



Pacific Center for
Emerging Infectious Diseases
Research



UNIVERSITY
of HAWAI'I
MĀNOA

Department of Tropical Medicine, Medical Microbiology & Pharmacology

JOHN A BURNS SCHOOL OF MEDICINE, UNIVERSITY OF HAWAI'I AT MANOA

Cytomegalovirus and the Eye: AIDS-related Retinitis and Beyond

The eye is an immune-privileged site of the body that possesses a number of structural barriers and immunologic strategies to preserve vision. Despite these novel barriers and strategies, viruses use a variety of unique pathogenic mechanisms to invade retinal tissues and establish infection, a process that often leads to destruction of the delicate structural architecture of the retina (retinitis) and ultimately vision loss and blindness. My research program through funding by the National Eye Institute focuses on understanding the key events that take place during onset and development of retinal diseases caused by human herpesviruses, especially human cytomegalovirus (HCMV). This human herpesvirus is responsible for a sight-threatening retinitis in persons who are immunosuppressed, including persons with AIDS. These investigations are being pursued using a clinically relevant animal model of mouse cytomegalovirus (MCMV) retinitis unique to my laboratory that employs mice with a retrovirus-induced immunosuppression (MAIDS), a mouse model that mimics HIV-induced immunosuppression during AIDS. Previous work from my laboratory using the MAIDS model of MCMV retinitis have investigated the precise roles of antibody and cellular immunity in protection against development of HCMV retinitis in immunologically normal persons. More recent work has explored the role of cytokines in MAIDS-related MCMV retinitis. Collectively, these investigations are designed to lead to new paradigms of disease pathogenesis for better diagnosis and management of AIDS-related HCMV retinitis in the clinical setting.

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John A. Burns School of Medicine, Kaka'ako Campus
Medical Education Building Auditorium (Room 315)
For further information, contact (808) 692-1654

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