

Fecal Microbial Transplantation; Challenges In Health And Diseases: A Review

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Abstract:

Fecal microbial transplantation (FMT) has gained mainstream attention with its remarkable efficacy in treating recurrent *Clostridium difficile* infection (RCDI). This includes other gastrointestinal diseases (inflammatory bowel disease [IBD], irritable bowel syndrome [IBS], and chronic constipation), neurological disorders (multiple sclerosis, Parkinson's disease), and hematologic disease (idiopathic thrombocytopenic purpura). The first application of FMT in western medicine was published in 1958 by Ben Eisema and colleagues. Challenges such as donor selection, sample handling, predicting recipient compatibility to a given donor microbiome, and standardization of therapeutic FMT protocol still require total commitment and focused strategies to overcome. Another challenge of exposure to multidrug-resistant organisms (MDROs) as a result of FMT emerges just recently, which leads to the death of a 73-year-old man in June 2019. As such Food and Drug Agency (FDA) recommends donor screening questions specifically "address risk factors for colonization with MDROs, exclusion of individuals at higher risk of settlement with MDROs and MDRO testing of donor stool before transplant.

Biography:

Abdulkadir Bashir has completed her phd course in Science, Technology and Biotechnology for Sustainability at the University of Tuscia (Viterbo) in 2017 with a thesis concerning microbial oil production from yeasts and molds. She is actually a postdoc researcher at the "Environmental and Applied Microbiology" laboratory (University of Tuscia), headed by Prof. Maurizio Petruccioli. Her main lines of research concern the production of microbial compounds of industrial interest and the bioremediation of waters and soils contaminated by heavy metals by means of microorganisms.



Publication of speakers:

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3. Alberti KG, Eckel RH, Grundy SM, Zimmet PZ, Cleeman JI, Donato KA, et al., (2009). Harmonizing the metabolic syndrome: a joint interim statement of the International Diabetes Federation Task Force on Epidemiology and Prevention; National Heart, Lung, and Blood Institute; American Heart Association; World Heart Federation; International Atherosclerosis Society; and International Association for the Study of Obesity. *Circulation.* 120:1640-5.
4. Backhed F, Manchester JK, Semenkovich CF, Gordon JI. (2007). Mechanisms underlying the resistance to diet-induced obesity in germ-free mice. *Proc Natl Acad Sci USA.* 104:979-84.
5. Bakken JS, Borody T, Brandt LJ, Brill JV, Demarco DC, Franzos MA, Kelly C, Khoruts A, Louie T, Martinelli LP, Moore TA, Russell G, Surawicz C (December 2011). "Treating *Clostridium difficile* infection with fecal microbiota transplantation". *Clinical Gastroenterology and Hepatology.* 9 (12): 1044-49.

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