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CANCER RESEARCH AT UF HEALTH (FACCA ATTENDEES)

Yehia Daaka, Ph.D.
Department: Anatomy and Cell Biology
Research Program: Cancer Therapy Immunotherapy
Email: ydaaka@ufl.edu

- The research is devoted to understanding the mechanisms that lead to tumorigenesis with specific focus on the roles of ubiquitous G protein-coupled receptor (GPCR) systems that instruct development and continue to function in adulthood
- Studied GPCRs and their signaling with a focus on receptor expression / localization and regulation, signal transduction and downstream consequences
- Involved in crucial discoveries that unraveled contribution of these receptors and their effectors (e.g. heterotrimeric G proteins, GRKs, and βArrestins) to human cancer

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Huang, Suming, Ph.D.
Department: Biochemistry and Molecular Biology
Research Program: Cancer Therapy Immunotherapy
Email: sumingh@ufl.edu

- Delineate the epigenetic pathways that regulate the normal hematopoiesis and to further determine how these networks are perturbed in anemia and leukemia
- Background in chromatin structure and transcriptional control of hematopoiesis

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Christian Jobin, Ph.D.
Department: Medicine, Division of Gastroenterology, Hepatology and Nutrition
Research Program: Cancer Microbiology and Virology
Email: christian.jobin@medicine.ufl.edu

- Focus is on bacteria/host interaction and ensuing innate/immunological responses during health and diseases
- Used mice and zebrafish housed in germ-free and gnotobiotic conditions, microbiome techniques (next-generation sequencing, microbial gene mutations, etc) to study the differential contribution of bacteria in protecting or exacerbating the development of colitis and colorectal cancer

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Frederic Kaye, M.D.
Department: Medicine, Division of Hematology and Oncology
Research Program: Cancer Therapy Immunotherapy; Cancer Microbiology and Virology
Email: fkaye@ufl.edu

- Research interest in the genetics of cancer focusing on lung and head and neck tumors
- Identified the RB gene as the first tumor suppressor gene in lung cancer
- The first to identify an RB/p16 cancer gene pathway by studying patterns of mutually exclusive somatic mutations in tumor samples

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Jonathan Licht, M.D.
Department: Medicine, Division of Hematology and Oncology
Research Program: Cancer Chromatin Dynamics; Cancer of Physical Sciences
Email: jdlicht@ufl.edu

- Studied aberrant transcriptional regulation as a cause of hematologic malignancy
- Studied the molecular biology of acute promyelocytic leukemia and transcriptional mechanisms and targets of PLZF transcription factor
- Studied chromatin changes and gene expression mediated by the MMSET protein overexpressed in a subset of multiple myeloma as well as aberrant gene and miRNA regulation in myeloproliferative neoplasms, and most recently chromatin changes mediated by EZH2 in lymphoma

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Walter O'Dell, Ph.D.
Department: Radiation Oncology
Research Program: Cancer Prevention Palliation Survivorship
Email: wodell@ufl.edu

- Research encompasses medical image processing and analysis, primarily relating to tasks pertinent to radiation oncology such as tumor early detection and sizing, modeling radiation delivery and quantifying radiation late effects to healthy tissue
- Uses magnetic resonance cardiac imaging with 'tags' to quantify deficits in cardiac deformation in women with breast cancer who receive radiation treatment of the chest wall where the heart can receive large radiation dose
- Developed tools to extract and quantify pulmonary vascular changes using CT chest scans following radiation exposure in cancer patients
- Applied this technology also to quantify vascular growth in neonates and create 3D physical models of the heart-lung vasculature in newborns with congenital vascular abnormalities
- Developed to-date the most accurate automatic metastatic tumor detection and sizing algorithm that is being used to identify early stage, asymptomatic metastases to the lung in high-risk breast cancer patients (the focus of this FACCA award)

Rolf Renne, Ph.D.
Department: Molecular Genetics and Microbiology
Research Program: Cancer Microbiology and Virology
Email: rrenne@ufl.edu

- Currently studying how proteins and noncoding RNAs expressed during KSHV latency regulate host and viral gene expression with the goal of contributing to our understanding of viral biology and tumorigenesis
- One of the four laboratories to identify 12 microRNA (miRNA) genes within the latency-associated region of KSHV

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Elias Sayour, M.D., Ph.D.
Department: Neurosurgery
Research Program: Cancer Therapy Immunotherapy
Email: elias.sayour@neurosurgery.ufl.edu

- The main focus of research is deeply rooted in harnessing the immune system to eradicate pediatric cancers
- Involved in translating bench work into clinical trials governing the development of dendritic cell vaccines with adoptively transferred cytotoxic T cells against recurrent medulloblastoma
- Started an integrative pediatric immunotherapy working group at UF that includes surgeons, clinicians, veterinarians, and pre-clinical scientists working to advance novel directed therapeutics against refractory malignancies

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Elizabeth Ann Shenkman, Ph.D.
Department: Health Outcomes & Policy
Research Program: Cancer Therapy Immunotherapy; Cancer Prevention Palliation Survivorship
Email: eshenkman@ufl.edu

- Determining which combinations of health care delivery, community, and patient factors influence quality and outcomes of care
- Developing corresponding evidence-based and patient-centered strategies to reduce health risks and improve health outcomes
- Primary research designs for these studies fall into the categories of implementation science and pragmatic clinical trials

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Lizi Wu, Ph.D.
Department: Molecular Genetics and Microbiology
Research Program: Cancer Chromatin Dynamics
Email: wmh0217@ufl.edu

- Studying signal transduction pathways that are important in human diseases especially cancers
- Current laboratory research is centered on two families of transcriptional co-activators, MAML and CRTC, that are essential components of Notch signaling and LKB1-CRTC/CREB signaling pathways, respectively

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Lusine Yaghjyan, Ph.D.
Department: Epidemiology
Research Program: Cancer Human Services Research
Email: lyaghjyan@ufl.edu

- Research focuses on mammographic breast density and breast cancer risk, biological pathways from high breast density to breast tumors, including stem cell markers, stromal markers, and estrogen metabolism pathway genes, and the role of environmental exposures in breast carcinogenesis