EDITORIAL

More intensive pathobiological studies have disclosed various interesting phenomena. Although these phenomena have revealed relations between brain and immune system, further detailed explanations are still needed. There are two vital pathways connecting brain with immune system, i.e., symphatetic nerve system and hypothalamo-pituitary-adrenal axis. Both pathways are commonly used in explaining the effect of mind on changes in immune system. The immune and neuroendocrine systems represent a total integration of information circuit that results from a sharing of ligands (messengers) and their receptors. Consequently, it can be stated that emotions, attitudes, and behaviors can affect immunity and, conversely, immunity can affect emotions and behavior. It is clear that the immune system communicates with the neuroendocrine system and that imbalances in the neuroendocrine-immune circuitry are relevant to host defenses. This knowledge is the basis of the scientific discipline called psychoneuroimmunology (PNI) that emphasizes the indivisibility of somatic and psychological processes and the inseparability of immunologic and neuroendocrine processes. In other words, immunoregulation is not autonomous. Simply put, mind affects the body and physical health, and, conversely, physical health affects mind and thoughts, emotions as well as behavior. Psychology and neurobiology has come together to influence the functioning of the immune system. Psychological factors can lead a person into unhealthy habits, while an individual's mental state can affect the body's biological defense system. It should therefore be possible to alter immune functions by inducing altered psychological states. In this regard, several studies have proved relations between *tahajud* praying, hajj pilgrimage, as well as fasting and immunity change. Sternberg also emphasized that if physical and psychological stresses can make people sick by adversely affecting their immune and hormonal responses, conversely, a strong belief in healing rituals and prayer may help make them well. Those studies proved that positive emotions may enhance immune function, and confirm furthermore that the regulation of immune system does not act autonomously. Today, Kaye regarded the non-autonomous immunity change as psychoneuroimmunological change.

The Editors