

# NIH Office of Dietary Supplements (ODS) 2023–2024 Seminar Series

## *Vitamin D and The Microbiome-Immune Nexus*

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University Park, PA

Wednesday, April 10 • 11 a.m. – 12 p.m. ET

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Margherita T. Cantorna, Ph.D., received her undergraduate degree in Chemistry from the University of Illinois and her Ph.D. in Medical Microbiology and Immunology from the University of Wisconsin. In 1998, she joined the faculty of the Penn State University (PSU) College of Agricultural Sciences, where she is now a Distinguished Professor. She is a recognized expert on vitamin D and inflammatory bowel disease (IBD), with her lab having been the first to describe and characterize the mechanisms by which vitamin D modulates experimental IBD, mucosal immunology, gastrointestinal infection, and multiple sclerosis. In 2012, she received the Osborne and Mendel Award from the American Society of Nutrition for her early work on these interactions.

Dr. Cantorna is interested in environmental regulators of immunity and has studied dietary iron, edible mushrooms, vitamin D, and vitamin A. She has directed two different graduate programs, one in Nutrition and the other in Immunology and Infectious Diseases. Dr. Cantorna chaired the Center for Molecular Immunology and Infectious Diseases from 2010 to 2019. Currently, Dr. Cantorna serves on the executive committee for the Vitamin D workshop; co-directs a T32 Physiological Adaptations to Stress graduate student training grant; and serves as an editor for the *Journal of Nutritional Biochemistry*. She has long been interested in promoting inclusion and she has served on the Minority Affairs committees for the Federation of American Societies for Experimental Biology, the American Association of Immunology, and the American Society for Nutrition. She is a founding member of the advocacy group Leading Advocacy and Action for a Diverse Leadership at PSU and serves on the Presidents Commission for Women.

### Recent Publications

1. Arora J, Patel DR, Nicol MJ, Field CJ, Restori KH, Wang J, Froelich NE, Katkere B, Terwilliger JA, Weaver V, Luley E, Kelly K, Kirimanjeswara GS, Sutton TC, Cantorna MT. Vitamin D and the Ability to Produce 1,25(OH)2D Are Critical for Protection from Viral Infection of the Lungs. *Nutrients*. 2022 Jul 26;14(15):3061. doi: 10.3390/nu14153061 PMID: 35893921 PMCID: [PMC9332570](#)
2. Cantorna MT, Lin YD, Arora J, Bora S, Tian Y, Nichols RG, Patterson AD. Vitamin D Regulates the Microbiota to Control the Numbers of ROR $\gamma$ t/FoxP3+ Regulatory T Cells in the Colon. *Front Immunol*. 2019 Jul 30;10:1772. doi: 10.3389/fimmu.2019.01772. eCollection 2019 PMID: 31417552 PMCID: [PMC6682671](#)
3. Arora J, Wang J, Weaver V, Zhang Y, Cantorna MT. Novel insight into the role of the vitamin D receptor in the development and function of the immune system. *J Steroid Biochem Mol Biol*. 2022 May;219:106084. doi:10.1016/j.jsbmb.2022.106084 PMID: 35202799 PMCID: [PMC8995385](#)



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