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## Alternative anticancerogenic diet creation as synergistic with the administered chemotherapeutic agent

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The consumptions of sugar and fat rich foods in excess amounts may result in cancer since Reactive Oxygen Species (ROS) can rupture the cell membrane and change the genome. Although ROS are claimed as one of the biggest crucial factors in cancer, they may also have a dual effect in cancer. Higher concentrations of ROS, when combined with anti-cancer treatments which cause the generation of ROS, may also kill the cancer cells. The ROS generating chemotherapeutics namely; costunolide, mitomycin C, cisplatin, garcinol may have much stronger apoptotic effect when administered during an anticancer diet including the food bio-active compounds which similarly generate ROS, like; resveratrol, quercetin, apigenin, vitamin C, amygdalin, Omega 3 fatty acids and vitamin D, via the synergy to increase ROS. But, since such synergism does not exist for folate/B6 and tocopherol, they should be excluded during the administration of this group of chemotherapeutics. When it comes to Hedgehog, the following Hedgehog inhibitors, e.g. veratramine, CUR-61414 and HhAntag-691, may have stronger anticancerogenic effect if they are administered during the consumption of the food bio-active compounds; resveratrol, genistein, curcumin, EGCG, baicalein, quercetin, quercetin and curcumin. The chemotherapeutic agents which induce apoptosis by inhibiting VEGF; e.g. sunitinib, sorafenib may have more anticancerogenic effect with VEGF inhibitory food bio-active compounds; e.g. lycopene, kappa tocotrienol, by creating a synergy via the inhibition of VEGF, HIF-1alpha, PIP3, PI3K, ERK1/2 and Akt. But, because vitamin D and folate/folic acid/B6 are VEGF inducers, they should be excluded during the administrations of the VEGF inhibitors. The presentation, with its review of 2900 studies, will mainly focus on NF-kB, PI3K, Akt, ERK/MAPK, IL-6, -8, FOXO, MDR1, MMP signaling and pathways with their synergistic food bio-active compounds.



Figure 1: The association of some of the food bio-active compounds and ERK signaling in cancer.

### Biography

Ugur Gogus graduated from Ankara University/Faculty of Veterinary in Turkey. After his graduation, he completed his Doctorate in the field of Meat Hygiene and Microbiology in Food Engineering Department of Ankara University/Faculty of Agriculture. He has research studies, books, oral presentations, media programs and reviews in the fields of Food Decontamination, Clinic Nutrition and Food Safety. Presently, he has been continuing his academic career and activities in Middle East Technical University/Vocational School of Higher Education, Ankara-Turkey.

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