Identification of new molecular mechanisms potentially involved in the development of Parkinson’s disease
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**About the cover:**
Parkinson’s disease is a neurodegenerative disease where, according to the dying back hypothesis, the dopaminergic neurons of the Substantia Nigra (SN) first lose their axonal connectivity with the striatum and consequently degenerate. The sprouts symbolize these dopaminergic neurons ‘growing out’ of the mouse SN (the red area). Normally, these neurons contain brown melanin pigment (brown seeds) and project their long axons (stems) to the striatum where they connect through their synapses (leaves) with the striatal targets. In PD, these axons lose their synaptic connectivity, retract their axons and lose their brown pigmentation as is illustrated by the ‘degenerated’ sprouts. It is expected that through identification of molecular signals that induce axon retraction and degeneration we would be able to alter this process and stop the progression of the disease. There may even be a possibility to induce re-growth of the retracted axons so they can ‘sprout’ back into the striatum and reconnect with their destined targets.

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