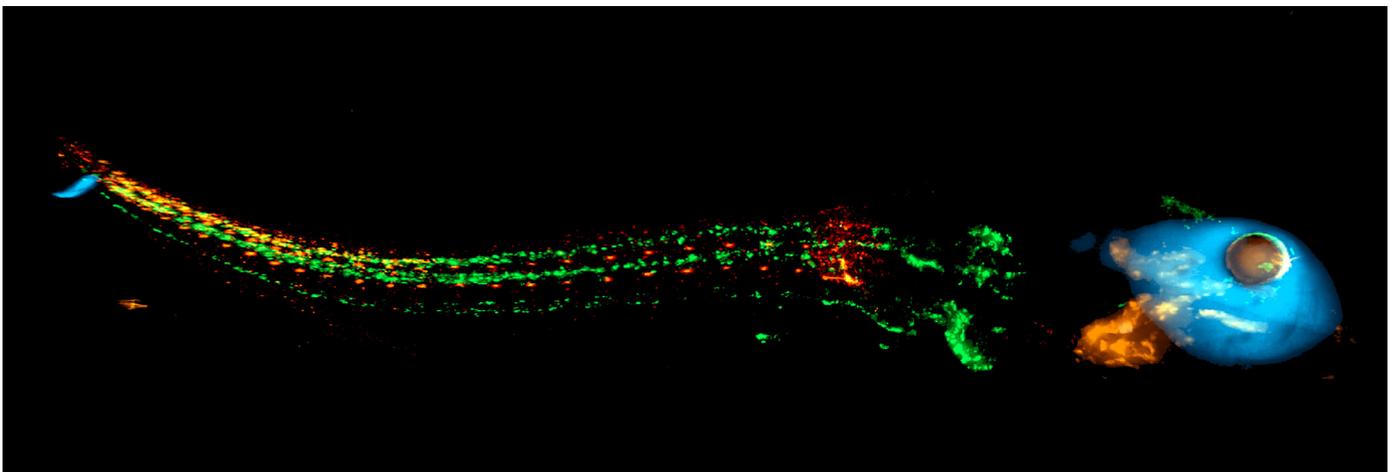


High-Resolution 3D Visualization & Evaluation

ZEISS Axio Observer *section* and ZEISS Axio Imager *section* for Easy and Cost-Effective 3D Imaging



Transgenic zebrafish larvae at 4 days post fertilization with neuronal and glial cells labeled with Hoechst, Alexa488, Alexa546, and Alexa647. Image courtesy of Hanna Reuter, Leibniz Institute on Aging – Fritz Lipmann Institute, Jena Germany

High-resolution 3D imaging is important to understanding the spatial context of your biological structures of interest. Whether you are working with cell monolayers or organoids, tissue sections up to full model organisms, not only must your imaging system be capable of acquiring sharp images, but you must be able to comprehensibly visualize, analyze, and present your complex 3D data in a compelling way.

Axio Observer *section* and Axio Imager *section* are designed to provide streamlined workflows for cost-effective 3D imaging from data collection through evaluation.

AI Sample Finder automatically finds and focuses your sample with the click of a button. The Colibri 7 LED light source offers the highest spectral flexibility with low phototoxicity. The sensitive and fast AxioCam 8 camera provides high resolution, high frame rates, and a large field of view. Utilize the software-based optical sectioning as the most light-efficient and cost-efficient method data acquisition for high-resolution 3D images. Or include ZEISS Apotome structured illumination for increased optical sectioning power and gain sharp images even of thicker samples.

Process your images during acquisition using one of several functions like deconvolution, deblurring or denoising.

Whether you work with 3D cell culture models (organoids, spheroids etc) or small model organisms such as yeast, *C. elegans*, zebrafish and more, this 3D imaging system with enhanced workflows and powerful software will bring your 3D research and evaluations to the next level.

Axio Observer section and Axio Imager section

The Bundle Components

Microscope

- Axio Observer 7 (inverted)
- Axio Imager 2 (upright)
- Scanning stage 130 × 100
- Mot. Condenser NA 0.55¹ / NA 0.9²
- AI Sample Finder¹
- Apotome 3

Light source / camera

- Colibri 7
- Filter sets 38, 43, 50, 64, 70², 96, 115
- AxioCam 820 mono

Objectives

- EC Plan-Neofluar 5×/0.16
- Plan-Apochromat 10×/0.45
- Plan-Apochromat 20×/0.8
- Plan-Apochromat 63×/1.4 Oil

Workstation

- Z6 Workstation with 128 GB RAM and nVidia Quadro RTXA4000 16 GB

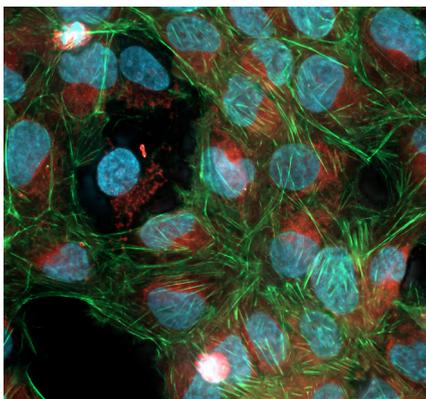


Depending on your application needs, you can either choose an inverted configuration based on ZEISS Axio Observer 7 (left) or an upright configuration based on ZEISS Axio Imager 2.

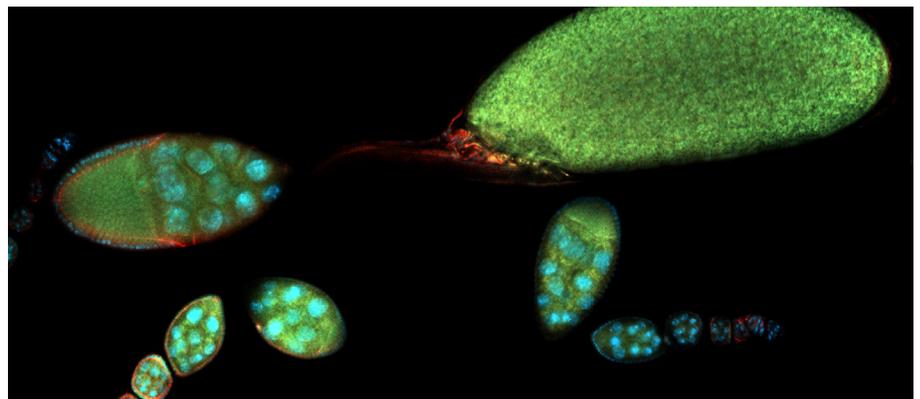
ZEN software packages

- ZEN Toolkit Motorized Acquisition: Acquire images and control motorized components in multi-dimensional experiments.
- ZEN Toolkit 2D: Create flexible automatic measurement programs for the analysis of your 2D images.

¹Axio Observer 7, ²Axio Imager 2



U2OS cells having nuclei stained with DAPI (blue), actin fibres stained with Alexa488 (green) and mitochondria stained with MitoTracker™ Red (red).



Drosophila egg chambers of different stages stained with DAPI (blue), Alexa488 (green) and Alexa555 (red). Sample courtesy of Vanessa Weichselberger, University Freiburg, Germany.



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Seeing beyond