

## TUESDAY 22 NOVEMBER

08:00-08:30 Meeting registration

*Rhodes - level 2*

### Plenary Sessions

08:30-08:45

#### Welcome Introduction

*Auditorium Athéna - level 2*

- **Renato Monteiro**, *President of the SFI*
- **Catherine Blanc**, *President of the AFC*

08:45-10:30

#### New concepts in immunology

*Auditorium Athéna - level 2*

**Chairs:** *Abdelilah Wakkach (Nice), Aïda Meghraoui-Kheddar (Biot) & Hervé Luche (Marseille)*

- **Yasmine Belkaid** (*Bethesda, USA*): Microbiome control of host immunity

10:30-11:15 Coffee break - Visit of exhibition - Posters

*Rhodes - level 2*

### Parallel Sessions

11:15-12:45

#### High content imaging

*Auditorium Athéna - level 2*

**Chairs:** *Aïda Meghraoui-Kheddar (Biot) & Noel De Miranda (The Netherlands)*

- **Laura Kuett** (*Switzerland*): 3D imaging mass cytometry for cell-level mapping of tissues
- **Noel De Miranda** (*The Netherlands*): The many faces of colorectal cancer immunity revealed by high content imaging approaches

#### Selected short oral presentations

- **Meri Tulic** (*Nice*): Unraveling the Complexity of the Tissue Microenvironment in the Skin of Vitiligo Patients using High-Plex Spatial Imaging
- **Soizic Garaud** (*Brest*): Dysregulation of B-cell homeostasis at the onset of immune checkpoint inhibitor toxicity in cancer patients
- **Christophe Goncalves** (*Montreal, Canada*): Highly Multiplexed Phenotyping of the Immune Tumor Microenvironment by CODEX Tissue Imaging
- **Yaël Glasson** (*Montpellier*): A 31-plex panel for high-dimensional single cell analysis of murine preclinical models of solid tumors by imaging mass cytometry

11:15-12:45

#### Osteoimmunology

*Room Gallieni 5 - level 2*

**Chairs:** *Claudine Blin (Nice) & Mario Zaiss (Erlangen, Germany)*

- **Claudine Blin** (*Nice*): Diversity and immune functions of osteoclasts, the multinucleated myeloid cells
- **Thibault Griseri** (*Londres, UK*): Dysregulated hematopoiesis in spondyloarthritis

#### Selected short oral presentations

- **Julia Halper** (*Nice*): Transcriptomic mapping of osteoclasts highlights PRRs in pathological osteoclastogenesis
- **Simon Glatigny** (*Montigny-le-bretonneux*): Pathogenicity of IL-17 producing cells during Spondyloarthritis

11:15-12:45

#### Innate lymphoid cells

*Room Rhodes 9 - level 2*

**Chairs:** *Émilie Narni-Mancinelli (Marseille) & Matthieu Rouleau (Nice)*

- **Dirk Elewaut** (*Ghent, Belgium*): Innate like T cells and arthritis: gateway from gut to joints
- **Emilie Narni-Mancinelli** (*Marseille*): ILC in health and disease

... / ...

**Selected short oral presentations**

- **Clémence Riffard** (Paris): Acute and chronic inflammation of pulmonary tissue provokes an increase in LTi-like ILC3 that parallels TLS neogenesis
- **Loïs Coënon** (Montpellier): Non-genetically modified, CAR-like, NK cell

11:15-12:45

**AFC / CytHem - Myeloma**

Room Risso 6 - level 2

**Chairs:** Jérôme Moreaux (Montpellier) & Thomas Matthes (Geneva, Switzerland)

- **Thomas Boyer** (Amiens): L'Intelligence Artificielle associée à la Cytométrie en Flux comme aide à la classification des Dyscrasies Plasmocytaires
- **Andreas Beilhack** (Würzburg, Germany): Targeting the multiple myeloma microenvironment
- **Jérôme Moreaux** (Montpellier): Predictive markers of response to Daratumumab in Multiple Myeloma

**Selected short oral presentations**

- **Mohamad Cherry** (Saint-Etienne): Myeloid lineage evaluation in patients with suspected myeloma
- **Hélène Gardeney** (Poitiers): Innate T-cells in the multiple myeloma tumoral niche

12:45-14:00

Lunch - Coffee - Visit of exhibition - Posters

Rhodes - level 2

**Parallel Sessions**

13:45-15:00

**La maladie résiduelle par cytométrie en flux dans les leucémies aiguës myéloblastiques****Modérateurs :** Adriana Plesa (Lyon) & Christophe Roumier (Lille)

Room Risso 6 - level 2

- **Wolfgang Kern** (Munich, Allemagne): Flow cytometric assessment of MRD in AML
- **Claude Preudhomme** (Lille): MRD moléculaire/NGS
- **Thomas Cluzeau** (Nice): MRD AML et aspect clinique

