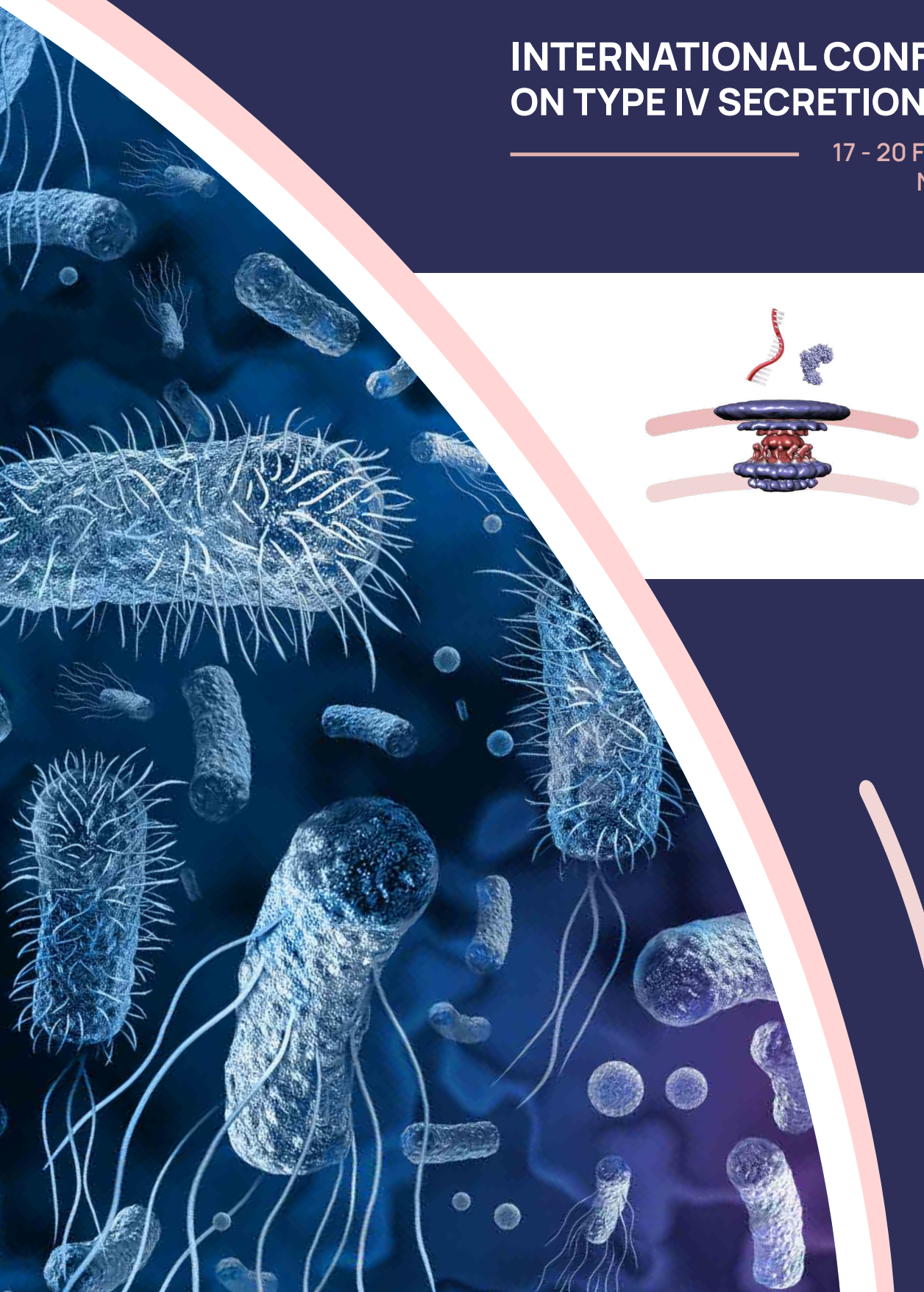
CONFERENCE GUIDE

INTERNATIONAL CONFERENCE ON TYPE IV SECRETION SYSTEM

17 - 20 February 2025
Nancy, France



T4SS

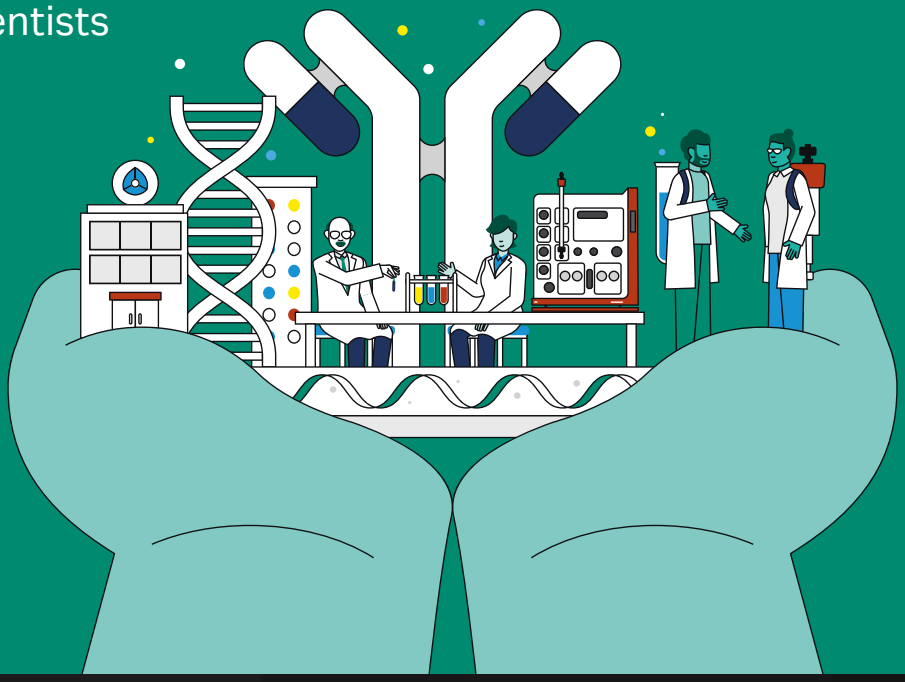
Structure

Function

Impact

Purify club.
Purely your people

Take our hand and join us in a world created for purification scientists



cytiva

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SUMMARY

WELCOME TO T4SS CONFERENCE

On behalf of the organizing and scientific committees, we are delighted to welcome you in Nancy for the International Conference on Type-IV Secretion Systems, taking place from February 17 to 20, 2025.

This conference is a major event in the fields of molecular microbiology and structural biology. The objectives of the conference are to provide scientific and professional interactions to improve our understanding of the T4SSs structure, assembly, functions, including their impact in pathogenesis and environmental microbiology. The last edition was held in Germany in 2016, now more than 8 years ago. Due to the covid pandemic, the community has not been able to meet since.

