## Accepted Manuscript

Title: Alpha-synuclein dimerization in erythrocytes of patients with genetic and non-genetic forms of Parkinson's Disease

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PII: S0304-3940(17)30910-2

DOI: https://doi.org/10.1016/j.neulet.2017.11.012

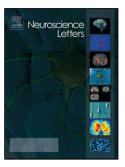
Reference: NSL 33220

To appear in: Neuroscience Letters

Received date: 25-9-2017 Revised date: 15-10-2017 Accepted date: 7-11-2017

Please cite this article as: Nikolaos Papagiannakis, Christos Koros, Maria Stamelou, Athina-Maria Simitsi, Matina Maniati, Roubina Antonelou, Dimitra Papadimitriou, Georgia Dermentzaki, Marina Moraitou, Helen Michelakakis, Leonidas Stefanis, Alpha-synuclein dimerization in erythrocytes of patients with genetic and non-genetic forms of Parkinson's Disease, Neuroscience Letters https://doi.org/10.1016/j.neulet.2017.11.012

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### ACCEPTED MANUSCRIPT

# Alpha-synuclein dimerization in erythrocytes of patients with genetic and non-genetic forms of Parkinson's Disease

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#### **Highlights**

- Erythrocyte membrane  $\alpha$ -syn dimer is elevated in PD patients with no known mutations.
- Erythrocyte membrane  $\alpha$ -syn dimer is elevated in PD patients with GBA mutations.
- There is no  $\alpha$ -syn dimer level difference in p.A53T  $\alpha$ -syn mutation carriers.
- The increased α-synuclein dimer levels in idiopathic and GBA-associated PD are suggestive of a systemic dysfunction, possibly leading to altered lipid composition of the erythrocyte membrane

#### **Abstract**

**Background:** Variations of  $\alpha$ -synuclein levels or species have been reported in Parkinson's Disease (PD). There has been little systematic examination of erythrocytes, a rich source of  $\alpha$ -synuclein.

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