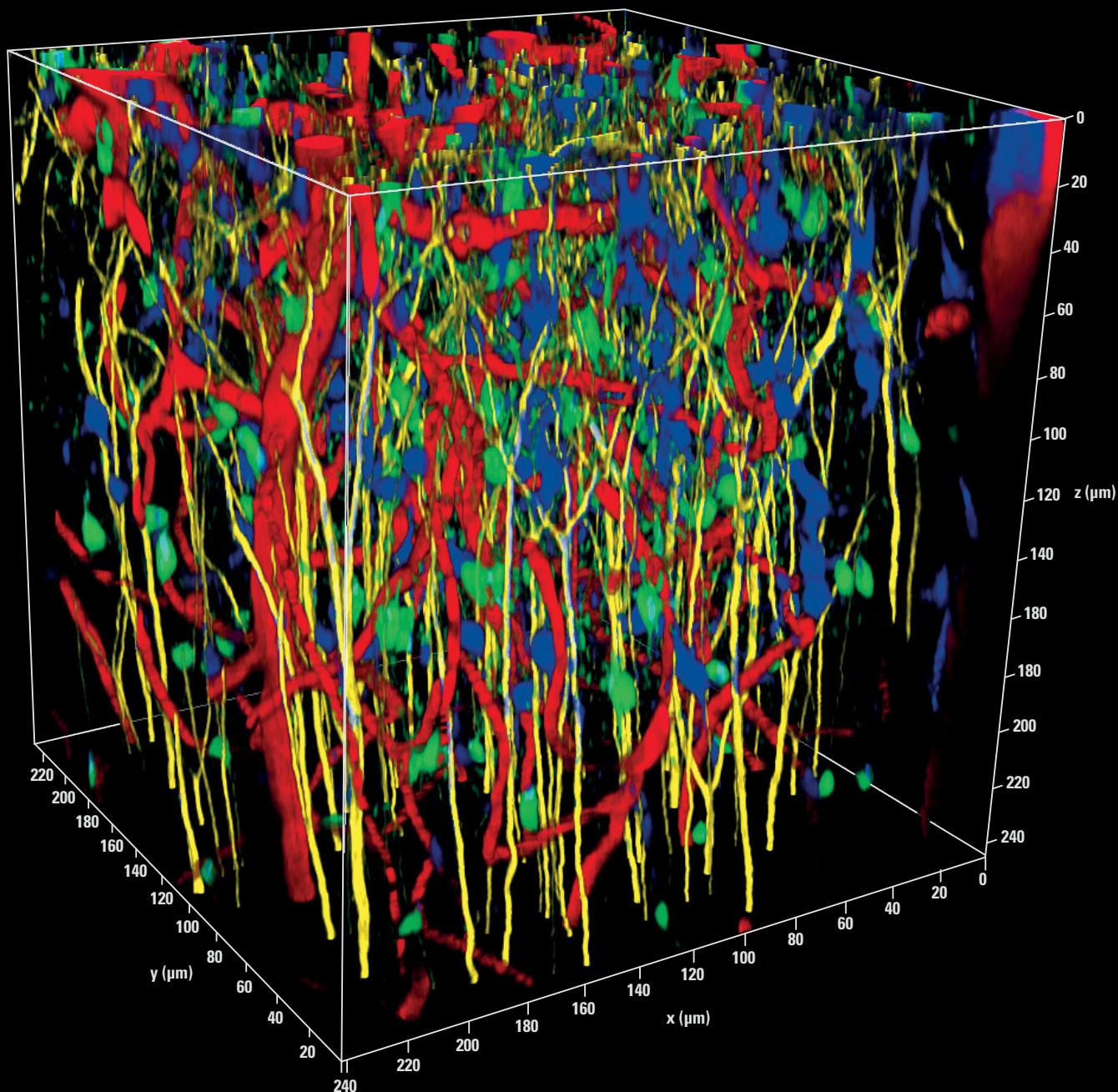
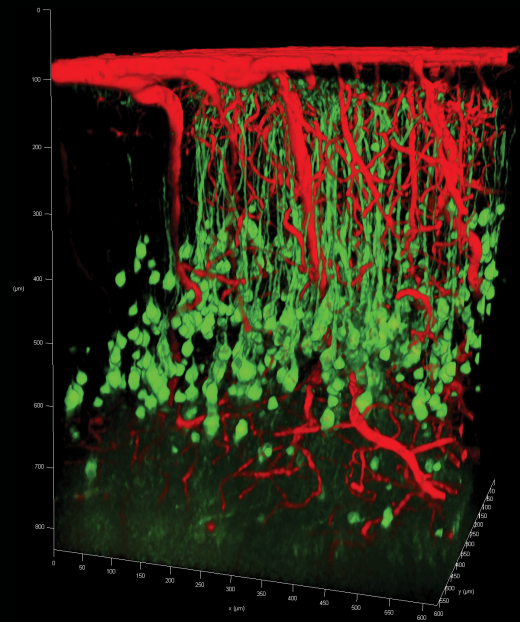


