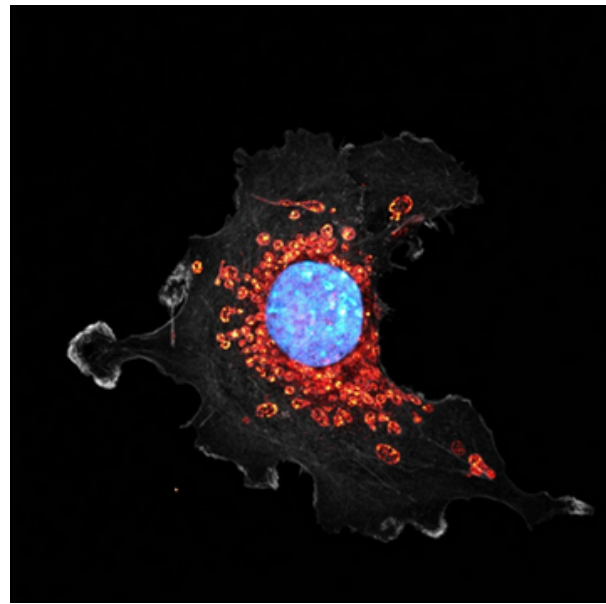


The heart of a cancer cell

Hoang Anh Le

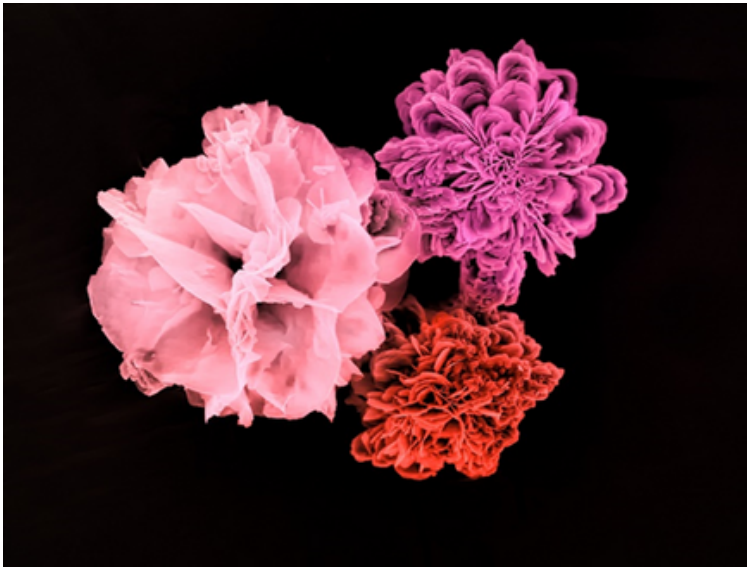
The image is of an Ewing's sarcoma cell labelled with DAPI (pink) for a peculiar heart-shaped nucleus and Phalloidin (white) for filamentous actin. This is a fixed sample taken using the Zeiss 880 with Airyscan deconvolution. Time taken: August 2019.



Mitochondria at work

Hoang Anh Le

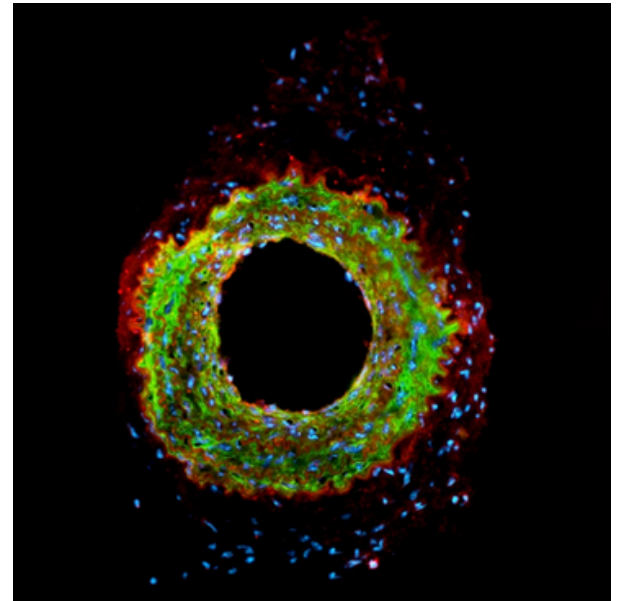
The image is of a COS-7 cell labelled with DAPI (cyan) for the nucleus, Phalloidin (white) for filamentous actin and Mito Red CMXRos (orange) for mitochondria. This is a fixed sample taken using the Zeiss 880 with Airyscan deconvolution. Time taken: 2021.