14:00-15:30

**SFI Club: Mast Cells**

Room Gallieni 5 - level 2

**Chairs:** Nicolas Gaudenzio (Toulouse) & Laurent Reber (Toulouse)

- **Florent Ginhoux** (Villejuif): New insights in the role of fetal mast cells in the onset of early life allergies
- **Nicolas Gaudenzio** (Toulouse): Single cell analysis of mast cells across organs: from development to heterogeneity
- **Laurent Reber** (Toulouse): Development of an anti-IgE vaccine for the treatment of IgE- and mast cell/basophil-mediated diseases

**Selected short oral presentation**

- **Jasper Kamphuis** (Toulouse): Impact of ageing on the severity of IgE-, Mrgprb2-, and histamine-mediated anaphylaxis in mice

14:00-15:30

**SFI Club: Neuroimmunology**

Auditorium Athéna - level 2

**Chairs:** Lennart Mars (Lille) & Violetta Zujovic (Paris)

- **Henrique Veiga-Fernandes** (Portugal): Neuronal regulation of innate lymphoid cells
- **Sophie Ugolini** (Marseille): Neuroimmune interactions in the skin, from molecular mechanisms to therapeutic perspectives
- **Séverine Boillée** (Paris): Peripheral macrophages and microglial cells for the progression of ALS

14:00-15:30

**SFI Club: Germinal Center**

Room Rhodes 9 - level 2

**Chairs:** Nicolas Fazilleau (Toulouse) & Patricia Amé-Thomas (Rennes)

- **Mauro Gaya** (Marseille): B cell memory in the lung airways
- **Christopher Mueller** (Strasbourg): Formation of the B cell-associated stromal cells in the lymph node ... /...



**Selected short oral presentations**

- **Helena Paidassi** (Lyon): Fine-tuning germinal centre B cell responses via  $\alpha\beta 8$ -mediated activation of TGF $\beta$
- **Pascal Chappert** (Paris): Human anti-Smallpox long-lived memory B cells are defined by dynamic interactions in the splenic niche and long-lasting germinal center imprinting

15:00-15:30

**Eco-responsible approach in the laboratory**

Room Risso 6 - level 2

**Chair: Muriel Andrieu** (Paris)

- **Peggy Sanatine** (Évry): Biosécurité et environnement : Évolution
- **Emmanuelle Näser** (Toulouse): Biosécurité et environnement : Retour du questionnaire déchets

**Plenary Session**

15:30-16:30

**Industry talk**

Auditorium Athéna - level 2

**Chairs: Florent Raffin** (Brétrigny- Sur-Orge) & **Hans Yssel** (Paris)

15:30-15:36

- **BioLegend**  
Explore our latest reagents for multiparametric flow cytometry  
*Élodie Baudoin* (BioLegend France SAS)



15:36-15:42

- **NanoString**  
Catalyze The Next Revolution Using Spatial Biology: Three Platforms. Unlimited Potential  
*Thibaud Metzger* (NanoString)



15:42-15:48

- **Agilent Technologies**  
Agilent: The Cell Analysis Solution  
*Jérôme Darakdjian* (Agilent) & *Damien Brechet* (BioTek Instruments France)



15:48-15:54

- **Thermo Fisher Scientific**  
La légende du BigFoot  
*Guerric Epron* (Thermo Fisher Scientific)



15:54-16:00

- **Stemcell Technologies**  
Fast and Easy Immune Cell Isolation from Large-Volume Samples  
*Sonika Godavarthy* (Stemcell Technologies)



16:00-16:06

- **Standard BioTools**  
Ready-to-use 45+ flow cytometry marker panels to measure activation, cytokine production and cytotoxicity from < 300ul of whole blood  
*Sathiesan Thambirajah* (Standard BioTools)



16:06-16:12

- **Bio-Rad**  
Build Bigger Better Panels with StarBright Dyes  
*Andrea Tradori* (Bio-Rad Laboratories)



16:12-16:24

- **Vizgen**  
Explore new dimensions through spatial context  
*Mickael Ploquin* (EMEA - Vizgen)



16:24-16:30

- **Merck**  
The latest Antibody innovations from Merck: ZooMAb<sup>®</sup> recombinant monoclonal antibodies and ColorWheel<sup>®</sup> Flow Cytometry Antibodies & Dyes  
*Baptiste Ménard* (Protein Biology Research)



## Formation continue Immunologie médicale

- 15:30-17:45 **Suivi biologique des immunothérapies** Room Risso 6 - level 2
- Modératrices : Morgane Gossez-Coulaud (Lyon) & Guislaine Carcelain (Paris)**
- **Aude Gleizes (Paris)** : Anti-TNF $\alpha$
  - **Marie-Agnès Dragon-Durey (Paris)** : Anti-checkpoints inhibiteurs
  - **Rémi Pescarmona (Lyon)** : Transfert de cellules CAR-T
  - **Sophie Candon (Rouen)** : Anti-CD20



- 16:30-17:15 **Poster Session 1 - odd-numbered posters**   
Rhodes - level 2
- 
- Coffee break - Visit of exhibition - Posters

## Plenary Sessions

- 17:15-17:30 **Industry symposium** Auditorium Athéna - level 2
- Chairs: Catherine Blanc (Paris) & Patricia Amé-Thomas (Rennes)**
- **Beckman Coulter Life Sciences**  
IVDR - Perspective d'un fabricant : Partenariat pour une transition en douceur  
*Brice Ezzouaouy (Immunotech Marseille)*



- 17:30-17:55 **Industry talk** Auditorium Athéna - level 2
- Chairs: Catherine Blanc (Paris) & Patricia Amé-Thomas (Rennes)**
- **10x Genomics**  
Hypothesis-free, multi modal analysis of the immune landscape at single cell and spatial resolution  
*Christophe Fleury (10x Genomics)*
  - **BD**  
BD FACSDiscover™ S8 et la technique d'imagerie BD CellView™ - Le premier cytomètre trieur combinant l'analyse spectrale et l'analyse d'image  
*Thierry Langlois (BD)*



## Parallel Sessions

- 18:00-19:30 **Core facility session: 'Standardisation: from tissue to sorted cells'** Room Risso 6 - level 2
- Chairs: Julie Cazareth (Valbonne) & Alexia Zakaroff (Toulouse)**
- **Alexia Zakaroff (Toulouse)**: Good practices for standardization: from sample to instrument
  - **Pierre Grenot (Strasbourg)**: Les bonnes pratiques de standardisation : de l'instrument à l'analyse
- Selected short oral presentation**
- **Carolina Moraes Cabé (Paris)**: CB UTechS, Institut Pasteur: a successful model of core facility for integrated and project-tailored support for biomarker discovery in immunology
  - **Coralie Guerin (Paris)**: Single-cell resolution tissue cytometry: a new multiplex spatial spectral approach
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- 18:00-19:30 **Myeloid cells** Room Rhodes 9 - level 2
- Chairs: Stoyan Ivanov (Nice) & Martin Guilliams (Belgium)**
- **David Sancho (Madrid, Spain)**: Oxidative phosphorylation selectively orchestrates tissue macrophage homeostasis
  - **Florent Ginhoux (Paris)**: Myeloid Cell Heterogeneity in Health and Disease ... / ...

**Selected short oral presentations**

- **Ignacio Cebrián** (Barcelona, Spain): Dendritic cell phagosomes recruit GRASP55 for efficient transport of MHC molecules to the plasma membrane during exogenous antigen presentation
- **Despoina Koumantou** (Paris): The p84/p110 $\gamma$  complex of PI3K $\gamma$  controls Fc $\gamma$ R-inducible and antibody-dependent cross-presentation in type 2 DCs and GM-CSF derived inflammatory DCs
- **Raquel Sal Carro** (Strasbourg): Epidermal maintenance of Langerhans cells relies on autophagy-regulated lipid metabolism

18:00-19:30

**Host/pathogen Interactions**

Auditorium Athéna - level 2

**Chairs: Christophe Paget** (Tours) & **Marlène Dreux** (Lyon)

- **Olivier Neyrolles** (Toulouse): C-type lectins in immunity to tuberculosis and beyond
- **Marlène Dreux** (Lyon): Severe COVID-19 patients have impaired plasmacytoid dendritic cell-mediated control of SARS-CoV-2-infected cells

**Selected short oral presentations**

- **Jane Jardine** (Nantes): The counterposing roles played by CK1a fine-tune the cGAS-STING pathway
- **Benjamin Voisin** (Strasbourg): An innervated and immunocompetent human skin model to study arboviral cutaneous infection
- **Emmanuel Martin** (Paris): Dual role of IL-27 in immunity to Epstein-Barr virus infection revealed by IL27RA deficiency

18:30-20:00

**AFC / CytHem - AML & MDS**

Room Gallieni 5 - level 2

**Chairs: Nicolas Chapuis** (Paris) & **François Vergez** (Toulouse)

- **Rafaël Argüello** (Marseille): Metabolic and epigenetic profiling with single cell resolution in a fixation-compatible system using whole blood samples
- **Nicolas Dulphy** (Paris): Intrinsic and Extrinsic Defects for Natural Killer cell-mediated Immunosurveillance in Myelodysplastic Syndromes

**Selected short oral presentations**

- **Rawan Hallal** (Montpellier): Targeting the SUMO pathway activates Natural Killer cells and enhances their anti-tumoral activity in Acute myeloid leukemia
- **Thomas Matthes** (Geneva, Switzerland): In-depth analysis of CD34<sup>pos</sup> hematopoietic stem and precursor cell (HSPC) subpopulations by flow cytometry using a single 20-color panel
- **Carmen-Mariana Aanei** (Saint-Etienne): High-dimensional mass cytometry analysis of the leukemic cells and of their signaling pathways in AML

