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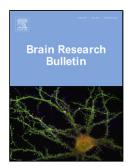
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ACCEPTED MANUSCRIPT

Modeling Parkinson's disease and treatment complications in rodents: potentials

and pitfalls of the current options.

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**Abstract** 

Animal models of neurological deficits are essential to assess new therapeutic

options and reduce treatment complications. Over the last decades, several rodent

models of Parkinson's disease have been developed, and have now become the first-

line experimental tool for therapeutic screening purposes. Which model is the most

predictive for identifying the efficacy of symptomatic or disease-modifying

interventions is still a matter of debate. None of the models so far available is able to

recapitulate all the features of the human disease, but several well-characterized

models with complementary features currently provide a valuable repertoire of tools

to address specific scientific hypotheses. This article reviews the rodent models of

Parkinson's disease currently available, with a particular focus on symptomatic

models used to mimic parkinsonian motor deficits and treatment-related

complications. Advantages and disadvantages of each model are presented and

discussed to assist the decision of investigators who wonder which model may be the

most suitable for their particular research project.

Key words: Parkinson's disease, L-DOPA-induced dyskinesia, 6-OHDA, MPTP,

animal models, rodents.

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