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Sommario/riassunto	<p>The basal ganglia constitute a group of subcortical structures, highly interconnected among themselves, as well as with the cerebral cortex, thalamus and other brain areas. These nuclei play a central role in the control of voluntary movement, and their specific pathology comprises the group of diseases known as movement disorders, including Parkinson's disease, Huntington's disease, dystonia and Gilles de la Tourette syndrome, among others. Additionally, the presence of a number of circuits within the basal ganglia related to non-motor functions has been acknowledged. Currently, the basal ganglia are thought to participate in cognitive, limbic and learning functions. Moreover, disorders related to the basal ganglia are known to involve a number of complex, non-motor symptoms and syndromes (e.g. compulsive and addictive behavior). In the light of this evidence, it is becoming clear that our knowledge about the basal ganglia needs to be revised, and that new pathophysiological models of movement disorders are needed. In this context, the study of the pathophysiology of the basal ganglia and the treatment of their pathology is becoming increasingly interdisciplinary. Nowadays, an appropriate approach to the study of these problems must necessarily involve the use of complex mathematical modeling, computer simulations, basic research (ranging from biomolecular studies to animal experimentation), and clinical research. This research topic aims to bring together the most recent advances related to the pathophysiology of the basal ganglia and</p>

movement disorders.
