

JANUARY 24

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"In the blink of an eye" ©L. Le, Institut des Sciences Moléculaires d'Orsay, Lévêque-Fort Team

COS7 fixed cell imaged with SMLM Fluorescence Microscopy. Alpha-tubulin labeled with DNA-PAINT and imaged with Atto 647N. Axial information is obtained by virtual-SAF measurement known as DONALD.

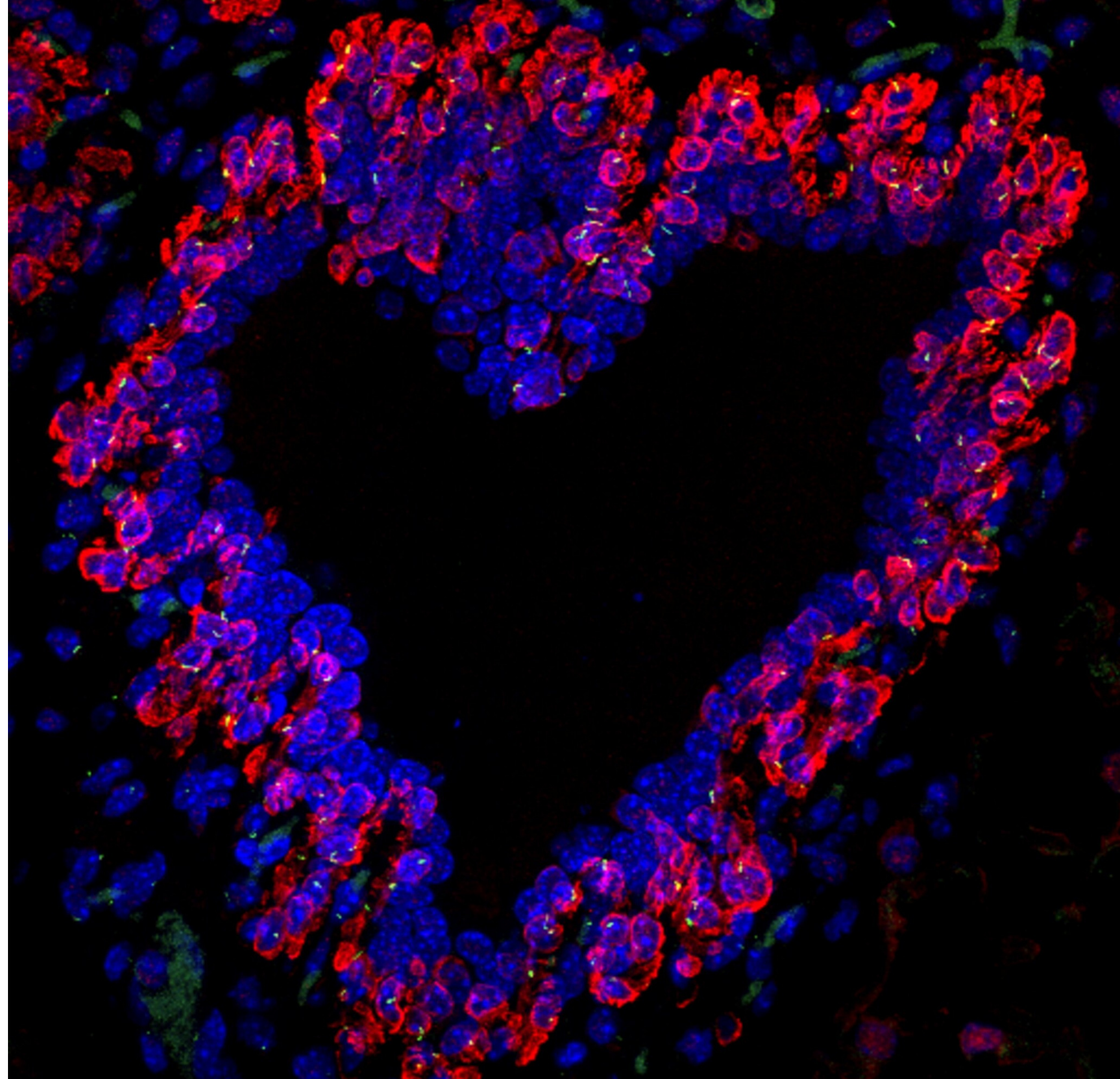
1st place of France-Biolmaging Image Contest 2023.

