

## Fall 2011

- **New Applications:**
  - Novel Bioluminescence Imaging *in vitro* and *in vivo*: micro to macro
  - Single molecule detection and tracking
  - CRET – Radiation-induced luminescence
  - BRET – Qdot Nanoprobes
  - TIRF – 30 to 1,000 fps
- **More Speed & Diversity:**
  - CMOS and sCMOS: up to 5.5 Mpixels (sCMOS) and 500 fps (CMOS)
  - Full line of Hamamatsu cameras featuring the ORCA-Flash & ImageEM EMCCDs
  - Intensified CCDs: Faster ICCD gating – Improved FLIM and long decay (Lanthanide) TRFM
  - Updated XR/TURBO: improved S/N and 12 bit outputs, 120-1000 fps operation
- **Piper Control™ Software:**
  - Faster streaming to RAID
  - Improved Micro-Manager integration and support
  - Single Photon Detection module
  - Real Time ROI measurements including strip chart, tracking and event detection
  - Faster TTL I/O and synchronization with external devices (up to 5,000 fps)
  - More peripheral devices:
    - ♦ Automated Microscopes – Nikon, Zeiss
    - ♦ Yokogawa CSU-X1 spinning disk confocal
    - ♦ Stages, Z-Drives and Filter wheels – ASI, Ludl, Piezo Jenna
    - ♦ High brightness LED products
    - ♦ Data Translation I/O modules
- **New Hardware:**
  - High-power large area LED illumination
    - ♦ Uniform field: <1% non-uniformity
    - ♦ Up to 16 colors from one module - UV to nIR
  - ONYX™ Black Box System. Next generation
    - ♦ Configured for whole animal imaging and environmentally controlled well plates
    - ♦ Filter wheel and in-box x-y-z positioning system
    - ♦ Converts from Macro to Micro visualization – 1:1 & 5X lens adapters with 0.5 N.A., 19 mm WD
- **New Facility (12/1/2011):**
  - Dedicated imaging lab for on-site proof of concept experiments
  - ONYX™ Black Box system for limit of detection imaging, macroview or microview
  - Full spectrum of camera options ranging from -Z cooled cathode ICCD's to 5 mpixel CCD and sCMOS
  - State-of-the-art PC workstations
  - Expanded customer service, R&D and production space
- **New Software Partners**
  - MotionAnalysis – CellTrak: Morphology and Motility Assessment Software
- **Faster, More Comprehensive Customer Service & Support**
  - Net-based desktop porting for immediate assessment & diagnosis, demonstrations & instruction
  - New export regulations offer “no waiting” license exempt shipping of SPI technology