DIPARTIMENTO DI SCIENZE E TECNOLOGIE BIOLOGICHE CHIMICHE E FARMACEUTICHE (STEBICEF)

Mercoledì 18/03/2026 ore 14:00

Aula Vittorelli (Aula 10) Dip. STEBICEF
Viale delle Scienze ed.16

Si terranno seminari
curati da docenti della
University of Florida

Dott.Kate Fogarty

Dott. Anna DeVries

Dott. Mohammed (Mo) Gbadamosi

Dott. Nicole Ambroise Gbadamosi

"Journey to a PhD"

"Preparing applications: Curriculum Vitae, Personal Statement, Recommendation Letters"

“Identification and Characterization of Chemoimmunomodulatory Trajectories in Breast Cancer”

"Immuno-oncology and immunotherapy”

“Neuro-oncology”

Docenti, studenti e dottorandi sono invitati a partecipare.

Seminario organizzato dalla **Dott.ssa Flores Naselli**

UF UNIVERSITY of FLORIDA

FACULTY COMMONS

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Abstract

Identification and Characterization of Chemoimmunomodulatory Trajectories in Breast Cancer
Triple negative breast cancer (TNBC) is the deadliest subtype of breast cancer despite a prevalence of 10-20% among breast cancer cases. One of the major determinants of clinical outcomes for TNBC patients is response to therapy. While neoadjuvant chemotherapy remains the standard of care, the heterogeneous nature of the tumor microenvironment means that patients experience vastly different immunological consequences following treatment, with no current robust measures for characterizing these trajectories post-therapy. Chemoimmunomodulation (CIM) Induction Classifier (CIMIC), a novel machine learning pipeline that uses pre- and post-treatment transcriptomics to map how the TNBC microenvironment immunologically responds to therapy. Our analysis across independent discovery cohorts reveals two divergent trajectories: a Functional-CIM (Fun-CIM) trajectory, characterized by robust immune activation and preserved antitumoral immunity, and a Dysfunctional-CIM (Dys-CIM), defined by immune inactivation and the upregulation of tumor-intrinsic stress adaptation programs like proteostasis and the unfolded protein response (UPR). We show that the Dys-CIM trajectory is significantly enriched in aggressive basal-like tumors and serves as a primary driver of therapeutic resistance and poor clinical outcomes. By distilling these dynamic trajectories, we derived a baseline eight-gene CIM-LASSO score that independently predicts survival and recurrence-free intervals in over 2,800 patients across the METABRIC and SCAN-B cohorts, providing a scalable tool for identifying high-risk patients before the initiation of therapy.

Dr. Mohammed (Mo) Gbadamosi is an Assistant Professor of Pharmacotherapy and Translational Research. His expertise and research lab focuses on chemoimmunotherapy, specific to metastatic triple-negative breast cancer. He is currently principal investigator on a grant worth nearly 2 million dollars to investigate the effectiveness of chemoimmunotherapy with this devastating disease. He has conducted several invited talks and produced dozens of publications and looks forward to sharing his expertise with audiences of students from highschool through medical school, as well as with university colleagues in the medical field. Dr.Gbadamosi collaborates with faculty abroad, including a colleague at Università di Firenze, whom he looks forward to meeting while visiting Italy in March.

Dr. Anna DeVries , worked with UF's Dr. Elias Sayor as her PhD advisor. After years of practice as a pediatric oncologist, he shifted from treatment to discovering a cure. Dr. Sayour developed a vaccine to treat glioblastoma, a rare brain cancer affecting children and Dr. DeVries worked in his research lab as part of this process. She has lectures prepared on the topic of curing childhood cancer with vaccines as well as practical talks for students on achieving academic success in college. Her lectures were well-received internationally at universities, medical schools, and hospitals in Guatemala in 2023 and 2024. Further, she is listed as a co-author on a recent publication authored by Dr. Sayour on the usefulness of mRNA vaccines in Nature, a high impact, highly cited publication (Impact Factor 48.5). Dr. DeVries currently works as a researcher for the Sontag Foundation, a Non Government Organization (NGO) among the largest funders in the private sector of brain cancer research.