Neurobiological research and associated medical practice in the Occident generally assumes that brain mechanisms alone will ultimately suffice to explain all psychologically described phenomena. This assumption stems from the cultural belief prevalent in Western science that all causal mechanisms relevant to neuroscience can be formulated solely in terms of the materialist principles of Newtonian physics. Thus, terms having intrinsic experiential content (e.g., feeling, observing and effort) are not included as primary causal factors since they are not describable solely in material terms. This theoretical perspective is dictated by ideas about the natural world that, although very widely believed in Western scientific culture, have been known to be fundamentally incorrect for more than three-quarters of a century. However quantum physical theory, much more in concert with Oriental approaches to medical practice, differs profoundly from materialist Newtonian physics on the important matter of how the consciousness of human agents enters into the causal dynamics of empirical phenomena. The new quantum principles contradict the older idea that mechanical processes alone can account for all observed empirical data. Contemporary quantum physical theory brings directly and irreducibly into the overall causal structure certain psychologically described choices made by human agents about how they will act. This key development is applicable to medical approaches to neuroscience, and it provides neurologists and psychiatrists with an alternative conceptual framework for describing neural processes. This alternative conceptual framework is much more consistent with Oriental approaches which allow an active role for consciousness in medical practice and provide a scientific basis for new approaches in Western medicine providing an active role of the conscious mind in the treatment of disease states. Recent research on the effects of the traditional Oriental practice of mindful awareness on cerebral activity will be discussed in this context.