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Viral pathogenesis / immunology / vaccines

My laboratory utilizes nonhuman primate models of AIDS and influenza A virus infection to define the pathogenesis of these viral infections, study the nature of protective antiviral immunity, and test vaccines and immunotherapeutic strategies to prevent AIDS, influenza and other viral diseases.

Our goal is to define protective immune responses against human viral infections and to develop strategies to elicit those responses by vaccination.

Oral serum-derived bovine immunoglobulin improves duodenal immune reconstitution and absorption function in patients with HIV enteropathy

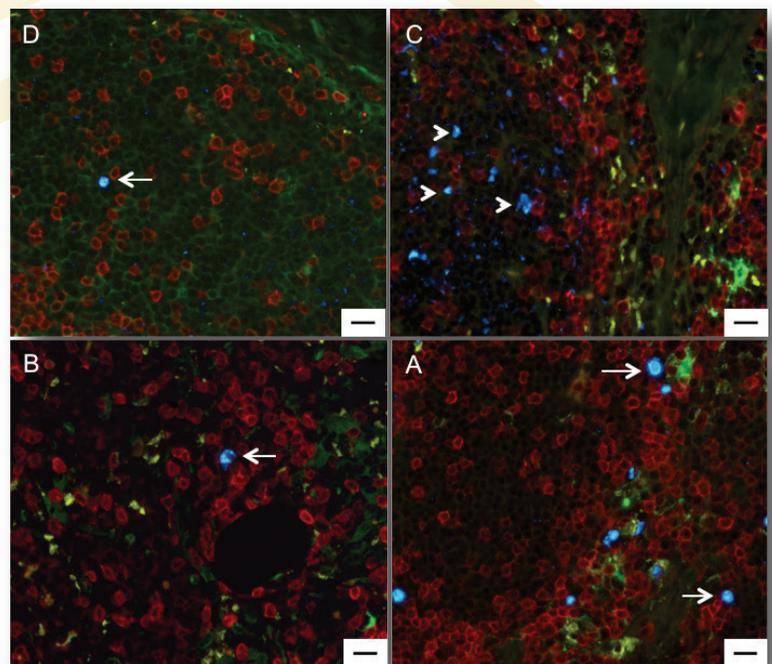
Asmuth DM, Ma ZM, Albanese A, Sandler NG, Devaraj S, Knight TH, Flynn NM, Yotter T, Garcia JC, Tsuchida E, Wu TT, Douek DC, Miller CJ

AIDS. 2013 Sep 10;27(14):2207-17. doi: 10.1097/QAD.0b013e328362e54c.

Efficacy of influenza vaccination of elderly rhesus macaques is dramatically improved by addition of a cationic lipid/DNA adjuvant

Carroll TD, Matzinger SR, Barry PA, McChesney MB, Fairman J, Miller CJ

J Infect Dis. 2014 Jan 1;209(1):24-33. doi: 10.1093/infdis/jit540. Epub 2013 Oct 17



SIV RNA+ cells in the Inguinal LN after penile SIV inoculation. Panel A) 1 day PI; Panel B) 1 day PI, inactivated-SIV; Panel C) 7 days PI; Panel D) 14 days PI. Arrows indicate representative SIV RNA+ cells (blue) located mostly in T cell rich paracortex in Panels A, C and D. In Panel B; arrowheads indicate extracellular vRNA within a B cell follicle. In Panel D; arrowheads indicate vRNA within macrophages. red = T cells; green = endothelial cells and bone-marrow derived dendritic cells; yellow = macrophages; bright blue = SIV RNA+ cells. Scale bar = 20 um.