

Einladung

zu dem am Donnerstag, dem 15. Januar 2015, ab 14 Uhr
im Geo-Bio Hörsaal,
Zülpicher Straße 49, 50923 Köln

stattfindenden öffentlichen

wissenschaftlichen Habilitationsvortrag
im Fach Botanik

von

Dr. Tamara Gigolashvili

über das Thema

Phytochemicals in fight against cancer

A wide array of dietary phytochemicals has been reported to induce the expression of enzymes involved in both cellular antioxidant defenses and the elimination/inactivation of electrophilic carcinogens. Induction of such cytoprotective enzymes by phytochemicals largely accounts for their cancer chemopreventive and chemoprotective activities. Many molecular alterations associated with carcinogenesis occur in cell-signalling pathways that regulate cell proliferation and differentiation. Chemopreventive phytochemicals can block initiation or reverse the promotion stage of multistep carcinogenesis.

I will discuss the cancer chemopreventive activity of cruciferous vegetables such as cabbage and broccoli, Allium vegetables such as garlic and onion, green tea, Citrus fruits, tomatoes, berries, ginger and ginseng, as well as some medicinal plants. Several lead compounds, such as brassinin (from cruciferous vegetables like Chinese cabbage), sulforaphane (from broccoli) and its analog sulforamate, withanolides (from tomatillos), and resveratrol (from grapes and peanuts among other foods), are in preclinical or clinical trials for cancer chemoprevention. Phytochemicals of these types have great potential in the fight against human cancer, and this talk will highlight the intracellular-signalling cascades as common molecular targets induced by some representative dietary phytochemicals.

A. Büschges
Dekan