

Review of: "[Case Report] Supplementation with Vitamin D, Zinc, and Quercetin to Treat COVID-19: A Case Report"

Walter Erhard Mueller¹

¹ Johann Wolfgang Goethe Universität Frankfurt am Main

Potential competing interests: No potential competing interests to declare.

Nutritional supplements against COVID-19

COVID-19 affects practically all parts of our body. The pathomechanisms behind

this complex disorder are not understood but activation of immune mechanisms, inflammation, and oxidative stress play an important role. Specific drugs to affect this complex pathophysiology are not known. Attempts to “repurpose” drugs used for other indications have identified several compounds which might show benefits due to anti-inflammatory and sigma-receptor binding properties, however final proof is missing (Mueller et al., 2022). On the other hand, nutritional supplements and/or herbal drugs seem to go parallel with the multitarget requirement for the treatment of the complex pathophysiology as several of those compounds show immunosuppressive, anti-inflammatory, cognition improving, and antidepressant properties and are probably helpful for COVID-19 patients (Davis et al., 2023). The flavonoid quercetin belongs to these compounds (Davis et al., 2023). While there are very little experiences with quercetin itself, it is one of the major ingredients of ginkgo biloba leaves. A standardized ginkgo extract (EGB 761) contains a large concentration of quercetin (Müller et al., 2019) and has been shown to have beneficial effects in COVID-19 patients (Zifko et al., 2022). The present manuscript reports positive effects

of a high dose of quercetin together with zinc vitamin D in a COVID-19 patient.

While the two latter compounds may also play a role it is quite likely that quercetin

is the major player. Thus, it represents an additional evidence that these multitarget herbal compounds may have some beneficial effects on the symptoms of COVID-19.

Davis HE, McCorkell L, Vogel JM, Topol EJ. Long COVID: major findings, mechanisms and recommendations. *Nat Rev Microbiol.* 2023 Mar;21(3):133-146. doi: 10.1038/s41579-022-00846-2

Müller WE, Eckert A, Eckert GP, Fink H, Friedland K, Gauthier S, Hoerr R, Ihl R, Kasper S, Möller HJ. Therapeutic efficacy of the Ginkgo special extract EGb761[®] within the framework of the mitochondrial cascade hypothesis of Alzheimer's disease. *World J Biol Psychiatry.* 2019 Mar;20(3):173-189. doi: 10.1080/15622975.2017.1308552.

Mueller JK, Riederer P, Müller WE. Neuropsychiatric Drugs Against COVID-19: What is the Clinical Evidence? *Pharmacopsychiatry.* 2022 Jan;55(1):7-15. doi: 10.1055/a-1717-2381.

Zifko UA, Yacob M, Braun BJ, Dietz GPH. Alleviation of Post-COVID-19 Cognitive Deficits by Treatment with EGb 761®: A Case Series. *Am J Case Rep.* 2022 Sep

26;23:e937094. doi: 10.12659/AJCR.937094. PMID: 36156538; PMCID: PMC9523733.

Prof. Dr. Walter Müller

Department of Pharmacology and Clinical Pharmacy, Goethe-University Frankfurt (Germany)

w.e.mueller@em.uni-frankfurt.de