
Faculty: Jacques E. Dion, Kenneth M. Liebman, Cameron McDougall, Andrew Molyneux, Neil Troffkin
Learning Objective: At the conclusion of this seminar, participants will be able to discuss the indications for endovascular management of intracranial aneurysms and be able to discuss various endovascular techniques available for aneurysm treatment. Participants will be able to discuss the results of endovascular versus open management of intracranial aneurysms.
- W44** **Management of Unruptured Intracranial Aneurysms: Understanding and Developing Treatment Options**
Moderator: Robert A. Solomon
Faculty: Cargill H. Alleyne, Massimo Collice, Neal F. Kassell, Stephen B. Lewis, David G. Piepgras
Learning Objective: At the conclusion of this seminar, participants will have been exposed to relevant research data pertaining to the management of unruptured intracranial aneurysms and be able to discuss surgical options for various types of unruptured intracranial aneurysms.
- W45** **Controversies in the Management of Chiari I Malformations**
Moderator: Richard G. Ellenbogen
Faculty: Ulrich Batzdorf, Neil Feldstein, John D. Heiss, Thomas H. Milhorat, W. Jerry Oakes
Learning Objective: At the conclusion of this seminar, participants will be able to discuss various medical and surgical treatment options in the management of Chiari I malformations, their controversies, and the differences in management of pediatric versus adult Chiari I malformations and their outcomes. Participants will be able to discuss new research relevant to the treatment of Chiari I malformations and syringomyelia.
- W46** **Trigeminal Neuralgia: Current Management Options**
Moderator: Kim J. Burchiel
Faculty: Jeffrey A. Brown, Peter J. Jannetta, Robert M. Levy, L. Dade Lunsford, Marc Sindou
Learning Objective: At the conclusion of this seminar, participants will be able to discuss various surgical and radiosurgical treatment options in the management of trigeminal neuralgia, as well as their associated complications, and outcomes.
- W47** **International Luncheon Seminar - International Society of Pituitary Surgeons (ISPS): Pituitary Tumors, Quo Vadis?**
Moderator: Gail Linskey Rosseau
Faculty: Jens Astrup, Armando Basso, Enrico De Divitiis, Rashid Jooma, Michael Powell
Learning Objective: At the conclusion of this seminar, participants will be able to discuss the specific management strategies that prominent members of the ISPS use in the treatment of their pituitary tumor patients.
- W48** **Current Concepts in Epilepsy Surgery**
Moderator: Dennis D. Spencer
Faculty: William E. Bingaman, Robert E. Gross, Joseph R. Madsen, W. Richard Marsh, Webster Pilcher, Jean Regis
Learning Objective: At the conclusion of this seminar, participants will be able to describe the clinical features of seizure disorders and be able to discuss various techniques in the preoperative, intra-operative and postoperative management of patients with epilepsy.

W49

Current Management of Meningiomas: Benign and Malignant

Moderator: Philip H. Gutin

Faculty: Ivan S. Ciric, Mohamed El-Fiki, Randy Jensen, Ali F. Krisht, Michael William McDermott

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the various treatment modalities appropriate for the treatment of benign and malignant meningiomas and be able to discuss current research pertaining to the management of these tumors. Participants will be able to discuss strategies associated with various treatments for benign and malignant meningiomas.

W50

Neurosurgical Practice: Enhancement, Compliance and Development

Moderator: Craig A. Van Der Veer

Faculty: James R. Bean, Jeffrey W. Cozzens, J. Charles Rich, Troy M. Tippet, John Allen Wilson

Learning Objective: At the conclusion of this seminar, participants will be able to discuss various techniques that can enhance neurosurgical practice, discuss important compliance matters relevant to the practice of neurosurgery and be aware of various tools helpful in the development of a neurosurgical practice.

W51

Treatment of Cervical Radiculopathy: Ventral versus Dorsal Approaches

Moderator: Gerald E. Rodts, Jr.

Faculty: H. Alan Crockard, H. Louis Harkey, Roger Hartl, Robert B. Snow, Gregory R. Trost

Learning Objective: At the conclusion of this seminar, the participant will have been exposed to the advantages and disadvantages of the various surgical approaches for cervical disc herniations with radiculopathy. The participant will be able to discuss the anterior foraminotomy approach, as well as the more traditional approaches.

W52

Management of Endovascular Aneurysm Patients for the Non-Endovascular Specialists

Moderator: Ian B. Ross

Faculty: Alan S. Boulos, Kai U. Frerichs, Giuseppe Lanzino, Richard J. Parkinson, Robert Replogle

Learning Objective: At the conclusion of this seminar, participants will be able to discuss the management issues related to endovascularly treated patients. Participants will also be able to discuss specific post-endovascular treatment management paradigms for various vascular disorders.

W53

Unusual and Difficult Neurosurgical Cases

Moderator: Andrew H. Kaye

Faculty: Javaid Iqbal, Christiano B. Lumenta, J.M. Rice-Edwards, Ibrahim Sbeih, Yong-Kwang Tu

Learning Objective: This luncheon seminar will focus on unusual and difficult neurosurgical cases presented from the clinical experience of a panel of experts. At the conclusion of this seminar the participant will gain exposure to a variety of unusual and difficult cases encountered during the practice of neurosurgery. They will be aware of the clinical challenges and treatment dilemmas inherent in these cases and the creative solutions derived from the expert's experience.

STAY IN TOUCH While at the Hynes Convention Center!

As a benefit to you, the CNS has funded Wireless Internet throughout the Convention Center for your convenience.



Special Course III: Advances in Neuroimaging

2:00 pm – 5:30 pm

Course Directors: Linda M. Liau, Cargill H. Alleyne, Jr.

Learning Objective: At the conclusion of this course, participants will be able to discuss recent state-of-the-art advances in anatomical, functional, and molecular neuro-imaging relevant to neurosurgical diseases, describe and compare imaging technologies available to the neurosurgeon to enhance the diagnosis and management of neurosurgical diseases and discuss future trends in intra-operative neuroimaging applications for neurosurgical procedures.

2:00 – 2:15	Functional Imaging of Stroke	Alma Gregory Sorenson
2:15 – 2:30	Will CTA Replace DSA as the Primary Imaging Modality in the Evaluation of Intracranial Aneurysms?	Christopher S. Ogilvy
2:30 – 2:35	Discussion	
2:35 – 2:50	Molecular Imaging: A New Frontier	Lee Josephson
2:50 – 3:05	Musculoskeletal Imaging: New Technologies for Spine Surgery	John Carrino
3:05 – 3:10	Discussion	
3:10 – 3:25	Imaging of Tumor Pathology	Peter C. Warnke
3:25 – 3:30	Discussion	
3:30 – 4:00	Refreshments with Exhibitors	
4:00 – 4:15	PET Scan: Current and Future Role in Clinical Diagnosis	Carolyn C. Meltzer
4:15 – 4:20	Discussion	
4:20 – 4:35	Imaging for CSF Flow Analysis in Chiari I Malformations	Edward H. Oldfield
4:35 – 4:50	The Non-conventional Angiographic Evaluation of Patients following Coil or Clip Aneurysm Treatment	James Rabinov
4:50 – 4:55	Discussion	
4:55 – 5:10	The Human Brain "Atlas"	Itzhak Fried
5:10 – 5:25	Pediatric Vascular Malformations: Imaging and Interventions in Children	Patricia Burroughs
5:25 – 5:30	Discussion	

Section on Neurotrauma and Critical Care II

2:00 pm – 5:30 pm

Moderators: Geoffrey T. Manley, Jamie Sue Ullman

Learning Objectives: At the end of this session, participants will be able to discuss the reasons for, and the arguments against, training allied professionals and mid-level practitioners to place neuromonitors in patients with severe traumatic brain-injury. Additionally, participants should have a greater exposure to the emerging issues surrounding who should supervise the care of the critically ill brain injured patient.

2:00 – 2:20	Pro: Only Neurosurgeons and their Extenders Should Place Neuromonitors and Supervise TBI Care	Domenic P. Esposito
2:20 – 2:40	Con: You Don't Have to be a Neurosurgeon to Place Neuromonitors and Supervise TBI Care	William M. Coplin
2:40 – 3:00	Discussion	
3:00 – 3:30	Oral Posters 42 – 51	
3:30 – 4:00	Refreshments with Exhibitors	
4:00 – 5:15	Open Papers 900 – 907	
5:15 – 5:30	Oral Posters 52 - 55	



Section on Pediatric Neurological Surgery II

2:00 pm – 5:30 pm

Moderator: Joseph R. Madsen

Learning Objectives: The attendee should be able to describe new approaches to pediatric neurosurgical conditions, and discuss relevant basic science and allied discipline approaches to same.

2:00 – 3:00	Open Papers 908 – 913	Moderators: Mark M. Souweidane, Sarah J. Gaskill
3:00 – 3:30	Oral Posters 73 – 82	
3:30 – 4:00	Refreshments with Exhibitors	
4:00 – 5:15	Open Papers 914 – 921	Moderators: Edward R. Smith, Nathan R. Selden
5:15 – 5:30	Oral Posters 83 - 87	

Section on Stereotactic and Functional Neurosurgery II

Exploring the Basal Ganglia

2:00 pm – 5:30 PM

Moderators: Emad N. Eskandar, Rees Cosgrove

Learning Objectives: This session will focus on the anatomy and physiology of the basal ganglia. Participants will be exposed to recent developments in the understanding of basal ganglia function and how it translates in to clinical treatment strategies.

2:00 – 2:25	Basal Ganglia Function: Neurophysiological Insights	Emad N. Eskandar
2:25 – 2:30	Discussion	
2:30 – 2:55	Basal Ganglia Surgery for Movement Disorders	Philip A. Starr
2:55 – 3:00	Discussion	
3:00 – 3:15	Stereotactic and Functional Neurosurgery Resident Award	
3:15 – 3:30	Oral Posters 118 – 122	
3:30 – 4:00	Refreshments with Exhibitors	
4:00 – 5:15	Open Papers 884 – 891	Moderators: Ron L. Alterman, Konstantin Slavin
5:15 -5:30	Oral Posters 123 - 127	

Section on Tumors II

Scientific Symposium: Molecular Targets and Targeted Therapies for Malignant Brain Tumors

2:00 pm – 5:30 pm

Moderators: Raymond Sawaya, Allesandro Olivi

Learning Objectives: Participants will be able to describe the most recent advances in the identification of molecular targets in malignant brain tumors, their role in the pathogenesis of pediatric and adult neoplasms, and the unique opportunity for future effective targeted therapies.

2:00 – 2:15	Molecular Classification of Glioblastoma for Targeted Molecular Therapy	Paul Mischel
2:15 – 2:30	Modeling Signal Transduction Pathways in Medulloblastomas	Daniel W. Fufts, III
2:30 – 2:45	Novel Near-Term Targeted Therapeutics for Primary Brain Malignancies	John Laterra
2:45 – 2:50	Discussion	
2:50 – 3:30	Oral Posters 133 – 144	
3:30 – 4:00	Refreshments with Exhibitors	
4:00 – 5:15	Open Papers 892 – 899	
5:15 – 5:30	Oral Posters 145 – 149	



TOPICS

THEORIES

TOOLS

THERAPIES

To our International Friends and Colleagues

**Celebrate your participation in the
2005 CNS Annual Meeting at the**

CNS International Reception

7:00 pm

Wednesday, October 12, 2005

John F. Kennedy Library & Museum

*The home of the John F. Kennedy legacy of leadership, inspiration,
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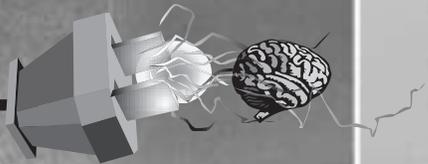


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At-A-GLANCE

7:00 am – 11:30 am	General Scientific Session IV: Therapies
9:00 am – 9:30 am	Roberto C. Heros, Honored Guest Presentation
9:30 am – 10:00 am	Coffee Break
10:00 am – 10:15 am	Story Landis, Special Lecturer
11:45 am	Adjourn

General Scientific Session IV: Therapies

7:00 am – 11:45 am

Moderators: Guy M. McKhann, II, Kristen O. Riley

Presiding Officer: Douglas S. Kondziolka

Learning Objectives: This session will explore neurosurgical treatment algorithms with an emphasis on those derived from evidenced-based medicine. Participants will gain exposure to current management strategies developed from both clinical experience and scientific investigation.

7:00 – 7:15	Lumbar Fusion Guidelines	Daniel K. Resnick
7:15 – 7:30	Clinical Outcome for the Surgical Treatment of Nerve Entrapment Syndromes	Robert J. Spinner
7:30 – 7:45	The Future of Surgical NeuroOncology	Charles B. Wilson
7:45 – 8:00	Technique, Complications, and Results of Third Ventriculostomy	Alan Cohen
8:00 – 8:15	Spinal Reconstruction: Quo Vadis?	Mark N. Hadley
8:15 – 8:30	Radiosurgery for Epilepsy: Which Patients, What Targets, and How Effective?	Nicholas M. Barbaro
8:30 – 8:45	Brain Injury Management: Quo Vadis?	Alex B. Valadka
8:45 – 9:00	Carotid Artery Stenting: Evidence-Based Treatment	Elad I. Levy
9:00 – 9:30	Honored Guest Presentation	
	Hemodilution and Fluid Management in Neurosurgery: A Clinician's Research	Roberto C. Heros
9:30 – 10:00	Coffee Break	
10:00 – 10:15	Special Lecture	
	NIH Funding for Neurosurgery Research	Story Landis, PhD
	National Institutes of Health	
10:15 – 10:30	Reduced Work Hours: Who Benefits?	Kenneth Lindsay
10:30 – 10:45	Neuroaugmentation for Spinal Pain	Richard B. North
10:45 – 11:00	Computer-Assisted Surgery	Robert J. Maciunas
11:00 – 11:15	Surgical Treatment of Spinal Cord Tumors	Jacques Brotchi
11:15 – 11:30	The Artificial Lumbar Disc: Surgical Technique and FDA IDE Study Results	Fred H. Geisler
11:30 – 11:45	Evidence-Based Treatment of Subarachnoid Hemorrhage: Current Status and Future Possibilities	R. Loch MacDonald
11:45	Adjourn	



Monday, October 10

Section on Cerebrovascular Surgery I

4:15 pm — 4:24 pm **800**

Statins Ameliorate Cerebral Vasospasm, Maintain Autoregulation, and Reduce Ischaemic Deficits and Mortality after Aneurysmal Subarachnoid Hemorrhage: A Randomised-Controlled Trial

Ming Yuan Tseng; Peter John Kirkpatrick

4:24 pm — 4:33 pm **801**

Effects of Recombinant Activated Factor VII on Perilesional Edema in Patients with Acute Intracerebral Haemorrhage

