

## Press Release

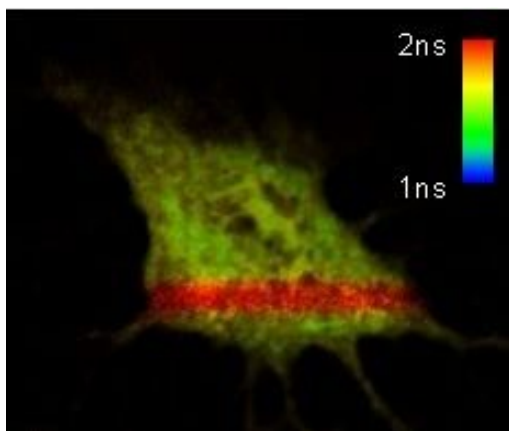
For immediate release  
3 August 2010

### FLIM upgrade kit for Olympus FV1000MPE with Non-descanned Detection (NDD)

The Fluorescence Lifetime (FLIM) upgrade kit from PicoQuant has been further improved and is now also available for the new two photon confocal microscope from Olympus, the FluoView FV1000MPE with non-descanned detection (NDD). The upgrade kit extends the capabilities of the microscope towards time-resolved FLIM measurements with a temporal resolution down to picoseconds and allows users to perform various analysis on this time scale.

The kit includes a small modification to the NDD unit of the Olympus MPE system, which enables the user to easily switch between standard NDD imaging and FLIM via a simple change of cables. Up to 4 internal NDD detectors can be used for FLIM. The kit uses the two photon laser source of the FV1000MPE system as excitation source and is completed by Time-Correlated Single Photon Counting (TCSPC) electronics and a special data acquisition and analysis software for FLIM and FLIM-FRET.

Due to the usage of many components already present, the upgrade kit is an economical way to extend the capabilities of the FV1000MPE towards FLIM measurements. NDD FLIM is extremely suited for deep tissue FLIM, where descanned detection becomes very insensitive. Still, the FV1000MPE can also be combined with sensitive descanned detection by additionally attaching Single Photon Avalanche Diodes (SPADs) with a extremely high quantum efficiency. This would make additional measurement modes like Fluorescence Correlation Spectroscopy (FCS) possible.



*Fig. 1: FLIM image of a cell with a GFP/RFP tandem construct. The red stripe is caused by acceptor photobleaching in this area, that prevents an energy transfer induced decrease in the fluorescence lifetime of the GFP.*

**Attachement**

picture: figure\_Cell.jpeg (recorded with the system)

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**About PicoQuant**

PicoQuant GmbH is a research and development company in the field of optoelectronics. The company was founded in 1996 and is based in the Technology Park Berlin-Adlershof, Germany. Since April 2008 Sales and Support in North America is handled by PicoQuant Photonics North America Inc. The company is a worldwide leader in the field of Single Photon Counting Applications. The product line includes pulsed diode lasers and LEDs, photon counting instrumentation, fluorescence lifetime spectrometers and time-resolved confocal microscopes. PicoQuant employs currently around 50 people.