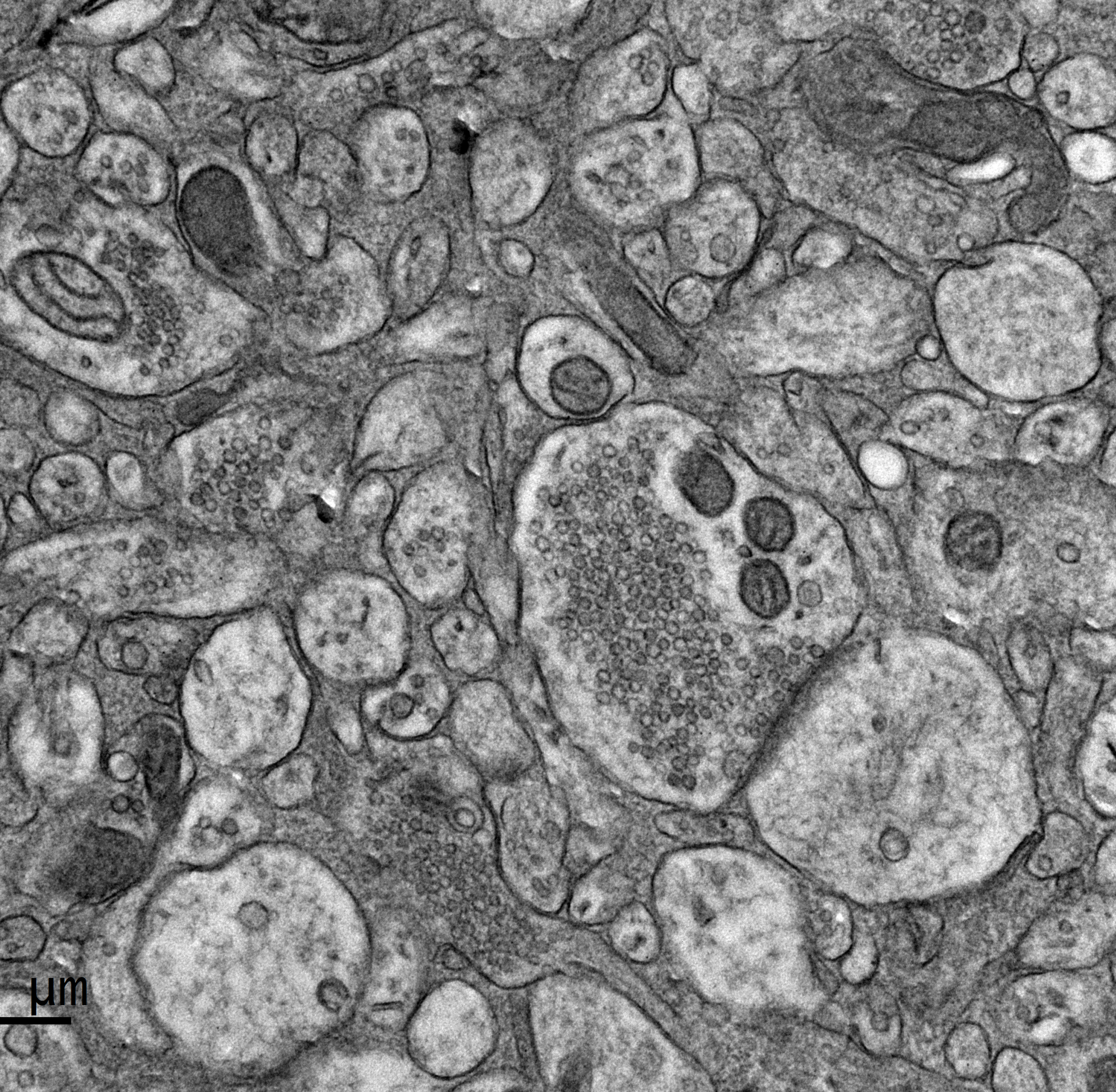
FEBRUARY 24

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"Love is in the hair" ©A. Dupuy, CRCI²NA - U1307, Team 7

Section mouse mammary gland during involution analyzed by indirect immunofluorescence using confocal microscope and labeled for the basal compartment (in red) and the primary cilia (in green). Nuclei were stained with DAPI.





MARCH 24

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"Snapshot of a brilliant idea" ©M. Petrel, Université de Bordeaux, Bordeaux Imaging Center

High pressure freezing of alive human brain cortex sample, observed by TEM.



