

The Janus Corner



This occasional section within the journal surveys visions and achievements, often not on the main track of the developing biomedical sciences, but all relating to discoveries and developments of medicinals – both ancient and modern. What they have in common, in one way or another, is providing further background and glances around the edges of the core discipline of pharmacognosy, as it has been and continues to evolve within our times.

Drinking Tea Improves Brain Health and Function

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A recent publication from a Singaporean-led research team has reported that drinking tea (infusions prepared from *Camellia sinensis* (L.) Kuntze) leaves helps to protect the brain from age related declines in brain function.¹ Indeed, regular tea drinking can reduce cognitive decline in older adults by up to 50%. Furthermore, tea consumption also results in mood improvement and prevents cardiovascular disease. The research focused on green tea, oolong tea and black tea and did not distinguish between the relative merits of the different beverages. However, it is note-

worthy that positive benefits of tea drinking reported in this study were evident in individuals who had consumed tea at least 4 times a week over a 25 year period and it is uncertain whether the effects of lower tea consumption, or consumption over shorter period would be as beneficial.

REFERENCE

1. Li J, Romero-Garcia R, Suckling J, Feng L. Habitual tea drinking modulates brain efficiency: Evidence from brain connectivity evaluation. *Aging*. 2019;11(11):3876. DOI: 10.18632/aging.102023

Delayed Release Curcumin Loaded Liposomes Inhibit Cancer Cell Growth

The benefits of turmeric and its component compound curcumin have long been known. Curcumin is reputed to be beneficial in the management of conditions associated with oxidative stress, including inflammation and inflammatory disorders (e.g. arthritis), metabolic syndrome, anxiety, hyperlipidemia and cancer.¹ However, despite its promising effects, curcumin suffers from low bioavailability due to its low gastrointestinal absorption rate, relatively low solubility in aqueous solutions and rapid inactivation. A recent study by a Washington State

University team in the USA have reported a drug delivery system that uses liposome encapsulated vesicles to overcome these bioavailability issues. The delivery system substantially improved the efficacy of curcumin *in vitro*. Indeed, the curcumin liposomes inhibited the growth of osteosarcoma cells by 96 percent compared to untreated cells.

REFERENCE

1. Hewlings SJ, Kalman DS. Curcumin: A review of its' effects on human health. *Foods*. 2017;6(10):92. DOI: 10.3390/foods6100092