CLINICAL NEUROSURGERY

VOLUME 54



CLINICAL NEUROSURGERY



Education and Innovation



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CLINICAL NEUROSURGERY

Volume 54

Proceedings

CONGRESS OF NEUROLOGICAL SURGEONS

Chicago, Illinois 2006





SCIENTIFIC INQUIRY • PATIENT ADVOCACY • SURGICAL MENTORSHIP

Congress of Neurological Surgeons 56th Annual Meeting

October 7-12, 2006 • Chicago, Illinois

Preface

The 56th Annual Meeting of the Congress of Neurological Surgeons was held in Chicago, Illinois. Volume 54 of *Clinical Neurosurgery* represents the official compilation of the invited scientific manuscripts from the plenary sessions, biographic and bibliographic information of the honored guest, and the presidential address. The program theme for this meeting was "Transcendent Leadership: Scientific Inquiry, Patient Advocacy, and Surgical Mentorship."

Meeting attendance was the largest ever with over 6,000 total attendees. Drs. Christopher Getch (Annual Meeting Chairman) and Tony Asher (Scientific Program Chairman) organized a truly outstanding meeting. There were several new educational formats such as live 3D cadaveric demonstrations by technical masters. There were six special speakers, including David McCullough, the two time Pulitzer Prize-winning historian, Judah Folkman, the renowned oncology surgeon/scientist who has pursued angiogenesis factors and their importance as a therapeutic target, Dr. Michael Bliss, author of a number of historical medical books including insights into the professional and personal life of Dr. Harvey Cushing, Dr. Ronald McKay, renowned stem cell neurobiologist, and Dr. Donald Johanson, a world renowned paleontologist. Finally, Mr. George Lucas was invited as the First Annual Michael L.J. Apuzzo Lecturer on Creativity and Innovation. Mr. Lucas' captivating leadership style interview on stage with past president Dr. Richard Ellenbogen was an inspiration to all. Dr. Apuzzo described Mr. Lucas in his introduction as "an iconoclast for our time and an icon for all time."

Dr. Peter Black, the Franc D. Ingraham Professor of Neurosurgery at Harvard Medical School, was the meeting's honored guest. Dr. Black shared his vast clinical experience with meningiomas, hydrocephalus, and also offered his insights on leadership and the future of neurosurgery.

Outgoing CNS President, Dr. Richard Ellenbogen eloquently delivered his presidential address, entitled, "Mathematics of Failure." We now welcome Dr. Douglas Kondziolka as the new president of the CNS.

We thank all of the contributors to *Clinical Neurosurgery* for their timely submission to this volume. We are especially indebted to Jennifer Sollenberger at Wolters Kluwer for her long hours of hard work and dedication to this volume of *Clinical Neurosurgery*. This is an exciting year for *Clinical Neurosurgery* because Dr. Michael Apuzzo has graciously agreed to have *Clinical Neurosurgery* published as a Supplement to Neurosurgery. The articles will be peer reviewed and indexed in Index Medicus. See you in San Diego!

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PETER M. BLACK

Honored Guest Peter M. Black, M.D, Ph.D., F.A.C.S.

Dr. Peter Black was born in Canada and grew up in Northern Ontario. While in high school, he became an Associate of the Royal Conservatory of Toronto as a solo performer in piano. He attended Harvard College, graduating with honors. He returned to Canada for medical school at McGill University. He entered surgical and then neurosurgical residency at the Massachusetts General Hospital. During this period, he served two years in the United States Navy, mostly at the U.S. Capitol as a physician to Congress and the Supreme Court. He earned a PhD in philosophy from Georgetown University. In 1980 he joined the staff at the MGH. In 1987 he became a Professor and Chief of Neurosurgery at the Brigham and Women's and Children's Hospitals. He is presently Chair of the Departments of Neurosurgery at Brigham and Women's Hospital; Chief of Neurosurgical Oncology at Dana Farber Cancer Institute; and Franc D. Ingraham Professor of Neurosurgery at Harvard Medical School.

Dr. Black is a respected clinical neurosurgeon with a busy neurosurgical oncology practice that includes many international referrals. He directs the brain tumor program at Dana-Farber Brigham and Women's Cancer Center. He is consistently listed in Best Doctors in America and Top Doctors with special interest in surgery for meningiomas, pituitary adenomas, and low grade gliomas; image-guided minimally invasive neurosurgery; skull base surgery; and brain mapping. He helped to develop the first intraoperative MRI and has used this device extensively to improve brain tumor treatment. He also has extensive experience in epilepsy surgery in children and hydrocephalus in adults. He has been an active member of the Congress of Neurological Surgeons since 1982, serving on numerous CNS committees including the Executive Committee. He edited several editions of SANS and Clinical Neurosurgery and is now Chair of the Editorial Board of Neurosurgery and the senior representative of the CNS to the World Federation of Neurosurgical Societies. His laboratory has had ongoing funding since 1980 including present RO1 funding. It investigates growth and invasion in brain tumors, especially innovative methods of blocking these with emphasis on local delivery systems. His bibliography includes ten books and five hundred papers, most involving brain tumor management, brain imaging and imageguided surgery, medical ethics, and molecular neurosurgery.

Dr. Black is deeply committed to neurosurgical education around the world. He has a great interest in the work of the World Federation of Neurosurgical Societies and chairs its Bylaws committee, also sitting on the Education and Ethics committees. He has mentored students, residents, young faculty, and graduate neurosurgeons from more than thirty countries and has given invited lectures in forty. He is very proud of the productivity of his former trainees, many holding prominent academic positions; Dr Richard Ellenbogen, the current CNS President, is a spectacular example.

Dr. Black has always had the good fortune to work with wonderfully talented and capable people. Chief among these are his family, the most important people in his life. His five grown children live in four cities and three countries. With his wife Katharine, an Episcopal priest, he welcomes Dia, Libby, Katy, P.T., Chris, and their friends home as often as possible, always ready with pizza, movies, and good conversation.

Bibliography

This bibliography includes the work of many colleagues who have helped with the projects represented here. I would like to thank them all. Special thanks to my family; to Rona Carroll who has codirected my lab for 20 years; to Sandra Rufo and Debbie Messinger who have organized my life as executive assistants; and to the many people who have helped in the laboratory and clinical enterprise but are not authors. Finally, I would like to thank Richard Ellenbogen, President of the Congress of Neurological Surgeons in 2006 and presently Neurosurgeon-in-Chief and Department Chair at the University of Washington in Seattle, a great leader in science, patient care and teaching.

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