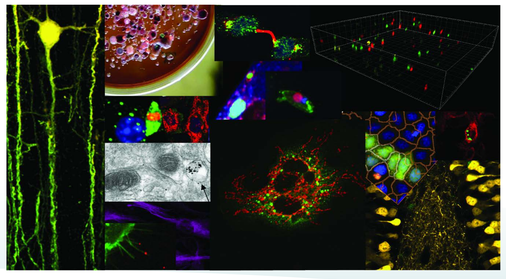
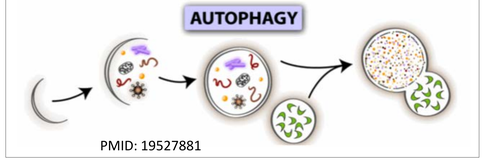
UNM SCHOOL of MEDICINE

Molecular Genetics & Microbiology



Dr. Vojo Deretic – Chair: Dr. Deretic's main contributions to science come from studies by his team on the role of autophagy in infection and immunity. Autophagy, a cytoplasmic pathway for the removal of damaged or surplus organelles, has been previously implicated in cancer, neurodegeneration, development, and aging. Dr. Deretic's group is one of those that made the discovery that autophagic degradation is a major effector and a regulator of innate and adaptive immune mechanisms.



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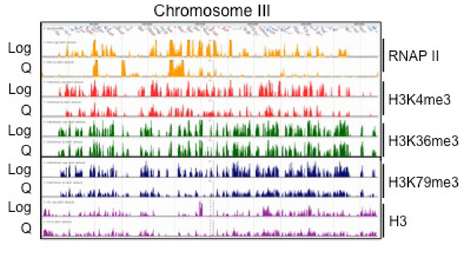
Dr. Mary Ann Osley – Professor: Dr. Osley's laboratory is focused on the role of chromatin in gene expression, DNA replication, and DNA repair as cells enter and exit quiescence. Her research uses budding yeast, *Saccharomyces cerevisiae,* to study these cellular processes.



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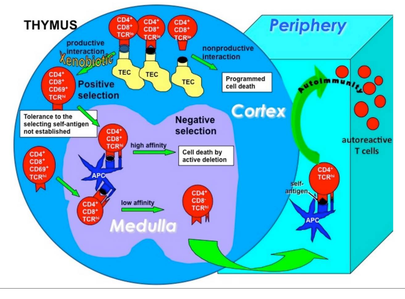
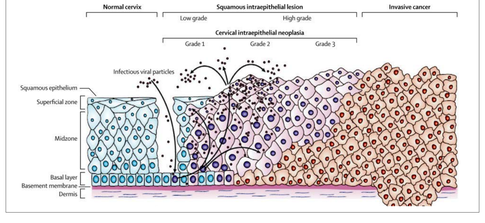
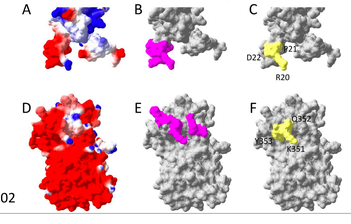
Dr. Robert Rubin– Professor: Dr. Rubin's lab explores T cell tolerance and autoimmunity, T cell development in the thymus, systemic and drug-induced lupus, & autoantibody biosensors. Dr. Rubin's laboratory also studies the cellular and molecular basis for the capacity of lupus-inducing drugs to disrupt central T cell tolerance.



Dr. Michelle Ozbun – Professor: Dr. Ozbun's lab studies the cellular and viral mechanisms that regulate the life cycles of papillomaviruses (PVs), aiming to understand the delicate virus-cell interactions that can become unbalanced, leading to malignancies. Three areas of research interests are understanding: a) strategies for PV infection and persistence; b) PV and host interactions; c) the mechanisms of HPV-induced malignant transformation.



Dr. David Peabody – Professor: Dr. Peabody was trained at Stanford University in the laboratory of Paul Berg (Nobel Prize, 1980) and has been associated with UNM since 1984. For a number of years his group studied RNA viruses of bacteria as model systems to understand gene regulation. In recent years his group has focused on adapting the virus-like particles of these bacteriophages as platforms for vaccine discovery and delivery.



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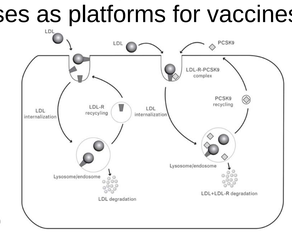
Dr. Bryce Chackerian – Professor: Dr. Chackerian's laboratory is focused on vaccine development. In particular, they use virus particles as platforms for the Display of antigens. Dr. Chackerian's laboratory has demonstrated that antigens that are normally poorly immunogenic can be made highly immunogenic by displaying them in a multivalent, repetitive format on the surface of virus particles -- essentially using viruses as platforms for vaccines.



