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## Neurobiology of Disease

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## Editorial

## Editorial for neurobiology of disease special issue on dystonia progress in the neurobiology of dystonia



The dystonias are a group of disorders characterized by excessive involuntary contraction of muscles leading to abnormal movements and postures. They have been described as the most “mysterious” of all movement disorders, because they are often not well recognized in the clinic, and their causes are hard to determine, even after extensive diagnostic testing. During the past decade or more, there has been an enormous effort to improve our understanding of these disorders. By now, more than 100 distinct clinical dystonia syndromes are recognized, along with even more identified etiologies. There have been several recent meetings focused on dystonia (e.g. <https://www.treatment-of-dystonia.org/> and <http://dystonia-2019.uniroma2.it/>). The 6th International Dystonia Symposium is planned for the near future ([www.internationaldystoniasymposium.org](http://www.internationaldystoniasymposium.org)). The numbers of publications with dystonia as a keyword has steadily increased in the past decade (Fig. 1).

This special issue in *Neurobiology of Disease* focuses on what has been learned about the neurobiological basis for dystonia. This special issue is not a comprehensive review of the everything that has been

learned, but rather a selection of specific topics that have attracted a lot of attention recently. One article addresses the many genes so far linked with dystonia. It is not a summary of all the genes, but rather an attempt to assemble them into shared biological pathways. Another article focuses on *TOR1A*-related dystonia, one subtype of dystonia that has been studied particularly intensively. Two additional articles focus on the relationship between dystonia and Parkinson's disease. Both dystonia and Parkinson's disease have been linked with dysfunction of dopamine systems, raising questions regarding potentially shared biological mechanisms. Dystonic movements are also an important feature of levodopa-induced dyskinesias in Parkinson's disease, a phenomenon that has led to more questions about potentially shared therapeutic targets. Finally, the last article addresses how the many recent advances in understanding the neurobiology of dystonia might be exploited to develop novel therapeutics.

These are exciting times for dystonia research. Dystonia is slowly but surely giving up its secrets and is no longer such a mysterious disorder.

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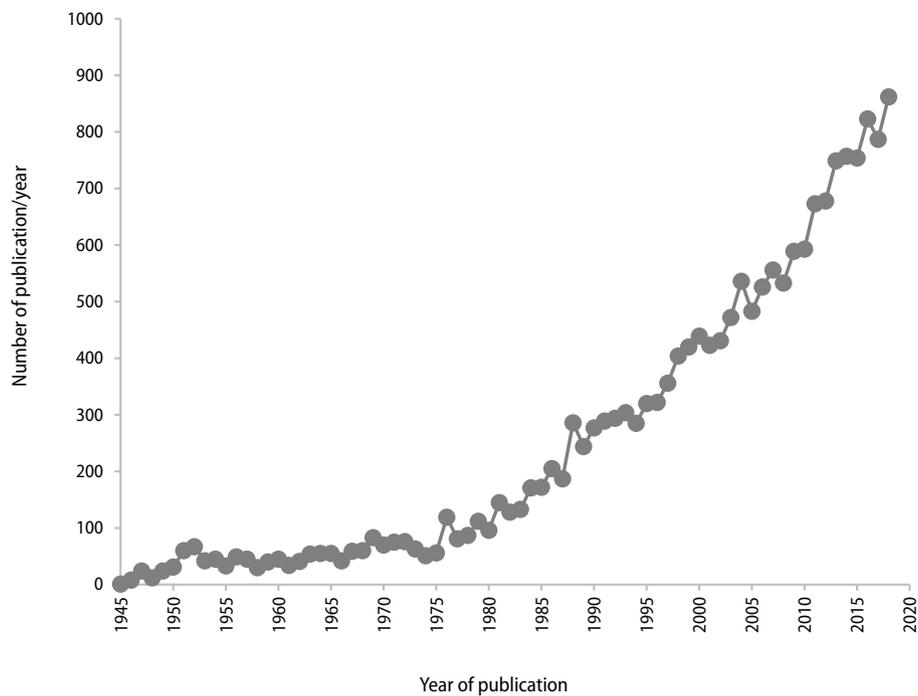


Fig. 1.

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