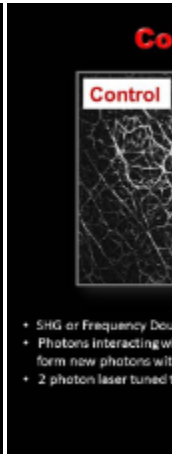
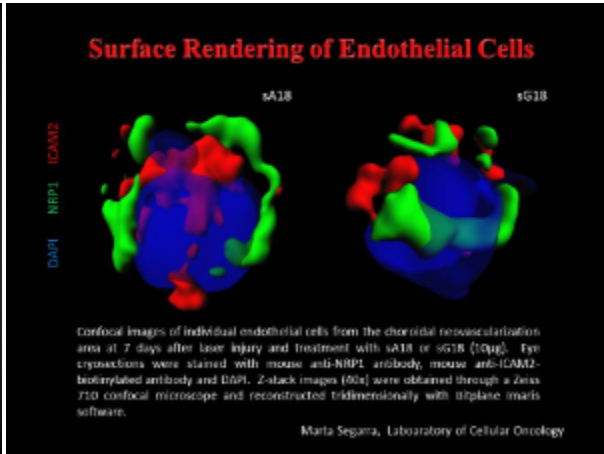
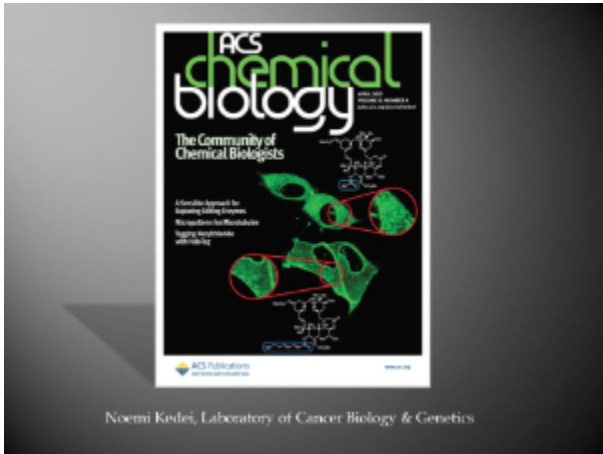
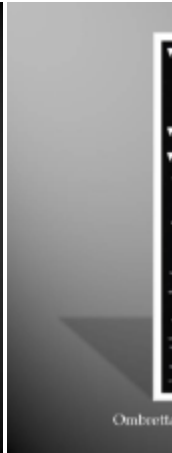
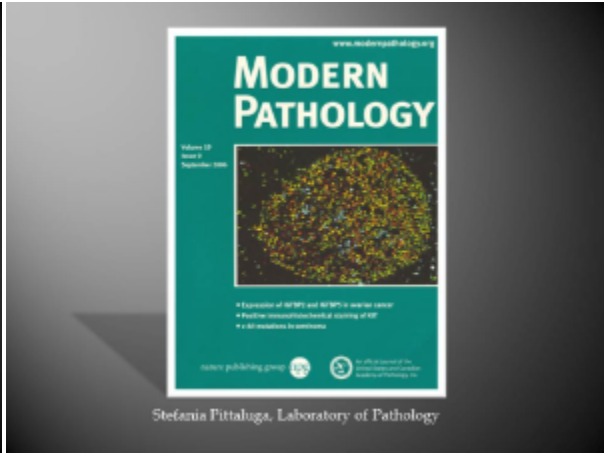
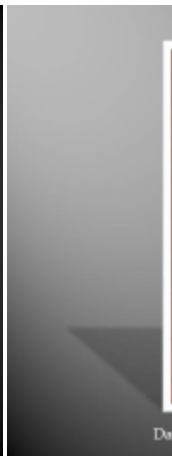
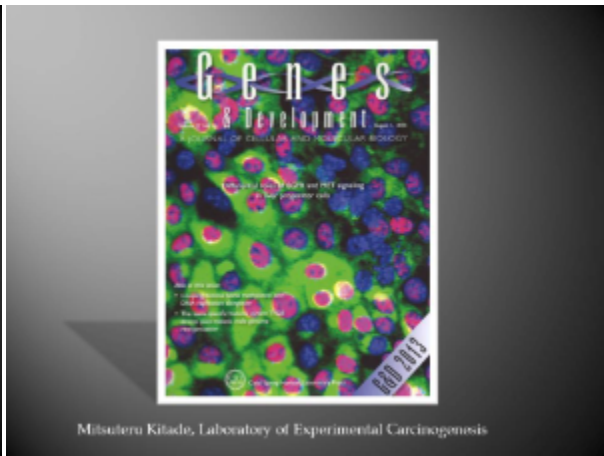
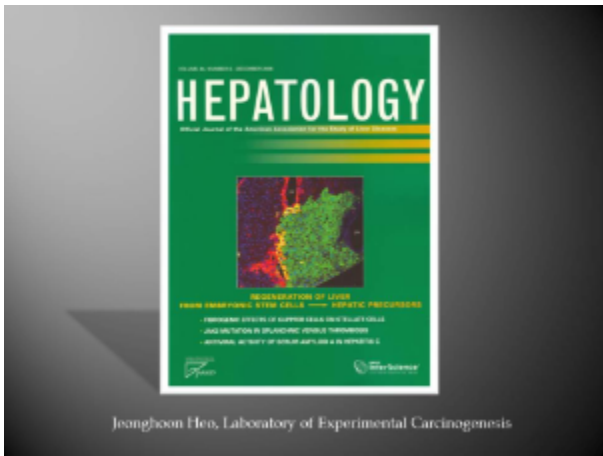