Michael N. Diringer; Antoni Davalos; Stephan A. Mayer; Nikolai C. Brun; Kamilla Begtrup; Joseph Broderick; Stephen Davis; Brett E. Skolnick; Thorsten Steiner

4:33 pm — 4:42 pm **802**

Staged Volume Radiosurgery for Large Arteriovenous Malformations: Techniques and Expectations

Douglas S. Kondziolka; Sait Sirin; Ajay Niranjan; John Flickinger; L. Dade Lunsford

4:42 pm — 4:51 pm **803**

Cerebral Vasospasm following Aneurysmal Subarachnoid Hemorrhage Is Inhibited by Clazosentan, an Endothelin Receptor Antagonist

Peter Vajkoczy; Bernhard Meyer; Stephan Weidauer; Andreas Raabe; Claudius Thome; Florian A. Ringel; Volker Breu; Peter Schmiedek

4:51 pm — 5:00 pm **804**

Current Trends in Management of Ruptured Intracranial Aneurysms in Toronto following the International Subarachnoid Trial (ISAT)

Julian Spears; Tali Jonas-Kimchi; Bruce Gray; Lyne Noel de Tilley; Michael Cusimano; Rick Moulton; Paul Muller; Richard Perrin; William Tucker; Tom R. Marotta; Walter Montanera

5:00 pm — 5:09 pm **805**

A Single-Centre, Prospective Analysis of the Natural History of Hemorrhage from Brain AVMs with or without Associated Aneurysms

Leodante B. da Costa; Christopher M. Wallace; Karel TerBrugge; Robert Willinsky; Michael Tymianski

Section on Disorders of the Spine and Peripheral Nerves I

4:00 pm — 4:09 pm **806**

Complications of Lumbar Artificial Disc Replacement vs. Fusion: Results from the Randomized, Multicenter FDA IDE Study of the CHARITÉ Artificial Disc

Fred H. Geisler; Richard T. Holt; Mohammed E. Majd; Jorge Isaza; Scott L. Blumenthal; Paul C. McAfee; Richard D. Guyer; Stephen H. Hochschuler; Rolando Garcia; John J. Regan

4:09 pm — 4:18 pm **807**

Intraoperative Ultrasonography and CSF Pressure Testing in Primary Spinal Syringomyelia

John D. Heiss; Hanh T. Nguyen; Hetty L. DeVroom; René Smith; Kailash D. Daryanani; Thomas Shawker; Edward H. Oldfield

4:18 pm — 4:27 pm **808**

The Revisability of the CHARITÉ Artificial Disc: Analysis of 688 Consecutive Patients from a Prospective, Randomized, Multicenter IDE Trial

Fred H. Geisler; Paul C. McAfee; Sam Saiedy; Sandra V. Moore; Scott L. Blumenthal; Richard D. Guyer; John J. Regan

4:27 pm — 4:36 pm **809**

A Randomized Trial of Instrumented Posterior Lumbar Interbody Fusion Using Machined Cortical Wedges/Local Bone with or without rhBMP2 in the Treatment of Degenerative Lumbar Spondylolisthesis with Stenosis

Scott Shapiro; Richard B. Rodgers; Robert Sloan; Thomas Altstadt; James Miller

4:36 pm — 4:45 pm **810**

Spinal Experts' Review Significantly Increases Patient Consent to Randomization in the SLIP Study: An Ongoing Prospective, Multi-Center Surgical Trial

Zoher Ghogawala; Edward C. Benzel; Sepideh Amin-Hanjani; Jean-Valery Coumans; Volker K. Sonntag; Lawrence F. Borges; Juan C. Bartolomei; Stephen Whalen; Subu N. Magge; Peter K. Dempsey; Frederick G. Barker

4:45 pm — 4:54 pm **811**

A Prospective Multicenter Evaluation of a Carbon Fiber Reinforced Polymer (CFRP) Cage for One-Level Anterior Lumbar Interbody Fusion

Daniel H. Kim; Alexander R. Vaccaro; John S. Thalgott; John Vender; John W. Brantigan



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4:54 pm — 5:03 pm 812

Single-Stage Transpedicular Vertebroctomy (TPV) with Circumferential Decompression and Fixation for the Management of Spinal Metastasis: A 10-Year Experience
Elias Dagnew; Ehud Mendel; Laurence Rhines; Fredrick Lang; Ziya Gokaslan; Ian McCutcheon

5:03 pm — 5:12 pm 813

Two-Year Sagittal Cervical Evaluation of Static versus Dynamic Anterior Cervical Plates
Timothy R. Kuklo; Michael K. Rosner; Christopher J. Neal; Korboi Evans

Section on Stereotactic and Functional Neurosurgery I

4:00 pm — 4:09 pm 814

A Multicenter Feasibility Study of Cortical Stimulation for the Rehabilitation of Patients with Hemiparetic Stroke: 6-Month Follow-up
Robert M. Levy; Sean Ruland; Martin E. Weinand; David Lowry; Rima Dafer

4:09 pm — 4:18 pm 815

Human Embryonic Stem Cells: In Vivo Behavior Post Grafting in the Rodent Brain
Viviane Tabar; Georgia Panagiotakos; Bill Chan; Philip H. Gutin; Lorenz Studer

4:18 pm — 4:27 pm 816

A Unique Neurocognitive Profile Differentiates Idiopathic Normal Pressure Hydrocephalus from Neurodegenerative Dementia: A Novel Guide for Shunt Surgery
Graeme F. Woodworth; George Thomas; Matthew McGirt; Alexander L. Coon; Argye Hillis; Michael A. Williams; Daniele Rigamonti

4:27 pm — 4:36 pm 817

Multicenter Clinical Evaluation of CyberKnife Radiosurgery for Idiopathic Trigeminal Neuralgia
Michael Lim; Alan Villavicencio; Sigita Burneikiene; Steven D. Chang; Pantaleo Romanelli; Lee McNeely; Melinda McIntyre; Jeffrey Thramann; John Adler

4:36 pm — 4:45 pm 818

Management of Referred DBS Failures: A Retrospective Analysis From Two Movement Disorders Centers
Michael S. Okun; Michele Tagliati; Hubert H. Fernandez; Ramon L. Rodriguez; Ron L. Alterman; Kelly Foote

4:45 pm — 4:54 pm 819

Neuronal Correlates of Associative Learning in the Primate Striatum and its Selective Enhancement by Electrical Stimulation
Ziv Williams; Emad N. Eskandar

4:54 pm — 5:03 pm 820

Efficacy at the Expense of Safety: Thalamotomy versus Thalamic Stimulation for Multiple Sclerosis Tremor.
Jonathan A. Hyam; Richard G. Bittar; Tipu Z. Aziz

5:03 pm — 5:12 pm 821

Stereotactic Radiation for Aggressive Meningiomas According to the WHO 2000 Classification
Carlos A. Mattozo; Antonio A. F. De Salles; Ivan Klement; Alessandra A. Gorgulho; Cynthia Cabatan-Awang; Solberg Timothy; Michael Selch

Section on Neurotrauma and Critical Care I

Synthes Award for Resident Research on Craniofacial and Brain Injury

2:00 pm — 2:09 pm 822

Effect of Cyclosporin A, Topiramate, or 100% Oxygen as Proposed 'Neuroprotective' Therapies Upon the Microdialysis Parameters of Patients with Severe Traumatic Brain Injury
Rodney M. Samuelson; Anna Mazzeo; Niki K. Kunene; Charlotte B. Gilman; M. Ross Bullock; Harold F. Young

Synthes Award for Resident Research on Spinal Cord and Spinal Column Injury

2:18 pm — 2:27 pm 823

Inhibition of the p75 Neutrophin Receptor Does Not Protect against Cell Death at the Injury Site and Worsens Functional Outcome after a Clinically Relevant Compression Model of Spinal Cord Injury
Gordon K. T. Chu; Michael G. Fehlings



4:00 pm — 4:09 pm 824

Evolution of Diffuse Brain Edema in Experimental Traumatic Injury Model Analyzed by High Resolution MRI and 1H NMR Spectroscopy

Ruth Prieto; José María Pascual; Juan Solivera; Laura Barrios; Sebastián Cerdán; José María Roda

4:09 pm — 4:18 pm 825

Indirect Transport of Severe Traumatic Brain Injury Patients to Trauma Centers Increases Mortality

Roger Hartl; Linda Gerber; Quanhong Ni; Laura Iacono; Jamshid Ghajar

4:18 pm — 4:27 pm 826

Chronic Anticoagulation with Warfarin Is Associated with Decreased Functional Outcome and Increased Length of Stay following Craniotomy for Acute Subdural Hematoma

Alexander L. Coon; Matthew McGirt; Graeme Woodworth; Geoffrey P. Colby; Gerhard S. Mundinger; Mark Foran; Judy Huang

4:27 pm — 4:36 pm 827

Mortality following Severe Head Injury in the Elderly

Hiren C. Patel; Omar Bouamra; A. T. King; F. Lecky

4:36 pm — 4:45 pm 828

Neurosurgical Experience in Theater during Operation Iraq Freedom

Michael K. Rosner; Christopher J. Neal; David T. Floyd

4:45 pm — 4:54 pm 829

DVT Prophylaxis in Neurosurgery: A Prospective Randomized Trial-Study Design and Preliminary Data after 8 Months

Samuel R. Browd; Cade Walker; Renee Madsen; Brian T. Ragel; Gary Davis; Amy Scott; Elaine Skalabrin; William T. Couldwell

4:54 pm — 5:03 pm 830

Severe Head Injury Patients with Glasgow Coma Score of 3, 4 and 5: To Treat or Not to Treat

Martina Stippler; Yuan Kong; Mary Kerr; Howard Yonas

5:03 pm — 5:12 pm 831

Pre- but Not Post Lesion Inflammation Plus Proteoglycan Degradation Results in Functional Regeneration

Michael P. Steinmetz; Kevin P. Horn; Jared H. Miller; Dileep Nair; Dan J. Silver; Jerry Silver

Council of State Neurosurgical Societies

CSNS Resident Award

3:05 pm — 3:14 pm 832

Neurosurgery Work Hour Restrictions: Impact on Resident Training

Todd D. McCall; John Kestle; Ganesh Rao

CSNS Young Neurosurgeon Award

3:20 pm — 3:29 pm 833

Racial Disparities in Patient Outcomes after Craniotomy for Tumor in the United States: a Population-based Analysis

William T. Curry, Jr.; Bob Carter; Frederick G. Barker

4:30 pm — 4:39 pm 834

Quo Vadis: Where Are We Headed in Academic Neurosurgery in the United States?

Dongwoo John Chang

4:39 pm — 4:48 pm 835

Surgeon Frequency, Not Cumulative Volume is Associated with Perioperative Morbidity after Carotid Endarterectomy

Matthew McGirt; Alexander L. Coon; Graeme Woodworth; Donald Buck; Shamik Jain; Richard E. Clatterbuck; Bruce Perler; Rafael J. Tamargo

4:48 pm — 4:57 pm 836

Increase in Neurosurgical Consultations and Change in Consultation Case Mix Associated with Development of a Level I Trauma Center

Christopher E. Wolfla; Fadi F. Nasr

4:57 pm — 5:06 pm 837

Revitalizing the Resident Clinic: Developing Clinical Competencies through Continuity of Care

Jeffrey M. Tomlin; Robert Bakos

5:06 pm — 5:15 pm 838

Understanding Barriers to Neurosurgical Randomized Clinical Trials: Community Equipoise, Individual Surgeon Equipoise, and Willingness to Randomize for a Complex Surgical Decision

Frederick G. Barker; Jean-Valery Coumans; Edward C. Benzel; Lauren Stabile; Zoher Ghogawala

5:15 pm — 5:24 pm 839

Comparison in Head Injury Outcomes at a Major Trauma Center in Response to Changing Referral Patterns due to Discontinuation of State Support

Adnan Siddiqui; Jennifer Jennings; Murali Raju; Maryann Fields; Sharon Menard; Satish Krishnamurthy



TOPICS

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Tuesday, October 11

General Scientific Session II

CNS Resident Award

9:00 am — 9:09 am 840

Enhanced Replication of Oncolytic HSV in Glioma Cells that Evade Temozolomide Chemotherapy through DNA Repair

Manish K. Aghi; Samuel Rabkin; Robert L. Martuza

Section on Tumors I

Preuss Resident Research Award

3:00 pm — 3:09 pm 841

Maximal Resection of Low Grade Intrinsic Brain Tumors Using “Awake” Craniotomy and Multiple Marginal Smear Biopsies: Operative Complication Rates and 10-year Survival Data

Mary Murphy; Judith Dinsmore; Peter Wilkins; Henry Marsh

Tumor Young Investigator Award

3:10 pm — 3:19 pm 842

Glioblastoma Induced Neurogenesis

Michael Synowitz; Rainer Glass; JoHee Waelzlein; Golo Kronenberg; Daniela Gast; LiPing Wang; Darko Markovic; Gerd Kempermann; Helmut Kettenmann

Mahaley Clinical Research Award

3:20 pm — 3:29 pm 843

Results of a Phase II Trial of Tumor Lysate-pulsed Dendritic Cell Vaccination for Malignant Glioma

John S. Yu; Keith L. Black; Gentao Liu; Christopher J. Wheeler; Mia Wagenberg; Asha Das; Elina Mindlin; Ray M. Chu; Anne Luptrawan; Michael A. Badruddoja

Integra Foundation Award

4:00 pm — 4:09 pm 844

Long-term Natural History of Hemangioblastomas in von Hippel-Lindau Disease: Implications for Treatment

*Joshua Ammerman; Russell R. Lonser; Edward H. Oldfield***4:09 pm — 4:18 pm 845**

PV-1 is a Novel and Critical Marker of Brain Tumor Angiogenesis

*Kevin A. Walter; Jessica Hampton; Steven Madden; Eleanor B. Carson-Walter***4:18 pm — 4:27 pm 846**

The Role of Adjuvant Postoperative Radiotherapy in the Management of Single Brain Metastases: An Analysis of 404 Patients.

