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Microbiota and mental health with the emphasize of the role of autoantibodies

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Rapid scientific and technological advances have allowed for a more detailed understanding of the relevance of intestinal microbiota, and the entire body-wide microbiome, to human health and well-being. Human microbiota is a diverse and dynamic ecosystem, which has evolved in a mutualistic relationship with its host. This micro-ecosystem serves the host by protecting it against pathogens, metabolizing complex lipids and polysaccharides that otherwise would be inaccessible nutrients, neutralizing drugs and carcinogens, modulating intestinal motility, and making visceral perception possible. It is now evident that the bidirectional signaling between the gastrointestinal tract and the brain, the so called “microbiota-gut-brain axis,” is vital for maintaining homeostasis and it may be also involved in the etiology of several metabolic and mental dysfunctions/disorders. Here we review evidence on the ability of the gut microbiota to communicate with the brain and thus modulate behavior, cognitive functions, such as learning, memory and decision making processes. Role of molecular mimicry and autoantibodies in the etiology of certain brain diseases as lupus erythematosus, anorexia, and depression, Alzheimer, Multiple sclerosis and autism will be clarified. Role of probiotic and prebiotic in treating mental disorders will be also traced.

Biography

Afaf El-Ansary, female, biochemist, graduated from biochemistry department, Ain Shams University, Egypt in 1974. She worked in the National Reserch Centre, Egypt from 1976-2000, since 2001, she is working in biochemistry department, King Saud University, KSA. She has published more than 45 papers related to metabolic integration between schistosome parasite and molluscan hosts. She recorded a patent on the “Use of sublethal concentration of solanum nigrum plant for the control of schistosomiasis”. She was recognized by the Marquis Who's Who in science and engineering, Eight's edition, 2005-2006. She is member in number of national and international societies and she is recorded as reviewer in many international journals. In recent year she focused on the screening of biochemical markers related to autism and she got another 40 published papers in high impact factor Journals related to this research interest. She is member in Predictive, Preventive and Personalized Medicine Society (Moscow).

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