



PROGRESS IN NEUROSCIENCE PINS

Seminar Series of the
Brain & Mind Research Institute
Weill Cornell Medical College (WCMC)
&

The Graduate Program in Neuroscience of
WCMC and Sloan Kettering Institute

Thursday, 2/16/17, 4 PM, coffee at 3:45 PM

Weill Auditorium



“Selective Autophagy in the Fight Against Neurodegeneration”

Ana Maria Cuervo, M.D./Ph.D., Professor, Department of Development and Molecular Biology, Co-director of the Einstein Institute for Aging Studies, Albert Einstein College of Medicine

Abstract



Our studies focus on autophagy, an essential catabolic cellular process that assures maintenance of the cellular energetic balance as well as efficient removal of any intracellular damaged structures. Growing evidence supports that functionality of the autophagy system is compromised with age and in different age-related disorders. In this talk, I will describe our recent findings on the molecular effectors and regulators of different types of selective autophagy and our studies in support of a reciprocal interplay between pathogenic proteins such as alpha-synuclein, or tau and autophagic pathways. I will comment on the consequences of the functional decline of autophagy with age and in age-related disorders and some of our current efforts to chemically modulate autophagy activity to enhance the cellular response against proteotoxicity.

Recent Relevant Publications:

1. Orenstein SJ, Kuo SH, Tasset-Cuevas I, Arias E, Koga H, Fernandez-Carasa I, Cortes, E., Honig, L.S., Dauer, W., Consiglio A, Raya A, Sulzer, D, **Cuervo AM***. Interplay of LRRK2 with chaperone-mediated autophagy. *Nat. Neurosci.* 16:394-406, 2013
2. Rui Y-N, Xu Z, Patel B, Chen Z, Chen D, Tito A, David G, Sun Y, Stimming ER, Bellen H, **Cuervo AM***, Zhang S*. Huntingtin functions as a scaffold for selective macroautophagy. *Nat. Cell. Biol.* 17: 262-75, 2015
3. Kaushik S, **Cuervo AM**. Proteostasis and aging. *Nat Med.* 21:1406-15, 2015.



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