*Christopher M. McPherson; Dima Suki; Anita Mahajan; Raymond Sawaya; Frederick F. Lang***4:27 pm — 4:36 pm 847**

PEX Producing Human Neural Stem Cells Inhibit Tumor Growth in a Mouse Glioma Model

*Seung-Ki Kim; Peter Black; Seung U. Kim; Theresa Cargioli; Yanping Sun; Ruqayyah Al-Hashem; Marcelle Machluf; Rona Carroll***4:36 pm — 4:45 pm 848**

IL-23-expressing Bone Marrow-derived Neural Stem-like Cells Exhibit Antitumor Activity against Intracranial Glioma

*John S. Yu; Xiangpeng Yuan; Gentao Liu; Zhaohui Zeng; Dwain Morris-Irvin; Keith L. Black***4:45 pm — 4:54 pm 849**

Microsurgical Management of Cerebellopontine Angle Epidermoid Tumors: Operative Technique and Results in 152 Cases

*Peter M. Grossi; Tetsuro Sameshima; John H. Sampson; Allan H. Friedman; Takanori Fukushima***4:54 pm — 5:03 pm 850**

Glioma Patients Segregate into 2 Distinct Immunosuppressive Phenotypes Based on PTEN Status: Implications for Immunotherapy

*Andrew T. Parsa; James Waldron; Ian Parney; Christine Sison; David Stokoe; Tarik Tihan; Russ Pieper***5:03 pm — 5:12 pm 851**

Supratentorial Low Grade Glioma: Diagnostic Trends, Temporal and Geographic Variation in Practice Patterns – A Population-based Study

Bob Carter; Manish K. Aghi; William T. Curry, Jr.; Frederick G. Barker



Section on Pain I

Ronald Tasker Award

4:00 pm — 4:09 pm **852**

Recurrent or Refractory Trigeminal Neuralgia after Microvascular Decompression, Radiofrequency Ablation, or Radiosurgery

Rene O. Sanchez-Mejia; Nicholas M. Barbaro

4:09 pm — 4:18 pm **853**

Chronic Motor Cortex Stimulation for Phantom Limb Pain Control: Correlations between Analgesic Effects and Cortex Mapping

Yves Lazorthes; Jean-Christophe Sol; Pascal Cintas; Jean-Albert Lotterie; Jean-Claude Verdie; Sylvain Fow

4:18 pm — 4:27 pm **854**

A 12-month Prospective Study on Gasserian Stimulation for Neuropathic Facial Pain

Machado G. Andre; Michelle Ogrin; Jaimie Henderson; Joshua M. Rosenow

4:27 pm — 4:36 pm **855**

A Study on Neurosurgical Treatment for Intractable Pain

Yong-sheng Hu; Yong-jie Li

4:36 pm — 4:45 pm **856**

Percutaneous Balloon Compression for Trigeminal Neuralgia: Reduced Dysestheias and Masseter Weakness Using Intraluminal Compression Pressure Monitoring in a Consecutive Series of 56 Patients

Jeffrey A. Brown; Julie G. Pilitsis

4:45 pm — 4:54 pm **857**

Prevention of Mechanical Failures in Implanted Spinal Cord Stimulation Systems

Jaimie M. Henderson; John C. Oakley; C. M. Schade; John Sasaki; David L. Caraway

4:54 pm — 5:03 pm **858**

Microvascular Decompression or Sectioning of the Nervus Intermedius for Geniculate Neuralgia: A Follow-up

Kenneth F. Casey; Peter J. Jannetta; Ricky E. Kortyna; Emily Belz

Section on Pediatric Neurological Surgery I

4:00 pm — 4:09 pm **859**

100 Cerebral Hemispherectomies for the Treatment of Intractable Epilepsy: Lessons Learned

Atthaporn Boongird; Ann Warbel; Prakash Kotagal; Elaine Wyllie; William E. Bingaman

4:09 pm — 4:18 pm **860**

The Transchoroidal Approach to Posterior Third Ventricular Tumors in Children: Surgical Strategies A Series of 37 Cases

Scott Berta; Henry E. Aryan; Min Sik Park; Hal S. Meltzer; Michael L. Levy

4:18 pm — 4:27 pm **861**

Gene Expression Profiling of Pediatric Brainstem Gliomas

Ruth E. Bristol; Jessica Rennert; Stephen Coons; Michael Berens

4:27 pm — 4:36 pm **862**

Vagus Nerve Stimulation Therapy in Patients with Autism Spectrum Disorder: Results from the Vagus Nerve Stimulation Therapy Patient Outcome Registry

Scott Berta; Min Sik Park; Hal S. Meltzer; Arun P. Amar; Michael L. J. Apuzzo; Karen M. Levy; Michael L. Levy

4:36 pm — 4:45 pm **863**

The Use of Cranial Fixation Pins in Pediatric Neurosurgery

Cherisse Berry; Daniel J. Hoh; David I. Sandberg; Ivan J. Sosa; Mark D. Krieger; J. Gordon McComb

4:45 pm — 4:54 pm **864**

Significance of Beaten Copper Appearance on Skull Radiographs in Children with Isolated Sagittal Synostosis

Deepak Agrawal; Paul Steinbok; David D. Cochrane

4:54 pm — 5:03 pm **865**

Outcomes following Craniotomy for Acute Subdural Hematoma Evacuation in Children: A Pediatric Trauma Center Experience

Alexander L. Coon; Matthew McGirt; Graeme Woodworth; Timothy Vogel; Geoffrey P. Colby; George I. Jallo

5:03 pm — 5:12 pm **866**

EphA2 Receptor Represents a New Marker and Therapeutic Target in Pediatric Malignancies

Daniel Couture; Jill Wykosky; Denise M. Gibo; Waldemar Debinski

Section on Cerebrovascular Surgery II

Galbraith Award

2:00 pm — 2:09 pm **867**

Predictors of Neurocognitive Dysfunction following Carotid Endarterectomy

J. Mocco; William J. Mack; David A. Wilson; Ricardo Jorge Komotar; Joseph Zurica; Hadi J. Halazun; Raheleh Hatami; Paulina B. Sergot; E. Sander Connolly, Jr.; Eric J. Heyer

4:20 pm — 4:29 pm **868**

Statins, HMG CoA-reductase Inhibitors, Reduce the Risk of Perioperative Stroke after Carotid Endarterectomy: A Novel Role for a Potential Neuroprotectant

Matthew McGirt; Alexander L. Coon; Graeme Woodworth; Shamik Jain; Donald Buck; Richard E. Clatterbuck; Bruce Perler; Rafael J. Tamargo

4:29 pm — 4:38 pm **869**

Endothelial Enriched Neural Stem Cell Transplantation after CNS Ischemia: A Cell Replacement Strategy

Daniel Friedlich; A. John Popp; Sally Temple

4:38 pm — 4:47 pm **870**

Alternative Fuels in Neuroprotection after Stroke

Jose E. Valerio; Douglas Emancipator; Nicole Victor; Michell Puchowicz; Warren R. Selman; Robert A. Ratcheson

4:47 pm — 4:56 pm **871**

Simvastatin Reduces Vasospasm after Aneurysmal SAH: Results of a Pilot Randomized Clinical Trial

John R. Lynch; Matthew McGirt; Daniel T. Laskowitz; Allan H. Friedman; Michael J. Alexander

4:56 pm — 5:05 pm **872**

Warning Headache and the Risk for Early Rebleeding after Aneurysmal SAH

Juergen Beck; Andreas Raabe; Joachim Berkefeld; Ruediger Gerlach; Volker Seifert

5:05 pm — 5:14 pm **873**

Endothelial Expression of ICAM-1 and VCAM-1 after Subarachnoid Hemorrhage in Monkeys Treated with Locally-delivered Ibuprofen

Gustavo Pradilla; Diana L. Vargas; Quoc-anh Thai; Federico G. Legnani; Richard E. Clatterbuck; Joseph L. Mankowski; Ahmed M. Essa; Rafael J. Tamargo

5:14 pm — 5:23 pm **874**

The Presence of Infection Predicts Vasospasm after Aneurysmal Subarachnoid Hemorrhage

Bi Tadzong; Akash D. Agarwal; Satish Krishnamurthy; Erik B. Lehman; Kevin M. Cockroft

Section on Disorders of the Spine and Peripheral Nerves II

4:00 pm — 4:09 pm **875**

Cervical Disc Arthroplasty with the Prestige ST Cervical Disc: Preliminary Results from a Multi-Center Randomized Controlled Trial

Paul D. Sawin; Wade Ceola; Praveen V. Mummaneni; Joseph Stachniak

4:09 pm — 4:18 pm **876**

Surgical Treatment of Peripheral Entrapment Neuropathy of the Lower Extremities: Outcomes from 158 Consecutive Surgical Cases

Juan M. Valdivia Valdivia; Martin E. Weinand

4:18 pm — 4:27 pm **877**

A Series of 171 Patients with Obstetrical Brachial Plexus Palsies: 28-year Experience at Louisiana State University Health Sciences Center

Shaun T. OLeary; Robert L. Tiel; David G. Kline

4:27 pm — 4:36 pm **878**

Intraoperative Motor Evoked Potential Monitoring Improves Outcome following Surgery for Intramedullary Spinal Cord Tumor: A Historical Control Study

Francesco Sala; Giorgio Palandri; Elisabetta Basso; Paola Lanteri; Vedran Deletis; Franco Faccioli; Albino Bricolo

4:36 pm — 4:45 pm **879**

Hypoxia-inducible Gene Expression System for VEGF Gene Therapy for the Rat Spinal Cord Injury Model

Seung-Hwan Yoon; Hyeon-Seon Park; Minhyung Lee; Choi Hyune Byung; Chong-Woon Park; Yoon Ha

4:45 pm — 4:54 pm **880**

Compensatory Hyperhidrosis after Endoscopic Thoracic Sympathectomy for Primary Hyperhidrosis-Predisposing Factors and Impact on Patient Satisfaction

Noel I. Perin; Ignacio J. Barrenechea

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4:54 pm — 5:03 pm **881**
 Post-operative Dysphagia after Anterior Cervical Surgery with or without Plating: A Prospective Study with Independent Clinical Review
Prakash Sampath; Michael Cobb; Matthew Olsen; Ritu Goel

5:03 pm — 5:12 pm **882**
 Improved Pain Control and Stable Quality of Life after CyberKnife Stereotactic Radiosurgery of Spinal Tumors
Jeffrey W. Degen; Gregory J. Gagnon; Jean-Marc Voyadzis; Donald A. McRae; Michael Lunsden; Sonja Dieterich; Inge Molzahn; Fraser C. Henderson

Wednesday, October 12

Section on Stereotactic and Functional Neurosurgery II

Stereotactic and Functional Neurosurgery Resident Award

3:00 pm — 3:09 pm **883**
 Periventricular Gray Stimulation Can Regulate Arterial Blood Pressure in Awake Humans
Alexander L. Green; Sarah L.F. Owen; Shou-Yan Wang; Liu Xuguang; John F. Stein; David J. Paterson; Tipu Z. Aziz

4:00 pm — 4:09 pm **884**
 Anti-Apoptotic Gene Therapy Improves Animal Models of Parkinson's and Huntington's Diseases
Michael G. Kaplitt; Susan Browne; Mihaela Stavarache; Joshua Goldfein; Sergei Musatov

4:09 pm — 4:18 pm **885**
 BRAINGATE: Turning Thought into Action: First Experience with a Human Neuro-Motor Prosthesis
Vasilios A. Zerris; John D. Donoghue; Leigh R. Hochberg; Daniel Kevin O'Rourke; Ennio Antonio Chiocca

4:18 pm — 4:27 pm **886**
 ECoG Controlled Brain-Computer Interfaces in Patients with Temporary Subdural Electrode Implants
Elizabeth A. Felton; J. Adam Wilson; Robert G. Radwin; Justin C. Williams; P. Charles Garell

4:27 pm — 4:36 pm **887**
 Comparison of Deep Brain Stimulator Implants with and without Microelectrode Recording
Antonio A.F. De Salles; Alessandra A. Gorgulho; Lisa Tseng; Eric Benhke; Scott Krahl; Katayoun Tagik; Carlos Matozzo

4:36 pm — 4:45 pm **888**
 Evaluation of Fiber Tracking in Neurosurgery
Stefan Welschehold; Martin B. Glaser; Cleopatra Charalampaki; Paulo R. Dellani; Axel Perneczky

4:45 pm — 4:54 pm **889**
 Neurosurgical Treatments for Chronic Refractory Depression: Controlled Comparison of Anterior Capsulotomy, Anterior Cingulotomy and Vagus Nerve Stimulation
Keith Matthews; Mufthah Eljamel; David Christmas; Robert MacVicar

4:54 pm — 5:03 pm **890**
 Light Chain Gene-based Control of Neocortical Epilepsy
Nicholas M. Boulis; Jun Yang; Qingshan Teng; Imad Najm; Stephan Chabardes; Michael Moffitt; Mary Garrity-Moses

5:03 pm — 5:12 pm **891**
 Bilateral Subthalamic Nucleus Stimulation in Elderly Patients with Advanced Parkinson Disease
Yves Lazorthes; Fabienne Ory; Christine Brefel-Courbon; Marion Simonetta-Moreau; Patrick Chaynes; Jean Sabatier; Jean Albert Lotterie; Isabelle Berry; Olivier Rascol

Section on Tumors II

4:00 pm — 4:09 pm **892**
 Cellular Composition and Cytoarchitecture of the Adult Human Subventricular Zone: A Niche of Stem Cells
Alfredo Quinones-Hinojosa; Nader Sanai; Oscar Gonzalez-Perez; Jose Manuel Garcia-Verdugo; Mitchel S. Berger; Arturo Alvarez-Buylla

4:09 pm — 4:18 pm **893**
 High-resolution Mapping of Human Glioma Genomes
Markus Bredel; Claudia Bredel; Dejan Juric; Griffith R. Harsh; Hannes Vogel; Lawrence D. Recht; Branimir I. Sikic

4:18 pm — 4:27 pm **894**
 Glioblastoma Cancer Stem Cells Exhibit Chemoresistance with Overexpression of Multi-drug Resistance Gene BCRP-1
John S. Yu; Gentao Liu; Dwain Morris-Irvin; Keith L. Black

**4:27 pm — 4:36 pm 895**

Desferoxamine Protects T-cell from GBM Mediated Apoptosis and Improves Cytolytic Activity of T-cells in Killing of Tumor Targets

Ali Chahlavi; Hamid Daneshva; Amy Richmond; Fumihiko Nishimura; Hideho Okada; Michael A. Vogelbaum; Gene H. Barnett; James Finke

4:36 pm — 4:45 pm 896

Anatomic Variants of Ependymoma Arise from Distinct Subsets of Radial Glial Cells

Michael D. Taylor; Helen Poppleton; Christine Fuller; Xiaoping Su; Xiaong Liu; Patricia Jensen; Susan Magdelano; James Dalton; Julian Board; Tobey MacDonald; James T. Rutka; Abhijit Guha; Amar Gajjar; Thomas Curran; Richard J. Gilbertson

4:45 pm — 4:54 pm 897

Derivation of Tumorigenic Stem-like Cells from Glioblastoma Multiforme

Moneeb Ehtesham; Michael K. Cooper; Juan G. Valadez; Reid C. Thompson

4:54 pm — 5:03 pm 898

Relative Cerebral Blood Volume Distinguishes Genotype In Oligodendroglial Tumors

Michael D. Jenkinson; Trevor S. Smith; Kathy A. Joyce; Carol Walker; Peter C. Warnke

5:03 pm — 5:12 pm 899

Seizure Characteristics and Post-operative Seizure Control in Patients with Low-Grade Gliomas

Edward F. Chang; Evren G. Keles; Matt Potts; Susan Chang; Kathleen L. Lamborn; Nicholas M. Barbaro; Mitchel S. Berger

Section on Neurotrauma and Critical Care II

4:00 pm — 4:09 pm 900

Effect of Cyclosporin (CsA) Therapy on Functional Outcome in Severe Traumatic Brain Injury: Report of a Phase I/II Clinical Trial

Bonnie Rosbolt; Jimmi Hatton; Richard Kryscio; Byron Young

4:09 pm — 4:18 pm 901

Prophylactic Craniectomy for Traumatic Brain Injury: Clinical Results and Complications

John Chi; Matt Potts; Michelle Meeker; Martin C. Holland; Geoffrey T. Manley

4:18 pm — 4:27 pm 902

Examination of the Management of Traumatic Brain Injury in the Developing and Developed World: Focus on Resource Utilization, Protocols, and Practices that Alter Outcome.