Image Gallery

Click on each thumbnail image below to enlarge it and view captions.



Photoactivation

- Photoactivation of Dendra2 by 488nm laser line
- Switches from green emission to red emission with high intensity laser
- Acquisition with low intensity laser

Michael Stern, Laboratory of Cell Biology

Surface Rendering of Exosomes and Nanotubes

Exosomes localize inside nanotubes. a-f HUVEC cells incubated with PKC- δ -labeled exosomes (a, red) on Matrigel reorganized and sent out pseudopods that extended into nanotubes containing both F-actin (b, pink) and microtubules (c, green). Nuclei were stained with DAPI (blue). The merged image (d) shows the localization of exosomes at level of the nanotube. Scale bars 10 μ m. e 3D reconstruction of the nanotube by surface rendering, showing outer view. f-g sections of the nanotube showing exosome localization inside the nanotubes in longitudinal section (f) and cross section (g). Confocal images were obtained through a Zeiss 510 confocal microscope and reconstructed tridimensionally with Bitplane Imaris software.

Marco Milnes, Medical Oncology Branch

Colocalization

Co-localization of endocytosis and lysosomal trafficking. FLAG-AGAP1 (green) in

Zhongwen Nie and Paul
of Cellular Oncology

Options for Z stacks

Phagocytosis of FITC labeled E. coli (green) by primary hepatocytes loaded with lysotracker (red)

Valentine Factor, Laboratory of Experimental Carcinogenesis

FRET: Fluorescence Energy Transfer

Acceptor Photobleaching:

- cy3 (green, donor)
- cy5 (red, acceptor)

Chaojie Zhai and Peter Lundberg, Laboratory of Cancer Biology & Genetics

FRAP to M

- KB-20 cells: disjunctive
- KB-VI cells: compare

KB-20 cells with Fluorescein-DHPE

PKC Project

- Translocation of PKC δ in CHO cells in response to 1 μ M Bryostat 1
- Nuclear membrane translocation with less plasma membrane translocation
- Perinuclear localization

Differential localization of protein kinase C δ by phorbol esters and related compounds using a fusion protein with green fluorescent protein. Wang, Q. J., Bhattacharyya, D., Garfield, S., Marquez, V. E. and Blumberg, P. M. (1999) J Biol Chem

PKC Project

- Translocation of PKC δ in CHO cells in response to 1 μ M PMA
- Predominant plasma membrane translocation (peaks at 10 min)
- Slower and more limited nuclear membrane translocation

Differential localization of protein kinase C δ by phorbol esters and related compounds using a fusion protein with green fluorescent protein. Wang, Q. J., Bhattacharyya, D., Garfield, S., Marquez, V. E. and Blumberg, P. M. (1999) J Biol Chem

Ruffling/Cytoskeleton

- Withdrawal of IL-3 dissolves ruffles & converts the cell phenotype to round
- Phorbol 12-myristate 13-acetate (PMA) has the same effect in the presence of IL-3

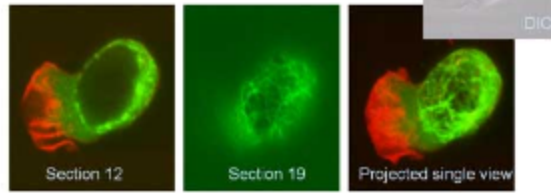
Regulation of actin cytoskeleton. Romanova, L. V., Go

PKC Project 2

PKC Project

Ruffling/Cytoskeleton

Ruffling/Cytoskeleton



Actin and tubulin staining of cells treated with IL-3 showing membrane ruffling, cytoskeleton and elongated cell phenotype

Regulation of actin cytoskeleton in lymphocytes: PKC- δ disrupts IL-3-induced membrane ruffles downstream of Rac1. Romanova, L.Y., Garfield, S., et al. (1998) Journal of Cellular Physiology

Ruffling/Cytoskeleton