Cell and Developmental Biology Retreat
April 28 at Smithville

Keynote speaker: Denise Montell, Johns Hopkins
Molecular Genetics of Cell Migration

Registration:

Name: ____________________________________________
Dept. or Affiliation: ____________________________________________
Phone Number ____________________ Email ________________________________

__ I plan to attend the conference.
__ I will bring _____ guest(s).
   Name of guest(s): ____________________________________________
__ I need transportation.
__ I can offer transportation for ___ others.

Presentation:
___ No
___ Yes
   __ I would prefer to present a 12-minute report.
   __ I would prefer to present a poster (size of poster boards is 5 1/2 feet x 4 feet)
   __ I will present either a poster or a talk (no preference)
   __ An abstract of my presentation is enclosed.
   __ I need special audio-visual equipment (in addition to a blackboard and projectors for 50 x 50 mm slides and overhead transparencies (please specify):________________________

Please return this registration form and abstract by Friday April 13, or as soon as possible, to Paul Macdonald, MBB 2.422 or pmac@icmb.utexas.edu. If you have any questions call me at 232-6292.
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Instructions for Abstracts

Please provide an abstract of your progress report or poster presentation. The size of the abstract should not exceed 6 1/2 x 4 1/2 in. Please use the example below as a template for preparation of the abstract, using a font size of 11 point or larger. The abstract MUST fit in the box. It will be photocopied as is and will be included in the conference program.

The abstract should be submitted as a Word or Appleworks file, preferably via email as an attached document.

Example Abstract:

MICROTUBULE ORGANIZING CENTER AND ASSOCIATED VESICLE MOVEMENTS OF LIVING T LYMPHOCYTES VISUALIZED BY MODULATED POLARIZATION MICROSCOPY.

Jeffrey R. Kuhn and Martin Poenie, Department of Zoology, University of Texas, Austin, TX 78712, USA.

Many types of cells exhibit cytoplasmic polarity during some part of their life history. Examples of this polarity are seen in bud site selection of yeast, animal-vegetal axis of oocytes, and the polarized organization of the cytoskeleton in migrating cells and during T cell mediated killing of target cells. In T cells, killing via the secretory pathway involves movements of the cytoskeleton and coordinated directional movement of vesicles. To study these cytoskeletal and vesicle movements, we have developed a new type of microscopy called modulated polarization microscopy. Here we selectively image weakly birefringent structures such as vesicles and cytoskeletal elements using the principle that birefringence depends on the polarization angle of the illuminating light. Here, we modulate polarization angle illuminating light at a fixed rate while viewing the specimen between crossed polarizers. This causes birefringent structures to oscillate in intensity. Video images are then processed using a single frequency Fourier filter, which passes only those elements in the image that oscillate at the right frequency. Using this approach we have been able to image the microtubule organizing center, microtubules, and their associated vesicles in living T lymphocytes and their cognate target cells.