

CHEM-4703(3) Topics in Chemistry

COURSE DESCRIPTION

Title:

[This course addresses UNIQUE CHEMICAL SPECIES as commonalities in health, pathogenesis of neurodegenerative and other degenerative, chronic and infectious diseases (including COVID-19), oxidative stress, inflammation, chemical toxicity, cancers, host-pathogen interactions, and therapy and immunology. It seeks to explain the rationale for consumption of fresh foods and vegetables for optimal health]

pathogens: HIV/AIDS and other viral pathogens (including corona viruses); *Plasmodium* spp., *Leishmania*, *Brucella*, *Mycobacteria*, etc]. Detoxification mechanisms (Induction of phase 2 enzymes). The special and confounding pathology of COVID-19 (and other coronavirus infections): hyper-inflammation, the cytokine storm, oxidative stress and other associated/allied phenomena; potential remediation strategies.

Antioxidants and Nutraceuticals (Health foods and eating healthy; e.g., sulforaphane and others).

Therapeutic and host toxicity mechanisms of antimalarials.

Immunogenicity/vaccinology [Receptor-ligation Signal Transduction (ROS, NO, guanylate cyclase)]

Toxicity Perspectives and Disease: Cancer (Mechanisms of carcinogenesis); Pathogenesis of aging, and other degenerative d9(y)20(l)-11(a)4(te)] TET0.00000912 0 62 92 reWB31 0 0 0 1 5757.7 Tm0ise7niskT4(l)-4(v) c(he)9(r)