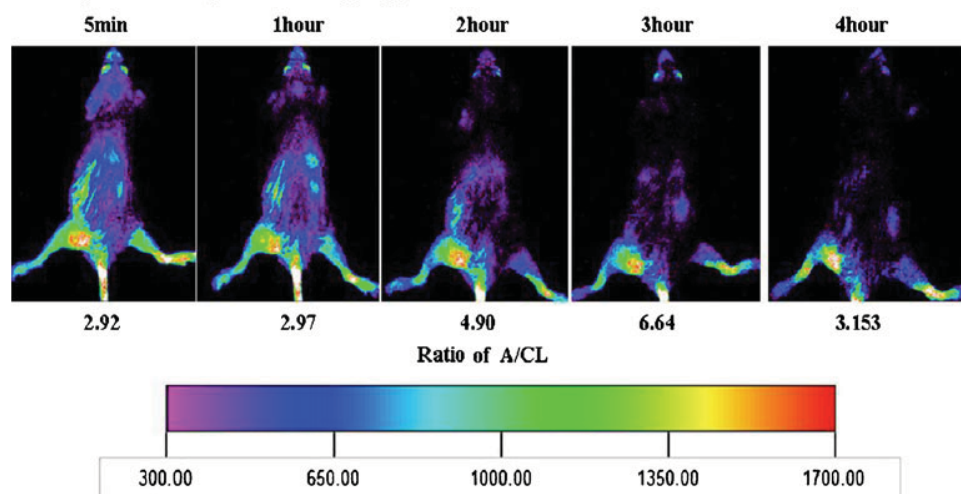


## PSVue® 749 Targets infectious foci in mice

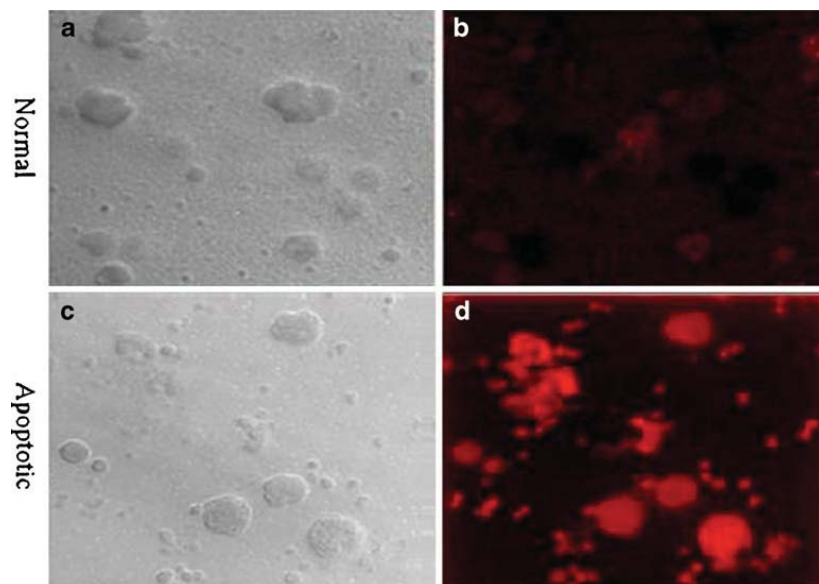
Publication: Targeting Apoptosis for Optical Imaging of Infection

Results reported in Molecular Imaging and Biology online:03 May 2011 demonstrated that PSVue® 749 can target PS on the outer leaflet of apoptotic or necrotic neutrophils as well as gram-positive microorganisms. Bacterial infection and sterile inflammation were induced in separate groups of mice. Imaging of targeted PSVue® 749 was performed using Kodak Multispectral FX-Pro system. Images were visible at 5 min post-injection. At 3 h post-infection target to background intensity ratios were  $6.6 \pm 0.2$  and  $3.2 \pm 0.5$  for infection foci and inflammation, respectively. The following figure shows optical images of a mouse with bacterial infection.

### Dynamic optical imaging of bacterial infection with PSVue 794



Confocal microscopy of normal and apoptotic neutrophils as shown in the following figure confirmed excellent specificity of PSVue® 749 for outer leaflet PS.



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## CellVue® NIR815 for General Cell Membrane Labeling

**CellVue® NIR815** tracks human umbilical cord blood stem cells within an intervertebral disk explant.

Results reported in the *2011 Rush Orthopedics Journal* demonstrated success using CellVue® NIR815 fluorescent dye to track stem cell survival in rabbit disk culture. Human umbilical cord blood-derived mesenchymal stem cells (hUCB-MSC) were stained with CellVue® NIR815 and transplanted into cultured rabbit intervertebral disk explants. Cells continued to fluoresce green after 1 month in culture. When these green images are overlapped with a noninjected rabbit disk that has a red background fluorescence the resulting color for the stem cells has a yellow fluorescent appearance (figure below). The fluorescent color diminished only slightly over the 4-week culture period.

Rabbit Intervertebral Disc Organ Explants injected with human umbilical cord mesenchymal stem cells labeled with CellVue and cultured *in vitro* for 4 weeks

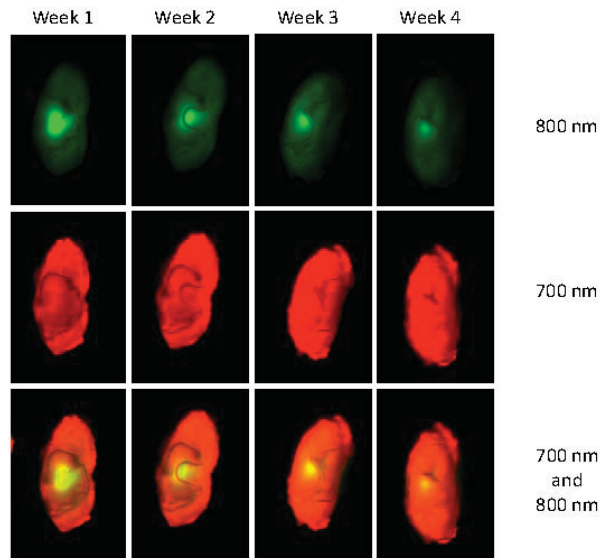


Figure courtesy of Dr. Ana Chee

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