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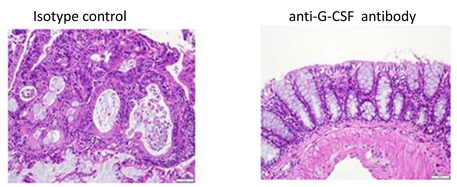
Dr. Ellen Beswick– Associate Professor: Dr. Beswick's laboratory is interested in understanding the relationship between chronic inflammation and gastrointestinal (GI) cancers, developing novel immuno-therapeutics for GI cancer, T cell immunology in the GI tract, Treg and Th17 differentiation and responses in GI cancers, *Helicobacter pylori,* Inflammatory Bowel Disease.



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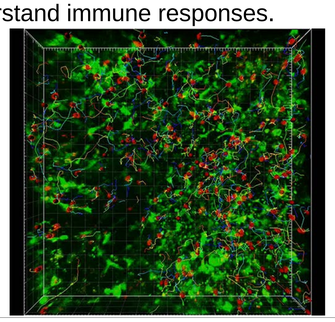
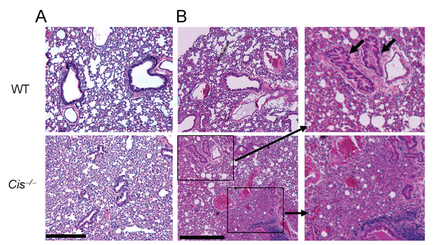
Dr. Judy Cannon – Associate Professor: Dr. Cannon's research is focused on T cell migration, T cell signaling, and leukemia cell migration using in vivo imaging. Dr. Cannon's Group has visualized T cells moving in intact lymph nodes and lungs combined with computational modeling to better understand immune responses.



Dr. Xuexian Yang – Associate Professor: Dr. Yang's laboratory investigates the regulation and function of T helper (Th17 and Th2) cells in inflammatory and autoimmune diseases, including neuro-inflammation, allergy, IBD and colon cancer. Dr. Yang's group is also interested in transcriptional control in T cells and cytokine signaling during adaptive immunity.



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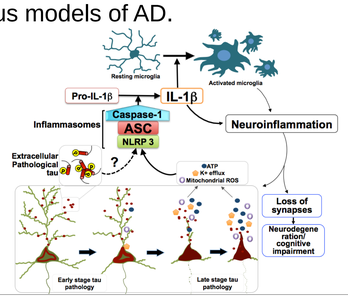
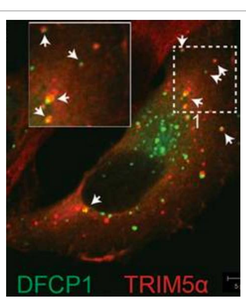
Dr. Kiran Bhaskar – Assistant Professor: Dr. Bhaskar's research is related to understanding the role of neuroinflammation in Alzheimer's disease (AD). Importantly, his lab investigates the inflammation cell-autonomous to microglia in driving AD-related pathologies, neuro-degeneration and cognitive impairment in various models of AD.



Dr. Michael Mandell – Assistant Professor: Dr. Mandell's research is focused on the autophagic targeting of HIV-1 by members of TRIM family of proteins (TRIMs). Dr. Mandell's laboratory has determined that TRIMs link autophagy induction with target specificity. These dual functions can respond to HIV infection promoting the clearance of viral components from the cell. The current focus of the lab is to uncover how TRIMs and autophagy modulate HIV-induced immune signaling.



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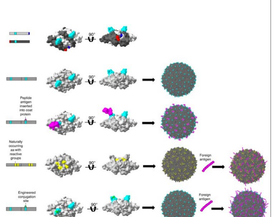
Dr. Kathryn Frietze – Research Assistant Professor: Dr. Frietze's research aims to develop new technologies to assess antibody specificity and responsiveness in infectious and chronic diseases.

Dr. Frietze's laboratory is also interested in translating the understanding of antibody responses into targeted therapeutic or prophylactic interventions for various infectious and chronic diseases.



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Dr. Paulus Mrass – Research Assistant Professor : Dr. Mrass's research is focused on direct visualization and analysis of the behavior of CD8+ effector T cells at the site of inflammation using cutting-edge imaging technology. The lab also focused on direct *in vivo* visualization of T cell migration and interaction with other immune cells during sterile lung inflammation or infection with influenza virus.