Odette Harris; Carl A. Bruce; Ivor Crandon

4:27 pm — 4:36 pm 903

Frequency and Severity of Brain Hypoxia and Responsiveness to Brain Oxygen Directed Therapy is Associated with Outcome in Patients following Severe Traumatic Brain Injury

Alejandro M. Spiotta; Michael F. Stiefel; Stephanie Bloom; Eileen Maloney-Wilensky; M. Sean Grady; Peter D. Le Roux

4:36 pm — 4:45 pm 904

Design of a Prospective TBI Quality Improvement Data Bank

Roger Hartl; Linda Gerber; Quanhong Ni; Laura Iacono; Jamshid Ghajar

4:45 pm — 4:54 pm 905

Independent Predictors of Outcome following Acute Subdural Hematoma Evacuation: A Novel Grading Scale for Outcome Prediction

Alexander L. Coon; Matthew McGirt; Graeme F. Woodworth; Gerhard S. Mundinger; Mark Foran; Geoffrey P. Colby; Judy Huang

4:54 pm — 5:03 pm 906

Erythropoietin Enhances Neurogenesis and Restores Spatial Memory in Rats after Traumatic Brain Injury

Asim Mahmood; Dunyue Lu; Changsheng Qu; Anton Goussev; Timothy Schallert; Michael Chopp

5:03 pm — 5:12 pm 907

Diffusion Weighted Imaging - Magnetic Resonance Imaging for Cranial Infections

Brian L. Hoh; Christopher J. Farrell; William T. Curry, Jr.; Frederick G. Barker



Section on Pediatric Neurological Surgery II

2:00 pm — 2:09 pm 908

Real-time, Image-guided Convection-enhanced Delivery of Interleukin 13-PE38QQR to the Primate Brainstem

Gregory J. Murad; Stuart Walbridge; Jeffrey W. Degen; Paul F. Morrison; Martin Brechbiel; Kayhan Garmestani; Edward H. Oldfield; Russell R. Lonser

2:09 pm — 2:18 pm 909

Management of Deformational Plagiocephaly: A Randomized, Prospective Analysis

Holly Gilmer-Hill; Julie G. Pilitsis; Jennifer L. Kowaleski; Arlene Rozzelle; Alexa I. Canady

2:18 pm — 2:27 pm 910

Outcome following Multiple Repeat Spinal Cord Untethering Operations

Cormac O. Maher; Mark R. Proctor; Liliana Goumnerova; R. Michael Scott

2:27 pm — 2:36 pm 911

Adjustable versus Set-pressure Valves Decrease the Risk of Proximal Shunt Obstruction Despite Similar Revision Rates for the Treatment of Pediatric Hydrocephalus

Matthew McGirt; Graeme Woodworth; Robert M. Stewart; Dan Sciubba; Amer F. Samdani; Benjamin S. Carson; George I. Jallo

2:36 pm — 2:45 pm 912

Flow Cytometric Analysis of Neural Stem Cell Markers on Pediatric Brain Tumors

Samuel Cheshier; Laurie E. Ailles; Michael Lim; Paul Laddis; Victor C. K. Tse; Irving Weissman; Stephen L. Huhn

2:45 pm — 2:54 pm 913

Moyamoya Associated With Down Syndrome: Outcome following Surgical Revascularization

Andrew Jea; Edward R. Smith; Richard Robertson; R. Michael Scott

4:00 pm — 4:09 pm 914

Assessment of the Relationship between Mobility of Third Ventriculostomy Stoma and Success of Third Ventriculostomy Using a Simple Intraoperative Hydrostatic Pressure Test

Mahmoud Hamdy Kamel; Michael Kelleher; Kristian Aquilina; Chris Lim; John Caird; George Kaar

4:09 pm — 4:18 pm 915

Simultaneous Measurement of Cerebral Blood Flow and ICP in Patients with Hydrocephalus Using a Non-Invasive MRI Based Technique

Roberta P. Glick; Terry Lichtor; Aaron Lee; Osbert Egibor; Noam Alperin

4:18 pm — 4:27 pm 916

Arteriovenous Malformations of Childhood: A Developmental Perspective

Stacey C. Quintero Wolfe; Sanjeev Bhatia; Greg Olavarria; Nolan Altman; Glenn Morrison; John Ragheb

4:27 pm — 4:36 pm 917

Neurocognitive Performance after Shunting for Hydrocephalus: Effects of Shunt Valve Type

David M. Frim; Tien Do; Dawn Mottlow; Scott Hunter; Maureen Lacy

4:36 pm — 4:45 pm 918

Use of Intraoperative Transcranial Motor-evoked Potentials to Predict Outcome following Resection of Pediatric Intramedullary Spinal Cord Tumors

Kurtis Auguste; Alfredo Quinones-Hinojosa; Russ Lyon; Peter P. Sun; Nalin Gupta

4:45 pm — 4:54 pm 919

Survival Analysis for Children with Glioma in England and Wales

Jen Ho Tseng; Ming Yuan Tseng

4:54 pm — 5:03 pm 920

Reformation of the Sagittal Suture following Surgery for Isolated Sagittal Craniosynostosis

Deepak Agrawal; Paul Steinbok; David D. Cochrane

5:03 pm — 5:12 pm 921

Pediatric C1-C2 Anomaly: A Definitive Surgical Option without a Halo or Occipital Fusion

Jon Park; Stephen L. Huhn; Max Lee; Daniel H. Kim; Michael S. B. Edwards



Dear Auxiliary Member:

Our families welcome you to Boston, a city rich in history and tradition! Boston holds many wonders for those who seek adventure and calming avenues for those who wish to relax.

The meeting hotel, the Sheraton Boston, is centrally located in Boston's Back Bay. Boston is called "America's Walking City" so comfortable shoes are a must! The hotel is within walking distance of many exciting venues offering plenty of entertainment. The Museum of Fine Arts is located within a half mile of the hotel and offers free guided tours several times per day. Boston's Newbury Street is known for fine wines, designer boutiques, sidewalk cafes, spas, and unique art galleries. It is a fun way to spend the day and is located around the corner from the hotel. Families can enjoy visiting Boston's many museums and explore history by touring the JFK Museum, the Boston Tea Party Ship and the New England Aquarium. The famous Fenway Park, home of the World Champion Red Sox, is only a mile from the hotel. Baseball fans will love a tour and some eye-catching souvenirs. Whether it is museums, whale watching, concerts, shopping, exploring history, eating, or harbor cruises, there is plenty to do in Boston! Of course, there are also innumerable restaurants in Boston, a city known for its famous Boston Cream Pie and fresh lobster tails! (A full fitness facility is located in the hotel).

Our exciting week begins with the CNS Opening Reception to be held at the Hynes Convention Center Auditorium on Sunday, October 9th from 6:30-8:30pm. The Convention Center is conveniently connected to the Sheraton Boston Hotel. Be our guest as we step back in time and share historical periods of Boston, while visiting with old and new friends alike!

This year's CNS Auxiliary Luncheon and Program will be held on Monday, October 10 at 12:30 pm. Known as an event not to miss, this year will be no exception! We hope that you will join us as we welcome Dr. Melissa R. Schneider, Plastic and Reconstructive Surgeon. There is an ever-growing interest in aesthetic plastic surgery, particularly the less invasive procedures, and Dr. Schneider will discuss the many options available to us today. Sign-up with your friends and enjoy this informative program!

The CNS Hospitality Center will be located at the Sheraton Boston Hotel. It will be open Monday through Wednesday from 7:00am-10:30am. A continental breakfast, coffee, and juice will be served and a representative from the Boston area will be there to answer any questions.

We hope that you will enjoy the many scenic, cultural, and historical tours as well as special evening events that have been designed specifically for the CNS, our guests, and our families. Please take a minute to review all of the options and sign-up for your favorites with your registration. Boston is a wonderful city and we want to share it with you.

We sincerely hope that you will bring your family and join us for the 55th Annual Meeting of the Congress of Neurological Surgeons, October 8 - 13, 2005. We look forward to hosting you and strolling through Boston together.



Lola Oyesiku

CNS Auxiliary President



Cathy Wolfia

CNS Auxiliary Chairperson

Auxiliary Program

Saturday, October 8

5:45 pm to 10:45 pm	OE01	Dinner at Salem Cross Inn	\$98
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Sunday, October 9

7:00 am to 8:00 am	AT01	Power Exercise – Pilates	\$15
8:00 am to 12:30 pm	AT02	On the Trail Through Cambridge	\$48
9:30 am to 4:30 pm	AT03	Antique Boston & Isabella Stewart Gardner Museum	\$83
11:45 am to 12:45 pm	AT04	America's Walking City: "Welcome to Boston"	Complimentary
12:00 pm to 5:00 pm	AT05	The Perfect Tour: Gloucester and Rockport	\$68
1:00 pm to 5:00 pm	AT06	Boston Revealed	\$57
6:30 pm to 8:30 pm	Open*	CNS Opening Reception	Hosted by CNS

Monday, October 10

7:00 am to 8:00 am	AT07	Power Exercise – Tai Chi	\$15
7:00 am to 10:30 am	Open*	CNS Spouse Hospitality Center	Hosted by CNS
8:00 am to 12:00 pm	AT08	Colonial Literary Legends	\$67
9:00 am to 4:00 pm	AT09	Bewitching Seaports: Salem and Marblehead	\$121
12:30 pm to 3:00 pm	AT10	CNS Auxiliary Luncheon & Program	Hosted in part by CNS, \$45
3:30 pm to 5:30 pm	AT11	Victorian Back Bay Walking Tour	\$29
6:00 pm to 10:30 pm	OE02	Odyssey of the Seas	\$148

Tuesday, October 11

7:00 am to 8:00 am	AT12	Power Exercise – Yoga	\$15
7:00 am to 10:30 am	Open*	CNS Spouse Hospitality Center	Hosted by CNS
8:00 am to 5:00 pm	AT13	Oh The Elegance & Charm of Newport	\$145
9:00 am to 11:00 am	AT14	Beacon Hill Walking Tour	\$28
1:00 pm to 5:00 pm	AT15	Boston by Design	\$93
6:00 pm to 10:00 pm	OE03	Cambridge Soiree, Evening River Cruise	\$125
6:00 pm to 10:00 pm	OE04	Boston Brewery Tour	\$98

Wednesday, October 12

7:00 am to 8:00 am	AT16	Power Exercise – Aerobics	\$15
7:00 am to 10:30 am	Open*	CNS Spouse Hospitality Center	Hosted by CNS
9:00 am to 12:00 pm	AT17	Boston Duck and Fenway	\$73



THERAPIES

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Saturday, October 8

All tour shuttle departures will meet at the main lobby entrance of the Sheraton Boston Hotel

OE01 DINNER AT SALEM CROSS INN

5:45 PM - 10:45 PM; \$98 PER PERSON

Experience a fine example of Colonial restoration at the Salem Cross Inn by either relaxing by the fire or lending a hand in the kitchen by stirring the chowder as it bubbles in the cast iron cauldron.

Located on 600 acres of rolling meadows and woodlands, the original building was constructed by a grandson of Peregrine White, the first male child born on the Mayflower in 1620. End the evening with a piece of the pie; utilizing an antique apple peeler and baking it in the 1699 Beehive Oven; this is a meal prepared in old Colonial style! Enjoy a hayride to end the evening.



Sunday, October 9

AT01 POWER EXERCISE – PILATES

7:00 AM TO 8:00 AM; \$15 PER PERSON

Condition your body with Pilates! This “intelligent” fitness will generate muscle strength and balance your mind and body.

AT02 ON THE TRAIL THROUGH CAMBRIDGE

8:00 AM - 12:30 PM; \$48 PER PERSON

Take a stroll to the Harvard campus, one of the greatest academic and research facilities in the world; via Brattle Street past the cemetery. You will learn about the architectural and historical perspectives and be treated to a series of long-lived campus stories, popular since the Institution’s founding in 1636. Spend time at the University’s Natural History Botanical Museum, home of 3000 glass model flowers created by naturalists and consummate glass artisans, Leopold and Rudolph Blaschka. The life-size models include 847 species with remarkably accurate anatomical sections and enlarged flower parts.

AT03 ANTIQUE BOSTON & ISABELLA STEWART GARDNER MUSEUM

9:30 AM TO 4:30 PM; \$83 PER PERSON

Visit the gas-lamp lit Charles Street, the antiques center of Boston. A variety of shops will open early exclusively for CNS where you will find antiques from the United States, China, Japan, England, France, and other countries around the world; there is no shortage of collectibles! You won’t have to travel far to be transported to the turn of the century when you visit the breathtaking palazzo, Isabella Stewart Gardner Museum. Isabella’s pioneering independence and eccentricity overcame resistance from the very conservative Boston Brahman in opening a female-owned gallery. Despite being the victim of the most costly art heist in the 20th Century, the museum displays over 3,000 works of art including objects by Rembrandt, Botticelli, Raphael, Titian and Matisse. Time will be allotted for significant shopping and lunch is on your own.



AT04 AMERICA’S WALKING CITY: “WELCOME TO BOSTON” 11:45 AM TO 12:45 PM; COMPLIMENTARY

Plan your tour itinerary with an overview of what Boston has to offer and the area’s best-kept secrets! All in all, Boston and its environs feature incomparable charm, historical ambiance, unique architectural sense, and the vibrancy of an eclectic collaboration of cultures. Experience the beginnings of America; A living history.