## WEDNESDAY 23 NOVEMBER

08:00-08:30 Welcome coffee

Rhodes - level 2

### Plenary Session

08:30-09:30 Debate 'Women in Science'

Auditorium Athéna - level 2

**Chairs:** *Abdelilah Wakkach* (Nice), *Florence Apparailly* (Montpellier) & *Fatima-Ezzahra L'Faqih-Olive* (Toulouse)

- *Yasmine Belkaid* (Bethesda, USA): Title up coming
- *Anne Hosmalin* (Paris): Women in Immunology: a career perspective

### Parallel Sessions

09:30-11:00 SFI / Spanish Society for Immunology

Room Rhodes 9 - level 2

**Contribution of french and spanish immunology to the fight against Covid**

**Chairs:** *Marcos Lopez Hoyos* (Santander, Spain) & *Renato Monteiro* (Paris)

- *Olivier Schwartz* (Paris): Omicron sub-variants and sub-sub-variants: viral fitness and sensitivity to the humoral response
- *Estela Paz-Artal* (Madrid, Spain): SARS-CoV-2 Infection and Vaccination: Real World Immunology Lessons
- *Jorge Carrillo* (Barcelona, Spain): Structurally guided stabilization of Spike glycoproteins for the development of novel SARS-CoV-2 vaccines



09:30-11:00 AFC / SFM - Microbiology

Room Rizzo 6 - level 2

**Chairs:** *Marielle Bouix* (Paris) & *Claire Saulou-Bérion* (Palaiseau)

- *Lysiane Omhover* (Strasbourg): Freeze-dried bacteria: between viability and stress states
- *Mickael Bourge* (Paris): Development of intracellular pH measurements to characterize the physiology of bacteroids in the legume-rhizobium symbiosis by combining cytometry and imaging



#### Selected short oral presentations

- *Laetitia Velly* (Paris): Optimal combination of early biomarkers for infection and sepsis diagnosis in the emergency department: The BIPS study
- *Clément Trunet* (Quimper): Rapid flow cytometry methodology for airborne fungal conidia enumeration
- *Sophie Servain-Viel* (Orsay): Flow Cytometry Method for Safe Detection of Bacterial Viability

09:30-11:00 AFC / CytHem - New cytometers, new panels, new regulation

Auditorium Athéna - level 2

**Chairs:** *Michel Tichioni* (Nice) & *Magali Le Garff-Tavernier* (Paris)

- *Bernard Chatelain* (Yvoir, Belgium): Reflections on the implementation and use of the FACS Lyric flow cytometer at the CHU UCL Namur
- *Christophe Roumier* (Lille): Du Navios au DX Flex (Beckman Coulter) : impact du changement de technologie (10 PMT vs 13 APD, Digitalisation 20 Bits vs 24 Bits) en pratique au laboratoire
- *Françoise Durrieu* (Bordeaux): New cytometer and new panels in an accredited routine lab: experience of the Dxflex implementation



#### Selected short oral presentations

- *Nicolas Voirin-Mathieu* (Limoges): Performance analysis of new 10-color cytometer: XF-1600® Sysmex
- *Magali Le Garff-Tavernier* (Paris): Phenotypic profile of Waldenström Macroglobulinemia B cells: from determination of a diagnostic score to development of a 12-color flow cytometry panel

11:00-11:45 Coffee break - Visit of exhibition - Posters

Rhodes - level 2

Poster Prize audition

## Parallel Sessions

11:45-13:15	<p style="background-color: #0070C0; color: white; padding: 2px 5px; border-radius: 5px; display: inline-block;"><b>Data analysis</b></p>	<i>Auditorium Athéna - level 2</i>
<b>Chairs: Aïda Meghraoui-Kheddar (Biot) &amp; Samuel Granjeaud (Marseille)</b>		
<ul style="list-style-type: none"> <li>• <b>Keren Leeat (Tel-Aviv, Israel):</b> Unraveling the tumor immune microenvironment in melanoma by multiplexed imaging</li> </ul>		
<b>Selected short oral presentations</b>		
<ul style="list-style-type: none"> <li>• <b>Manon Scholaert (Toulouse):</b> MANTIS: an integrated digital process for 3-D deconstruction of human skin immune landscape</li> <li>• <b>Yvonne Sculler (Brest):</b> In-depth analysis of salivary gland biopsies: Development of new tools using Hyperion mass cytometry to accurately determine Sjögren's severity status</li> <li>• <b>Quentin Blampey (Villejuif):</b> Scyan: an interpretable generative model for multi-task cytometry analysis</li> <li>• <b>Julien Nourikyan (Lyon):</b> Robust Identification of biomarkers through a clustering approach guided by patient outcomes: application in B-cell ALL, melanoma and rheumatoid arthritis</li> <li>• <b>Yann Abraham (Beerse, Belgium):</b> Data-driven identification of cell states in cytometry experiments</li> </ul>		
11:45-13:15	<p style="background-color: #0070C0; color: white; padding: 2px 5px; border-radius: 5px; display: inline-block;"><b>Transplant immunology</b></p>	<i>Room Risso 6 - level 2</i>
<b>Chairs: Alice Koenig (Lyon) &amp; Julien Zuber (Bordeaux)</b>		
<ul style="list-style-type: none"> <li>• <b>Hannah Kaminski (Bordeaux):</b> Amis : L'immunité innée dans les infections et les cancers des receveurs d'allogreffe</li> <li>• <b>Olivier Thauinat (Lyon):</b> Ennemis : L'immunité innée dans l'alloreconnaissance et les lésions de rejet d'allogreffe</li> </ul>		
<b>Selected short oral presentations</b>		
<ul style="list-style-type: none"> <li>• <b>Nassim Salem (Marseille):</b> Combined CAR-NK and CARgd T cells promote the killing of leukemic blasts</li> <li>• <b>Lorenzo Canti (Liège, Belgium):</b> Integrative Approach in the Context of BNT162b2 mRNA Covid-19 Vaccine in Allo-HCT Patients: System Vaccinology</li> </ul>		
11:45-13:15	<p style="background-color: #0070C0; color: white; padding: 2px 5px; border-radius: 5px; display: inline-block;"><b>Environmental control of myeloid cells</b></p>	<i>Room Rhodes 9 - level 2</i>
<b>Chairs: Fabienne Anjuère (Valbonne) &amp; Florent Ginhoux (Villejuif)</b>		
<ul style="list-style-type: none"> <li>• <b>Thomas Simon (Valbonne):</b> Treatment of autoimmune diseases by neuromodulation</li> <li>• <b>Christopher Mueller (Strasbourg):</b> Immune-microenvironment: cell specification in lymphoid organ niches</li> </ul>		
<b>Selected short oral presentations</b>		
<ul style="list-style-type: none"> <li>• <b>Bastien Dolfi (Nice):</b> Decipher the diversity and function of adrenal gland macrophages</li> <li>• <b>Maya Saleh (Bordeaux):</b> Single cell and spatial transcriptomics unravel TREM1+CD163+ myeloid cells as potent immunosuppressive cells associated with poor survival in human liver cancer</li> </ul>		
11:45-13:15	<p style="background-color: #0070C0; color: white; padding: 2px 5px; border-radius: 5px; display: inline-block;"><b>AFC / CytHem: T- and NK- cell lymphoma</b></p>	<i>Room Gallieni 5 - level 2</i>
<b>Chairs: Mikael Roussel (Rennes) &amp; Alessandra Rosenthal (Nice)</b>		
<ul style="list-style-type: none"> <li>• <b>Mikael Roussel (Rennes):</b> Diagnostic de LGL : vers une approche intégrée</li> <li>• <b>Laurence De Leval (Lausanne, Switzerland):</b> Classification of T-cell lymphomas</li> <li>• <b>Hélène Moins (Paris):</b> Diagnostic et suivi par cytométrie du S. de Sezary - Groupe Cythem Sezary</li> </ul>		
<b>Selected short oral presentation</b>		
<ul style="list-style-type: none"> <li>• <b>Rémi Letestu (Bobigny):</b> Étude de l'expression de TRBC1 par CMF comme marqueur de substitution de la clonalité lymphoïde T : une évaluation monocentrique de l'anticorps JOVI-1</li> </ul>		
13:15-14:30	<p><b>Lunch</b></p> <p><b>Coffee - Visit of exhibition - Posters</b></p>	<i>Rhodes - level 2</i>

## Journée de la Fédération d'Immunologie Médicale

14:00-17:30

## Immuno-Oncologie : La révolution continue

Room Rhodes 9 - level 2

**Modérateurs : François Lemoine (Paris) & Lisa Derosa (Paris)**

- **Marie-Caroline Dieu-Nosjean (Paris)** : Tumor-associated Tertiary lymphoid structures, a major 'headquarters' for the development of efficient immune responses against cancers
- **Lisa Derosa (Paris)** : Impact du microbiote sur les biothérapies et les réponses anti-tumorales
- **François-Xavier Danlos (Paris)** : Mécanismes de résistance aux immunothérapies par anticorps monoclonaux anti-PD1
- **Eric Tartour (Paris)** : Therapeutic cancer vaccine
- **Makoto Miyara (Paris)** : CAR T cells : avancées et enjeux en Oncologie
- **Michael Loschi (Nice)** : CAR T cells et hémopathies malignes
- **Table ronde**



## Parallel Sessions

14:30-16:00

## High content cytometry

Auditorium Athéna - level 2

**Chairs: Anne-Sophie Chrétien (Marseille) & Catherine Blanc (Paris)**

- **Henrik Mei (Berlin, Germany)**: Probing the Immune System by Mass(ive) Cytometry
- **Emeric Limagne (Dijon)**: Spectral flow cytometry: a tool for characterizing the tumor microenvironment in preclinical models

**Selected short oral presentations**

- **Olivier Molendi-Coste (Lille)**: A CyTOF atlas of human cardiac immunity
- **Tom Dott (Paris)**: High-dimensional spectral cytometry panels for whole blood immune phenotyping in the Milieu Interieur 10-year longitudinal study

14:30-16:00

## Hematopoiesis

Room Gallieni 5 - level 2

**Chairs: Tsvee Lapidot (Rehovot, Israel) & Noushin Mossadegh-Keller (Marseille)**

- **Tsvee Lapidot (Tel-Aviv, Israel)**: Circadian regulation of hematopoietic stem cells and host immunity by light and darkness cues
- **Elisa Gomez-Perdiguero (Paris)**: Progenitor waves interplay during development to build the immune system
- **Karl Balabanian (Paris)**: CXCR4 signaling, a gatekeeper orchestrating the bone marrow ecosystem

14:30-16:00

## Microbiota

Room Risso 6 - level 2

**Chairs: Sophie Brouard (Nantes) & David Moulin (Nancy)**

- **Valérie Gaboriau-Routhiau (Paris)**: The Segmented Filamentous Bacterium: a paradoxical bacterium
- **Mario Zaiss (Erlangen, Germany)**: Gut microbiota-derived metabolites in the regulation of inflammatory diseases

**Selected short oral presentations**

- **Léo Bertrand (Paris)**: Microbiota in type 1 diabetes induces circulatory and intestinal MAIT cell dysfunction and increases liver and pancreas pro-inflammatory immune landscapes
- **Patrícia Brito Rodrigues (Campinas, Brazil)**: SARS-CoV-2 gamma variant induces microbiota changes and impairs intestinal epithelium tight junctions in mice
- **Rémy Villette (Paris)**: Secretory IgA and gut microbiota at birth influence allergic clinical outcome





16:00-16:45 **Poster Session 2 - even-numbered posters**

Coffee break - Visit of exhibition - Posters

Rhodes - level 2

Poster Prize audition

## Plenary Sessions

16:45-17:00

## Industry symposium

Auditorium Athéna - level 2

**Chairs: Muriel Andrieu (Paris) & Lennart Mars (Lille)**

## • Cytex Biosciences

Application of high-dimensional spectral cytometry to the evaluation of drug responses in AML patient samples

Laure Delestré (Institut Gustave Roussy, Villejuif)



17:00-18:30

## Young scientists

Auditorium Athéna - level 2

**Chairs: Noushin Mossadegh-Keller (Marseille), Mathieu Chevalier (Paris), Laetitia Gautreau-Rolland (Nantes), Fatima-Ezzahra L'Faqih-Olive (Toulouse), Catherine Blanc (Paris) & Anne-Sophie Chrétien (Marseille)**• **Noushin Mossadegh-Keller, Vice-President of the SFI:** Introduction**Selected short oral presentations**• **Julie Noguerol (Toulouse):** H3K9me3-dependent epigenetic pathways control CD4 T cell responses to Treg-mediated suppression• **François Santinon (Montreal, Canada):** Identification of p-eIF4E as a new regulator of regulatory T-cell activity• **Aurora Pignata (Toulouse):** Investigating the role of Tissue-resident memory T cells in chronic CNS autoimmune disease• **Morgane Gossez-Coulaud (Lyon):** Regulatory plasma cells are induced after bacterial and SARS-CoV-2 sepsis and inhibit T cell function through increased PD-L1 expression**Best PhD article Award**

## Parallel Sessions

18:30-19:30

## AFC General Assembly

Room Risso 6 - level 2

18:30-19:30

## SFI General Assembly

Auditorium Athéna - level 2

20:00

## Meeting Dinner

Hyatt Regency Nice Palais de La Méditerranée

## THURSDAY 24 NOVEMBER

08:00-08:30 Welcome coffee

Rhodes - level 2

### Parallel Sessions

08:30-10:00 **Core facility session: 'Analysis of microparticules'**

Room Gallieni 5 - level 2

**Chairs:** *Muriel Andrieu (Paris) & Agnès Loubat (Nice)*

- **Agnès Loubat (Nice):** Purification de granules subcellulaires
- **Pierre-Henri Commere (Paris):** Novel method for Extracellular vesicles and Virus Analysis by NanoCytometry

**Selected short oral presentation**

- **Alia Bahri (Nice):** Environmental stress control RNA granule formation and content in C.elegans

08:30-10:00 **Immunometabolism**

Auditorium Athéna - level 2

**Chairs:** *Stoyan Ivanov (Nice) & David Sancho (Spain)*

- **Stoyan Ivanov (Nice):** Brown adipose tissue myeloid cell diversity and functions
- **Massimiliano Mazzone (Leuven, Belgium):** Harnessing tumor metabolism to overcome immunosuppression: A novel way to enhance the success of cancer immunotherapy

**Selected short oral presentations**

- **Laurent L'Homme (Lille):** Macrophage infiltration and hepatocyte stress regulate GDF-15 in obesity, type 2 diabetes and NASH
- **Marine Monnier (Angers):** Impact of the ketone body acetoacetate on the functional polarization of human macrophages
- **Paulina Garcia Gonzalez (Marseille):** Single-cell profiling of metabolic states coupled to epigenetic heterogeneity in immune cells

08:30-10:00 **Omics analysis**

Room Rhodes 9 - level 2

**Chairs:** *Félix Hartmann (Heidelberg, Germany) & Samuel Granjeaud (Marseille)*

- **Felix Hartmann (Heidelberg, Germany):** Beyond phenotype - Quantifying cellular metabolism in single cells and tissues through multiplexed imaging
- **Martin Guilliams (Ghent, Belgium):** Analysis of spatial multi-omics data

**Selected short oral presentations**

- **Nathan Foulquier (Brest):** Machine Learning for the Identification of a Common Signature for Anti-SSA/Ro 60 Antibody Expression Across Autoimmune Diseases
- **Cristian Iperi (Brest):** Role of metabolism in the dysfunction of B lymphocytes in Systemic Lupus Erythematosus

08:30-10:00 **Transplantation : Nouvelles immunothérapies**

Room Risso 6 - level 2

**Modératrices :** *Sophie Candon (Mont-Saint-Aignan) & Alice Koenig (Lyon)*

- **Julien Zuber (Paris):** CAR-engineered regulatory T cells in transplantation: where do we stand, where do we go?
- **Gilles Blancho (Nantes):** Thérapies ciblées

**Présentations orales sélectionnées**

- **Yves Renaudineau (Toulouse):** The oxygen carrier M101 alleviates complement activation, which may be beneficial for donor organ preservation



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- **Emilie Lebraud** (Paris): Gaining insights into the origin and pathophysiological effects of non-HLA antibodies using a newly developed universal endothelial crossmatch assay
- **Tifanie Blein** (Paris): Use of TCR-deficient CAR-Tregs in combination with anti-CD3 monoclonal antibodies for inducing durable tolerance

10:00-10:45 Coffee break - Visit of exhibition - Posters

Rhodes - level 2

## Parallel Sessions

10:45-12:15

## Oceanobiology

Room Gallieni 5 - level 2

**Chairs: Frédéric Larbret** (Nice) & **Gérald Grégori** (Marseille)

- **Benyamin Rosental** (Beer-Sheva, Israel): Unique evolutionary approaches of FACS in non-classical model organisms, reveal applications and discoveries of immunity and stem cell transplantation
- **Gérald Grégori** (Marseille): The waltz of marine plankton revealed by automated flow cytometry

**Selected short oral presentation**

- **Mélanie Billaud** (Monaco): Cell type identification in the different tissues of *Exaiptasia pallida* during *Vibrio parahaemolyticus* infection by histology and spectral cytometry techniques

10:45-12:15

## Immune Ageing

Room Rizzo 6 - level 2

**Chairs: Julien Cherfils-Vicini** (Nice) & **Anne Astier** (Toulouse)

- **Delphine Sauce** (Paris): Hip fracture as a model of acute stress
- **Arne Akbar** (Londres, Uk): Strategies for enhancing immunity for ageing

**Selected short oral presentations**

- **Jérémy Santamaria** (Marseille): RANKL-mediated thymic rejuvenation improves peripheral immunity during aging
- **Özmen Cobanoglu** (Lille): Targeting senescent cells for improving immune responses to vaccination in aged mice

10:45-12:15

## Cancer immunology

Auditorium Athéna - level 2

**Chairs: Véronique Braud** (Valbonne) & **Jacques Nunès** (Marseille)

- **Fabienne Anjuère** (Valbonne): Comprehensive characterization of the tumor microenvironment of cutaneous squamous cell carcinomas
- **Bertrand Dubois** (Lyon): Disentangling the heterogeneity of antibody producing cells and its clinical impact in breast and ovarian cancers

**Selected short oral presentations**

- **Pierre-Louis Bernard** (Marseille): Targeting CISH enhances natural cytotoxicity receptor signaling and reduces NK cell exhaustion to improve solid tumor immunity
- **Lionel Le Bourhis** (Paris): Autologous T cell responses to primary human colorectal cancer spheroids are enhanced by ectonucleotidase inhibition



Fondation pour la recherche sur le cancer

10:45-12:15

## Auto-immunité, allergies et environnement

Room Rhodes 9 - level 2

**Modérateurs : Barbara Seitz-polski** (Nice) & **Jean-François Nicolas** (Lyon)

- **Renato Monteiro** (Paris): Microbiote et maladies auto-immunes : l'exemple de la néphropathie à IgA
- **Valérie Siroux** (Grenoble): Environmental epidemiology, exposome, asthma and allergy



FEDERATION IMMUNOLOGIE MEDICALE

STALLERGENES GREER

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**Présentations orales sélectionnées**

- **Mahmoud Tarayrah** (Paris): Smad7 dictates T-cell resistance to TGF- $\beta$  and development of type 1 diabetes
- **Maxime Teisseyre** (Nice): Impact of Pollution on the Pathophysiology of Membranous Nephropathy
- **Sophie Lalevée** (Créteil): IL-33: amplifying cytotoxicity in epidermal necrolysis?

**Plenary Session**

12:15-13:00

**Industry talk: Data analysis**

Auditorium Athéna - level 2

**Chairs: Pierre Grenot** (Strasbourg) & **Aude Magerus** (Paris)• **OMIQ****OMIQ: Modern Software for Cellular Analysis***Christopher Ciccolella* (OMIQ, Inc.)• **Metafora****Live demo of Metaflow an innovative tool for multidimensional data analysis***Kamila Czechowska* (Metafora Biosystems)• **Tercen Data Analytics****Tercen: high-dimensional flow cytometry data analysis made easy***Alexandre Gouy* (Tercen)• **Beckman Coulter Life Sciences****Cytobank platform Version 10: Say goodbye to manual gating***Antoine Fouillet* (Beckman Coulter Life Sciences)

13:00-14:15

**Lunch**

Rhodes - level 2

**Coffee - Visit of exhibition - Posters****ASSIM General Assembly**

Room Risso 6 - level 2

**Looking for an academic research position? Come and discuss with qualified colleagues!**

Room Risso 8 - level 2

**Parallel Sessions**

14:15-15:45

**3C Club****Modérateurs : Samuel Granjeaud** (Marseille) & **Alexia Alfaro** (Villejuif)

Room Gallieni 5 - level 2

- **Anne-Laure Iscache** (Toulouse): Good Practices in pre-processing data: focus on three automatic algorithms 'flowClean', 'FlowAI' and 'flowCut'
- **Annelies Emmaneel** (Belgium): Why and how should we use quality control tools for cytometry data?
- **Table ronde** : Retours d'expérience en analyse, besoins à automatiser...

14:15-15:45

**T cells**

Auditorium Athéna - level 2

**Chairs: Loredana Saveanu** (Paris) & **Abdelhadi Saoudi** (Toulouse)

- **Julien Marie** (Lyon): A New Effector T cell Subset Leading to Cancer
- **Magali Irla** (Marseille): Lymphotoxin, a novel immune checkpoint of Treg suppressive activity

**Selected short oral presentations**

- **Romain Roncagalli** (Marseille): Analysis of the molecular mechanisms encoding TCR ligand discrimination
- **Romain Perocheschi** (Toulouse): The transcription factor Eomes controls regulatory T cell suppressive functions and plasticity
- **Emilie Barsac** (Tours): MAIT cells in Streptococcus pneumoniae pneumonia: Activation, functions and therapeutic opportunities?

- 14:15-15:45 **Extracellular vesicles** *Room Risso 6 - level 2*
- Chairs:** *Lorena Martin-Jaular (Paris) & Stéphane Robert (Marseille)*
- **Lorena Martin-Jaular (Paris):** EV heterogeneity and functional consequences
  - **Guillaume Van Niel (Paris):** Basic lessons and therapeutic applications of live imaging of extracellular vesicles *in vivo*
  - **Coralie Guerin (Paris):** Extracellular Vesicle Surface Signatures in hospitalized COVID-19 Patients
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- 14:15-15:45 **Analyses multiparamétriques de l'immunité antitumorale et anti-infectieuse** *Room Rhodes 9 - level 2*
- Modérateurs :** *Guislain Carcelain (Paris) & Jean-Daniel Lelievre (Paris)*
- **Joshua Waterfall (Paris) :** Heterogeneity and ontogeny of tumor infiltrating CD4+ T cells in NSCLC
  - **Rodolphe Thiébaud (Bordeaux) :** Analysis of gene expression data applied to SARS-COV2 infected patients
- Présentations orales sélectionnées*
- **Luciana Petti (Valbonne):** The TNC extracellular matrix protein modulates spatial distribution and phenotypes of tumor-associated myeloid cell populations in oral squamous cell carcinoma
  - **Claude Capron (Boulogne):** Combined coagulation and inflammation markers as predictors of death and venous thrombo-embolism in COVID-19



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### Plenary Session

- 15:45-17:15 **Keynote lecture (Pierre Grabar Lecture)** *Auditorium Athéna - level 2*
- Chair:** *Renato Monteiro (Paris)*
- **Gwendalyn Randolph (Saint-Louis, USA):** Immunity in the mesentery and visceral cavity - translational studies between mouse and human
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- 17:15 **Prize awards - Conclusion**