

## MMI 291 Seminar Series

Current Theme: Interdisciplinary Research  
Spring Quarter 2024 – CRN 48450

Friday Seminar – 12:10-1 p.m.

### “FLIm: Advancing GI Inflammation Detection and Colorectal Cancer Screening”

#### Research Bio

**Alba Alfonso-Garcia, Ph.D.** is an Assistant Project Scientist in the Department of Biomedical Engineering at University of California, Davis. She received her Ph.D. in Biomedical Engineering from University of California, Irvine before joining UC Davis for her postdoctoral training. Alfonso-Garcia's research in the field of biophotonics focuses on developing label-free spectroscopy and imaging solutions to address unmet needs in biomedical research and clinical practice including disease detection, therapy monitoring, and surgical guidance.

She currently investigates live tissue fluorescence signatures to identify intrinsic biomarkers of brain tumor and gastrointestinal disease. She has implemented a fiber-based autofluorescence lifetime imaging system for detecting and monitoring intestinal inflammation in living mice, with the goal to develop a research tool for longitudinal small animal studies.

#### Publications

**Alfonso-Garcia A**, Cevallos SA, Lee JY, Li C, Bec J, Bäumlér AJ, Marcu L. “Assessment of Murine Colon Inflammation Using Intraluminal Fluorescence Lifetime Imaging”. *Molecules*. 2022 Feb 15;27(4):1317. doi: 10.3390/molecules27041317. PMID: 35209104; PMCID: PMC8875403.

**Alfonso-Garcia A**, Bec J, Weyers B, Marsden M, Zhou X, Li C, Marcu L. “Mesoscopic fluorescence lifetime imaging: Fundamental principles, clinical applications and future directions”. *J Biophotonics*. 2021 Jun;14(6):e202000472. doi: 10.1002/jbio.202000472. Epub 2021 Mar 29. PMID: 33710785; PMCID: PMC8579869.

May  
24



**Alba Alfonso-Garcia, Ph.D.**  
Assistant Project Scientist  
Department of  
Biomedical Engineering  
University of California, Davis

May 24, 2024  
12:10 – 1 p.m.  
GBSF Auditorium

Medical Microbiology  
and Immunology  
School of Medicine

Seminar Contact:  
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We hope to see you there!