FRANCE-BIOIMAGING

**APRIL
24**

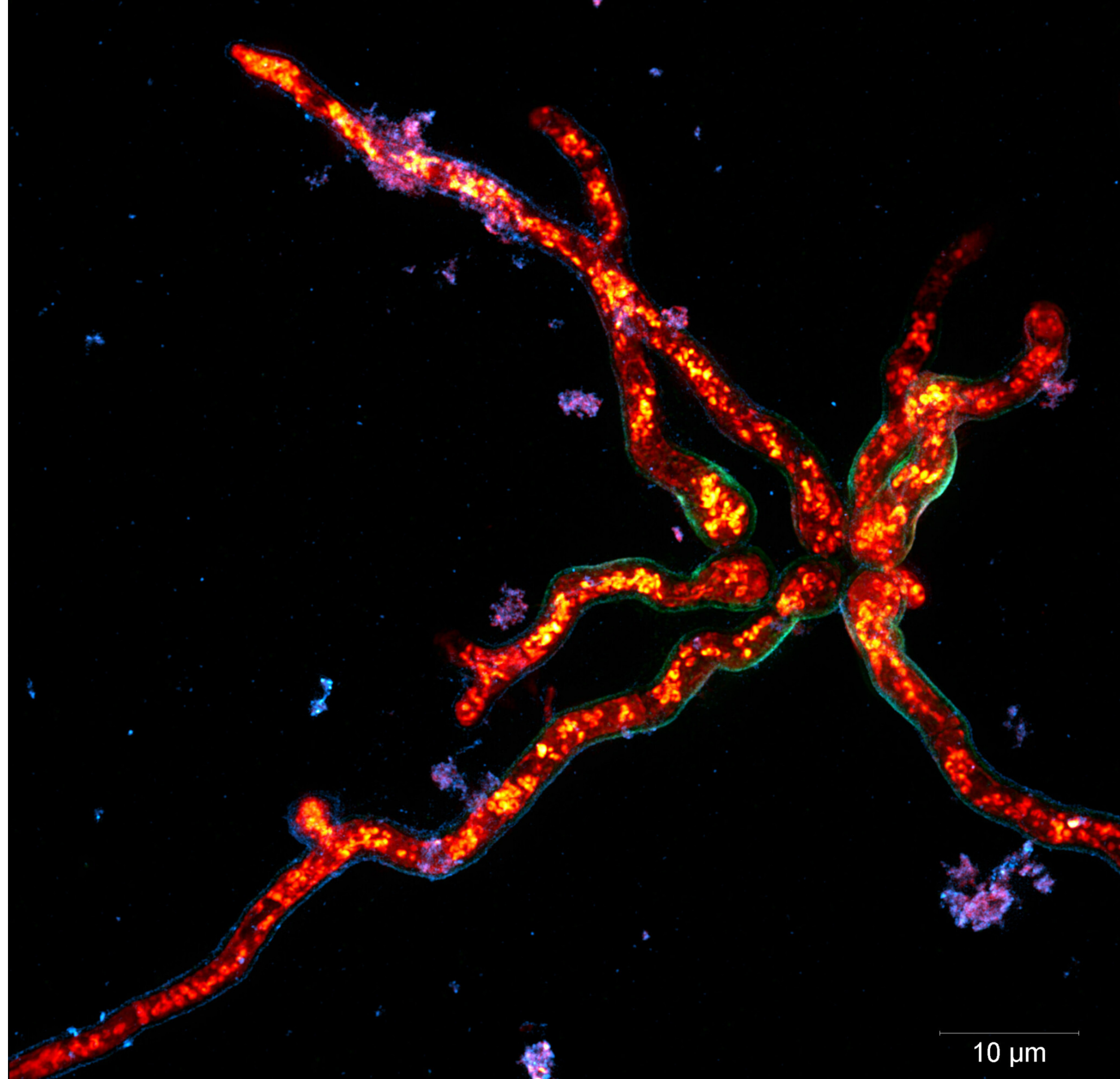
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"Interaction of a host-humoral component with *Aspergillus fumigatus* germ-tubes" ©S. Dellière, V. Aimanianda, A. Salles, Institut Pasteur, Immunobiology of *Aspergillus* Team, UTechS PBI Photonic Biolmaging,

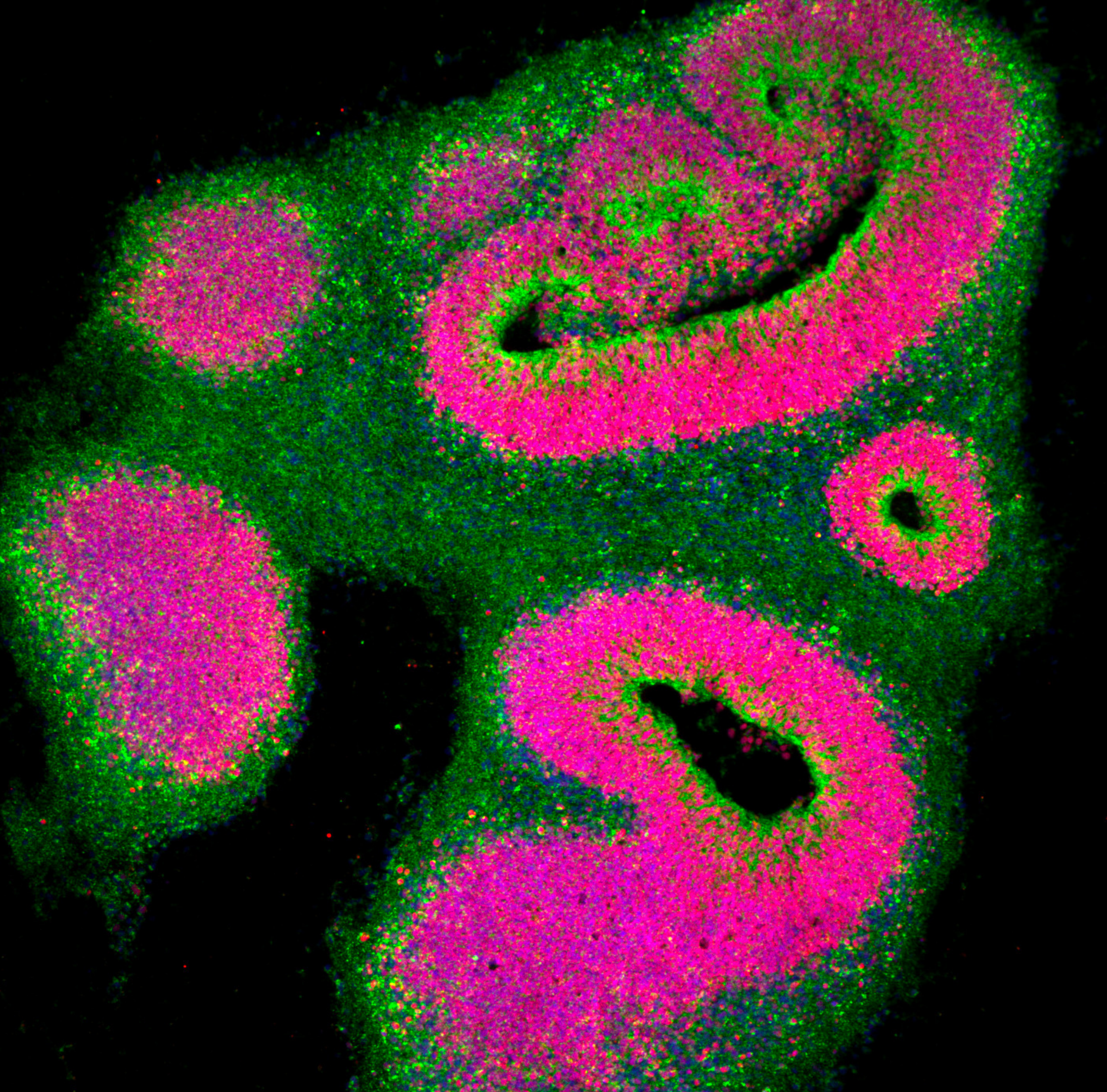
*Lattice Structured Illumination Microscopy. To visualize and localize the interaction between SP-D, GM, and GAG, we tagged SP-D with Alexa Fluor 488, made it to interact with *Aspergillus fumigatus* and labelled GM/GAG with respective primary and secondary fluorochrome conjugate antibodies. The fungal membrane was labelled with CellMask. The SIM analyses indicated that SP-D exerts its antifungal activity indirectly, not entering the hyphal cytoplasm, possibly through interaction with the fungal membrane bound receptors.*