Sunday, October 9

AT05 THE PERFECT TOUR: GLOUCESTER AND ROCKPORT

12:00 PM TO 5:00 PM; \$68 PER PERSON

Along with coastal beauty and the final stages of fall foliage, view the Eastern Point Lighthouse which guides the fishermen to shore in the coastal town of Gloucester. Take a stroll through sites from the blockbuster movie “The Perfect Storm”. Afterwards, you will encounter Rockport’s trademark “Motif No.1”, while wistfully shopping the boutiques and eateries in the weather beaten shops of Bear Skin Neck. Glimpses of Sandy Bay and the Inner Harbor pop up like a changing slide show between buildings and through shop doors and windows and the rocky point at the end of the neck provides a panoramic view. You’ll visit Halibut Point State Park, a 54-acre park along the rocky coast. On a clear day, views extend to the Isles of Shoals off the coast of New Hampshire and Mount Agamenticus in Maine. Estimated travel time: 45 minutes each way.

AT06 BOSTON REVEALED

1:00 PM TO 5:00 PM; \$57 PER PERSON

Referred to as the “Athens of America”, Boston represents a colonial cornucopia of sites and sounds. Travel through Copley Square and the Back Bay, home of the Boston Public Library and Trinity Church. View the Old South Meeting House, where planning for the Tea Party “coup” took place, and the Old State House where the Declaration of Independence was recited to Boston residents. Head to Charlestown’s old navy shipyard to view “Old Ironsides” –originally launched in Boston in 1797, this is the oldest commissioned warship afloat in the world. As you leave the Charlestown area, travel into the old world of the North End and forge on to Faneuil Hall, “the cradle of liberty” for over 240 years. Amble past the home of Paul Revere, famous patriot, businessman, father and silversmith, the oldest building in Boston.



OPENING RECEPTION

6:30 PM TO 8:30 PM

The Congress of Neurological Surgeons invites you to step back in time and into the rich history of Boston. Follow The Freedom Trail through the streets of Boston – America’s Walking City on Sunday, October 9 from 6:30 pm – 8:30 pm in the Hynes Convention Center Auditorium. Experience the 16th, 17th, and 18th Century of the rich Bostonian history and charm. From neighborhoods to historical icons and events; you will be taken through three centuries while you witness how Bostonian history was made.

Join your colleagues to enjoy an assortment of sumptuous hors d’oeuvres and beverages as you build a lifetime of memories and camaraderie.

Each Annual Meeting registrant will receive one complimentary ticket to the Opening Reception.

Monday, October 10

AT07 POWER EXERCISE – TAI CHI

7:00 AM TO 8:00 AM; \$15 PER PERSON

Tai Chi originated from martial art exercises focused on levels of awareness. They are composed of gentle physical movements, breathing techniques, mental and spiritual meaning, and meditation. Balance your Yin and Yang life force with Tai Chi.



CNS SPOUSE HOSPITALITY CENTER

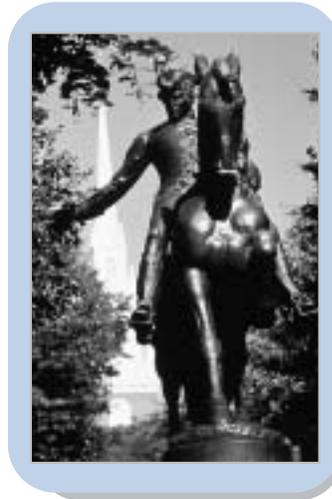
7:00 AM TO 10:30 AM; HOSTED BY CNS

Continental breakfast and beverages will be served this morning in the CNS Spouse Hospitality Center at the Sheraton Boston Hotel.

Monday, October 10

AT08 COLONIAL LITERARY LEGENDS **8:00 AM TO 12:00 PM; \$67 PER PERSON**

Retrace the footsteps along the Freedom Trail through Boston proper and into the towns of Belmont, Lexington and Concord, where the Freedom Rider rode his horse to warn the Colonials that the “British Are Coming”. Relive the moments on the famous Lexington Green and Concord Foot Bridge as well as the 13-mile ride of Paul Revere from Charlestown to Lexington / Concord. Learn about the “true” story of that night and the day’s to follow. In the century following America’s War for Independence, the Greater Boston area experienced a whole new kind of “revolution”. Lifting beloved authors off the pages of their works, today’s excursion intertwines them in the rich and fascinating context of their time whilst the vibrant literary and political reawakening comes to life.



TOPICS

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Auxiliary Tours / Optional Events / Social Program



Monday, October 10 **8:50 am**

Nelson M. Oyesiku, MD, PhD, FACS
Presidential Address

**Homogeneity and Heterogeneity:
Lessons from Nature and Society**

AT09 BEWITCHING SEAPORTS: SALEM AND MARBLEHEAD **9:00 AM TO 4:00 PM; \$121 PER PERSON**

“Witch” way to Salem? Salem and Witches: two words synonymous with New England; where witchcraft hysteria defined this seaside Mecca’s place in history and even today. Arriving in Salem, your first stop will be “The House of Seven Gables”, the inspiration for Nathaniel Hawthorne’s great classic. Winding past the Hawthorne Inn and Pickering Wharf, the macabre of the “witchery” draws you into a fascinating glimpse of 17th century mob hysteria. Enjoy lunch at the historic Hawthorne Hotel; if you are not interrupted by a spirit or two. After lunch, head into Marblehead, home to a sleek fleet of prestigious yachting clubs, Marblehead is a charming town still dependent on its own fishing industry. Visit Point O’Neck Lighthouse before embarking down the streets of Old Town up to Abbot Hall where town meetings are still regularly held and view the famous painting “Spirit of 76”, a true period masterpiece.

AT10 CNS AUXILIARY LUNCHEON & PROGRAM **12:30 PM TO 3:00 PM** **HOSTED IN PART BY CNS; \$45 PER PERSON**

More and more we hear about the many options available to us in the arena of plastic surgery. Did you know that over 1.5 million plastic surgery procedures are performed in the United States annually? While 70 percent of all plastic surgery procedures are reconstructive, there is an ever-growing interest in aesthetic plastic surgery particularly the less invasive procedures. Join us for an informative and educational luncheon gathering with Dr. Melissa R. Schneider, Plastic and Reconstructive Surgeon. Dr. Schneider will discuss minimally and non-invasive procedures.

Melissa R. Schneider, MD is a graduate of Hamilton College and the University of Rochester School of Medicine. Dr. Schneider completed her General Surgery internship at New York Hospital and her General Surgery residency at Seattle’s Virginia Mason Medical Center. She subsequently held a Fellowship in Plastic and Reconstructive Surgery at The Massachusetts General Hospital. Dr. Schneider started her practice in 1998 specializing in many of the newest technologies and minimally invasive procedures such as Botox, Blepharoplasty, Laser & IPL Treatments, Photofacials, Thermage, Collagen, and Restylane/Hylaform.

Join us on Monday afternoon and enjoy a wonderful lunch as you get answers to all the plastic surgery questions you have always wanted to know.



Monday, October 10

AT11 VICTORIAN BACK BAY WALKING TOUR

3:30 PM TO 5:30 PM; \$29 PER PERSON

Boston's Back Bay embraces one of America's richest collections of art and architecture. Its treasures include grand rows of Back Bay mansions, The Boston Public Library, and New Old South Church with a closer look inside the Trinity Church.

OE02 ODYSSEY OF THE SEAS

6:00 PM TO 10:30 PM; \$148 PER PERSON

Set sail aboard this graceful dinner cruise around Boston Harbor. You will discover the different decks and elegant atmosphere on this state-of-the-art ship, reminiscent of a classic ocean liner. Enjoy dinner and live entertainment as the Odyssey route takes you along Historic Boston Harbor from Castle Island to George's Island, then east to the Boston Light on Little Brewster Island, and back north to Charlestown Naval Yard before returning to the Wharf. A cash bar will be available.

Tuesday, October 11

AT12 POWER EXERCISE – YOGA

7:00 AM TO 8:00 AM; \$15 PER PERSON

Yoga is an ancient Indian practice composed of: health, happiness and a greater sense of self. The body and mind are linked via stretching, breathing and meditating throughout the exercises to create in general, a higher consciousness.



CNS SPOUSE HOSPITALITY CENTER

7:00 AM TO 10:30 AM; HOSTED BY CNS

Continental breakfast and beverages will be served this morning in the CNS Spouse Hospitality Center at the Sheraton Boston Hotel.

AT13 OH, THE ELEGANCE & CHARM OF NEWPORT

8:00 AM TO 5:00 PM; \$145 PER PERSON



Travel along the coast to discover the beguiling town of Newport; known as the legendary seaside resort and summer playground for this country's first millionaires and home of America's first castles. You'll experience the spectacular "10 mile drive" via the shoreline, admiring regal mansions against the backdrop of the magnificent Atlantic. Revel in the luxury of the Vanderbilt's "summer cottage" — The Breakers — a sprawling mansion with 70 rooms illustrating the Vanderbilt's role in the Gilded Age.

Eat like the royals, lunch will be served at the Astor's Beechwood Mansion; Astor's Beechwood is the former home of the Queen of American Society, Caroline Astor, the creator of the first American social register, "the 400", and the mother of John Jacob Astor IV, whose legend went down with the Titanic.

AT14 BEACON HILL WALKING TOUR

9:00 AM TO 11:00 AM; \$28 PER PERSON

From the golden dome of the State House to the stately townhouse of Louisburg Square, the Beacon Hill tour will take you back in time. Enjoy the beautiful architecture of this neighborhood's 18th and 19th century townhouses and mansions, and discover its history and secrets. Walk through a delightful maze of red bricked sidewalks and cobble stone streets while experiencing the spell of enchantment "The Hill" will cast on you. The tour will conclude on Charles Street where you can stroll around and discover the beautiful antique shops.



Tuesday, October 11



TOPICS

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Auxiliary Tours / Optional Events / Social Program



**Tuesday, October 11
10:40 am**

**Special Lecturer on Creativity and Innovation
Professor Ian Wilmut, PhD
Cells from
Cloned Embryos in Research and Therapy**

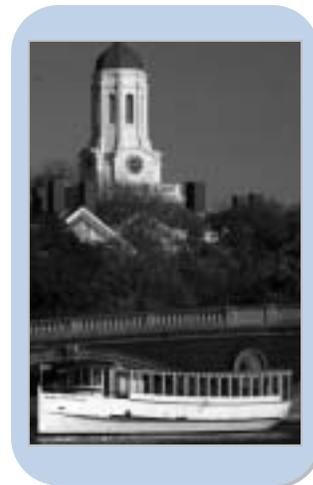
AT15 BOSTON BY DESIGN

1:00 PM TO 5:00 PM; \$93 PER PERSON

Start the day with a behind-the-scenes tour of a local fashion designer's studio. Learn the actual elements of what makes the process work – fabrics, patterns, and the cutting table. Take time to admire the collection and if inspired, may opt to purchase a piece or two. Next, it's off to the dynamically changing industrial waterfront where New England's preeminent resource for the design industry, the Boston Design Center, is located. The everyday workplace of interior designers, decorators, architects, and commercial specifiers holds a treasure trove of possibilities of reinventing your world. The Center focuses on modern-day design principles and offers 75 independent wholesale showrooms featuring more than 1,200 premier lines of furniture, fabrics, floor coverings, lighting fixtures, antiques, accessories and kitchen, bath and building products for every area of the home and office. You will be awarded exclusive access not available to the general public, via a professional designer who will give you the insider's look at several showrooms as well as the opportunity to purchase directly from the showroom retailer at discounted prices.

**OE03 CAMBRIDGE SOIREE, EVENING RIVER CRUISE
6:00 PM TO 10:00 PM; \$125 PER PERSON**

Head into Harvard Square, through the historical back roads of Cambridge; a leisurely amble down Tory Row past George Washington's house, the Old Blacksmith's Shop and the home of Henry Wadsworth Longfellow. Embark onto charming riverboats along side the Charles River for a buffet dinner and continue a fascinating excursion highlighting various points of interest and historical markers along the riverside.



**OE04 BOSTON BREWERY TOUR
6:00 PM TO 10:00 PM; \$98 PER PERSON**

This evening, head out on a Boston Pub Crawl. You will experience the atmosphere as you enjoy (3) 8 oz tastings and appetizers at three of Boston's best-known pubs. A professional tour guide will enthrall you with Boston history and lore throughout the evening.

Wednesday, October 12

AT16 POWER EXERCISE – AEROBICS

7:00 AM TO 8:00 AM; \$15 PER PERSON

Wake up with a morning aerobics workout! Increase your heart rate, burn some calories and improve endurance while exercising to rhythmic dance music to get your body moving.

CNS SPOUSE HOSPITALITY CENTER

7:00 AM TO 10:30 AM; HOSTED BY CNS

Continental breakfast and beverages will be served this morning in the CNS Spouse Hospitality Center at the Sheraton Boston Hotel.



Wednesday, October 12

AT17 BOSTON DUCK AND FENWAY 9:00 AM TO 12:00 PM; \$73 PER PERSON

The fun begins as soon as you board your "Duck", an authentic World War II Amphibious Landing vehicle. First, you will be greeted by a legendary ConDUCKtor, who will be narrating the tour. Then you're off on a journey like you've never had before. Cruise by all the places that make Boston the birthplace of freedom and a city of firsts, from the golden-domed State House to Bunker Hill and the Fleet Center, Boston Common and Copley Square, to fashionable Newbury Street, Quincy Market to the Prudential Tower, and more. And just when you think you've seen it all . . . the duck splashes right into the Charles River for a breathtaking view of the Boston and Cambridge skyline. Disembark at Fenway Park; the home of the Boston Red Sox. Though generations have come and gone, Fenway Park remains, much like it did the day it opened on April 20, 1912. Visit the park where the Babe pitched, The Kid hit, Yaz dazzled, and Manny and Ortiz still thrill young fans today. Learn the history of it all as you visit the new Red Sox Hall of Fame. Before strolling around Fenway Park, relax in the 406 Club and from the Press Box imagine being one of the "Knights of the Keyboard".




