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Editorial

This issue marks the exciting launch of a new journal, devoted to the world of the thalamus and related systems. The main reason underlying the journal is the rapid expansion of the field. Although different thalamic nuclei were recognized by neuroanatomists of the 19th and 20th centuries and methods used to record the electrical activity of thalamic neurons in animals and humans have been available since the 1960s, nowadays thalamic research has entered a new era. Research into the morphology of the thalamus provides data on the synaptic organization and chemistry of this structure at a level of resolution that was hitherto unexpected. Investigations in thalamic slices maintained *in vitro* reveal the intrinsic properties and ionic conductances of neurons. Studies *in vivo*, in animals with intact brain connectivity, including neuromodulatory systems arising in the brainstem and forebrain, place the results obtained *in vitro* in the context of interconnected neuronal assemblies and explore the activity of thalamic neurons during different behavioral states. Computational studies of thalamic functions predict new mechanisms that can be further investigated experimentally. Moreover, electrophysiological studies in humans, during both normal and abnormal states (epilepsy, Parkinsonian tremor, pain syndromes) corroborate the studies performed in animals and provide new clinical aspects. Non-invasive methods in humans are important in delineating and localizing different functions and abnormal states in the thalamus.

The future will develop along the above lines. Thus, the journal THALAMUS AND RELATED SYSTEMS is addressed to a series of investigators, such as neurobiologists (anatomists, electrophysiologists), psychologists, clinical neurologists, neurosurgeons, as well academics implicated in teaching at graduate levels. We will publish high-quality papers on the structure, organization and chemistry of thalamic neurons, including the development, single-cell electrophysiology and synaptic interactions, molecular biology, neuropsychology, computational neurobiology, and pathology of the thalamus. Experimental studies, using a variety of techniques *in vivo*, *in vitro* and *in computo*, as well as clinical and behavioral studies, will be considered for publication. Papers with relevance to related systems, such as activities in thalamocortical and corticothalamic systems, brainstem-thalamic interactions, and thalamic relations with basal ganglia, are also welcomed. Multiple-part papers are encouraged. In sum, the journal will publish short communications, regular articles, and occasional feature articles to address current and important issues, mini-reviews and commentaries, as well as book reviews relevant to the thalamus.

We hope that you will find THALAMUS AND RELATED SYSTEMS an enlightening source of information.

M. Steriade, Editor-in-Chief

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