FRANCE-BIOIMAGING



10 μm



**MAY
24**

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"Mitochondria in neurogenesis" ©C. Cimmaruta, Institut Pasteur, Miria Ricchetti's lab, Molecular Mechanisms of Pathological and Physiological Aging

Confocal image of a human dorsal forebrain organoid at week 4 of culture showing neural progenitors (Sox2, red) and mitochondria (TOM20, green). Nuclear staining (Hoechst, blue). Ti2E spinning disk

**JUNE
24**

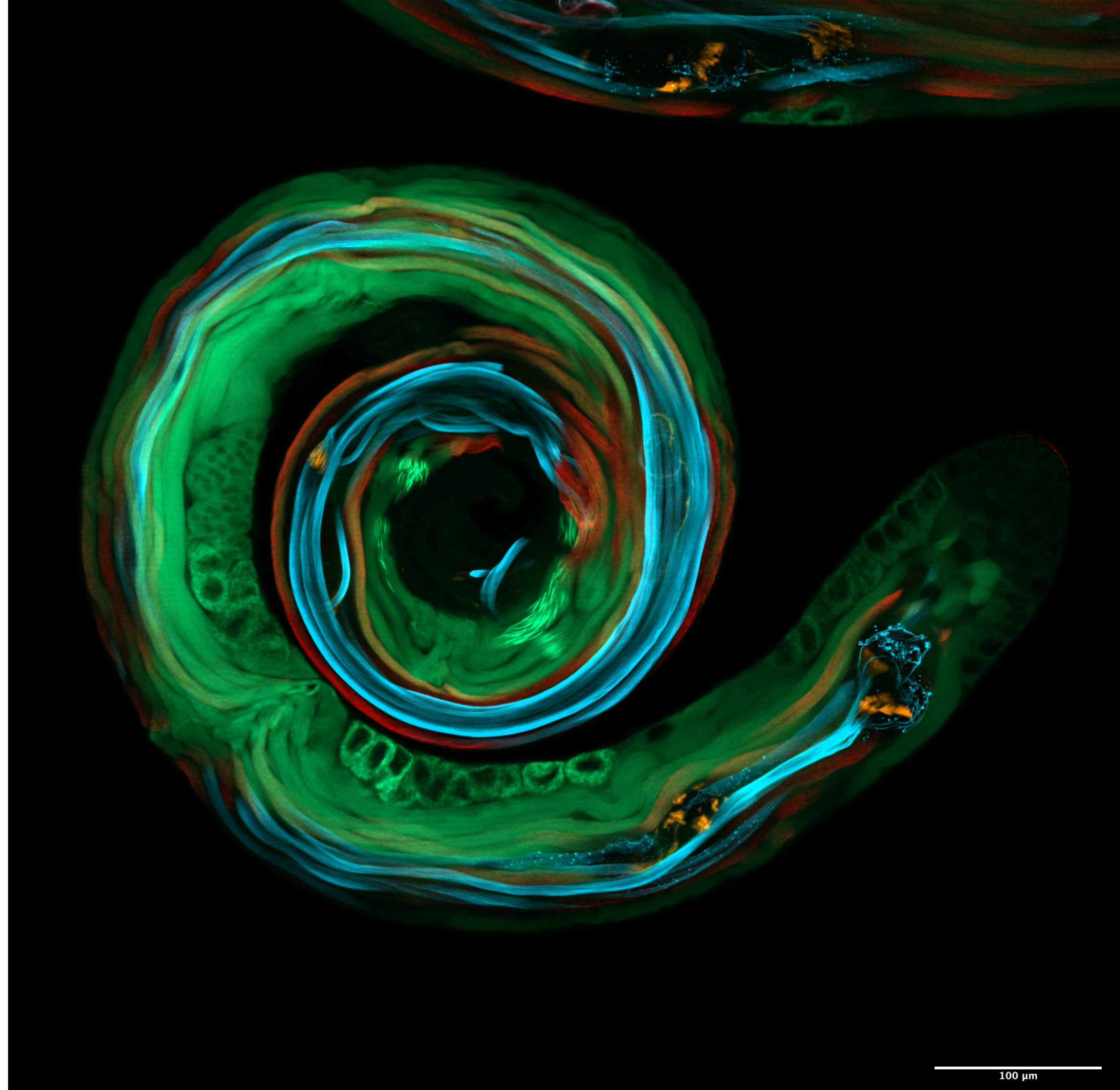
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"Little flies make giant sperm" ©F. Juge, Institut de Génétique Humaine, UMR 9002, Tubulin Code Team

