The importance of choosing a preclinical model that reflects what happens in Parkinson's disease

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One of the major problems in the translation of successful preclinical results to clinical studies and new therapies in Parkinson's disease is the use of preclinical models based on exogenous neurotoxins that do not replicate what happens in the disease. The loss of dopaminergic neurons containing neuromelanin in Parkinson´s disease takes years, contrasting the very rapid degeneration induced by exogenous neurotoxins. We discuss the role of endogenous neurotoxins generated during dopamine oxidation and its possible use as new preclinical models for Parkinson´s disease.