Petit bouquet

David Talens-Perales

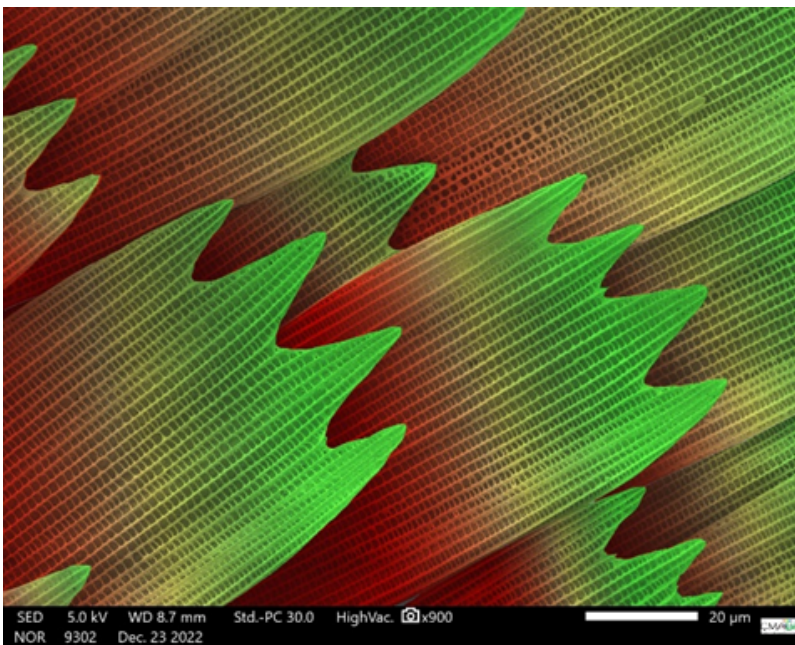
Enzymes are essential protein macromolecules for life that have also become a fundamental tool in the food, chemical and pharmaceutical industries. Biotechnological research aims to improve the properties of enzymes and to obtain new materials with enzymatic properties by binding enzymes to organic or inorganic supports. In this scanning electron microscopy image, three different enzymes can be observed forming crystalline complexes with copper phosphate. The protein-salt complexes grow into structures resembling some flowers.



Born of fire

Huawei Zhang

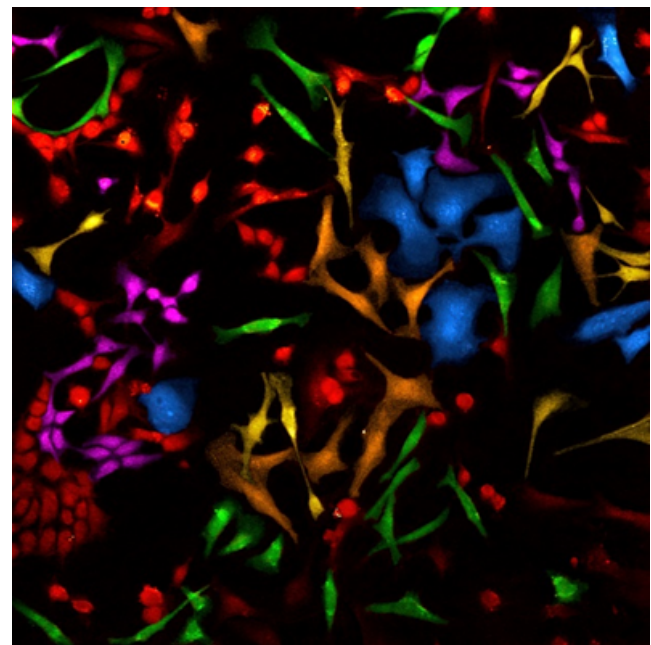
The image is a cross-section of C57BL/6J mouse carotid artery which was taken with an Olympus IX81 fluorescence microscope in December 2022. Immunofluorescence staining for α -smooth muscle actin (green), RNA binding proteins (red) and nucleus (blue) in carotid arteries after 28 days of wire injury.