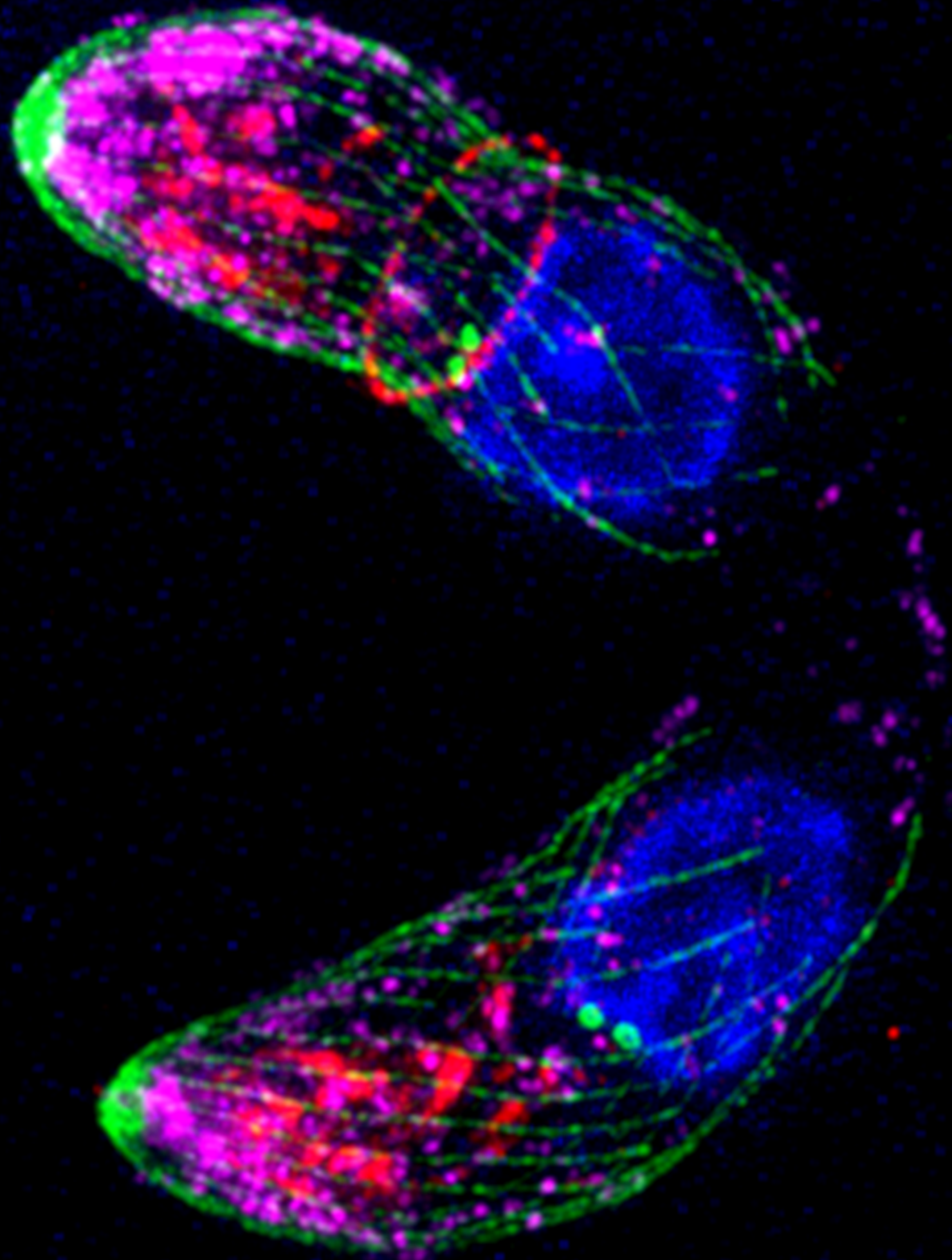
*Image of a testis from *Drosophila melanogaster* showing different microtubules labellings corresponding to different stages of spermatogenesis. In early stages, microtubules are labelled in green revealing spermatocytes as well as bundles of long axonemes. At late stages the sperm axonemes acquire specific tubulin modifications labelled in red and then blue (lastest stage). In this species sperm reaches a length of 1.8 mm, an impressive size for a fly of less than 3 mm! Imaged with Apotome.*