We are delighted to host you in Nancy for this new exciting edition with an attractive scientific program, composed of 4 major themes: T4SS Structure and Function, Host-Pathogen Interactions, Bioinformatics, Genomics and Evolution, and Impact of Conjugative Transfer.

Nancy is an historic city in the East of France, French capital of Art Nouveau, and famous for the Stanislas Square. During the congress, we will offer an excursion to explore a city theme with an expert from the Nancy tourist office. Besides its Renaissance-style old town, Nancy has also been enriched by Art Nouveau and then Art Deco architecture, which you will have the opportunity to discover. In addition, Nancy offers different culinary specialties like bergamot candy, rum baba and macaroons.

We wish you a pleasant stay and a fruitful congress with enriching scientific discussions.

Dr Badreddine Douzi and Dr Nicolas Soler

Co-chairs of the T4SS conference

GENERAL INFORMATION

GENERAL INFORMATION

Key information

Key dates

- Conference date: 17-20 February, 2025
- Opening of the congress: Monday 17th February, 2025 (14:30)
- Concluding remarks: Thursday 20th February, 2025 (13:00)

Address

Campus Lettres et Sciences Humaines de Nancy - Université de Lorraine
23 Boulevard (Bd) Albert 1er, 54000 Nancy (France)
Batiment K. Prefer the entrance near the gas station (Avenue de la Libération).

