# Supplementary Information

**Flow cytometric analysis of DR and pSTAT3 on human monocytes**

Analysis of DR on monocytes was performed according to a previously established method (Kustrimovic N *et al*. 2014; Kustrimovic N *et al*. 2016) modified. Briefly, aliquots of 200 μL whole blood were prepared, and erythrocytes were removed by means of a lysis buffer. The staining protocol included treatment of aliquots with 5 μL Fc Block Solution (Biolegend-Campoverde, code 422302) for 10 min at room temperature, followed by incubation with the primary anti-DR ab (D1: Merck-Millipore, code 324390; D2: LifeSpan-Space, code LS-C22924; D3: Merck-Millipore, code 324402; D4: LifeSpan-Space, code LS-C22938; D5: Merck-Millipore, code 324408) for 30 min on ice in the dark, washing and incubation with the secondary ab (Alexa Fluor® 647, Biolegend- Campoverde, code 406414) for 30 min on ice in the dark. Aliquots were then washed and incubated with a cocktail of anti-human CD45 (BD Biosciences-Italy, code 555407), HLA- DR (Biolegend-Campoverde, code 307628), CD14 (BD Biosciences-Italy, code 557742) and CD16 (BD Biosciences-Italy, code 555407) for the identification of classical (CD14++/CD16-), non-classical (CD14+/CD16++) and intermediate (CD14++/CD16+) monocytes.

STAT3 phosphorylation in human monocytes was assessed in samples of 200 μL human whole blood kept for 5 min on ice in the dark, alone or in the presence of dopamine hydrochloride (Sigma, Italy, code H8502), thereafter added with anti-human CD14 ab (BD Biosciences-Italy, code 557742) and incubated for 20 min at 37°C in a water bath. During this period, 100 ng/mL interleukin (IL)-6 (Biolegend, San Diego, CA, code 570804) was eventually added after 5 min. Intracellular staining of pSTAT3 was then performed according to BD Phosflow Protocol III for Human Whole Blood (<http://www.bdbiosciences.com/us/applications/research/intracellular->flow/m/745716/resources). Acquisition and analysis were performed on a BD FACSCanto II flow cytometer (Becton Dickinson, Milan, Italy) with BD FACSDiva software (version 6.1.3). The results were finally expressed as absolute numbers (103/mm3) as well as percentage of positive cells (%), as well as median fluorescence intensity (MFI) of positive cells, calculated as the difference between MFI in anti-human DR ab stained aliquots and aliquots stained with the secondary ab alone.

**References**

**Kustrimovic N, Rasini E, Legnaro M, Marino F & Cosentino M** (2014). Expression of dopaminergic receptors on human CD4+ T lymphocytes: flow cytometric analysis of naive and memory subsets and relevance for the neuroimmunology of neurodegenerative disease. *Journal of Neuroimmune Pharmacology* **9**, 302-312.

**Kustrimovic N, Rasini E, Legnaro M, Bombelli R, Aleksic I, Blandini F, Comi C, Mauri M, Minafra B, Riboldazzi G, Sanchez-Guajardo V, Marino F, Cosentino M** (2016). Dopaminergic Receptors on CD4+ T Naive and Memory Lymphocytes Correlate with Motor Impairment in Patients with Parkinson's Disease. *Scientific Reports* **6**, 33738.