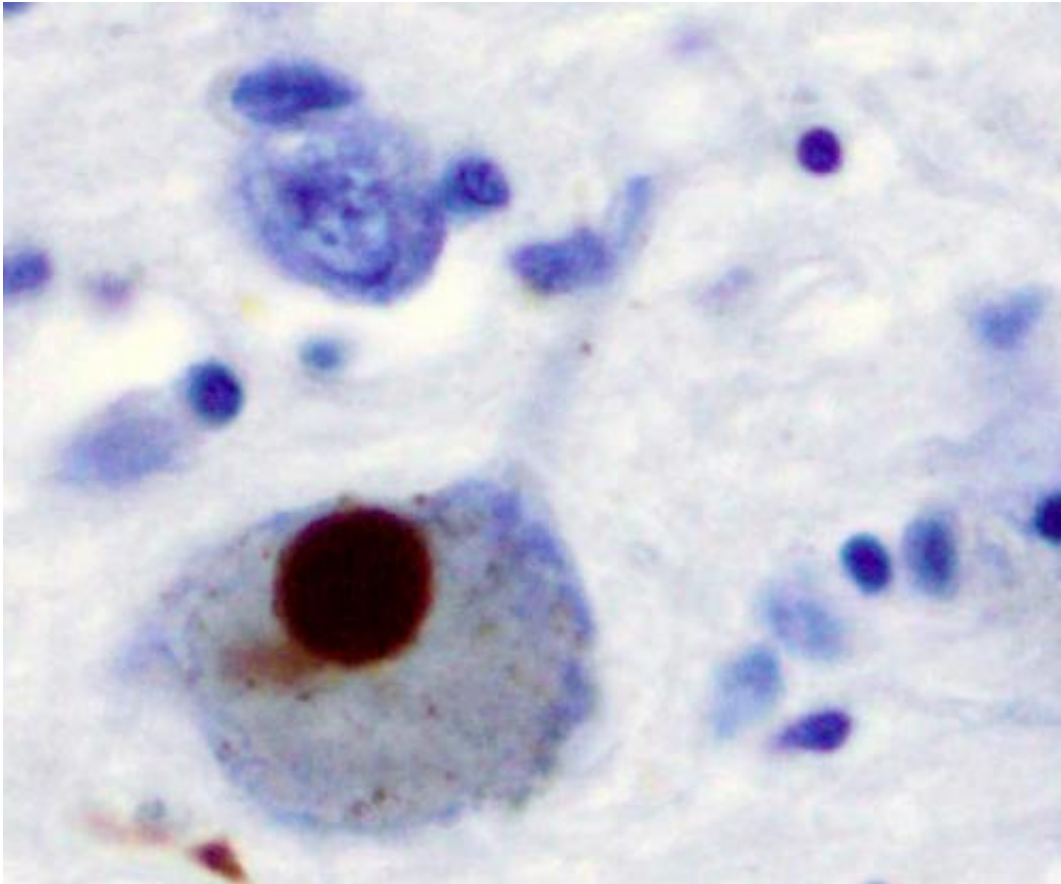


Emotion detection in Parkinson's disease

November 12 2020, by David Bradley



Immunohistochemistry for alpha-synuclein showing positive staining (brown) of an intraneural Lewy-body in the Substantia nigra in Parkinson's disease. Credit: Wikipedia

Parkinson's disease is a neurodegenerative disorder that leads to significant disturbances to motor control resulting in involuntary tremor, shuffling gait, muscular rigidity, and other problems. The disease also

leads to cognitive decline and a reduction in the patient's ability to understand facial expressions and other people's emotions from their faces. Work published in the *International Journal of Medical Engineering and Informatics*, has used bioinformatics to examine this change in this ultimately fatal disease.

K.N. Rejith and Kamalraj Subramaniam of the Karpagam Academy of Higher Education in Coimbatore, India, explain how electroencephalograms (EEGs) have been used in much of the work into understanding the recognition of six "standard" emotions—happiness, sadness, fear, anger, surprise, and disgust—in Parkinson's disease.

The team points out that EEG offers a simpler alternative to more sophisticated techniques for studying the brain, such as magnetic resonance imaging (MRI) and positron emission tomography (PET). But, despite its relative simplicity, the quantification of EEG rhythms could provide an important biomarker for several neuropsychiatric disorders. The researchers suggest that this could be critical for [early diagnosis](#) and thus intervention in such diseases allowing better disease management and treatment to be put in place at an earlier stage of the disease's progression.

More information: K.N. Rejith et al. A review on emotion recognition in Parkinson's disease using bioinformatics, *International Journal of Medical Engineering and Informatics* (2020). [DOI: 10.1504/IJMEI.2020.111028](#)

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