

NEW CLINICAL EVIDENCES CONFIRM: QUERCETIN PHYTOSOME® IS A NATURAL HELP FOR AN OPTIMIZED RECOVERY FROM COVID-19

Milan, 31 January 2023 – Indena’s Quercefit® is an innovative 100% food-grade delivery system of quercetin based on Phytosome® technology, which optimizes quercetin bioavailability (up to 20 times and in the range of a diet rich in vegetables and fruits) with dose linearity. It has been proven to be an effective natural help to manage early stage conditions of COVID-19, in combination with standard care.

Although the emergency due to the pandemic is luckily decreasing at a global level, COVID-19 continues to be the focus for several scientific analysis. Quercetin Phytosome® has been the object of several human studies in the last two years¹ - the most recent one issued in January 2023² - which demonstrated that this ingredient, in combination with standard care, when used in early stage of COVID-19, could aid in ameliorating the early conditions and helps keeping the immune system strong, mildening the symptoms and optimizing the timing of molecular test conversion from positive to negative.

The most recent study involved a larger group of subjects (100 subjects consisting of 50 people in the quercetin group and 50 ones in the control group) completing the preliminary data anticipated and published in 2021.

Antonella Riva, Head of Product Innovation and Development & LCM of Indena S.p.A., commenting the study “*Quercetin as a possible complementary agent for early-stage COVID-19: Concluding results of a randomized clinical trial*” by Di Pierro et al., explains: “*This randomized clinical trial investigated the possible adjuvant effect of an oral quercetin supplementation in mild to moderately symptomatic COVID-19 outpatients. The results revealed that subjects who received quercetin in addition to standard care, cleared the virus better (tested negative for SARS-CoV-2) and had milder symptoms as compared to the people who received the standard care alone. Moreover, participants in the quercetin group also showed statistically significant improvement in the serum levels of inflammatory biomarker LDH. Also the outcomes of our last study then - adds Riva - suggest possible quercetin supplementation effectiveness in the early-stage mild to moderately symptomatic COVID-19 outpatients and may help in optimizing the clearance of the SARS-CoV-2 infection, mildening of the symptoms and modulation/control of the host’s inflammatory response. The study also supports the safety of quercetin supplementation in subjects with COVID-19 which has an unpredictable and complex course and hence may be potentially used as an adjuvant alongside routine care in the management of mild to moderate symptoms of COVID-19*”.

“*We keep devoting resources to clinical research with the aim to get stronger and stronger scientific evidences about Indena’s ingredients. We’re very happy and proud to see such results from our Quercefit® and to give our contribution in helping people’s health which has had to face one of the most serious pandemics in recent years*” adds **Stefano Togni, Chief Commercial Officer of Indena S.p.A.**

Quercetin, a flavonol not naturally present in the human body, is the most abundant polyphenol in fruits and vegetable and is widely used as a dietary supplement to boost the immune system and in general to promote a healthy condition. Quercetin is characterized by crucial pharmacological properties including, antioxidant and immune-protective effects, which allows it to be a potential candidate to support all unpleasant conditions

¹ Di Pierro et al., *Possible Therapeutic Effects of Adjuvant Quercetin Supplementation Against Early-Stage COVID-19 Infection: A Prospective, Randomized, Controlled, and Open-Label Study*, International Journal of General Medicine 2021:14 2359–2366. <https://www.dovepress.com/possible-therapeutic-effects-of-adjuvant-quercetin-supplementation-aga-peer-reviewed-fulltext-article-IJGM> <https://pubmed.ncbi.nlm.nih.gov/34135619/>

Di Pierro et al., *Potential Clinical Benefits of Quercetin in the Early Stage of COVID-19: Results of a Second, Pilot, Randomized, Controlled and Open-Label Clinical Trial*, International Journal of General Medicine 2021:14 2807–2816. <https://www.dovepress.com/potential-clinical-benefits-of-quercetin-in-the-early-stage-of-covid-1-peer-reviewed-fulltext-article-IJGM>

Rondanelli et al., *Promising Effects of 3-Month Period of Quercetin Phytosome® Supplementation in the Prevention of Symptomatic COVID-19 Disease in Healthcare Workers: A Pilot Study* 2022: 12 66 <https://pubmed.ncbi.nlm.nih.gov/35054459/>

² Di Pierro et al., *Quercetin as a possible complementary agent for early-stage COVID-19: Concluding results of a randomized clinical trial*, Front. Pharmacol. 13:1096853. doi: 10.3389/fphar.2022.1096853

where oxidative stress, inflammation and immunity are involved. These conditions include discomforts related to cardiovascular health, healthy-aging, bones and joint health, sport and physical activity, gut and respiratory health³.

Quercefit® is Indena's formulation of quercetin deriving from the flower buds of *Sophora japonica* L., based on Phytosome® proprietary technology that optimizes its biological absorption. It has been proven that Quercefit® is able to modulate biological markers, typical in inflammatory conditions, in respiratory health, endurance and eye health and that it is an effective support for healthy aging thanks to its senolytic action. That is why Quercefit® may be called a multi-target product, which can be of help for several conditions.

Indena is the leading company dedicated to the identification, development and production of high quality active principles derived from plants, for use in the pharmaceutical and health food industries. Backed up by a century of botanical experience, the company owns 100 patent families, has published more than 1000 scientific studies and cooperates with the world's most prestigious universities and private research institutions. Indena employs over 900 staff, investing a significant amount of its annual turnover in research, making this activity the key to its success. Headquartered in Milan, Indena has 4 production sites and 5 international branches throughout the world and manages sales in more than 80 countries. The company's experts communicate and interact constantly with the major international regulatory authorities and cooperate on the update of all the main pharmacopoeias.

CDMO activities are the priority in Indena's strategic vision. Today, Indena has a multipurpose GMP plant equipped with reactor ranging from 250 lt to 10,000 lt (Stainless Steel, Hastelloy, Glass-lined); a kilo lab LK2 to offer different capacities for products at the highest containment level (OEL 20 ng/m³ or OEB5); two spray dryers, large and a mid-size, working with organic solvents; a 20-liter hydrogenator being complemented by a 250-liter hydrogenator (ready at the end of 2023) to satisfy a wider demand for this kind of chemistry.

Find more on indena.com

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³ Anand David AV, Arulmoli R, Parasuraman S. *Overviews of biological importance of quercetin: a bioactive flavonoid*. Pharmacogn Rev. 2016;10(20):84–89. doi:10.4103/0973-7847.194044)