



Prof. Antonio Cuadrado, PhD

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Antonio Cuadrado is full professor of Biochemistry, Deputy Director of the Institute of Biomedical Research “Alberto Sols” UAM-CSIC and Head of the Department of Biochemistry, Medical School, Autonomous University of Madrid. He obtained his PhD degree in 1985 and enjoyed several postdoctoral stays in the National Cancer Institute-NIH with the help of Fulbright and Fogarty fellowships. He established his independent laboratory as Professor of Biochemistry in 1997 with a main interest on the study of molecular mechanisms involved in initiation and progression of neurodegenerative diseases. For the past years his main lane of research has been the validation of transcription factor Nrf2, master regulator of cell homeostasis, with three main lines of activity: i) The transcription factor Nrf2 as a new therapeutic target in Parkinson's and Alzheimer's disease and ii) Role of oxidative stress in neuronal death and neuroinflammation in neurodegenerative diseases iii) pharmacologic regulation of autophagy in the brain as a novel therapeutic strategy for neurodegenerative proteinopathies.

Dr. Cuadrado has been awarded several research projects funded by private, local, and governmental agencies to study the molecular basis of Parkinson's and Alzheimer's disease. He has published over 100 primary and review articles, of which more than 50 are related to neuroprotection in preclinical models of Parkinson's and Alzheimer's disease. He is grant and fellowship evaluation consultant for Spanish governmental and autonomic agencies. As a professor, Dr. Cuadrado has participated in multiple teaching activities for the carriers of Biochemistry and Medicine, with special focus on research training.

Selected publications:

1. Schmidt HH, Stocker R, Vollbracht C, Paulsen G, Riley D, Daiber A, Cuadrado A. Antioxidants in Translational Medicine. *Antioxid Redox Signal*. 2015 Nov 10;23(14):1130-43.
2. Lastres-Becker I, Innamorato NG, Jaworski T, Rábano A, Kügler S, Van Leuven F, Cuadrado A. Fractalkine activates NRF2/NFE2L2 and heme oxygenase 1 to restrain tauopathy-induced microgliosis. *Brain*. 2014 Jan;137(Pt 1):78-91.
3. Lastres-Becker I, Ulusoy A, Innamorato NG, Sahin G, Rábano A, Kirik D, Cuadrado A. α -Synuclein expression and Nrf2 deficiency cooperate to aggravate protein aggregation, neuronal death and inflammation in early-stage Parkinson's disease. *Hum Mol Genet*. 2012 Jul 15;21(14):3173-92.
4. Jazwa A, Rojo AI, Innamorato NG, Hesse M, Fernández-Ruiz J, Cuadrado A. Pharmacological targeting of the transcription factor Nrf2 at the basal ganglia provides disease modifying therapy for experimental parkinsonism. *Antioxid Redox Signal*. 2011 Jun 15;14(12):2347-60.
5. Rojo AI, Innamorato NG, Martín-Moreno AM, De Ceballos ML, Yamamoto M, Cuadrado A. Nrf2 regulates microglial dynamics and neuroinflammation in experimental Parkinson's disease. *Glia*. 2010 Apr;58(5):588-98.