Invited speakers

- Dr. Sagar Bhogaraju, France
- Dr. Helene Chiapello & Pr. Nathalie Leblond-Bourget, France
- Pr. Peter Christie, United States
- Dr. Uli Klümper, Germany
- Pr. Suzana Salcedo, United States
- Pr. Gabriel Waksman, United Kingdom







About the organizing entities

UMR DynAMic: Genome dynamics and microbial adaptation

DynAMic is a mixt unit of research between INRAE (Institut National de Recherche en Agriculture, Alimentation et Environnement) and Université de Lorraine.

The main research topic of the Unit deals with the mechanisms of fast evolution in bacteria. Horizontal gene transfer, i.e. exchanges of genetic information between related or unrelated bacteria in an ecosystem, constitutes a major mechanism of bacterial evolution. The studies include the characterization of the molecular mechanisms of transfer of genetic information, of its integration in the recipient genome and of the mechanisms of regulation of these processes, as well as the impact of the transferred sequences in the bacterial host (genome diversity, new functions, adaptation).

Two bacterial groups and their respective ecosystems constitute the studied model organisms: streptomycetes and the forest soil, and streptococci and their different ecosystems (food, oral cavity and human digestive tract).

Université de Lorraine

The Université de Lorraine (UL) is a prominent multidisciplinary institution in the Grand Est region of France, recognized for its cutting-edge research and innovation. With over 60 research units, UL excels in fostering collaborations across disciplines, addressing global challenges in health, science, and technology. Research activities are carried out by 4,000 teaching and research staff.

The University is home to 60+ research units, many of which are internationally recognized. These research units actively collaborate with industry leaders and public institutions, translating innovation into tangible societal impacts.

The excellence of research at the Université de Lorraine is reflected in international thematic rankings, in which the university is regularly cited.

INRAE (Institut National de Recherche en Agriculture, Alimentation et Environnement)

INRAE, the French National Research Institute for Agriculture, Food and the Environment, is the leading research organization* specializing in its three scientific fields, and is helping to meet these challenges. Through research, innovation and support for public policy, INRAE proposes new orientations to support the emergence of sustainable agricultural and food systems, and aims to provide solutions for life, people and the earth.

Based in the Grand Est region of France, INRAE Grand Est's teams focus on three main areas of research: adapting ecosystems and forest, agricultural and urban soils to global change, and sustainable management of these areas. It also contributes to the ecological transition by producing materials and biomolecules from plants and micro-organisms. Genome dynamics and microbial adaptation (DynAMic) is one of the center's research units.

** Specialization index: INRAE's share of the following 10 fields / INRAE's share of all Web of Science disciplines worldwide: Agriculture, Plant sciences, Veterinary sciences, Genetics & heredity, Food science & technology, Nutrition dietetics, Biotechnology & applied microbiology, Environmental sciences & ecology, Water resources, Microbiology.*

Organizing & scientific committees

Organizing Committee

CHAIRS

- Dr Badreddine Douzi, DynAMic, Nancy, France
- Dr Nicolas Soler, DynAMic, Nancy, France

SUPPORT

ICE-TeA team members
Jérémie Bel, Lorraine Université d'Excellence, Nancy, France

ADMINISTRATIVE MANAGER

Layla Rateau

UL PROPULS MEMBERS

Émilie Fargant, Nancy, France
Candice Rollet, Nancy, France

Scientific Committee

- Dr Xavier Bellanger, LCPME, Nancy, France
- Pr Carmen Buchrieser, Institut Pasteur, Paris, France
- Pr Elisabeth Grohmann, Beuth University of Applied Sciences, Berlin, Germany
- Pr Nathalie Leblond-Bourget, DynAMic, Nancy, France
- Pr Matxalen Llosa, IBBTEC, Santander, Spain
- Dr Laurent Terradot, IBCP, Lyon, France

Useful information

Conference venue

THE BEAUTIFUL CITY OF NANCY

Nestled in the heart of the Grand Est region, Nancy is a city rich in history while being firmly focused on the future. Known for its exceptional architectural heritage, including the famous Place Stanislas, a UNESCO World Heritage site, Nancy is also a leading university city. With a strong tradition in science, it hosts prestigious institutions such as the University of Lorraine and several internationally renowned research laboratories.

Nancy, a city in northeastern France, is full of history and charm. Its historic heart is a maze of cobbled streets, elegant squares and Renaissance buildings. The majestic Place Stanislas, a jewel of 18th-century architecture, is the city's nerve center. Surrounded by ornate buildings, it embodies the elegance and greatness of Nancy.

