

World Summit on

# STRESS, MINDFULNESS AND PHILOSOPHY

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# STRESS, MENTAL HEALTH AND DEMENTIA

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### Chronic inflammatory bowel disease, pain related cognitive disorders, oxidative stress and nutritional interventions

Inflammatory bowel disease (IBD) is characterized by chronic inflammation in the mucosal membrane of the small and/or large intestine. Pain is a frequent symptom of IBD. Recent investigations support that pathophysiological processes in IBD affect cognitive-neurophysiological and flexibility. Psychosocial factors emerge as a key element in exacerbation of discomfort and pain in IBD patients. Patients who express pain during remission are more likely to suffer from some form of psychological disorders. The risk incident for mood, depression, anxiety and bipolar disorders are higher in these patients. Evidence supports that patients with IBD are genetically susceptible to this disease, and the defect targets an inability to effectively down-regulate the inflammatory response to specific antigens and dysregulated luminal microbiota. The inflammatory mediators include reactive oxygen species (ROS), cytokines and chemokines. Oxidant-mediated injuries are important in the pathophysiology of IBD. ROS upregulate nuclear factor- $\kappa$ B and result in further increases in the levels of oxidants and tissue injury in IBD. Inflamed gut from IBD patients and animal models are abundant with inflammatory cells such as activated macrophages and neutrophils which generate an exaggerated quantity of ROS with subsequent increases in oxidative stress. These ROS include hydroxyl radicals, superoxide anions, hydrogen peroxide, and nitric oxide. Although many treatments have been recommended for IBD, they do not treat the cause but are effective only in reducing the inflammation and accompanying symptoms in patients. Oral delivery is the most common and preferred route of drug administration. This is the ideal route to deliver compounds to colonic sites to treat IBD yet with certain limitations. In this presentation, various antioxidants and nutritional elements will be scrutinized as possible interventions or adjunctive therapies in IBD.

### Biography

Helieh Oz has a DVM, MS (U. IL); Ph.D. (U. MN) and clinical translational research certificate (U.KY). Dr. Oz is an active member of the American Association of Gastroenterology (AGA) and AGA Fellow (AGAF) and associate in Rome Foundation (Functional Gastrointestinal Diseases). Dr. Oz is Immuno-Microbiologist with expertise in inflammatory/infectious diseases, drugs discovery, pathogenesis, innate/mucosal Immunity, molecular biology, reactive oxygen radicals, antioxidants, polyphenols and micronutrient, animal models and pain-related behavioral modifications. She has over 90 publications and served as Lead Editor for special issues including Gut inflammatory, infectious diseases and nutrition 2017 (Mediators of Inflammation); Gastrointestinal inflammation, repair: the role of microbiome, infection, nutrition (Gastroenterology Research Practice), J. Nutrient and guest Editor for J. Pediatric Infectious Disease. Dr. Oz serves on different editorial advisory board committees including Center of Excellence for Medical Research and Innovative Products, Walailak University Thailand and is an avid reviewer for several peer-reviewed journals.

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### Notes: