

Journée de Biologie In silico de Rennes

25 November 2025

Amphitheatre F - Building 2 - Health Campus

PROGRAM

JBISR is a one-day symposium dedicated to **bioinformatics**, organized as part of the BIS2 ([Biology In Silico](#)) transversal axis at IGDR. The program highlights **cutting-edge research** in **AI-driven analysis** and **multi-modal data integration** in **health** and **cancer**.

09:30 - 10:00 Welcoming participants

10:00 - 10:10 Introductory remarks

10:10 - 11:45 **Session 1 - Integration of Multi-Modal Data in Biology and Cancer**

10:10 - 11:00 Keynote Speaker 1 | **DR. ANDREA RAU**

Université Paris-Saclay, INRAE, AgroParisTech



Title: Tackling the statistical challenges of multi-omic integration

Dr. Andrea Rau, a leading expert in biostatistics and computational biology, will discuss cutting-edge methodologies for multi-omics data integration and highlight applications in oncology.

11:00 - 11:45 **Selected presentations (15 minutes for each presentation)**

- **Valentin Isen:** *How to get the most of your single-cell RNA-seq data? A practical walk-through using follicular lymphoma stromal microenvironment*
- **Hugo Barbot:** *Multi-omic statistical inference of cellular heterogeneity*

FLASH TALKS:

- **Jules Garreau** (*Network based analyses of transcriptomic data to study the effect of Sonic Hedgehog pathway defect in neurodevelopmental disorders*)
- **Quentin Rouger** (*Naive prediction of complete protein complex structure using AlphaFold, applied in Type 4 secretion system*)
- **Nicolai Hoffmann** (*Facilitating genome annotation using ANNEXA and long-read RNA sequencing*)
- **Charlotte Dubec-Fleury** (*Targeted Segmentation of Macrophages Enhances Spatial Profiling in Imaging Mass Cytometry*)

11:45 - 12:45 Lunch Break

12:45 - 13:30 Poster all Sessions with Coffee

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13:30 – 15:05 **Session 2 – AI for Sequence and Image Analyses**

13:30 – 14:20 **Keynote Speaker 2 | DR. JULIETTE GRIFFIÉ**



Science for Life Laboratory, Stockholm University, Sweden

Title: Interpretable ML for data driven therapeutic design and diagnosis

Dr. Juliette Griffié specializes in computational imaging and AI-driven biomedical modeling. Her talk will cover recent advances in microscopy image analysis, generative AI, and explainable AI in immunology applications in oncology.

14:20 – 15:05 **3 selected presentations (15 minutes for each presentation)**

- ➔ **Rajeev Manick:** *sGAN: Enabling Low-Data, High-Speed Cell Classification for Automated Microscopes*
- ➔ **Clémentine Hatton:** *Synthetic thoracic radiography generation for improved nodule detection*
- ➔ **Sidi Mohamed Sid'El Moutar:** *On the Use of Flow Matching for Microtubule Segmentation in Noisy Microscopy Images*

15:05 – 15:40 *Coffee Break*

15:40 – 17:15 **Session 3 – Applications of AI and integrative approaches in Personalized Medicine and Health**

15:40 – 16:30 **Keynote Speaker 3 | DR. RÉMY NICOLLE**



Centre de Recherche sur l'Inflammation (INSERM, CNRS, Université Paris Cité) Paris

Title: Multimodal Tumor phenotyping for treatment recommendation in pancreatic cancer

Dr. Rémy Nicolle, a renowned expert in onco-genomics and pancreatic cancer research, will discuss emerging multi-modal integrative approaches and AI methodologies for personalized medicine, focusing on patient stratification, biomarker discovery, and personalized therapeutic strategies in pancreatic cancer.

16:30 – 17:15 **3 selected presentations (15 minutes for each presentation)**

- ➔ **Axel Bonesteve:** *From clinical texts to phenotypic profiles: extraction of HPO terms to facilitate the characterisation and clustering of patients with rare diseases.*
- ➔ **Tianyuan Wang:** *Multimodal Analysis of Fibrous Nests in Human Hepatocellular Carcinomas by Spatial Transcriptomics and a 62-Antibody Immune Oncology Multiplex Panel*
- ➔ **Saiveth Hernandez-Hernandez:** *Integration of Extracellular Vesicle microRNA Signatures and Machine Learning to Improve Lung Cancer Diagnosis*

17:15 – 17:30 **Closing Session - Future Directions in Bioinformatics**

Closing Remarks and Farewell

17:30 *Wine and Cheese*