Whether for its cultural assets, high quality of life, or scientific dynamism, Nancy stands out as an essential destination for hosting international congresses, at the crossroads of innovation and knowledge.

NANCY, THE CITY OF ARTS & SCIENCES

The city is also renowned for its Art Nouveau, with the strong influence of the École de Nancy. The ornate facades and artistic details of the buildings bear witness to this flourishing period. Green parks, such as Parc de la Pépinière, offer peaceful spaces for strolling and leisure. Nancy is a dynamic cultural center, hosting artistic events, festivals and exhibitions throughout the year. Museums, such as the Musée des Beaux-Arts, display a rich collection of works that testify to the region's artistic wealth. The city is equally known for its lively student life, with a friendly atmosphere conducive to intellectual exchange.

This dynamic and creative city, renowned for its commitment to innovation and research, is the ideal setting for hosting scientific congresses. Nancy stands out with its dense network of academic, industrial, and technological actors, fostering synergies between researchers, experts, and entrepreneurs. Its scientific ecosystem is further strengthened by the French Tech label and centers of excellence in fields such as healthcare, materials science, and engineering.

Scan this QR Code to discover emblematic & practical locations in Nancy!






Conference venue

CAMPUS LETTRES ET SCIENCES HUMAINES

Access:
The T4SS conference will be held in Nancy (Campus Lettres et Sciences Humaines in Nancy - Université de Lorraine), France, from February 17 to 20, 2025. The conference is a 11-minute walk from the train station. The Campus Lettres et Sciences Humaines is located in the heart of Nancy. Every year, it welcomes over 9,000 students in fields such as Arts, Literature and Languages as well as the Human and Social Sciences.

Address:
Campus Lettres et Sciences Humaines de Nancy - Université de Lorraine
40 Avenue de la Libération, 54000 Nancy (France) - recommended access

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Building K: Welcome desk, conference, coffee breaks & lunches, Welcome Cocktail
Building D, Maison des étudiants (MDE):

- **Room Louis Majorelle:** Poster exhibition
- **Second floor:** Work & relaxation space

Coming to Campus Lettres et Sciences Humaines

Nancy's train station is in the center of town. Trains from Paris (Gare de l'Est) take around 1h30 with the high-speed train (TGV). Trains from Luxembourg or Strasbourg take around 1h20. The Campus Lettres et Sciences Humaines is a 11-minute walk from Nancy train station, 11 minutes by bus and 4 minutes by car.

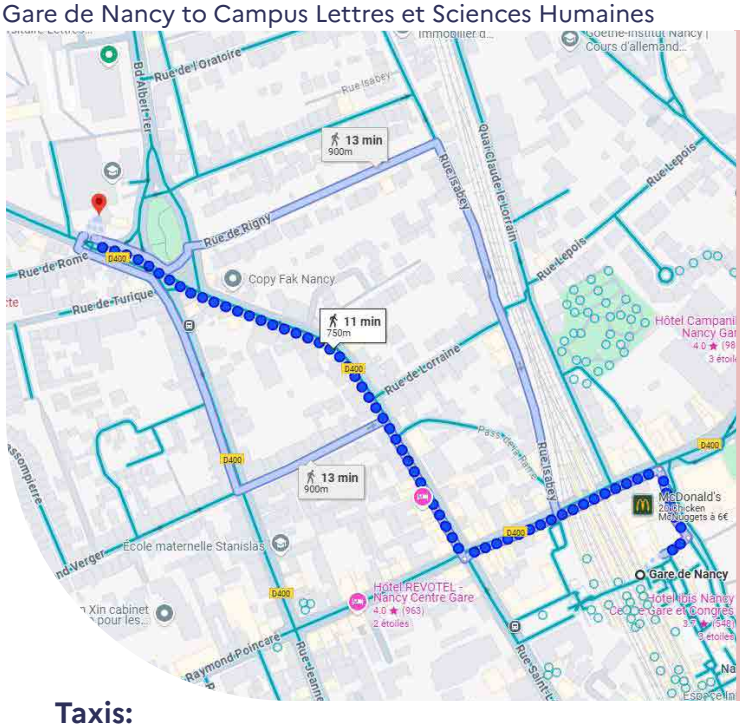
Local transport

By bike:
If you want to get around Nancy quickly for short trips, VéloStanLib' offers self-service bicycles 24 hours a day, 7 days a week, at 29 stations conveniently located throughout the city. Numerous cycle paths take you right through Nancy. There is a free application to make your journey easier.
Website: velostanlib.fr

