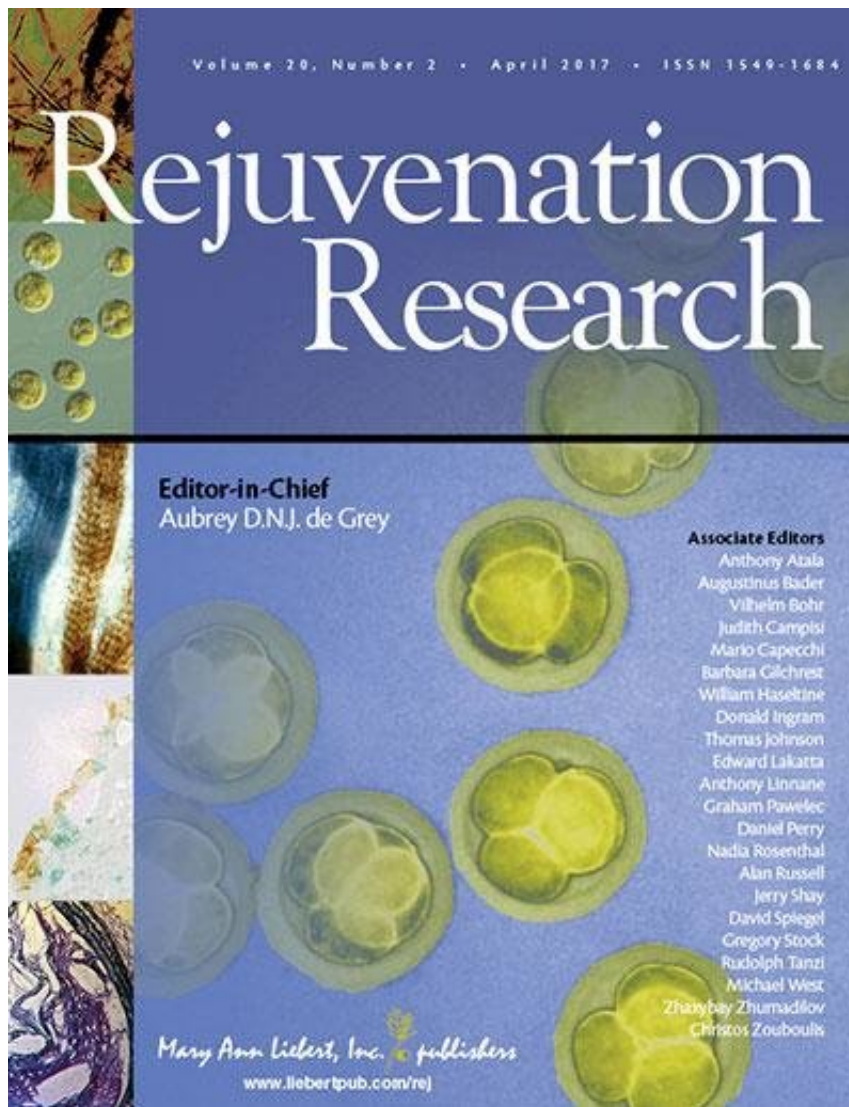


Does stem cell therapy offer the best hope for neurodegenerative diseases?

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Rejuvenation Research is the premier peer-reviewed journal providing cutting-edge research on rejuvenation therapies in the laboratory and clinic. Credit: Mary Ann Liebert, Inc., publishers

As the brain has limited capability for self-repair or regeneration, stem cells may represent the best therapeutic approach for counteracting damage to or degeneration of brain tissue caused by injury, aging, or disease. Although preclinical testing of stem cell therapies has shown promise, results achieved in animals are not necessarily indicative of what will occur in patients, and clinical studies in humans have been limited in size and number. The potential value of stem cells and emerging therapeutic agents in neurodegenerative diseases are the focus of an article published in *Rejuvenation Research*, a peer-reviewed journal from Mary Ann Liebert, Inc., publishers. The article is available free on the *Rejuvenation Research* website until November 24, 2017.

Martina Nasello, Giuseppe Schirò, Floriana Crapanzano, and Carmela Rita Balistreri, University of Palermo, Italy, review the published literature and the most recent data evaluating the effectiveness of [stem cells](#) and other potential therapeutic compounds in the prevention and treatment of neurodegenerative pathologies. They describe their findings in the article entitled "Stem Cells and Other Emerging Agents as Innovative 'Drugs' in Neurodegenerative Diseases: Benefits and Limitations."

The researchers discuss the potential advantages and obstacles for using different types of stem cells, including embryonic (ESC), mesenchymal (MSC), induced pluripotent (iPSC), and neuronal (NSC) stem cells as [therapeutic agents](#). They also present the evidence to support further study of compounds such as metformin and melatonin hybrids, and of natural antioxidants including resveratrol, curcumin, and acetyl-L-carnitine.

"Especially at late stages, the main chronic neurodegenerative conditions of old age are characterized by the loss of neurons that the body does not

replace; we need [stem cell therapies](#) to do that replacement," says Editor-in-Chief Aubrey D.N.J. de Grey, SENS Research Foundation, Mountain View, CA. Stem cells also secrete rejuvenating factors that can restore the health of stressed [cells](#) at an earlier stage in such diseases. Nasello et al. provide a terrific survey of where we stand and what remains to be developed in this critical area for the health of older people."

More information: Martina Nasello et al, Stem Cells and Other Emerging Agents as Innovative "Drugs" in Neurodegenerative Diseases: Benefits and Limitations, *Rejuvenation Research* (2017). [DOI: 10.1089/rej.2017.1946](#)

Provided by Mary Ann Liebert, Inc

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