Kidum R&D Applications and Technology Transfer

A plant extract for the prevention or treatment Parkinson's disease

Figure 1

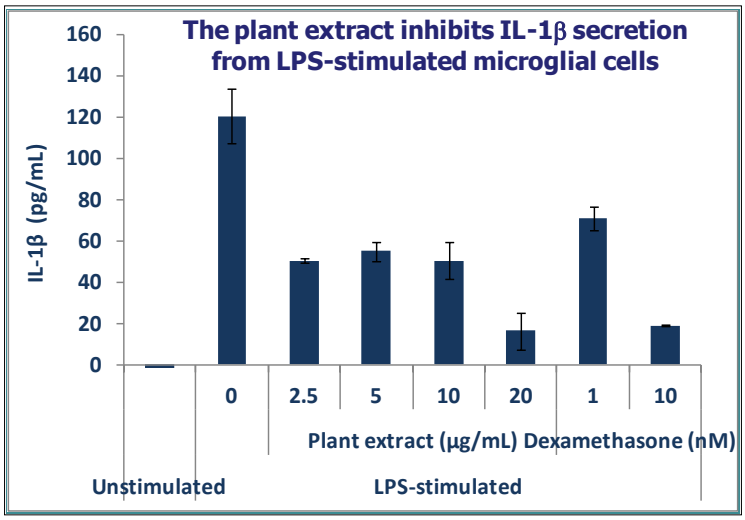
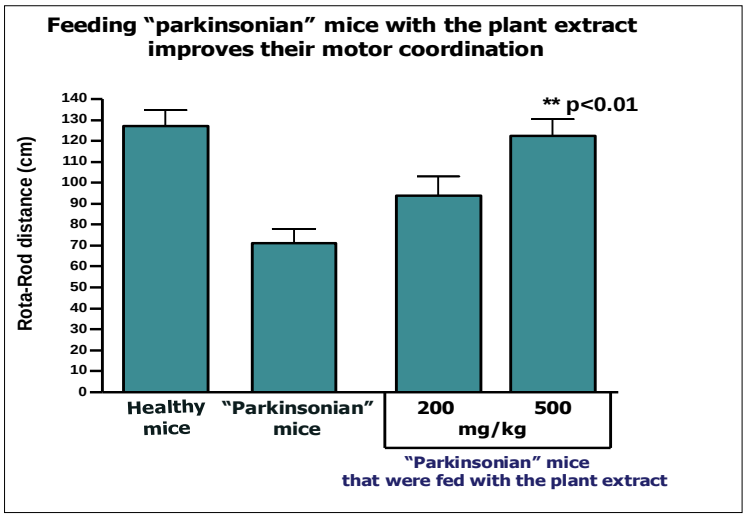


Figure 2



TTM No. 103

Innovation & Advantages:

-The activities of this GRAS (Generally Recognized as Safe)-defined plant extract include:

In cultured microglial cells- it inhibits inflammation and oxidative stress

- Inhibits the LPS - elicited expression of the pro-inflammatory mediators COX-2 and iNOS and down-regulated NO, IL-1β (see Fig. 1) and IL-6 secretion from LPS-activated microglial cells.
- Molecules of this extract penetrate plasma membranes and prevent the accumulation of reactive oxygen species (ROS) in microglial cells.

***In vivo* (mice)**

- **In the MPTP model for Parkinson's disease**. Injection of MPTP to mice serves as a model for Parkinson's disease. In this model, oral treatment of mice with the plant extract counteracts MPTP-induced dopaminergic neurotoxicity in mice, as was shown by behavioral tests and histological analysis (see Fig. 2).

Oral toxicity. Oral treatment of mice with the plant extract is not toxic even at a doubled effective dose – of course – it was considered as GRAS (Generally Recognized As Safe) by the American Food and Drug Administration (FDA).

Development status:

- Pre-Clinical

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