









# UMR**1313**

# Animal Genetics and Integrative Biology (GABI) Platform team

# **Areas of expertise**

Structural and functional genomics: Next-generation sequencing (Illumina and Nanopore NGS), low- and high-throughput quantitative PCR, digital PCR, transcriptomic analysis using Ingenuity Pathway Analysis (Qiagen).

Microgenomics and cell sorting: Skills and equipment required to perform single-cell analyses using:

- microfluidics (10XGenomics type) or instrument-free kits, depending on project requirements,
- laser microdissection;
- a chain of cytometry equipment for cell analysis and sorting (Miltenyi Biotech) to better prepare cells or nuclei before single-cell analysis;
- extraction of nano-quantities of nucleic acids or proteins in collaboration with the PAPPSO platform

Histology and tissue imaging: Histology, tissue fixation, sectioning and staining; in situ hybridisation on cryopreserved tissue sections; immunohistochemistry, bright field virtual histological slides.

Biobank and Animal Biological Resource Centre (BRC): Secure storage, traceability, characterisation, distribution and provision of standardised procedures for samples from numerous species (cattle, sheep, goats, horses, pigs, rabbits, poultry).

Cellular Ultrastructures Centre (MIMA2): Transmission electron microscopy stage with 2D analysis and 3D reconstruction on a HITACHI 7700 electron microscope. Morphological analyses, analyses of nano-objects by negative staining. Immunocytochemistry.









# **Platforms**

#### **Animation**

Claudia Bevilacqua Delphine Muller

#### **INRAE**

FR-78350 Jouy en Josas abridge@inrae.fr https://gabi.jouy.hub.inrae.fr/

#### **Objectives**

The team brings together the expertise, know-how and equipment of the platforms supported by the GABI unit:

- The @BRIDGe platform (Animal Biological Resources for Integrated and Digital Genomics, https://abridge.inrae.fr/),
- The Cellular Ultrastructures Centre (PUC) of the MIMA2 multi-site imaging platform.

These platforms, open to external users, support researchers in their projects by offering them access to cutting-edge equipment, cross-disciplinary expertise and personalised support.

The services and equipment offered include the storage of biological samples and their analysis at the molecular, cellular and tissue levels.

The total number of users varies from 120 to 170 per year.

Centre Île-de-France - Jouy en Josas - Anthony



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Liberté Égalité Fraternité







#### **Activities and networks**



Biologiques animales https://www.crb-anim.fr/



Member of The National Research infrastructure **RARe** 

https://www.agrobrc-rare.org/

# universite

Membre of the University of Paris-Saclay, Graduate School Biosphera https://www.universite-paris-saclay.fr/



Member of **SAPS** (Sciences animales Paris-Saclay)

https://www.saps-paris-saclay.fr/

#### **Quality policy**

The @BRIDGe platform is ISO 9001:2015 certified for its biobank section.
Its CRB is IBiSA and INRAE Collective Scientific Infrastructure (ISC) certified. The MIMA2 platform is ISC INRAE certified. https://www.ibisa.net/

#### **Technologies and Services**

The range of skills and techno-logies offered by @BRIDGe and its network enables it to support researchers throughout all stages leading up to omic analyses.

Cutting-edge technology platforms: integrating genomics, transcriptomics, histology and imaging for multi-level analysis.

**Personalised scientific support**: assistance in choosing techniques, conducting analyses and interpreting results.

Expertise in handling small quantities: specialisation in the processing of micro- and nano-quantities of samples (isolated cells, FFPE tissues, biological fluids).

Services tailored to research or clinical projects: services for targeted or exploratory analyses.

# **Certifications and Network Integration:**

- Quality certifications: ISO 9001:2015 and NFS 96-900 for the biobank.
- **INRAE label:** Collective Scientific Infrastructure (ISC) since 2018 for the CRB Anim (GIS since 2025 https://www.crb-anim.fr/) and the PUC of MIMA2.
- **BRC member of the national RARe infrastructure:** French Network of Biological Resource Centres for research in biology, agronomy and the environment (https://agrobrc-rare.org).
- GENOPS: network of genomics platforms in Paris-Saclay
- **CyPSay:** network of cytometry platforms in Paris-Saclay
- RMLB: national laser microdissection network
- **Rés'Hist:** network of histology platforms in the Ile-de-France region

#### **Strategic Partnerships and Innovation:**

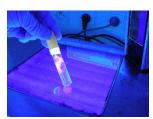
**Associated Partnership Laboratory (LPA) with Excilone**: Associated Partnership Laboratory (LPA) with Excilone: development of innovative nanogenomics methods.

**Applications in animal and human health:** detection of biomarkers (miRs) in exosomes, extracellular vesicles and FFPE tissues for early diagnosis or monitoring of diseases.

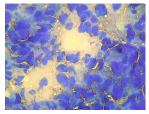
## **Publications**

Recent publications: <a href="https://www.jouy.inrae.fr/gabi">https://www.jouy.inrae.fr/gabi</a>

All of the platform's publications are available at: <a href="https://hal.inrae.fr/ABRIDGE/">https://hal.inrae.fr/ABRIDGE/</a>



























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