



Women's Health Research Roundtable: The Gut Microbiome and Women's Health

Thursday, July 30, 2026, 3-4 p.m. EDT

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FEATURING:

Negar Fani, PhD, ABPP

Associate Professor, Psychiatry and Behavioral Sciences
Emory University School of Medicine



Social Stressors and the Gut-brain Axis: Mechanisms of Vulnerability and Intervention for Psychiatric Disorders in Women

One pathway linking social stressors to brain health is the gut microbiome. Changes in gut microorganisms influence stress-response systems through metabolites and immune signaling, often described as the gut-brain axis. These interactions may contribute to psychiatric disorders by affecting neurobiological pathways. The microbiome also interfaces environmental and social exposures—collectively termed the exposome—and neuroplastic changes that may increase vulnerability to mental illness. Effects are particularly relevant for women, with links to cancers and intergenerational transmission. Social stressors and discrimination may alter the microbiome, highlighting mechanisms of health disparities and potential interventions including prebiotic, probiotic, postbiotic therapies and fecal microbiota transplantation approaches.



Saori Furuta, PhD

Associate Professor, Cancer Biology
Case Western Reserve University

Role of the Gut Microbiome in Modulating Mammary Carcinogenesis

It is increasingly evident that the microbiome influences cancer occurrence. In cancer-susceptible individuals, dysbiosis is common, and restoring a healthy microbiome has emerged as a preventive strategy. This research examined microbial metabolites that enhance innate immunity to prevent breast cancer. Sepiapterin supplementation, a precursor of tetrahydrobiopterin, prevented tumors in HER2-positive models and reprogrammed the gut microbiota, increasing Akkermansia. Fecal lipid extracts from treated mice enhanced natural killer cell cytotoxicity in vitro. These findings suggest bacterial metabolites that activate immune responses contribute to tumor prevention and may support development of prophylactic therapies targeting HER2-positive mammary tumors in high-risk populations and warrant further validation studies.

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