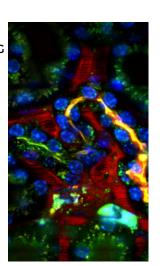
# **LIST OF POPULAR**

### **APPLICATIONS**

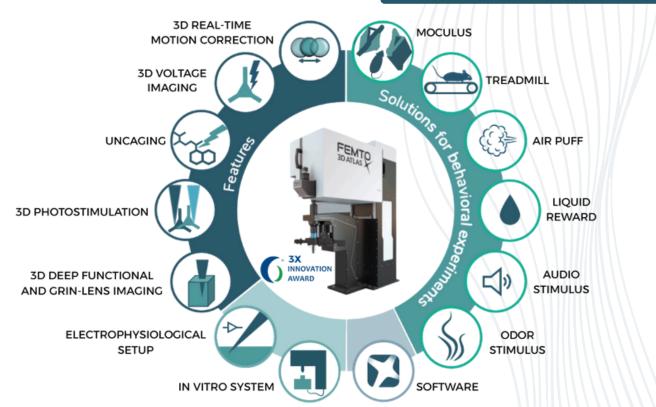
- BEHAVIOR EXPERIMENTS
- DEEP FUNCTIONAL IMAGING
- VOLTAGE IMAGING
- OPTOGENETICS
- BLOODFLOW IMAGING
- NETWORK IMAGING
- DENDRITIC IMAGING
- UNCAGING EXPERIMENTS
- 3-PHOTON MICROSCOPY
- FLIM
- ELECTROPHYSIOLOGY
- CHRONIC IMAGING



### **READY FOR RELIABLE RESULTS?**

**TEAM UP WITH US!** 



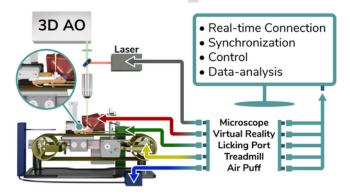




#### **COMPLEX BEHAVIORAL**

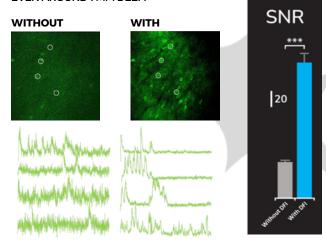
### **EXPERIMENTS**

IMAGING NEURAL ACTIVITY IN BEHAVING ANIMALS IS CHALLENGING, SINCE ALL KINDS OF MOVEMENT MAY GENERATE IMAGING ARTIFACTS. WITH THE HARDWARE AND SOFTWARE SOLUTIONS PROVIDED BY FEMTONICS, WE PROMISE, THAT YOUR EXPERIMENTS WILL BE AT ITS BEST BEHAVIOR!



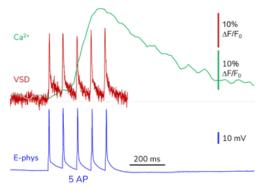
#### **DEEP FUNCTIONAL IMAGING**

EXAMINE THE DEEPER LAYERS OF THE NEOCORTEX. EVEN AROUND 1 MM DEEP.



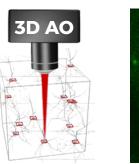
IMPROVED SNR USING FEMTONICS DFI PACKAGE AT -850 MICROMETERS IN CORTEX, GREEN TRACES: **EXAMPLE ROIS. BAR GRAPH: SNR** 

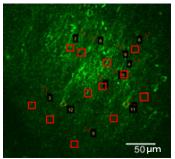
### **3D VOLTAGE IMAGING**



#### **ADVANTAGES TO ELECTROPHYSIOLOGY**

- NON-INVASIVE, LARGE-SCALE (EVEN 100 CELLS AT A TIME)
- DETAILED ELECTROPHYSIOLOGICAL READOUT
- MORPHOLOGY + DENDRITIC-LEVEL INSIGHTS
- NO PHYSICAL ACCESS REQUIRED
- HIGH TEMPORAL RESOLUTION (UP TO 100 KHZ)
- REDUCED PHOTOBLEACHING WITH NEW VOLTAGE SENSORS

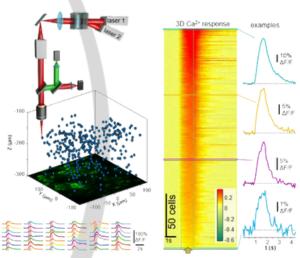




500 ms

#### **3D OPTOGENETICS**

PHOTOSTIMULATION CAN BE INTERLACED WITH IMAGING BY SELECTING A SCAN AREA COVERING ONE OR MORE SOMATA SITUATED ANYWHERE IN THE 3D VOLUME. WITH THE TIMING OF THE STIMULUS UNDER OUR CONTROL. THE SPATIAL AND TEMPORAL PROPERTIES OF THE NETWORK ELEMENTS CAN BE EXAMINED HOLISTICALLY AND EVEN CHRONICALLY.



SIMULTANEOUS PHOTOSTIMULATION AND IMAGING

## **BLOODFLOW IMAGING**

THE FEMTO3D ATLAS MICROSCOPES EMPLOY SUPERIOR TECHNIQUES TO PERFORM HIGH-QUALITY BLOOD FLOW TRACKING AT THE CELLULAR LEVEL.