Wednesday, October 12
10:30 am
Professor Wole Soyinka,
The Sixth Annual Walter
E. Dandy Orator
Rapture and Rupture in the Liminal World

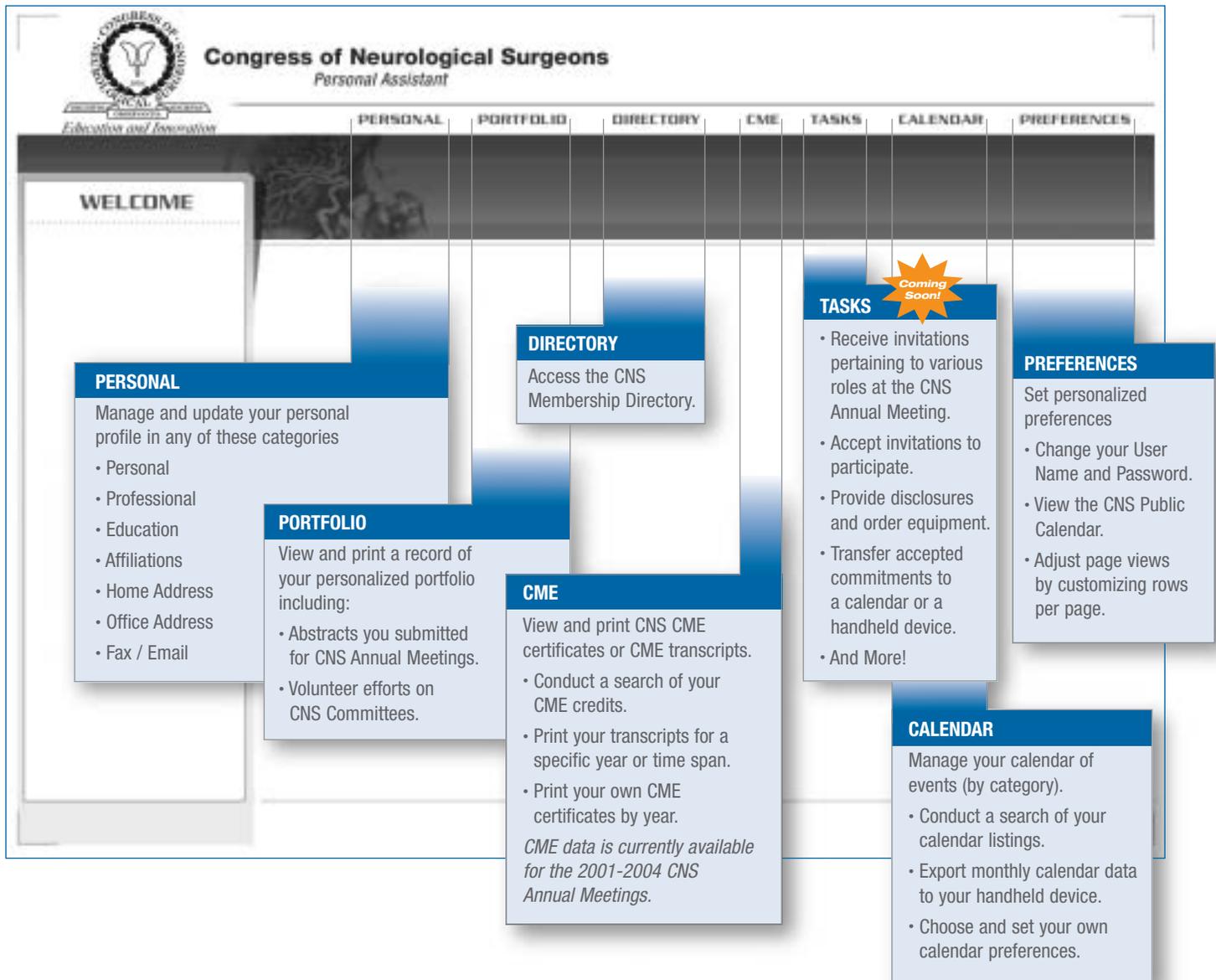
What you might not know about Boston...

- There are two State Houses, two City Halls, two courthouses, and two Hancock buildings (one old, one new for each).
- The "Old Granary Burial Ground" – on Tremont St. close to the Park Street Church - this historic cemetery boasts that "there are more people buried in 'Old Granary' who are known to more people than are buried in any other burying ground in the country." Among the best known:
 - John Hancock, Samuel Adams, and Robert Treat Paine (3 signers of the Declaration of Independence)
 - Paul Revere (he of the famous "Midnight Ride")
 - Mary Goose (better known as "Mother Goose," writer of the famous nursery rhymes)
 - Benjamin Franklin's parents
- The underground train is not a subway. It's the "T" and it doesn't run all night.
- It wasn't until 1856 that Christmas was made a legal holiday in Massachusetts.
- Charles Dickens gave the first reading of his beloved "A Christmas Carol" at the Tremont Temple in Boston in 1867.
- Congress declared in 1961 that Samuel Wilson of Arlington, Massachusetts, who provided casks of beef with "U.S." for American troops during the War of 1812, was indeed the real Uncle Sam. There's a statue marking his birthplace at Mass Avenue and Route 60.

Congress of Neurological Surgeons Personal Assistant Service – (CNS PA)

Introducing the CNS Personal Assistant service (CNS PA)
from the Congress of Neurological Surgeons!

*CNS PA is a complimentary online management tool
created exclusively for CNS Members.*



Congress of Neurological Surgeons
Personal Assistant

PERSONAL PORTFOLIO DIRECTORY CME TASKS CALENDAR PREFERENCES

WELCOME

PERSONAL
Manage and update your personal profile in any of these categories

- Personal
- Professional
- Education
- Affiliations
- Home Address
- Office Address
- Fax / Email

PORTFOLIO
View and print a record of your personalized portfolio including:

- Abstracts you submitted for CNS Annual Meetings.
- Volunteer efforts on CNS Committees.

DIRECTORY
Access the CNS Membership Directory.

CME
View and print CNS CME certificates or CME transcripts.

- Conduct a search of your CME credits.
- Print your transcripts for a specific year or time span.
- Print your own CME certificates by year.

CME data is currently available for the 2001-2004 CNS Annual Meetings.

TASKS *Coming Soon!*

- Receive invitations pertaining to various roles at the CNS Annual Meeting.
- Accept invitations to participate.
- Provide disclosures and order equipment.
- Transfer accepted commitments to a calendar or a handheld device.
- And More!

PREFERENCES
Set personalized preferences

- Change your User Name and Password.
- View the CNS Public Calendar.
- Adjust page views by customizing rows per page.

CALENDAR
Manage your calendar of events (by category).

- Conduct a search of your calendar listings.
- Export monthly calendar data to your handheld device.
- Choose and set your own calendar preferences.

Get Started with the CNS PA service Today!

Log on to <http://cnspa.neurosurgeon.org> ~ Enter your User Name and Password ~ Click login.

Current CNS Members: Your User Name and Password were recently emailed to the account you specified in the CNS Online Membership Directory. A letter was also sent to your preferred mailing address. If you need your User Name and Password resent, please contact the CNS at info@1cns.org

New CNS Members: You will receive an email with your User Name and Password shortly after becoming a CNS Member.



LOLA AND NELSON M. OYESIKU



President

Nelson M. Oyesiku was born in Nigeria where he graduated from St. Gregory's College and received his medical degree from the University of Ibadan. He then attended the University of London, UK as a Commonwealth Scholar where he obtained a Masters of Science degree. He obtained his neurosurgical training at Emory University, Atlanta. During his residency he also completed a PhD degree in the neuroscience graduate program at Emory studying the role of neurotrophic factors in neuronal survival and regeneration.

Dr. Oyesiku was appointed to the neurosurgical faculty at Emory upon completion of his training. He is currently Professor of Neurological Surgery and Director of the Laboratory of Molecular Neurosurgery & Biotechnology. His clinical and research focus is the surgical treatment and molecular biology of pituitary tumors. He received an NIH CIDA Award and Medical Faculty Development Award from the Robert Wood Johnson Foundation. He is a recipient of an NIH RO1 award for the molecular imaging and targeting of pituitary tumors. He has authored several manuscripts, book chapters and a book in the field of neurosurgery and basic science. Dr Oyesiku's laboratory has identified unique aspects of pituitary adenoma gene expression and is developing a new modality for imaging and targeted therapy of pituitary tumors.

Dr. Oyesiku has served Emory University, Emory Clinic and the Emory Hospital on various committees and he has also served on several state and regional committees.

Dr. Oyesiku has been Vice-President of the Congress of Neurological Surgeons and serves on the Executive Committee of the CNS. He has served on the Executive Committee of the Joint Section of Neurotrauma/Critical Care and the Joint Section of Tumors. As President-Elect he served as Chair of the Strategic Planning Committee of the CNS. He was co-Chair of the Scientific Program Committee for the 2002 CNS Annual Meeting and he was Scientific Program Chairman for the 2003 CNS meeting. He was Annual Meeting Chairman of the 2004 CNS meeting. He has been Chair of the CNS International Committee and served on the CNS Publications Committee. He is on the Editorial Board of **Neurosurgery**, the official journal of the CNS. He is ad hoc reviewer for several peer-reviewed journals. He is on the board of directors, Federation for International Education in Neurosurgery. He is a CNS Delegate to the World Federation of Neurosurgical Societies. He is chair of the Neuroendocrine Committee of the World Federation of Neurosurgical Societies.

He has been Secretary/Treasurer of the Georgia Neurosurgical Society and is currently President of the Georgia Neurosurgical Society.

He has been selected by his peers as one of *The Best Doctors in America* and was selected by the Consumer Research Council of America as one of *America's Top Surgeons*. He is a Fellow of the American College of Surgeons. He is named in *Marquis Who's Who in America*. He has been a visiting professor at several departments of neurosurgery.

Nelson and Lola have been married for 22 years. Lola is an R.N. with specialty training in Obstetrical Nursing, and is a certified midwife. She works part-time for Grady Hospital, Atlanta. They have three children; Angela (21) is a junior at University of Georgia at Athens; Linda (17) and Nelson III (14) who both attend Pace Academy in Atlanta. Linda plays the piano and Nelson III plays the trumpet. Angela enjoys volleyball, and singing. Linda and Nelson III play soccer and basketball for their school teams. Lola enjoys gardening and cooking. Nelson enjoys golf, football, cricket, and reading. Lola, Nelson and the kids have enjoyed seeing a great deal of the world together and have made the quadrennial pilgrimage to the World Cup finals a regular feature of their travels.

SANDY AND RICHARD G. ELLENBOGEN



President-Elect

Richard Ellenbogen is Professor and Chairman of Neurological Surgery at the University of Washington School of Medicine. He holds the Theodore S. Roberts Endowed Chair in Neurological Surgery, is the Chief of Neurological Surgery at Harborview Medical Center, and Chief of Pediatric Neurological Surgery at Children's Hospital and Regional Medical Center in Seattle, Washington. He is currently the President-Elect of the Congress of Neurological Surgeons. Rich has enjoyed nearly every job on the Scientific Committee or Annual Meeting Committee for the CNS, since 1989.

Dr. Ellenbogen was born and raised in New York, where he attended public school. He received his college degree in biochemistry at Brown University in 1980 and his medical degree from Brown in 1983. After completing a residency in 1989 at Children's Hospital, Brigham & Women's Hospital in Boston, Harvard Medical School, Dr. Ellenbogen became a staff Neurosurgeon at Walter Reed Army Medical Center in Washington, D.C. He was deployed in support of Operation Desert Storm as Commander of the 252nd Medical Detachment with the XVIII Airborne Corp. He was awarded a Bronze Star during that deployment. After he returned to Walter Reed, he became the Neurosurgical Director of the DOD/VA Head Injury Project. Subsequently, he became the Chief of Neurosurgery and Residency Program Director at Walter Reed Army Medical Center, and Chairman of the National Capital Area Neurosurgery Residency Consortium, prior to joining the UW Department of Neurological Surgery in November of 1997.

Dr. Ellenbogen's clinical practice focuses on Pediatric and Adult Brain Tumors, Craniofacial/Congenital Anomalies, Trauma, and Neuro-endoscopy. Dr. Ellenbogen's current extramural funded research (NIH and ACS) is in the field of hindbrain abnormalities/CSF physiology, and Brain Tumors. He is using MR to study the anatomic and physiological (CSF) properties of patients with Chiari malformations. In addition, his UW Nanotechnology research group (MINDD) is studying techniques to improve molecular imaging of brain tumors in situ, and in the operating room.

Rich and Sandy Ellenbogen have been together for 23 years, and married for 19 years. Sandy, who was raised in South Dakota, is an ICU nurse and works at the University of Washington Medical Center. They have 3 children: Rachel (16) who goes to high school and rows for the Pocock Crew Team in Seattle, Paul (14) who is a self-acclaimed computer addict and fraconophile who loves fencing, and the high spirited Zach (11) who plays every sport imaginable from football to baseball. Rich's hobbies include fly fishing, hunting and cooking. The Ellenbogens enjoy swimming together, watching movies and traveling as a family.



CATHERINE AND CHRISTOPHER E. **WOLFLA**



Annual Meeting Chairman

Christopher E. Wolfla was born in North Carolina and grew up in Indianapolis, Indiana. He received his undergraduate education at Indiana University in Bloomington, Indiana and his medical education at Indiana University School of Medicine in Indianapolis, Indiana. He completed his Neurosurgery residency training at Indiana University Medical Center under the direction of Drs. Robert L. Campbell and Paul B. Nelson. After his residency, he did a fellowship in Spinal Neurosurgery at the Medical College of Wisconsin under the direction of Dr. Sanford J. Larson.

From 1998 through 2004, Dr. Wolfla was a faculty member at the University of Oklahoma Health Sciences Center, where he was an Associate Professor of Neurosurgery and held the Esther and Ted Greenberg Endowed Chair of Neurosurgery. In 2005, Dr. Wolfla had the opportunity to return to the Medical College of Wisconsin, in Milwaukee, Wisconsin. He is currently an Associate Professor of Neurosurgery and is involved in both the Neurosurgery residency program and the fellowship program in Spinal Neurosurgery. Dr. Wolfla has an active clinical practice centered on spinal neurosurgery, including degenerative, neoplastic, infectious, and traumatic diseases of the spine. His research interests include cervical spondylotic myelopathy and the treatment of thoracic spinal fractures.

Dr. Wolfla currently serves the Congress of Neurological Surgeons as an Ex-Officio member of the Executive Committee, as Chairman of the 2005 Annual Meeting Committee, and as a member of the Strategic Planning Committee. He serves on a number of other committees in the Congress of Neurological Surgeons, including the Education, Web Site, and Fellowship Committees. He was formerly an Executive Committee Member-at-Large, Chairman of the 2004 Annual Meeting Scientific Program Committee, and the Chairman of the Education Committee. He was a contributor to the Resident Curriculum in Neurosurgery and Editor of the Medical Student Curriculum in Neurosurgery and the Image Database. In addition, Dr. Wolfla currently serves on the Executive Committee of the AANS/CNS Joint Section on Disorders of the Spine and Peripheral Nerves as Chairman of the Web Site Committee.

