Mission Statement

The Mission of the course Research Update in Neuroscience for Neurosurgeons (RUNN) is to provide an introduction to and update of the latest concepts, hypotheses and methodologies of neuroscience relevant to neurological surgery. These are presented by accomplished neuroscientists in an atmosphere emphasizing scientific rigor, highlighting models of career development for neurosurgeon-scientists, and illustrating potential future neurological applications. A milieu of total immersion in scientific discourse is designed to foster creative discussions among neurosurgeons and faculty. The course is designed to stimulate neurosurgical trainees to participate in basic, translational, and clinical research relevant to the practice of neurological surgery.

Historical Background and Setting

The RUNN course was the brainchild of Henry Schmidek, formerly of Harvard University and the University of Vermont. Schmidek conceived the course in response to the anticipated expansion of neurosurgery heralded an era of expansion and uninterrupted success and challenges in the laboratory.

There was nothing like it in neurological education, and there still is not. The founding mission of the RUNN course remains relevant today, and its culture and milieu remain as appealing. This crown jewel of American neurological education was adopted in the late 1980’s by the American Association of Neurological Surgeons (AANS) and later by the Joint Committee on Education of the AANS and the Congress of Neurological Surgeons (CNS). This endorsement and administrative oversight by organized neurosurgery heralded an era of expansion and uninterrupted success under the Directorship of Charles Hodge, of Syracuse, New York, with his lovely wife Cathy shepherding the Course as its coordinator. In the mid 1990’s Dr. Hodge became co-Director, passing the helm of Directorship to Cordell Gross, of Burlington, Vermont. In what has become a course tradition, Linda Gross served as Course Coordinator.

During this period Charlie and Cordell cultivated a core of devoted faculty from the MBFL, Syracuse, Vermont, Harvard, Brown, and other academic stars as role models, and wiser icons telling their tales of success and challenges in the laboratory. There would be long blocks of time for reading in the library, with lectures, unhurried, with plenty of time for discussion. There would be lots of time for reading in the library, for creative and vivid discussions with beer, wine and snacks late into the night. Friendships would be forged among attendees, and research ideas and even an occasional scholarly career would be hatched. All attendees stay at the dorm at Swope Hall, where the charming cafeterias are like no other, and the views from each simple bedroom (many shared by two residents) are memorable.

Because of unlimited illness in 1998 Dr. Gross asked to step down from the Directorship of the RUNN Course, which he had grown to love so much. The opportunity of change leadership allowed a re-examination and re-commitment to the Mission and core values of the RUNN Course. The AANS and CNS asked the Society of Neurological Surgeons (SNS) to assume sponsorship and oversight of the course. Established in 1920 the SNS is known in neurological lore as the “Senior Society” or organization of North American residency Program Directors. The SNS would ensure Program Directors’ continued commitment to this unique educational offering, and ensure residents’ continued participation.

The Marine Biological Laboratory is a non-profit institution devoted to research and education in basic biology, the MBFL, Syracuse, Vermont, Harvard, Brown, and culminated a core of devoted faculty from the MBFL, Syracuse, Vermont, Harvard, Brown, and other institutions who would participate on a regular basis as faculty. Many still receive the highest ratings from RUNN course attendees, and return again. Other RUNN attendees eventually became academic stars, and later leaders in neurosurgery and have become dedicated faculty. A requirement for faculty participation remains – that the individual be an active and accomplished scientist, speaking on topics he/she actively investigates, and that he/she be an effective speaker.

Only those who are highly paid by the neurological trainees would be invited again. Many would disagree and inspire captivating unforgettable lectures or discussions. The days would be filled with lectures, seminars, and plenty of time for discussion. There would be lots of time for reading in the library, for creative and vivid discussions with beer, wine and snacks late into the night. Friendships would be forged among attendees, and research ideas and even an occasional scholarly career would be hatched. All attendees stay at the dorm at Swope Hall, where the charming cafeterias are like no other, and the views from each simple bedroom (many shared by two residents) are memorable.

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The 2003 RUNN Course Curriculum: Tradition and Innovation

The founding mission and core values of the RUNN Course remain unchanged for this year’s offering in 2003, and the SNS Executive Committee (representing North American Residency Program Directors) reemphasized its commitment to the course and its leadership.

In response to recent course evaluations and discussions with Program Directors and residents, the course was shortened in 1999 from two weeks to one full week with travel days on both weekends. This format will be maintained. The one and one-half hour length of individual lectures remains unchanged and four evening sessions will continue to be held. Curriculum content has been reshaped to include lectures covering the spectrum of molecular, cellular and systems neuroscience. These include coverage of topics on molecular genetics, signaling and receptors, stem cells, cell death, regeneration, immunity, glutamate, vascular tone and phenotype, chaos theory, cognitive information science, circuit modeling, and higher cortical function. Approximately one-third of the lectures are given by practicing neurosurgeons with active laboratories. There are focused tours of the MBL laboratories and the very popular microscopy seminar with hands-on dissection of squid giant axon (challenging the dexterity of the most agile young neurosurgeons!). There were discussions on academic career development, grantmanship, history and philosophy of science and the scientific method, and history of the MBL. And there were the traditional opening get-acquainted reception and Course Orientation, and the farewell Clambake and certificate ceremony.

