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COVER PICTURE

Dopaminergic neurons in the substantia nigra pars compacta in the midbrain area are responsible for controlling voluntary movements, and the loss of these cells underlie the pathogenesis of Parkinson's disease, the second-most common and age-related neurodegenerative disease. A mouse model of Parkinson's disease can be produced by injecting the dopaminergic cell-specific neurotoxin MPTP, and the cell loss can be visualized by immunohistochemistry against the marker protein tyrosine hydroxylase. Toward development of therapy for Parkinson's disease, we have synthesized and tested compounds, such as KKC080096, that prevent the MPTP-elicited disappearance of the tyrosine hydroxylase-immunopositive neurons in the substantia nigra, with corresponding changes in the associated motor deficits. Possible cellular mechanisms for the protective effect of the compound were then investigated (Lee et al., pp. 134-147).