By bus:
A convenient way to get around Nancy is by bus. If you are arriving by train, you can take line T2 (direction Laxou Sapinière) from Tour Thiers Gare (located in front of the train station) and get off at Campus Lettres. There is a free application to make your journey easier and buy ticket online.
Website: mybus.io

A pedestrian destination:
Nancy is a city that can be visited on foot. You're always 5 minutes from a park or garden, your hotel or a good restaurant.

Itinerary via Google maps
Gare de Nancy to Campus Lettres et Sciences Humaines



Taxis:
Nancy cabs are available 24 hours a day, 7 days a week.
Telephone: +33(0)3 83 376 537
E-mail: contact@taxis-nancy.com
Website: Taxisnancy.fr

Useful information

Map & space

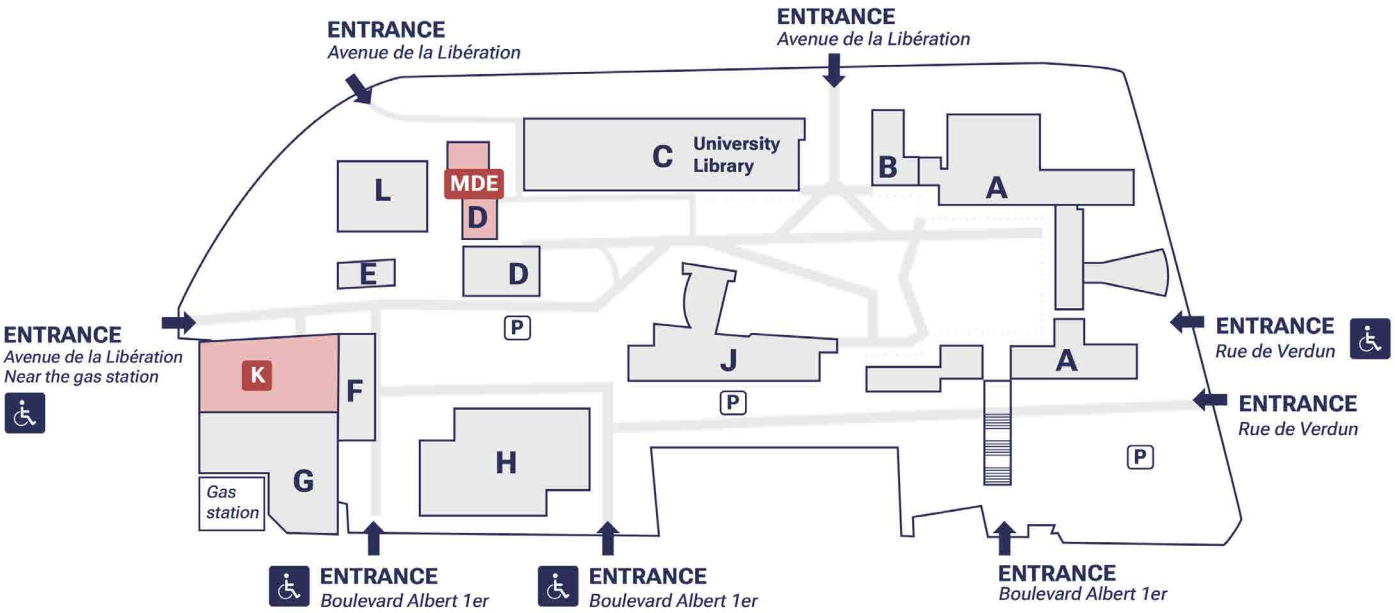
MAP OF THE CAMPUS LETTRES ET SCIENCES HUMAINES

BUILDING K

Welcome desk
Conference
Coffee breaks
Lunches

BUILDING D, MDE

Room Louis Majorelle: Posters exhibition
Second floor: Work & relaxation space



MAP OF THE CAMPUS LETTRES ET SCIENCES HUMAINES

FOCUS ON BUILDING K

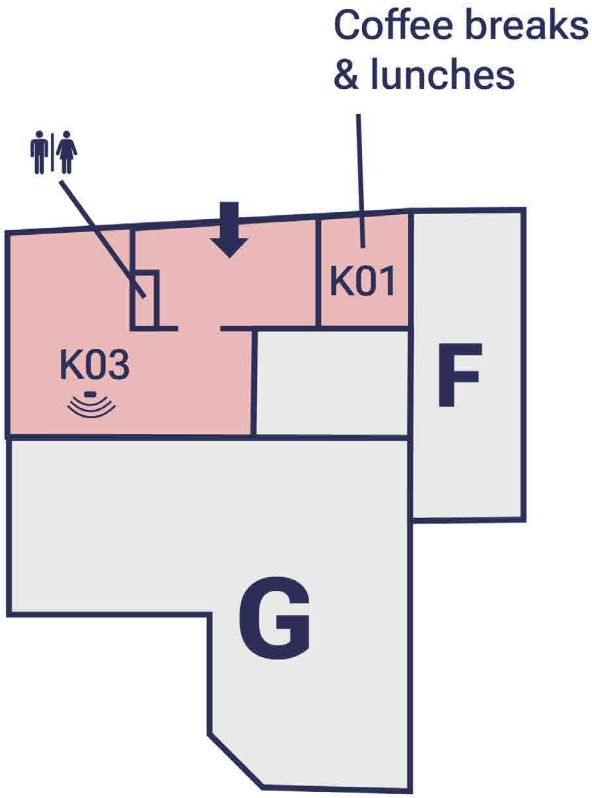
Welcome desk
Conference
Coffee breaks & lunches
Toilets

AMPHITHEATRE K03

Conference

ROOM K01

Coffee breaks & lunches



Recommended access

Building K

Entrance
40 Avenue de la libération
(Near the gas station)

Useful information

WIFI

You can benefit from a wifi connection throughout the duration of the congress. You received on your email address an ID and password to access to the university's wifi. If you haven't received your email, make sure to check your spam folder.

Welcome desk

The welcome desk is located at the entrance to building K, in front of the amphitheater K03. A permanence will be ensured at the reception desk for the duration of the conference. Do not hesitate to come to us if you want information about administrative, technical, social or scientific aspects.