Little paws from monsters

Jander Matos Guimaraes

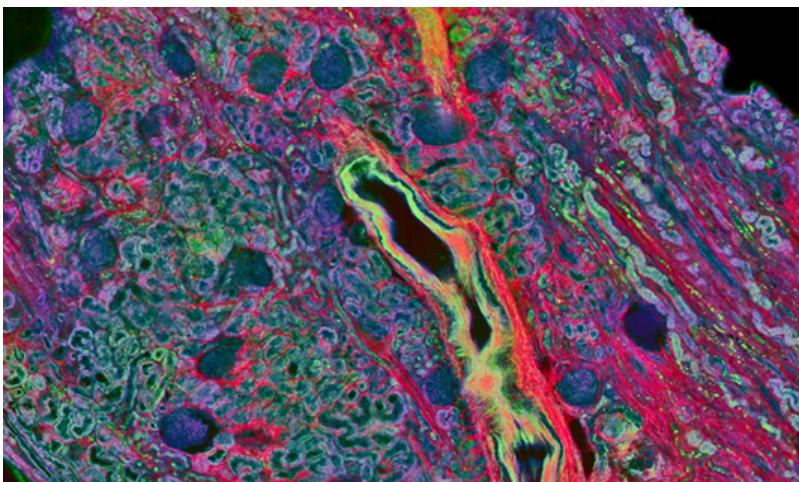
Details from the ultrastructure of wings from the moth species called *Thysania agrippina*, found in the Amazon rainforest in the north of Brazil. This image was acquired using scanning electron microscopy (JEOL JSM IT500HR), in the Multi-user Center for Analysis of Biomedical Phenomena from Universidade do Estado do Amazonas (CMABio/UEA) located in the city of Manaus, Amazonas, Brazil.



Label-free cell classification

Anthony Fung

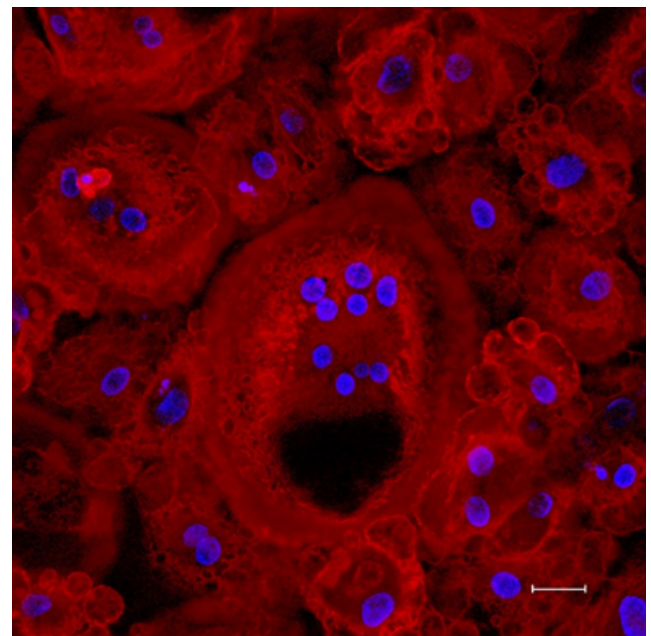
Multiple cell types were co-cultured on poly-L-lysine cover glass and fixed in 4% PFA. The cells were imaged in PBS using a stimulated Raman scattering microscope at multiple Raman shifts. The resulting hyperspectral image was fed into a MLP neural network for pseudo-coloring based on the assigned cell type class (MCF10A, MCF7, HEK, NHA, MDAMB231, HeLa). This image was taken in the fall of 2022.



Label-free oxidative stress in human kidney

Anthony Fung

Native NAD[P]H (magenta) and Flavin (green) two photon auto-fluorescence, as well as second harmonic generation of collagen fibers (red), produce an entirely label-free map of redox states in this human kidney cortex biopsy. This image was taken in the winter of 2022 on an Olympus FV 3000 confocal microscope. The image region depicted is 5000 microns by 3000 microns.



Monstrous osteoclasts

Sayali Chandekar

These are bone-eating giant multinucleated osteoclasts generated in vitro from peripheral blood mononuclear cells. The image was taken in 2022, it was taken on a Nikon confocal microscope, and the osteoclasts are stained for Phalloidin by Rhodamine dye (red) and the nuclei are stained by DAPI (purple).



α -smooth muscle actin terminus at freshly isolated rat brain microvessels

Xing Fang

Confocal image of freshly isolated cerebral microvessels from the Sprague Dawley rat. Cell nuclei are stained with DAPI (blue). The deep cortical penetrating arterioles express collagen IV (green, endothelia) and α -smooth muscle actin (red, pericytes). Downstream capillaries express collagen IV. Terminuses of α -smooth muscle actin are observed from distal branches of penetrating arterioles to arteriole–capillary transition points. The image was taken in October 2020.



The fungus weaves its web

Aldenora Vasconcelos

The image shows chlamydospores from the mushroom *Ganoderma* sp. The image was obtained using the Jeol JSM IT500HR scanning electron microscope, with a voltage of 5 kV in secondary electron mode in February 2023. Subsequently, the image was artificially colored using Adobe Photoshop CS6 software.