FRANCE-BIOIMAGING



100 μ m



**JULY
24**

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"Put a ring on it!" ©D. Sparvoli, University of Montpellier, Laboratory of Pathogens and Host Immunity (LPHI), Team Lebrun

*Two parasites of the species *Toxoplasma gondii* in contact with a not-stained host cell. The one below is still extracellular while the one above is entering the cell by establishing a tight connection with the host membrane in the shape of a ring around the parasite called moving junction 'MJ' (red) providing a firm anchor through which the parasites propel themselves within the host. It forms upon the secretion of virulence factors from two specialized apical secretory organelles called micronemes (magenta) and rhoptries (red). Parasite cytoskeleton is shown in green and the nucleus in blue. Ultra-Expansion Microscopy.*



FRANCE-BIOIMAGING

AUGUST 24

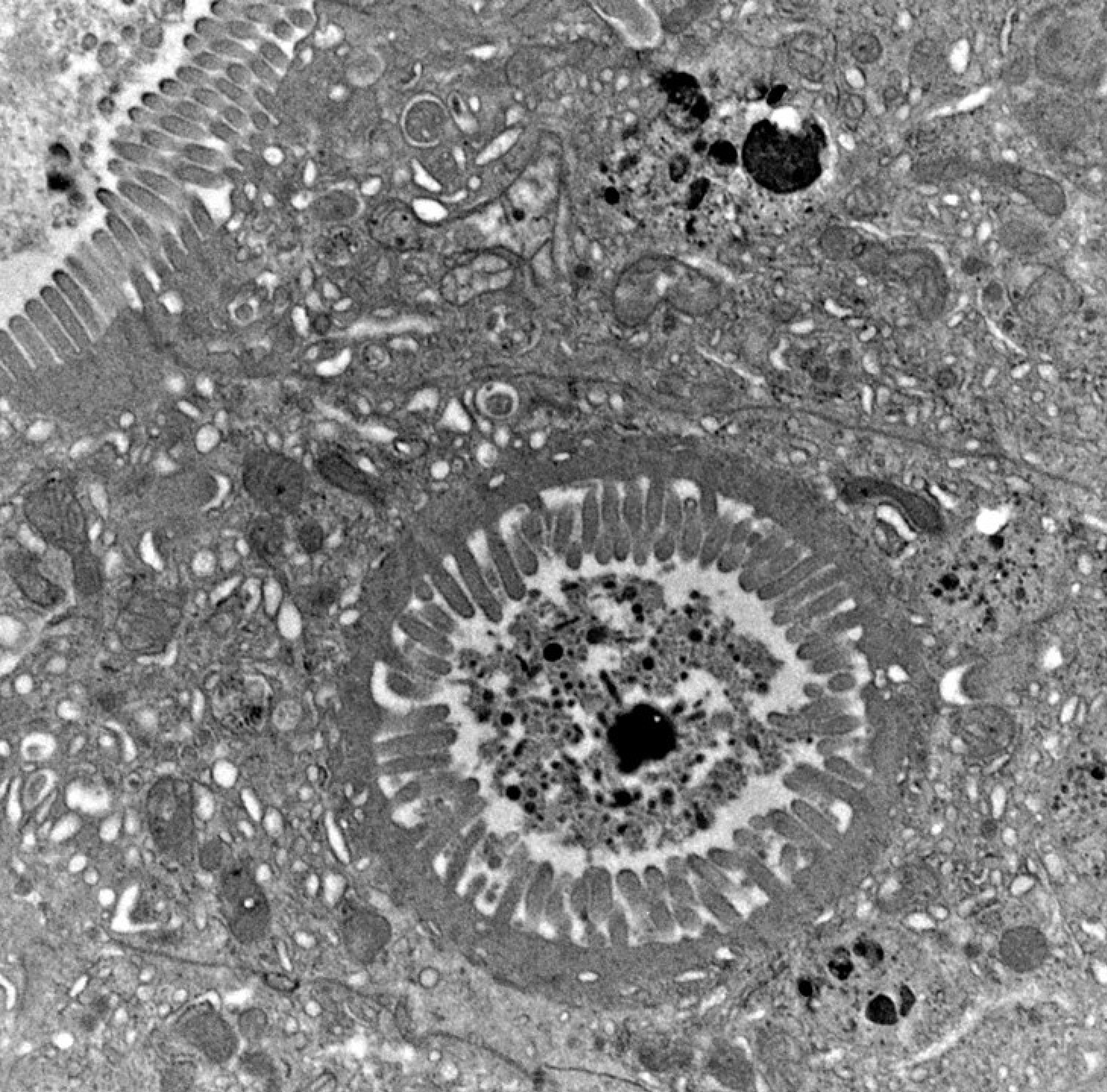
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"Intestinal octopus" ©H. Lelouard, Inserm-CNRS Centre d'Immunologie de Marseille Luminy (CIML), Gorvel Team

Small intestine section from a LyzM-eGFP mouse containing one Peyer's patch and stained for proliferative cells (Ki-67, yellow), Paneth cells (UEA-I, blue), epithelial cells (EpCAM, magenta), naive B cells (IgD, red), T cells (CD3, orange), helper T cells/macrophages (CD4, cyan), phagocytes (CD11c, turquoise), monocyte-derived phagocytes (GFP, green). Imaged by 10-color spectral confocal microscopy. 3rd place of France-BioImaging Image Contest 2023.



FRANCE-BIOIMAGING



SEPTEMBER 24

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"Rosette" ©O. Nicolle, Institut Génétique & Développement de Rennes (IGDR), Michaux Team

Electron microscopy reveals a microvillous inclusion vesicle in the cytoplasm of murine organoid enterocytes. This is the signature of a very rare severe intestinal disease characterized by neonatal intractable secretory diarrhea. Imaged by TEM.



FRANCE-BIOIMAGING

OCTOBER 24

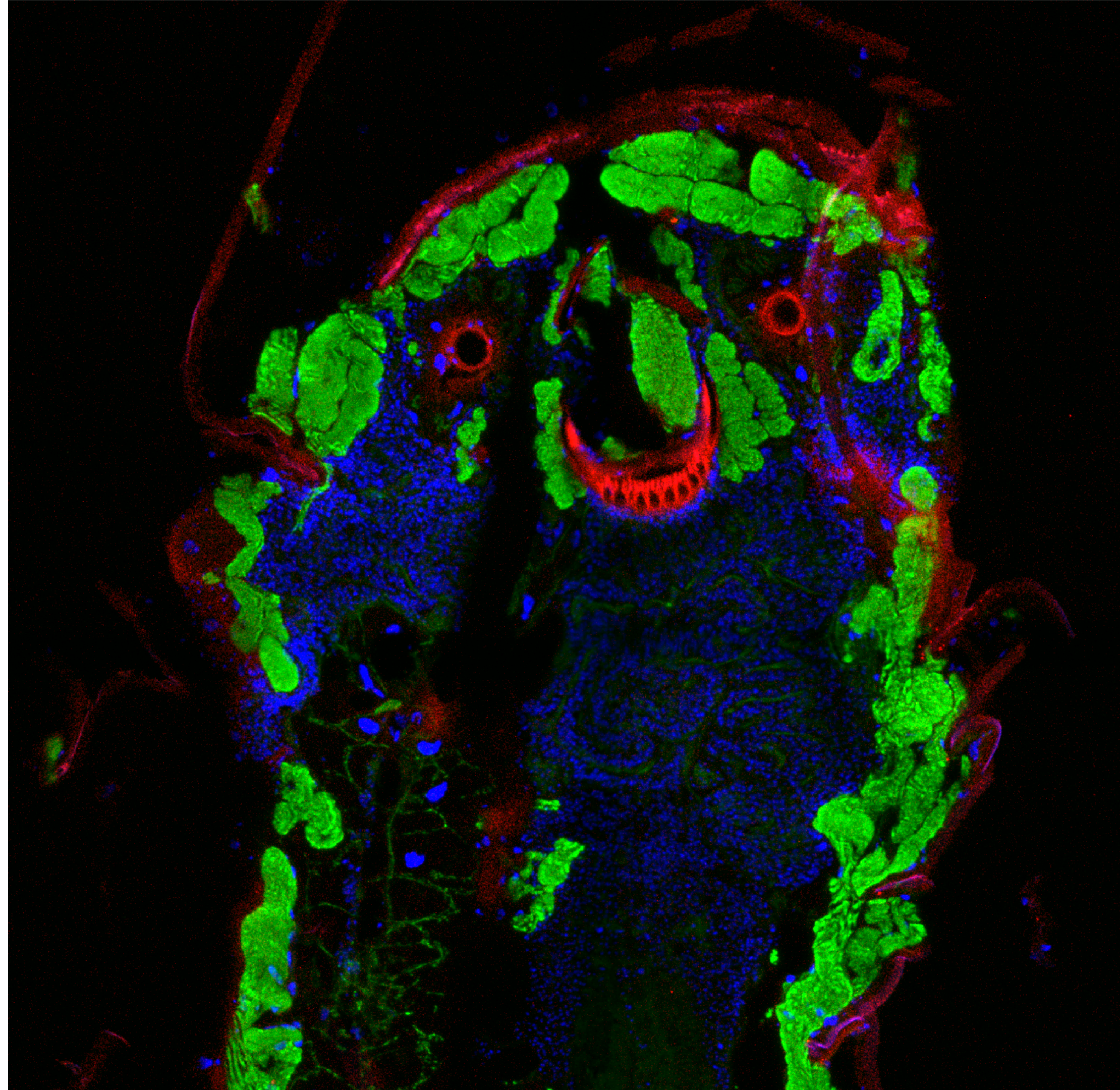
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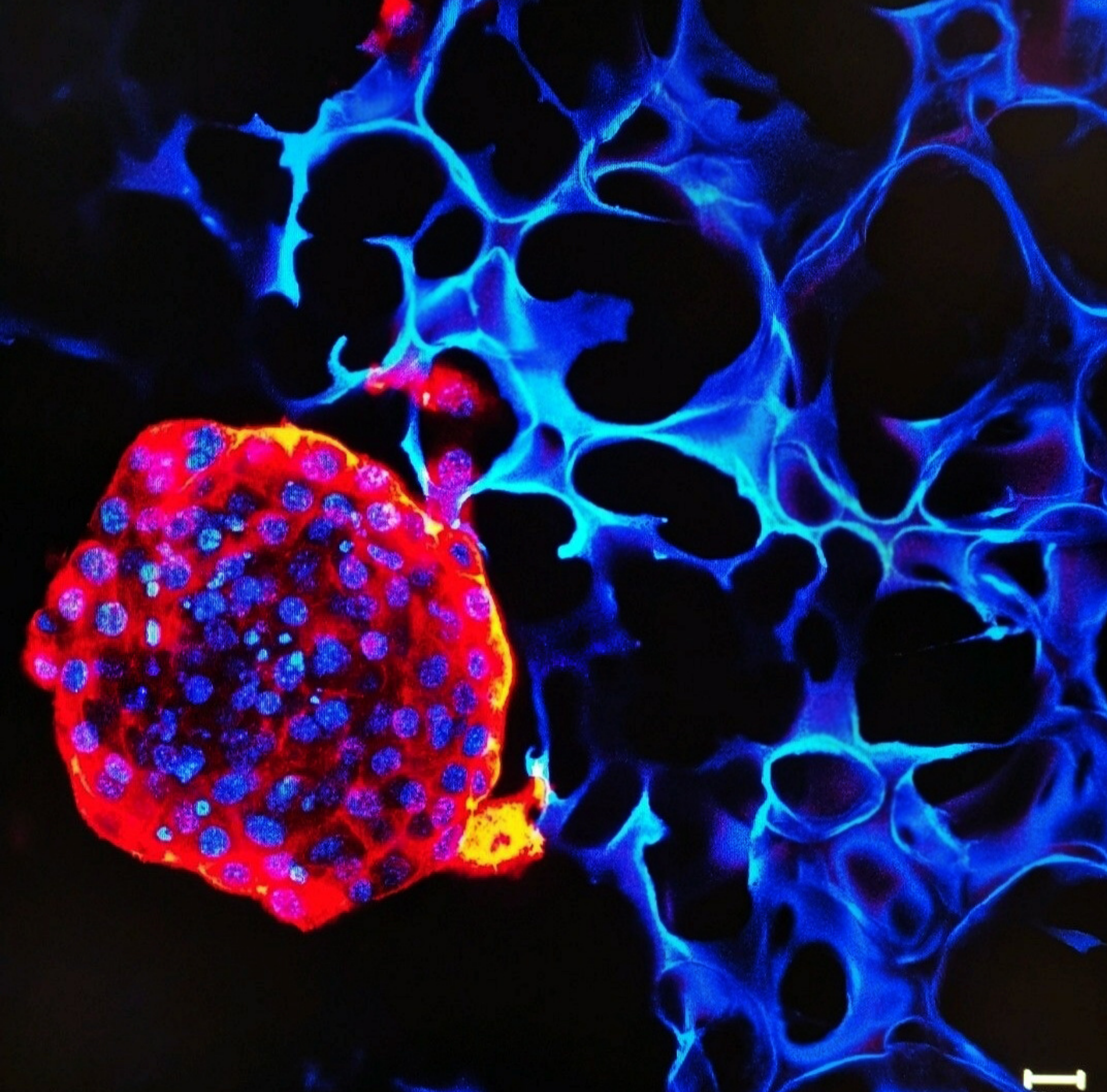
"Smile of the Drosophila larva" ©P. B. Cattenoz, Institut de génétique et de biologie moléculaire et cellulaire (IGBMC), Giangrande Team

Cryosection of a Drosophila larva (3rd instar) labelled with phalloidin and DAPI, acquired by confocal microscopy.



FRANCE-BIOIMAGING





NOVEMBER 24

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"Nascent organoid" ©V. Gribova, Inserm UMR_S 1121 Biomaterials and Bioengineering, Université de Strasbourg

This image shows interaction of the cells with a polymeric matrix, leading to formation of an organoid-like structure. The cells were labeled for actin (phalloidin-rhodamine, red) and nuclei (DAPI, blue). DAPI also stains the polymeric matrix in blue (non-specific interactions).



DECEMBER 24

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"Tardigrade embryos protected by mother's molt" ©G. Quiroga-Artigas, Centre de Recherche en Biologie cellulaire de Montpellier (CRBM), Team Contrôle cytoplasmique de la stabilité du génôme

Tardigrades commonly align the time of molting with egg laying. In this image we observe a tardigrade molt covering three developing embryos (DNA in white). The microscopy technology applied was confocal microscopy, and the research aimed to investigate the synchronization of embryo development in tardigrades. 2nd place of France-BioImaging Image Contest 2023.