Chris and Cathy Wolfla have been married since 1988. They have two lovely children, Andy (age 12) and Julie (age 6). The family enjoys annual trips to the Indianapolis 500 and sporting events with the children. Chris plays the electric guitar, Andy the bass, and Cathy the piano.



GALE ENGLAND AND CHRISTOPHER C. **GETCH**

Christopher Caldwell Getch is honored to serve the Congress of Neurological Surgeons as the Scientific Program Chairman. Dr. Getch joined Dr. H. Hunt Batjer on the Northwestern University faculty in 1996 in the Division of Cerebrovascular Neurosurgery. Prior to arriving in Chicago, Dr. Getch completed fellowships in Microsurgery with Dr. Peter Jannetta and Stereotactic Radiosurgery with Dr. L. Dade Lunsford and Dr. Douglas Konziolka at the University of Pittsburgh. Dr. Getch received his BA degree from Princeton University in 1984, his MD degree from Tufts University School of Medicine in 1989, and graduated from neurosurgical residency at Thomas Jefferson University under the chairmanship of Dr. William Buchheit. Since joining the faculty at Northwestern, Dr. Getch has been active in organized neurosurgery serving the Congress of Neurological Surgeons in numerous roles, most recently as Chairman of Leadership Development and Chairman of Membership. He has served as the Northwestern Neurosurgery Department's Clinical Practice Director since joining the group in 1996 and is currently Treasurer of the Illinois State Neurosurgical Society. Dr. Getch has been actively involved in clinical research in subarachnoid hemorrhage, cerebrovascular imaging, and the genetics of intracranial aneurysms. He has authored several manuscripts and book chapters on intracranial aneurysm surgery.



Scientific Program Chairman

Dr. Getch is married to Gale and they live in Hinsdale. They enjoy exotic travel and running having completed two marathons together. Dr. Getch continues to row in Lincoln Park. In addition to attending to their new puppy Wilbur, they are looking after their two boys Christopher, Jr. (12) and Oliver (10) who have reintroduced them to numerous activities including baseball, soccer, football, lacrosse, camping and skiing.

JULIA AND ERIC J. **WOODARD**

Eric J. Woodard is an Assistant Professor of Neurological Surgery at Harvard Medical School. He completed undergraduate studies at Trinity College in Hartford, Connecticut and Medical school at The Pennsylvania State University College of Medicine in Hershey, PA. Subsequently he underwent residency training at Emory University in Atlanta under Dr. George Tindall. Following a spine fellowship with Dr. Sanford Larsen at the Medical College of Wisconsin in Milwaukee, he returned to Atlanta as junior faculty. In 1995 he joined the faculty at Harvard at Brigham and Women's Hospital and was appointed Chief of the Division of Spinal Surgery in the Department of Neurosurgery, where he has practiced for the past nine years. A native of Massachusetts, he has recently joined the Boston Spine Group at New England Baptist Hospital in Boston where he directs the Neurosurgical fellowship program and pursues clinical research interests in spinal arthroplasty and adult deformity.



Local Arrangements Chairman

Dr. Woodard has remained active in the Congress of Neurological Surgeons serving as a Member-at-Large of the executive committee and a frequent lecturer for instructional courses and program seminars. He is an active member of several spinal surgery societies and currently serves as Chairman of the Board of AOSpine North America and a Board member of AOSpine International.

Eric and Julia Woodard live in the Jamaica Plain neighborhood of Boston with their four children – Matthew, Daniel, Caroline, and Vivienne.



General Information

Accessibility

The Hynes Convention Center is accessible through the Prudential or Boylston Street entrances. Inside, meeting rooms, exhibit halls and public areas are all served by conveniently located elevators. Telephones, drinking fountains and restrooms located throughout the facility are also wheelchair accessible.

Scooter and wheelchair rentals are available for a fee through ScootAround, Inc. and must be reserved at least a week prior to your arrival. Please call them toll free at 1-888-441-7575 or go to www.scootaround.com for further information.

Air Travel Information

Take advantage of one-stop shopping for all your air travel, registration and housing needs. See page 75 for details.

Americans with Disabilities Act

Please let us know if, under the Americans with Disabilities Act, you may require special accommodations or services in order to attend the 2005 CNS Annual Meeting. We want to ensure that no individual with a disability is excluded because of the absence of auxiliary aids and services.

Auxiliary Tours, Optional Evening Events and CNS Social Activities

Auxiliary Tours are optional activities and programs available to spouses and guests. Physicians and Allied Health Professionals may not register for programs that run simultaneously with our Scientific Program. These activities and programs are selected to provide an opportunity to explore the more interesting attractions in the Boston area.

All tours will depart from the CNS headquarters hotel, the Sheraton Boston (outside front entrance). Please arrive 15 minutes prior to the scheduled departure time.

All registered CNS Annual Meeting spouses and guests are invited to use the Spouse Hospitality Suite, Monday through Wednesday, including daily continental breakfast from 7:00 am – 10:30 am. Please note that admittance to the Spouse Hospitality Suite is by Spouse/Guest or Nurse/Spouse badge only. The Spouse Hospitality Suite is located at the Sheraton Boston Hotel.

Optional Evening Events are available to all registered attendees and our exhibit partners. Complete details and fees for all planned Optional Activities can be found on pages 59-64. We encourage you to share this information with your spouse or guest for their convenience when registering for the week's extensive programming.

CNS Social Activities are also open to all registered attendees and are included with each registration. The Opening Reception on Sunday, October 9 is open to all registered attendees and one complimentary ticket is included with each registration. See page 60 for more details.

Children

Children over the age of 12 may register as a guest at the Guest Registration fee. This will allow full participation in Auxiliary Program activities. Please note that children under the age of 18 are not allowed in the Exhibit Hall.

Should you desire Babysitting services, please contact the concierge desk at your hotel or call:

Parents in a Pinch (www.parentsinapinch.com)
800 688 4697, Ext. 2 or 617 739 5437, Ext. 2

Babysitters, Inc.
617 713 2669

CNS has no control over and assumes no responsibility for the care that is provided through hotels or these services. This information is provided solely to assist participants in identifying possible sources for childcare.

Climate

Boston experiences all four seasons and the fall colors in October will be something to view along the Charles River, where it meets the Atlantic Ocean. October mean temperatures range from a high of 59°F to a low of 47°F. Visitors are most comfortable with a light jacket or coat, or in a suit. An all-weather coat will take the chill off the evening temperature.



CME Accreditation

The Congress of Neurological Surgeons is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.

The CNS designates this continuing medical activity for a maximum of 26.25 credit hours in category 1 credit toward the American Medical Association's Physician's Recognition Award. An additional 16.5 hours of credit may be earned by attending optional educational programs such as Practical Courses and Luncheon Seminars. Each physician should claim only those hours of credit that he/she actually spent in the educational activity.

Presenters of scientific posters can claim up to 10 category 2 credits for designing a poster and can also claim 1 category 2 credit for teaching; attendees can claim 1 category 2 credit for each hour spent viewing posters.

The same number of category 1 credits awarded will be applied toward the Continuing Education Award in Neurosurgery.

CNS cannot designate its Annual Meeting as meeting the criteria for credit for nurses and other allied health professionals. For credit that may be acceptable to state medical associations, specialty societies, or state boards for medical licensure, please contact those organizations directly.

Certificates are mailed approximately six weeks after the meeting.

Course Agendas and Faculty

Agendas are occasionally subject to change. As we continue to strive to improve the quality of your educational experience, CNS may substitute faculty with comparable expertise where necessary.

Disclosures

Before the program, all speakers will disclose the existence of any financial interest and/or other relationship they might have with the manufacturer(s) of any commercial product(s) to be discussed during their presentation. It is also each speaker's responsibility to include the FDA clearance status of any device or drug requiring FDA approval discussed or described in their presentation or to describe the lack of FDA clearance for any "off label" uses discussed. Speakers from the audience are also required, therefore, to indicate any relevant personal/professional relationships as they discuss a given topic.

Handout materials are prepared and submitted for distribution by the presenters who are solely responsible for their content.

Disclosures will be published in the Scientific Program Book and the Abstract CD that will be distributed at the Annual Meeting.

E-mail Cafés

You will be able to check your e-mail messages from the E-mail Cafés in the CNS Member Services Center (Booth #318, Exhibit Hall and throughout the Exhibit Halls). Please be sure to have your e-mail account username, password and the mail server name.

Exhibition

The CNS Exhibit Halls will be located on Levels One and Two of the Hynes Convention Center.

Hours are:

Monday, October 10 9:00 am – 4:30 pm

Tuesday, October 11 9:00 am – 4:30 pm

Wednesday, October 12 9:00 am – 4:00 pm

Admittance to the Exhibit Hall is by CNS name badge only. Please note that children under the age of 18 are not allowed in the CNS Exhibit Hall.

Evaluations

The evaluation process is a key component in our continuous strive for excellence in neurosurgical education. Feedback from registrants helps to determine programming at future Annual Meetings. As a result of your input, our programming will continue to improve. Please complete your evaluation forms and deposit them in the drop boxes located throughout the Hynes Convention Center. CNS is dedicated to neurosurgical education . . . your opinions are important to us!



Future Meetings

Chicago, ILOctober 7 – 12, 2006
 San DiegoSeptember 15 – 20, 2007
 Orlando, FLSeptember 20 – 25, 2008
 New Orleans, LAOctober 24 – 29, 2009

Housing Information

See pages 74-77.

International Attendees (U.S. State Department Regulations)

U.S. embassies and consulates now require face-to-face visa interviews for most nonimmigrant visa applicants. Because of these new regulations visa application approval may be delayed. You are encouraged to apply for a visa at least 4 months before the Annual Meeting. Please visit www.neurosurgeon.org for more information and website links to the U.S. Department of State for procedures on visas.

Member Services – Booth #318

Designed to increase the visibility of the CNS Secretary, the CNS Membership Department and **NEUROSURGERY**® as well as the Residents’ and Placement Offices, the CNS Member Services is located in Exhibit Hall A, Booth #318. Staff members will be available to assist you and answer any questions you may have about CNS and its member services. You can also check your e-mail at the E-mail Cafés.

Message Center

The Message Center will be located in the CNS Registration Area during registration hours.

Press Room

Press activities will take place at the Hynes Convention Center. Please stop by the Registration area for details.

Registration Information

Registration Hours:

Saturday, October 87:00 am – 5:30 pm
 Sunday, October 97:00 am – 5:30 pm
 Monday, October 106:30 am – 5:30 pm
 Tuesday, October 116:30 am – 5:30 pm
 Wednesday, October 126:30 am – 5:30 pm
 Thursday, October 137:00 am – 11:00 am

For additional information see page 78-79.

Speaker Ready Room

The Speaker Ready Room will be available Saturday, October 8 through Wednesday, October 12, from 6:30 am – 6:00 pm and Thursday, October 13 from 6:30 am – noon at the Hynes Convention Center. All speakers and abstract presenters should visit the Speaker Ready Room prior to their presentations.

Smoking

Smoking will be prohibited in all meeting rooms and exhibit areas.

Transportation Information from Boston Logan International Airport

Logan Airport is a convenient 2 miles outside the city center, with several convenient public transportation options to the airport from downtown & suburban locations. Travelers can ride the MBTA Blue Line to Airport Station and connect to all terminals via free Logan shuttle buses. Taxis are readily available within the city & at the airport.

Who Should Attend

Neurological surgeons, neurosurgery nurses, physician assistants, orthopedic surgeons, primary care physicians, gerontologists, radiologists, hospital administrators, oncologists, neurologists, pediatricians, physiatrists, and infectious disease specialists are welcome and encouraged to attend the 2005 CNS Annual Meeting.

Become a CNS Member



Only \$335 per year!

for Active and International Active Members

ACCESS

A global network of neurosurgical colleagues and information

- ◆ CNS Member Contact Guide ◆ World Directory of Neurological Surgeons ◆ www.neurosurgeon.org
- NEW!** CNS Personal Assistant service (CNS PA) now available!

EDUCATION

Bringing you the latest scientific knowledge and solutions

- ◆ CNS Annual Meeting
 - Save \$100 on registration fees ◆ Earn valuable CME credit
- ◆ Complimentary subscriptions to leading neurosurgical publications—over a \$300+ value.
 - ◆ **NEUROSURGERY**®—the official journal of the CNS.
 - NEW!** *Operative Neurosurgery*—a new supplement to **NEUROSURGERY**®.
 - ◆ *Neurosurgery News*—the official news magazine of the CNS.
 - ◆ *Clinical Neurosurgery*—published annually for CNS members.
- ◆ **sans** *wired* 
power up your mind
 - ◆ Prepare for your certification or re-certification.
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Or send your application to: Congress of Neurological Surgeons
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Schaumburg, IL 60173

CNS Housing, Registration, and Travel Service/I.T.S.

The CNS, in conjunction with International Travel Services (I.T.S.) offers you one-stop services for all your hotel, registration, and air travel needs.

For your convenience, you can register for courses, select your flights, reserve your hotel room and more via these four methods:

- Online:** www.neurosurgeon.org
Internet booking is available 24 hours a day, seven days a week
Credit card only
Not available for Residents or Fellows
Receive *immediate confirmation* of Registration Confirmation Notification
- Fax:** **800/521-6017 U.S. & Canada**
847/940-2386 International
Credit card only
Allow *seven business days* for Registration Confirmation Notification
- Phone:** **800/424-5249 U.S. & Canada**
847/940-2155 International
Credit card only
Not available for Residents or Fellows
Not available for Ticketed Events
Allow *two business days* for Registration Confirmation Notification
- Mail:** **CNS Annual Meeting/I.T.S.**
108 Wilmot Road, Suite 400
Deerfield, IL 60015-5124
Credit card or check (no wire transfers)
Allow *two business days* for Registration Confirmation Notification

Fax & Mail

- Type or print all information on the registration / housing form in black ink. Do not use a cover sheet.
- CNS / I.T.S. is not responsible for faxes not received due to mechanical failure or circumstances beyond our control.
- Due to the high volume of forms received, I.T.S. cannot confirm receipt of faxed or mailed forms.

Phone

Have your completed registration / housing form and credit card information in front of you when placing your call.

Credit Card Payments

- For Advance Registration Visa MasterCard American Express Diners Club Discover
- Accepted On-Site Only Visa MasterCard American Express

Payment by Check

Checks must be drawn on a U.S. bank in U.S. dollars. Make checks payable to: CNS Annual Meeting / I.T.S. Include \$250 per unit hotel deposit plus appropriate fees for registration and any optional items purchased.

Important Dates to Remember

September 8, 2005

Advance Registration Discount and Housing Deadline Cancellation Deadline (Full refund with receipt of written cancellation request)

September 9 to September 15, 2005

\$75 Processing fee will be charged for written cancellation requests received during this time. No refunds given after September 15, 2005.

