A Journal for Translational Neuroscience for Rehabilitation

Great strides have been made in the past 10 years in North America, Asia, and Europe in neurologic-rehabilitation-related research. *Neurorehabilitation and Neural Repair (NNR)* aims to foster this far-reaching scientific activity. As the new editor in chief, with outstanding associate editors and editorial board members, I will continue the course set by Dr Mickey Selzer to capture the most important strides and challenges in this field of widening boundaries. The journal will reflect and help catalyze the evolution of scientifically driven translational research to ameliorate the impairments and disabilities of patients. On a personal note, I can claim that the journal, along with the science for rehabilitation, has come a long way since I authored the 1st article in the 1st issue of the *Journal of Neurologic Rehabilitation*,1 which was the original name when it represented only the American Society of Neurorehabilitation (ASNR). NNR now represents the ASNR and fellow societies of the World Federation of NeuroRehabilitation.

These are optimistic times for patients and clinicians. Hypotheses drawn from research in animal models and theories about skills learning have led to the 1st large, multicenter, randomized clinical trials of interventions for patients with stroke and spinal cord injury.2,3 More trials with solid designs are in progress. Physiologic measures, especially functional neuroimaging and transcranial magnetic stimulation, have captured the neural adaptations associated with rehabilitation. This window on the networks engaged by therapies may aid the manipulation of activity-dependent and pharmacologically induced plasticity for behavioral gains. Research at the level of cells, synapses, and intracellular messenger cascades is providing insight into how to optimize motor and cognitive skills retraining. Biologic interventions, such as cellular implants into the brain and spinal cord, blockers of milieu inhibitors of axonal regeneration, and medications that direct cytoskeletal and other genes for dendritic sprouting and axonal regeneration have reached the stage of clinical safety trials. The injection of substances, as well as the use of neurostimulation and robotic devices, will require rigorous and ethically sensible trial designs. Mentors for trainees are critical for continued progress. In the United States, training grants for young investigators, funds for pilot research studies, and multiyear grants have grown through the efforts of disease-oriented foundations and the National Institute of Neurological Diseases and Stroke and the National Center for Medical Research and Rehabilitation within the National Institute for Child Health and Human Development.4 The pursuit of better care for patients rides with scientists and with clinicians from neurology, neurosurgery and physiatry; physical, occupational, and speech therapy; neuropsychology; and engineering. The journal offers these disciplines an intellectual home.

NNR’s research articles must include sound hypotheses, methods, and results. They must also inform both researchers and clinicians about where each study’s results fit within the distributed chain of evidence and ideas about recovery. So we invite authors to include a short discussion about subsequent experiments, beyond the material they have presented, that may move their work toward novel and efficacious interventions for patients. A new feature, Point of View: New Directions for Research, provides a unique opportunity for authors to tackle a basic science, translational, or clinical problem and to offer an agenda of solutions.5

This issue of the journal includes the remarkable abstracts of the World Congress of NeuroRehabilitation, held in Hong Kong in February 2006. This gathering is an opportune time to recommit NNR to pursuing the clinical science of neurorehabilitation and neural repair.

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References


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