Here research ships leave everyday to study the pristine waters around Martha’s Vineyard and to collect and maintain more than 200 species of marine life. There are 230,000 square feet of research space and a splendid library with an extraordinary repository of books and journals and incredible electronic connectivity to everything biological. It is here that the great squid axon was (and continues to be) so closely studied unfolding the splendid story of molecular mechanisms of neural function. There are invaluable microscopy facilities, numerous amphitheaters and teaching facilities, a quintessential scientific community in true life and work, and a magnificent setting for creativity and scholarly productivity. And there is Swope Hall, a simple dormitory splendidly designed to foster creative discussions among neurosurgical trainees and faculty. Participants are instructed on how to select a research topic and mentor as well as how to design hypotheses, design experiments and grant writing. The course is designed to stimulate neurosurgical trainees to participate in basic, translational, and clinical research relevant to the practice of neurosurgery.

Historical Background and Setting

The RUNN course was the brainchild of Henry Schmidek, formerly of Harvard University and the University of Vermont. The course was conceived in response to the anticipated expansion of neuroscience, which he predicted in the early 1980's. The course was to combat what he perceived as potential dilution in basic neurosurgery that he feared would weaken the specialty of neurosurgery. Dr. Schmidek’s RUNN Course has been instrumental in setting the course of the last generation of academic neurosurgeons.

As so many neuroscientists from New England, Dr. Schmidek was very familiar with the Marine Biological Laboratory (MBL), at Woods Hole, Massachusetts. Established as 1888 as a non-profit institution devoted to research and education in basic biology, the MBL has been called “the scholarly national center for biology in this century” (Lewis Thomas, The Lives of a Cell). Scientists and students throughout the world come to MBL to conduct research, teach, study and collaborate. They often use the diverse and abundant organisms found in surrounding waters as model systems.
An Enthusiastic Cast of Attendees

I believe I speak for the group of faculty and resident attendees in declaring the 2004 RUNN course a tremendous success. This was the 28th year of the RUNN Course. The course, set on the historic campus of the Marine Biological Laboratory in Woods Hole Massachusetts, brought attendees from programs together for a week of inspiring lectures on various topics in neurosurgery and neurobiology.

The course directors, Dr. Allan Friedman from Duke and Dr. Robert Friedlander from Harvard, organized a wonderful diverse group of lecturers to enrich the content for the course to discuss topical research shaping clinical neurosurgery. Talks ranged from basic science lectures on the neuronal cell signaling to discussions of clinical research design and the history of the scientific method. We were also fortunate to have Dr. Henry Schmidek, the founder of the RUNN Course, in attendance. Dr. Schmidek’s interest and insightful comments clearly demonstrated his passion for the course and the topics presented and his enthusiasm was infectious.

All lectures were held in the conference center of the historic Woods Hole Marine Biological Laboratory. We attended lectures during the day and slept within the confines of the “MBL.” Imbued in the historic legacy of Hodgkin and Black and other pioneers of neurobiological research. During the week, we were also able to explore the resources of the MBL and even demonstrate our own cutting-edge research on apoptosis. The evening sessions, including some of the most enlightening and entertaining talks. The course concluded with a special lecture by Dr. Peter Black on “the neuron as a transitional system.” His lecture neatly brought together many of the concepts discussed during the week and simply ended this talk on an inspiring note.

Following the final lecture, the course concluded with a delicious Cape Cod-style Lobster bake and farewell ceremony.

The colloquial atmosphere at Cape Hall remained unchanged, as were the memorable late night sessions with snacks, beer and wine and the late night sessions at Captain Kidd’s. We preserved several blocks of free time, and the extraordinary one on interaction among faculty and attendees. Each attendee received a complimentary copy of the 1,600 page textbook: Fundamentals of Neuroscience, edited by Zigmond, Bloom, Landis, Roberts, and Roberts. The textbook included countless constructive suggestions for next year. Individual faculty mean evaluation scores ranged from 1.2 to 2.2 (scale 1-5, 1 = best), with more than two-thirds scoring better than 2.0 (good), and none averaging a score of 3.0 (average) or worse.

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Our participants continue to be enthusiastic. It is exciting to see the participants open up into engaging the lecturers and confronting the lecturers with insightful questions.

The 2004 RUNN Course Curriculum: Tradition and Innovation

The founding mission and core values of the RUNN Course remained unchanged for the 2004 course, and the NNS Executive Committee (representing North American residency Program Directors) rearticulated 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 was maintained. The one and one-half length of individual lectures remained unchanged and several session were held. Curriculum content was rephrased to include lectures covering the spectrum of molecular, cellular and systems neuroscience. These include coverage of topics on molecular genetics, signal receptors, stem cells, cell death, regeneration, oncogenesis, glut, brain injury, vascular tone and phenotype, chau theory, cognitive information science, circuit modeling, and higher cortical function. Approximately one-third of the lectures were given by practicing neurosurgeons with active laboratories. There were focused tours of the MBL laboratories and the very popular neuroscience with hands-on dissection of squid giant axon (challenging the dexterity of the most agile young neurosurgeons). There were sessions on academic career development, mentorship, 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 first ACRM and certificate ceremony.

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