The 2003 Special Lecture was delivered by Henry Brem, M.D., Ph.D. Coasting Professor and Chairman of the Department of Neurosurgery at Johns Hopkins Hospital. He discussed his views on the treatment of malignant brain tumors. Dr. Brem also spent time with the course participants sharing his insights into academic career development and the feasibility of connecting world-class research with a stimulating and challenging clinical practice.

The collegial atmosphere at Snowball House remained unchanged, as did the memorable late night sessions with snacks, beer and wine. We preserved several blocks of free time, and the extraordinary one on one interaction among faculty and attendees. Each attendee has access to the 1,600 page textbook, Fundamentals of Neuroscience, edited by Zigmond, Bloom, Landis, Roberts, and Squire (Academic Press 1999), a magnificent resource to topics covered in the lectures, and an outstanding source of suggested reading.

An Enthusiastic Cast of Attendees

There were 55 attendees from 45 Programs (see list) representing programs throughout the United States, Canada and Puerto Rico. Our goal is to attract one neurosurgeon from each neurological program in North America. We will work hard until we represent at least one participant from each North American Program. The future of the RUNN course is a catalyst towards that end.

Our participants continue to be enthusiastic. It is exciting to see the participants sweep up into a top and engaging the lecturers with probing questions.

“At the end of the week we all felt a little bit smarter; a lot more up to date on the future of neuroscience; more connected with our peers, and most importantly, we realized that we are a part of an amazing group of people around the globe who are driven to take science and medicine into the new millennium.”

Matthew Chang, M.D., PGY-4
Denver, Colorado – 2002

Josh Medow, M.D., PGY-4
Madison, Wisconsin – 2002

Toward RUNN 2004 and Beyond!

We have finalized space contract with the MBL for the years 2004 through 2009. The RUNN 2004 will take place from October 30th- November 6, 2004. The SNS and the Course Co-Directors and Coordinator are committed to maintaining the best of the RUNN Course, while continuing to strive to enhance curriculum content and value to each registrant. We continue to call on Residency Program Directors to support this unique gem of North American Neurosurgical Education, by providing their residents the opportunity of exposure to, and update on the best of neurobiology.

We hope that future courses will also attract fellows and young faculty at formative states of their academic careers, and to practicing neurosurgeons who want to get reacquainted with the future of neuroscience!

RUNN Web Site
http://www.societyns.org

Future Course Dates

Marine Biological Laboratory
Woods Hole, MA

October 30-November 6, 2004

October 23-30, 2005

October 21-28, 2006

October 20-27, 2007

October 18-25, 2008

October 17-24, 2009

Resident Attendee Course Report by Le Selznick, M.D.

Neurosurgical Resident, Duke University Hospital

As a resident attendee at the 2003 RUNN course, I wish to express in this report the profound impact that it has on the rest of my career in neurosurgery. More than just a research update in neuroscience for neurosurgeons, the course is an introduction to some, a reminder of others, that the field we have chosen is an exciting and ever-changing academic pursuit. By assembling a diverse and enthusiastic faculty at the world-renowned Marine Biological Laboratory in beautiful Cape Cod, the RUNN course offers an inspiring opportunity to neurosurgical residents in the early stages of their careers.

The research update for 2003 included talks from world-renowned neurosurgeons and neuroscientists on some of the more recent discoveries shaping the current practice and future direction of clinical neurosurgery. Whereas some of the 60 to 90 minute talks were strictly on basic neuroscience, others were on translational research and career development. Basic science topics included a review of molecular genetics and a brief history of the research conducted at the vasculature lab. In particular, the breakthrough work on the giant squid axon. Angiogenesis, apoptosis, axonal guidance, cortical plasticity, and the molecular biology of brain tumors were also covered. Of particular interest were talks given by leading scientists describing their breakthrough work in the lab and how it applies to what they see in clinical practice. The ability of stem cells to regenerate in the injured spinal cord was discussed by John McDonald using Christopher Reeve as an illustrative case report. Mark Smnad reviewed smooth muscle physiology as it applies to cerebrovascular disease. Gene therapy, convection-enhanced delivery, and a special lecture by Henry Brem on brain tumor therapy were particularly enlightening. Perhaps the best part was the relaxed atmosphere and opportunity to discuss academic career development with some of the leading scientists-physicians detailing their breakthrough work in the lab and how it applies to what they see in clinical practice.

The social aspects were as valuable as the scientific ones. The ability to step away and socialize in the relaxed setting and enjoy the beautiful surroundings and delicious cuisine was a highlight of the week for most of the participants. The social aspect of the course was infectious and made me think critically about the future of neurosurgery and the direction in which we are heading as a specialty in medicine and in our personal career development.

At the end of the week we all felt a little bit smarter; a lot more up to date on the future of neuroscience; more connected with our peers, and most importantly, we realized that we are a part of an amazing group of people around the globe who are driven to take science and medicine into the new millennium.”

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