

## CARL ZEISS MICROSCOPY

### **Add a new dimension to live imaging - Use your Airyscan detector and uncover spatial molecular dynamics in your current samples**

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**Presenter:**

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**Abstract:**

ZEISS Dynamics Profiler uncovers molecular concentration, diffusion, and flow dynamics of fluorescent proteins in your living samples in a single, easy measurement. By utilizing the ZEISS Airyscan area detector, Dynamics Profiler collects more information than was previously possible with conventional Fluorescence Correlation Spectroscopy (FCS), bringing you Asymmetric Diffusion and Flow Analysis Tools. Uniquely using the Airyscan detector elements enables accurate and reproducible analyses, even with bright samples. Delicate samples can be explored without excessive light exposure or prolonged experiment time.

Molecular dynamics experiments are often limited by lack of necessary equipment or the highly trained personnel. Now, with the Dynamics Profiler function that can be easily added to a ZEISS confocal with the Airyscan detector, any proficient confocal microscopy user can go beyond traditional confocal imaging to collect molecular concentration and dynamics information about a protein of interest. The wizard-guided workflow ensures precise acquisition settings and simple data quality control. Reference images aid in sample context and measurement position documentation. Comprehensible data visualization enables intuitive access to the information obtained. Adding molecular dynamics measurements to any of your current live sample experiments has never been easier.

Develop a more in-depth profile of the molecules in your current experiments, from cell cultures to organoids to whole organisms. Examples of new dimensions uncovered by Dynamics Profiler include the transition of cellular condensates formed by liquid-liquid phase separation as measured by Asymmetric Diffusion. With Flow Analysis, measure speed and direction of fluorescent molecules moving in a bloodstream or in microfluidic systems, such as organs-on-a-chip.

Raw data is saved with every measurement, enabling you to perform customized analyses, either immediately or when the scientific question arises later.

It's easier than you think to add molecular dynamics measurements to your current confocal experiments.