September 15, 2005

Course and event tickets will be refunded in full until this date. No refunds after this date.

September 9 to September 19, 2005

Contact ITS for any Housing questions.

September 26, 2005

Any changes to hotel reservations must be made directly with hotel from this date on.

CNS Hotel Reservations

Contact I.T.S., the official CNS Housing and Registration Service, to reserve your guest rooms.

Hotel will not accept reservations from CNS meeting attendees directly.

Reservations can be made Online or via Fax, Phone or Mail – See page 74.

Be sure to complete the entire housing section of the registration form.

Hotel Reservation Information and Deadlines

Hotel reservations are only available to registered CNS attendees.

You must first register for the CNS Annual Meeting before making your hotel arrangements – see page 78.

Don't wait. Rooms are limited and fill up quickly.

Reserve your room by September 8, 2005.

Deposits

A deposit is required and due at the time your hotel reservation is made.

This payment must be submitted with your registration fees. Credit cards will be charged immediately.

A small portion of your room rate will be used to help defray the cost of registration and housing services.

– Deposits: Standard Room = \$250

All rooms are subject to applicable tax, currently at 12.45% for hotel tax.

Hotel Confirmations, Cancellations or Changes

Note: When canceling a reservation by phone, record the date, cancellation number, and name of the person accepting the cancellation.

Through September 15, 2005, 5:00 pm CST

- All changes and cancellations must be made through I.T.S.
- Rooms are not transferable
- Refunds for deposits will be issued by I.T.S.

Between September 9 and September 19, 2005

- Contact ITS for any Housing questions.

Beginning September 26, 2005

- All changes and cancellations must be made directly with the hotel.
- If cancellation notice is not received according to the hotel policy, the deposit may be forfeited.
- Check your hotel confirmation and contact the hotel directly for information.

Complimentary Housing for CNS Resident Attendees

Complimentary housing at the CNS Annual Meeting is available to CNS Resident Members on a first-come, first-served basis.

To be considered for this program, CNS Resident Members must:

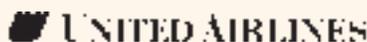
- Complete a separate CNS Resident Housing Form (Included with Resident Member registration materials).
- Register for the CNS Annual Meeting by September 1, 2005
- Become a member by August 1, 2005

NOTE: All Resident attendees must register and make housing arrangements via Fax or Mail. Online and Phone registration is not permitted.

Air Travel

The Congress of Neurological Surgeons has secured a special discount agreement with United Airlines. The discount is offered exclusively to CNS Annual Meeting attendees and is not available to the general public.

Choose Your Savings & Book Early



Save 5% off the lowest available fare by calling United at 1-800-521-4041 – refer to **Meeting ID #523LG**

Save 10% off the unrestricted coach fare when purchased 7 days in advance.

Save an additional 5% when you purchase your tickets at least 30 days in advance.

Discounts apply on United, United Express, Ted, and code share flights operated by US Airways, US Airways Express and Air Canada.

Reservations are accepted through: The airline 7 days a week from 8:00am-10:00pm EST at 1-800-521-4041, online at www.united.com, or through your travel agent.

Mileage Plus members receive full credit for all miles flown to this meeting.



TOPICS

THEORIES

TOOLS

THERAPIES



Thank You for Your Continued Support of the CNS

The CNS thanks you for your support of reserving your guest room through the official CNS Housing, Registration, and Travel Service/I.T.S. The CNS, in negotiating contracts with convention centers and hotels, must commit to a minimum number of guest rooms. This commitment helps guarantee the availability of meeting space and helps control of the cost of the meeting. When the CNS fails to anticipate the number of attendees reserving rooms through our housing block, we are held liable for contracted rooms that go unoccupied. This financial penalty may then impact future member services and programs. A history of high utilization of our room block enables CNS to negotiate better room rates for future meetings.

Hotel Room Rates:	Single:	Double:
Sheraton Boston Hotel (Headquarters)	\$259	\$279
Boston Marriott Copley Place	\$239	\$259

All rates are subject to a 12.45% occupancy tax.

A small portion of your room rate will be used to help defray the cost of housing and registration services.

Sheraton Boston Hotel

The Sheraton Boston Hotel is the official CNS Headquarter Hotel

The Sheraton Boston Hotel is nestled in charming and historic Back Bay, close to the Downtown Crossing, the scenic Charles River, many of Boston's favorite shops, restaurants, and museums, and only one block from famous Newbury Street.

It is conveniently connected to the Hynes Convention Center and to 200 shops at the Prudential Center and Copley Place Mall, which features a wide variety of fine retail establishments. Restaurants offering every type of cuisine and setting are also available, including Top of the Hub Restaurant on the 52nd floor of the Prudential Building with sweeping views of the Boston skyline.

The Boston Fitness and Swim Club features New England's largest indoor/outdoor hotel pool. For those who wish to grab a quick bite to eat while relaxing poolside, a casual menu is served in the sundeck. Surrounding the 18-meter pool is a state-of-the-art fitness center, including free weights and cardiovascular machines, Jacuzzi and redwood sauna. Personal trainers are available upon request.

Restaurants and Lounge:

- Apropos Restaurant - features traditional New England cuisine with a creative twist
- Turning Point Lounge – serving Tapas
- Starbucks – Coffee Bar

Amenities:

Sheraton Sweet Sleeper (SM) Bed, high speed internet access, individual climate controls, coffee and tea maker, bathrobes, voicemail and more.





Boston Marriott Copley Place

An anchor hotel in Boston's posh Copley Place; it offers easy access to over 200 upscale shops and restaurants and more. An enclosed footbridge leads to the nearby Prudential Center complex and the Hynes Convention Center... "A city within a city!"

Restaurants and Lounge:

- Gourmeli's offers an upscale family restaurant with daily buffets
- Champions American Sports Bar
- The Sushi Bar – Japanese cuisine and features fresh sushi favorites
- The Terrace Bar – Open for dinner and enjoy live entertainment Wednesday through Sunday
- Starbucks – Coffee Bar

Amenities:

- Refrigerator
- Internet browser/Web TV
- Newspaper delivery to your room
- Full-service business center and more



Education and Innovation

Important Dates to Remember

September 8, 2005

Advance Registration Discount and Housing Deadline
Cancellation Deadline (Full refund with receipt of written cancellation request)

September 9 to September 15, 2005

\$75 Processing fee will be charged for written cancellation requests received during this time. No refunds given after September 15, 2005.

September 15, 2005

Course and event tickets will be refunded in full until this date. No refunds after this date.

September 9 to September 19, 2005

Contact ITS for any Housing questions.

September 26, 2005

Any changes to hotel reservations must be made directly with hotel from this date on.

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Registration Information



Instructions (How to fill out your enclosed registration from)

B1-B2 Advanced Registration and Housing Form

PRINT or TYPE your personal information. Your name and address, as entered here, will be used on your CME certificate, if applicable. Please include phone, fax, and email. If international, please include country code for phone and fax.

PRINT or TYPE any spouse/guest/ or children's badge information.

Hotel Reservations: List your arrival and departure days and dates. Check your room preference. Indicate with whom and where you will be staying if you are not making a hotel reservation. Should your room preference not be available you will automatically be placed in the room type most similar to your requested room type. All requests will be handled first come first served. Book Early!

Check the box that corresponds to your registration status. Residents and Fellows (domestic and international) must have registration form signed by Program Director. (Residents and Fellows may only register via fax or mail).

Add the \$250 Hotel Deposit to the cost of your registration – this is the balance due for Annual Meeting Registration and Housing Deposit. Registrations received without deposit payment cannot be processed.

Payment: If paying by check, please make check payable to CNS Annual Meeting / I.T.S. Any checks received on an overseas bank will be returned. Any checks returned for insufficient funds are subject to additional charges. If you are paying by credit card, write in full credit card number; print the cardholder name, expiration date and signature. NO WIRE TRANSFERS.

B3-B4 Practical Course and Luncheon Seminar Ticket Forms

Due to the popularity and limited space in many sessions, please indicate several choices where applicable.

Practical Courses and Luncheon Seminars are optional and each has a separate fee. If the Practical Course and/or Luncheon Seminar you list is open, your credit card will be charged accordingly. You may pay and register via the methods outlined on page 74.

Practical Course Registration (B3)

Saturday, October 8	Afternoon Practical Courses are available.
Sunday, October 9	Full day, morning and afternoon Practical Courses are available.

Luncheon Seminar Tickets (B4)

You may attend one Luncheon Seminar per day. Fee includes a seated lunch served in the seminar room.

Luncheon Seminars are offered:	Monday, October 10
	Tuesday, October 11
	Wednesday, October 12

B5 Optional / Evening / Auxiliary Tour Registration Form

(See pages 59-64 for details about these programs)

Please check the event tickets you would like to purchase, indicate quantity and total your purchase.

This form may be used to purchase tickets and order your Annual Meeting T-shirts.

PURCHASE TICKETED EVENTS ONLINE OR VIA FAX OR MAIL.
Phone orders will not be accepted.

CNS Meeting Registration



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Registration Information

Category	Discounted Fees On or before September 8, 2005 at 5:00 pm CST	Full Price Fees After September 8, 2005
	Register via: Internet Fax Phone Mail (see page 74 for details).	
Member	\$575	\$675
Transitional Member	\$575	\$675
Non-Member Neurosurgeon	\$675	\$775
Non-member Physician	\$675	\$775
Non-member/Non-Physician	\$675	\$775
Member of the Armed Forces	\$475	\$575
Resident Member*	\$150	\$250
Resident Non-Member*	\$250	\$350
Fellow Member**	\$150	\$250
Fellow Non-Member	\$250	\$350
Retired Senior Member	\$250	\$350
Medical Student	\$250	\$350
Allied Health	\$400	\$500
Physician Assistant	\$400	\$500
Nurse	\$400	\$500
Nurse Practitioner	\$400	\$500
Spouse/Guest/Child (13 & over)	\$115	\$115
Resident Spouse	\$75	\$75

* All domestic and international Residents must have their Program Director sign registration form.

**All domestic and international Fellows must attach letter from Program Coordinator verifying Fellow status.

Registration Materials Pick Up	Items included in Registration Fee
All materials should be picked up on-site at the Hynes Convention Center	<ul style="list-style-type: none"> • One ticket to the Opening Reception on Sunday, October 9 • Admission Monday – Thursday General Scientific Sessions • Admission Monday - Wednesday Special Courses Section Sessions • Morning Coffee & Afternoon Beverage Breaks in Exhibit Hall: Monday – Wednesday • Thursday Morning Coffee Break

Registration Cancellation Policy

All refund requests must be received in writing.

Requests accepted via:

Email: cns@itsmeetings.com

Fax: 847-940-2386

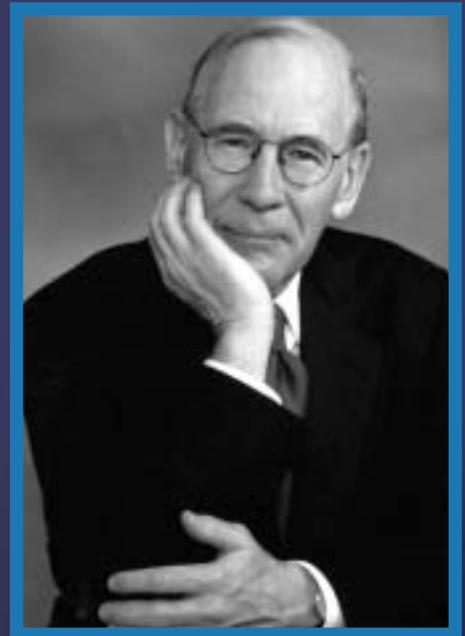
Mail: CNS Annual Meeting / I.T.S.
108 Wilmot Road, Suite 400
Deerfield, IL 60015-5124

Request Received by	Registration	Course & Event Tickets
September 8, 2005	Full refund	Full Refund
September 15, 2005	Full refund, less \$75 processing fee	
After September 15, 2005 and no show	Absolutely no refunds will be issued after this date, regardless of cause.	Absolutely no refunds due to facility guarantees.

2006 ANNUAL MEETING



RICHARD G. ELLENBOGEN
2006 President



PETER MCLAREN BLACK
2006 Honored Guest

October 7 – 12, 2006

CHICAGO, ILLINOIS

56TH ANNUAL MEETING

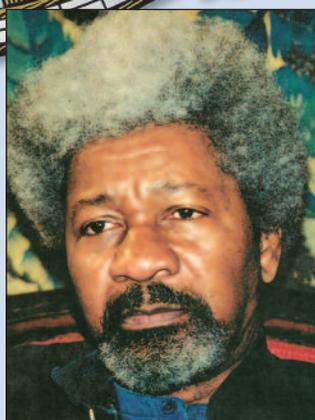
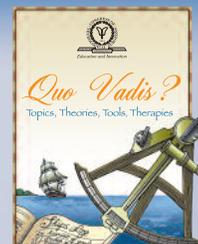
Please plan to join us in Chicago!

CHICAGO



2005 CNS ANNUAL MEETING

Quo Vadis?



6TH ANNUAL WALTER E. DANDY ORATOR

Prof. Wole Soyinka
Nobel Laureate—Literature 1986

SPECIAL LECTURER ON CREATIVITY AND INNOVATION

Prof. Ian Wilmut, PhD, FRS, FRSE, OBE



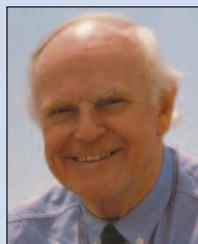
SPECIAL LECTURERS

MONDAY
Topics



Prof. Vilayanur S.
Ramachandran, MD, PhD

TUESDAY
Theories



Prof. E. Sidney Watkins,
MD, FRCS, OBE

WEDNESDAY
Tools



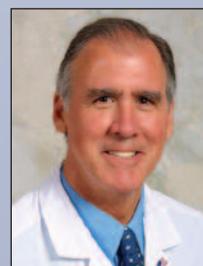
Prof. Robert S. Langer, PhD

CNS ANNUAL MEETING HIGHLIGHTS OCTOBER 8-13, 2005



Joint meeting with the
European Association of
Neurosurgical Societies—
EANS.

- **NEW!**
Digital Poster Center
See hundreds of Scientific Posters
via this new State-of-the-Art
Digital format.
- Over 26 hours of CME credit (and
up to 16.5 optional credit hours).
- Two floors of Exhibit Hall
space—featuring the latest in
neurosurgical innovation.
- Exclusive benefits for CNS
Resident Member attendees.
- And much more!



Roberto C. Heros, MD
2005 CNS Honored Guest



Nelson M. Oyesiku,
MD, PhD, FACS
2005 CNS President

Register Online
www.neurosurgeon.org