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Letter to the Editor

Polydatin and its potential protective effect on COVID-19

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Dear Editor,

The recent published guidelines for nutritional management of individuals with SARS-CoV-2 infection have recommended that nutritional intervention and food supplements should be considered as an integral part of the approach for individuals at risk or infected with SARS-CoV-2 [1]. Individuals at risk for severe COVID-19 include elderly persons and individuals affected by chronic and acute diseases since more susceptible for developing inflammatory conditions provoking interstitial pneumonia, vasculitis and gastrointestinal symptoms, identified as the most severe COVID-19 clinical conditions [2]. While, no effective treatment has been identified aimed at reducing significantly inflammatory response to the infection, interleukins and cytokine cascades have been identified as indicators of the abnormal human response to viral presence and replication and some clinical trials are ongoing to test the drugs able to moderate or modulate the immune response, including anti-chronic rheumatic and anti-clotting ones [2]. However, for their adverse effects, an appropriate patient monitoring is needed in order to balance benefits and risks.

According with the ESPEN guidelines [1], in addition, we would like to briefly outline some concerns regarding the food supplement polydatin and its potential protective effect for individual at risk COVID-19. Indeed, several studies have revealed the potential of natural compounds of plant origin, as resveratrol, to protect against SARS coronavirus infection including SARS-CoV-2 [3].

In the last years, we have been involved in using the natural glycosylated and bioavailable form of resveratrol, the polydatin, extracted by the plant *Polygonum Cuspidatum*, and tested as food supplements in very different clinical conditions from very different aetiology, but all having in common a general inflammatory and immune-depressed state [4,5].

During these last weeks we are receiving rather frequent feedback from both polydatin prescribers and consumers; from unrelated and merely unconnected groups we were informed about a

“protective” effect from COVID-19 diffusion and its clinical worst consequences.

Reporting users' groups include individual at risk COVID-19 such as Down syndrome eldest (in voluntary treatment to reduce oxidative stress and improve mitochondrial bioenergetics) as well as chemotherapy prescribed patients following an integrated approach (official oncology evidence-based protocols plus natural substances).

Polydatin efficacy lies mainly to moderate acute clinical as well as chronic subclinical inflammation and also tested on pneumonia or lung inflammation processes [6].

Actually, the cited food supplement is very safe, can lower the inflammation status, can work properly skipping the overload of reactive oxygen species and exhibits many pharmacological activities including multiple-organ protection [7]. Thus, it is reasonable to suggest the phytochemical polydatin as preventative (co-) treatment for individual at risk of COVID-19, as (asymptomatic or paucisymptomatic) relatives and contacts of swap positive confirmed cases. Of course, these observations warrant rigorous clinical trials (including or excluding other prevention measures) that can confirm or cancel our hypothesis without any risk and major costs.

The polydatin effective dose is well known, and it can be obtained extracting it from plants in several well-documented ways, many of them are anymore covered by patents; so, its procurement can be affordable in the case of positive results, without any “strong, fully or partially monopolistic” hand on its availability.

Authors' contributions

All authors contributed equally to conceive the idea and write the manuscript.

Conflict of interest

Dr Raggi declares that GHIMAS SpA is a maker of Polydatin based Cosmetics and Food Supplements. The other authors declare no competing interests for the content of this paper.

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