

Aging, COVID-19 and more: Interview with Dr. Alan S. Green

Interview with [Alan S. Green, M.D.](#), who practices medicine in New York state, and who, in 2016, began to treat patients with rapamycin (Sirolimus), an anti-aging drug. Interview was taken via email on March 31, 2020, by Editor Dr. Blagosklonny for the journal *Aging*.

Question 1: How many patients and for how long have you treated with rapamycin?

Answer 1:

Patient number 1 is myself, treated for 4 years. An additional 480 patients treated from 3 years to present.

Question 2: Rapamycin (Sirolimus) and its analog Everolimus are FDA-approved drugs used in millions of patients with several severe diseases for many years. Based on a few murine models, some people believe that rapamycin may have unacceptable side effects, even though rapamycin extended the health span and life span of mice in these studies. Have you noticed side effects in your patients?

Answer 2:

Rapamycin in older persons is very beneficial for the brain, heart, muscle, joints, insulin sensitivity, decreasing visceral fat, and prevention various age-related diseases. Rapamycin is a very potent drug and good results dependent on proper dose and interval. My patients show good results with sirolimus [rapamycin] 2 to 8 mg once a week. Major side effect in that range is decrease in activity innate immune system. To extent chronic inflammation is harmful in aging, this is generally beneficial. The basic researchers I follow are Matt [Kaeberlein](#) and Veronica Galvan who have recently shown excellent protection against normative aging in heart (dogs) and brain (rats). I have observed those same beneficial results in older humans.

Question 3: Z-pak (Azithromycin) that you prescribed to your patients (just in case of possible bacterial complications) is now considered a promising drug to treat COVID-19. Would you like

to comment? Also, it was published in *Aging* by [Sargiacomo et al](#), that Azithromycin and hydroxychloroquine are senolytics, drugs that selectively kill senescent cells.

Answer 3:

A natural tension always exists between treating physicians who use standard of "reasonable degree of medical certainty" and government scientists who use standard of "definitive proof" and dismiss anything short of definitive proof as "anecdotal". (Perfect is the enemy of Good). As regards recent paper in *Aging* by [Sargiacomo et al](#), that was an extraordinary important paper connecting COVID-19, aging, senescent cells and senolytics. In 2017 paper, [Blagosklonny](#) noted role of Doxycycline and other antibiotics as anti-aging drugs. Azithromycin looks like major drug in prevention and treatment COVID-19. I use same dose used in Cystic fibrosis study (500 mg 3 times a week) in which Azithromycin appears to be acting as senolytic.