EDITORIAL

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This journal will include reports on all aspects of the rapidly expanding area of research known as neu-roimmunomodulation. The field encompasses all of the interactions between the central nervous and the immune systems. In essence, the nervous system alters the functions of the immune system via neural, hormonal, and paracrine actions. Neural and humoral influences from the immune system feed back to the CNS to modulate its influences. This is a subject area which was in its infancy until the last 5-10 years; there has recently been an explosive increase in our knowledge of these interactions. The nervous system controls the immune system by release of hypothalamic peptides which alter the secretion of anterior pituitary hormones. These circulate through the blood and act on the immune cells either directly, or through their own target gland secretions to either increase or decrease immune responses. In addition, there is direct innervation of immune cells which can lead to alterations in their function in response to immune challenge. In response to host challenge the cells of the immune system release a variety of cytokines that circulate to the brain to alter temperature regulation, sleep, food intake, and other vegetative functions. The cytokines alter efferent output to the immune cells and release of hypothalamic peptides to alter secretion of pituitary hormones. In addition to acting on the CNS via the circulation, various neurons and glial elements can also produce cytokines and thus directly affect the nervous system. Furthermore, circulating cytokines act directly on the pituitary to alter secretion of its hormones. Cytokines are also produced in the pituitary gland to exert direct effects on the output of pituitary hormones. This journal will cover all aspects of this rapidly expanding field including clinical research, but will emphasize basic studies. On the basic side, we will consider all neural and humoral interactions from molecular genetics to cell regulation to integrative systems of the body. On the clinical side, it is now apparent that many diseases are related to malfunctioning of this system. Excessive production of cytokines and other agents can produce neuronal cell death and may be a basic mechanism involved in the pathogenesis of the CNS pathology in AIDS patients and in various neurodegenerative diseases. The understanding of the basic physiology may well pave the way to important therapeutic measures which can be used to alter the progression of these diseases. While the journal will be primarily devoted to research articles, we plan to publish short, timely reviews of various aspects of the field on the average of one such review per issue. Brief reports of timely and provocative results will also be published. All papers will be peer reviewed by at least two referees and only highly qualified papers will be accepted. Every effort will be made to maintain a short publication time.