## SP8 DIVE

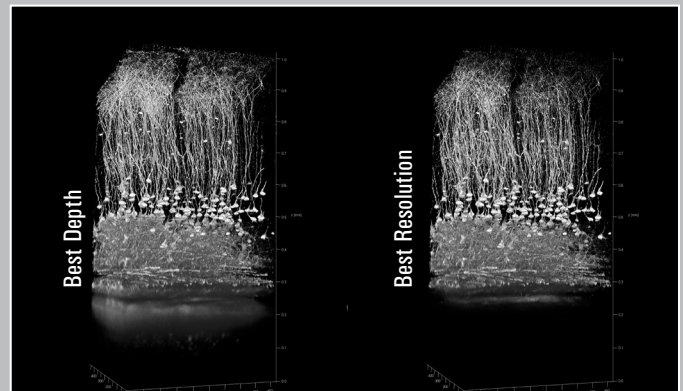
Multiphoton Microscopy for Cancer Research,  
Immunology and Neurobiology



# DESIGNED FOR YOUR EXPERIMENT



The comprehensive LAS X software allows for easy adaption of the detection windows.



Best depth vs best resolution mode: Penetration in the mouse cortex was enhanced by 20 % or 200  $\mu\text{m}$ . Samples courtesy of Kevin Keppler, Light Microscope Facility, DZNE Bonn, Germany.

## Spectral freedom for multicolor deep in vivo imaging

Whether you are aiming to understand the spread of cancer in a mouse model or looking at the development of Alzheimer's disease, with the SP8 DIVE system you can benefit from unlimited flexibility in your multiphoton experiments.

Be free to use any fluorescent label. The SP8 DIVE offers you full spectral freedom with perfect color separation. Use up to four colors simultaneously and an infinite number of colors sequentially. The unique 4Tune detector of the SP8 DIVE system allows easy adaptation to any marker without the necessity of replacing filter cubes!

With the flexibility of the SP8 DIVE, you can stay fully focused on your biological sample.

Top Image: Approx. 1 mm deep 3D image of a living mouse cortex. Neurons (green, GFP) and the blood system (red, Texas Red-dextran) are labelled. Samples courtesy of Kevin Keppler, Light Microscope Facility, DZNE Bonn, Germany.

Title Image: Mouse brain, transgenic and transiently labelled. Different types of nerve cells are shown in green (microglia, GFP), yellow (neurons, YFP), blue (astrocytes, sulforhodamine) and the blood system in red (Alexa680-dextran). Samples courtesy of Kevin Keppler, Light Microscope Facility, DZNE Bonn, Germany.

## The perfect balance between depth and resolution

You decide whether to image as deep as possible within your specimen or with highest resolution. With the Vario Beam Expander (VBE), you can seamlessly tune between penetration depth and resolution.

Penetrate 1 mm or beyond to access deep layers of brain tissue. Acquire large, detailed images of evolving dendritic spines or stem cells with high resolution. The SP8 DIVE system with the VBE always adapts to your experimental setup.

