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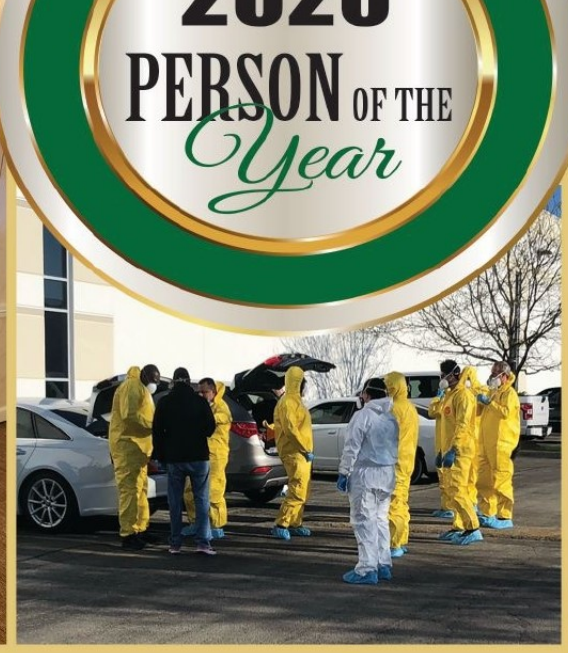
Informing and Educating the Natural Products Industry

2020 PERSON OF THE Year



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New Product Review of 2021
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Research News

Research Links Low Zinc Levels With COVID-19 Mortality Risk

Low levels of plasma zinc are associated with poorer survival outcomes in patients hospitalized with COVID-19, according to new research presented at the 2020 ESCMID Conference on Coronavirus Disease.

Having a low plasma zinc level was associated with a 2.3 times increased risk of in-hospital death compared to zinc-sufficient patients.

The study involved a retrospective analysis of symptomatic COVID-19 patients admitted to a tertiary university hospital in Barcelona, Spain, between March 15 and April 30. Fasting plasma zinc levels were measured at admission in patients in the COVID-19 unit and computer modelling and statistical analyses were used to assess the impact of zinc on mortality.

The average baseline zinc levels, among the 249 patients used in the study, was 61 mcg/dl. Among the 21 patients who died, baseline zinc levels were significantly lower, at 43 mcg/dl versus 63.1 mcg/dl in survivors, *Medscape* reports. Having a plasma zinc level lower than 50 mcg/dl at admission was associated with a 2.3 times increased risk of in-hospital death compared with the patients who had a plasma zinc level of 50 mcg/dl or higher.

Jacob Teitelbaum, M.D., noted that viral reproduction often results in "massive urinary zinc losses," while zinc is critical for thymulin, a hormone that regulates immunity. "Therefore," he said, "it's not surprising that low zinc is associated with poor outcomes. Meanwhile, the low zinc is likely what is triggering the loss of taste and smell, a key symptom of zinc deficiency. In other viruses, the loss of smell usually comes from swelling in the nerve cleft for the olfactory nerve. But this is not seen as the cause in COVID-19, suggesting the zinc deficiency caused by early viral reproduction is playing a key role."

Vitamin A Shows Promise as Potential Obesity Treatment

Vienna, Austria—Cold ambient temperatures increase vitamin A levels in humans and mice, according to a study in *Molecular Metabolism*. The vitamin A helps convert white adipose tissue into brown adipose tissue, which, a press release notes, stimulates fat burning and heat generation.

A research group led by Florian Kiefer, Division of Endocrinology and Metabolism, Department of Medicine III, MedUni Vienna, demonstrated that the moderate application of cold increases the levels of vitamin A in humans and mice. Most vitamin A reserves are stored in the liver, and cold exposure appears to stimulate the redistribution of vitamin A towards the adipose tissue, leading to fat burning.

"Our results show that vitamin A plays an important role in the function of adipose tissue and affects global energy metabolism. However, this is not an argument for consuming large amounts of vitamin A supplements if not prescribed, because it is critical that vitamin A is transported to the right cells at the right time," explained Kiefer in the press release. "We have discovered a new mechanism by which vitamin A regulates lipid combustion and heat generation in cold conditions. This could help us to develop new therapeutic interventions that exploit this specific mechanism."

Vitamin D Levels During Pregnancy Linked with Child's IQ

Seattle, WA—That's the finding from researchers at Seattle Children's Research Institute (SCRI). A press release explains that a mother's vitamin D supply is passed to the fetus in utero, where it helps regulate processes including brain development. The researchers used data from a cohort in Tennessee called the CANDLE study, which recruited pregnant women and collected information over time about their children's health and development. After controlling for several other factors, higher vitamin D levels in pregnancy were associated with higher IQ in children ages 4 to 6 years old.

One major issue the study noted: Black women are at greater risk of vitamin D deficiency than white women, with up to 80% of Black pregnant women deficient in vitamin D. Melissa Melough, lead author of the study and research scientist in the Department of Child Health, Behavior, and Development at SCRI, explains: "Melanin pigment protects the skin against sun damage, but by blocking UV rays, melanin also reduces vitamin D production in the skin. Because of this, we weren't surprised to see high rates of vitamin D deficiency among Black pregnant women in our study. Even though many pregnant women take a prenatal vitamin, this may not correct an existing vitamin D deficiency."

Melough says in the press release that vitamin D is one of the most difficult nutrients to get in adequate amounts from the diet, but that a supplement is an easy solution.

Additional research is needed to determine the optimal levels of vitamin D during pregnancy, but Melough hopes the study will help develop nutritional recommendations for pregnant women and promote nutritional supplementation and screening during pregnancy.

Melough added: "I hope our work brings greater awareness to this problem, shows the long-lasting implications of prenatal vitamin D for the child and their neurocognitive development, and highlights that there are certain groups providers should be paying closer attention to."

Study Connects Flavanols With BP

Reading, England—A high flavanol diet could help lower blood pressure, according to a study using data from more than 25,000 people in Norfolk, UK. Unlike previous studies, this one used nutritional biomarkers to draw the association, rather than self-reported data.

That association: A difference in blood pressure between those with the lowest 10% of flavanol intake and those with the highest 10% of between 2 and 4 mmHg. This difference is comparable to changes seen in those following the Mediterranean or DASH diet. The effect was more pronounced in those with hypertension.


The difference in blood pressure between those with the lowest flavanol intake and those with the highest was comparable to changes in blood pressure observed in those following the DASH diet.

"This study gives us an objective finding about the association between flavanols—found in tea and some fruits—and blood pressure," said Professor Gunter Kuhnle, a Nutritionist at the University of Reading and the leader of the study. "This research confirms the results from previous dietary intervention studies and shows that the same results can be achieved with a habitual diet rich in flavanols."