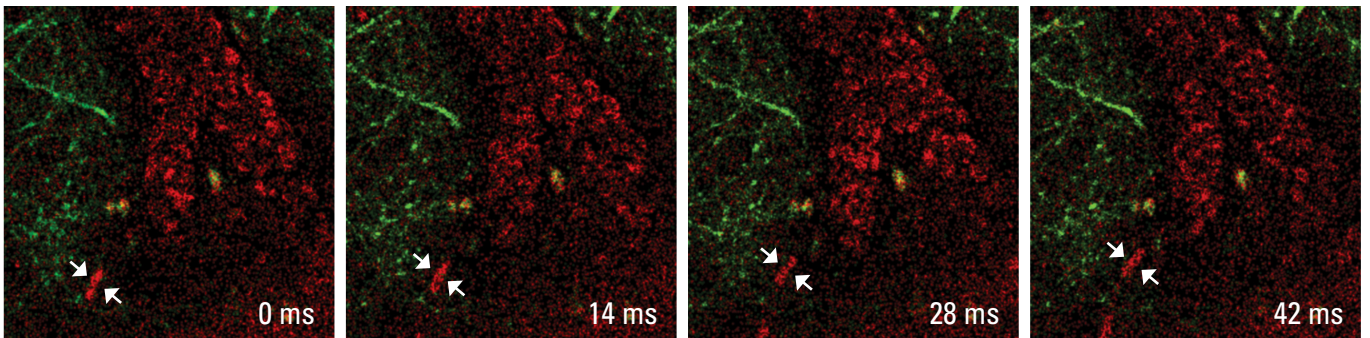
# BEHAVIORAL STUDIES MADE EASY



## Enhanced workspace for behavioral research.

For behavioral experiments, the SP8 DIVE can be configured with the DM8 CS microscope stand. The DM8 CS provides you with spatial

flexibility for large and complex setups. The microscope stand can be mounted on a cascaded table to customize the workspace according to your experimental requirements!



Mouse brain cortex. Green: Thy1-eYFP cortical neurons, red: THG blood cells, 1300 nm excitation, IRAPO 25x1.0 W motCorr; 70 fps, 256x256 px, Sample courtesy of Kevin Keppler, Light Microscope Facility, DZNE, Bonn, Germany.

Top Image: The SP8 DIVE with the DM8 CS microscope stand offers extended workspace for behavioral research. Laser safety measures not shown for better visibility of the system.

# ALWAYS THE RIGHT CHOICE FOR YOUR APPLICATION

The SP8 DIVE system covers a wide range of applications and specimens. Whether you image 3D cell cultures or live brain labeled with multiple fluorophores, the SP8 DIVE has the setup to meet your requirements.

Expand the SP8 DIVE with FALCON to acquire Fast Lifetime Contrast information. Lifetime imaging can be used for the biosensing of

physiological processes, like ion concentration changes (calcium-imaging) or molecular interaction (Förster Resonance Energy Transfer - FRET), over time and deep in vivo.

Find the right setup for your application. You can choose from three different microscope bodies: inverse, upright fixed stage, or extended space with the DM8 CS microscope stand.

Your Application	Our SP8 DIVE Solution
<ul style="list-style-type: none"> <li>&gt; Select tissues</li> <li>&gt; Image mouse intestines</li> <li>&gt; Investigate 3D cell cultures</li> </ul>	SP8 DIVE with the inverted microscope stand DMi 8
<ul style="list-style-type: none"> <li>&gt; Acquires live brain images</li> <li>&gt; Investigate spinal cords</li> </ul>	SP8 DIVE with the upright fixed stage microscope stand DM6 CFS
<ul style="list-style-type: none"> <li>&gt; Assay behavioral patterns requiring complex and spacious setups</li> <li>&gt; Image large specimens</li> </ul>	SP8 DIVE with the DM8 CS microscope stand



“The conventional dichroics are never optimal to distinguish all fluorophores, but with the spectral detectors, this is now possible and much easier, since we can really optimize for each fluorophore the wavelengths you want to detect.”

Prof. Dr. Jacco van Rheenen. Netherlands Cancer Institute, Amsterdam (the Netherlands).

DIVE DEEP WITH US!



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