DAYS	CONGRESS OPENING HOURS	WELCOME DESK OPENING
Monday 17th Feb.	12:00 to 18:20	12:00 to 19:30
Tuesday 18th Feb	08:30 to 18:45	08:30 to 19:00
Wednesday 19th Feb.	08:15 to 17:20	08:15 to 17:40
Thursday 20th Feb.	08:15 to 15:00	08:15 to 14:30

Lunch and coffee breaks

Coffee breaks and lunches are located in building K, the room is to the left of the entrance. For Thursday, February 20th, if you selected the lunch bag during your registration, you can pick it up after the closing ceremony from 13:30.

DAYS	MORNING COFFEE BREAK	LUNCH	AFTERNOON COFFEE BREAK
Monday 17th Feb.	/	/	16:40 - 17:10
Tuesday 18th Feb	11:15 - 12:30 (& posters session)	12:30 - 14:00	16:00 - 16:30
Wednesday 19th Feb.	11:00 - 11:20	12:30 - 14:00	15:25 - 16:30 (& posters session)
Thursday 20th Feb.	10:05 - 10:25	13:30 (lunch bag)	/

Conference badges

We ask you to wear your badge for the duration of the congress, in particular to access coffee breaks, lunches and participate in the social program.

Social program

DAY 1 – Monday 17th February

WELCOME EVENING COCKTAIL

To round off this first day of the conference, we invite you to join us for a welcome cocktail and a convivial moment at 18:30 at the Campus Lettres et Sciences Humaines, Building K.

This will be a great time to connect, share ideas, and enjoy a relaxed aperitif with the others participants.

DAY 2 – Tuesday 18th February

CITY TOURS

After a morning of scientific conferences, the early afternoon is reserved for discovering the city of Nancy... You can't miss it! We look forward to seeing you thereafter for the rest of the scientific sessions, including a talk by Professor Peter Christie.

Afternoon activity (14:00 - 16:30):

- Historic Center tour
- Art Deco Tour
- Art Nouveau Tour



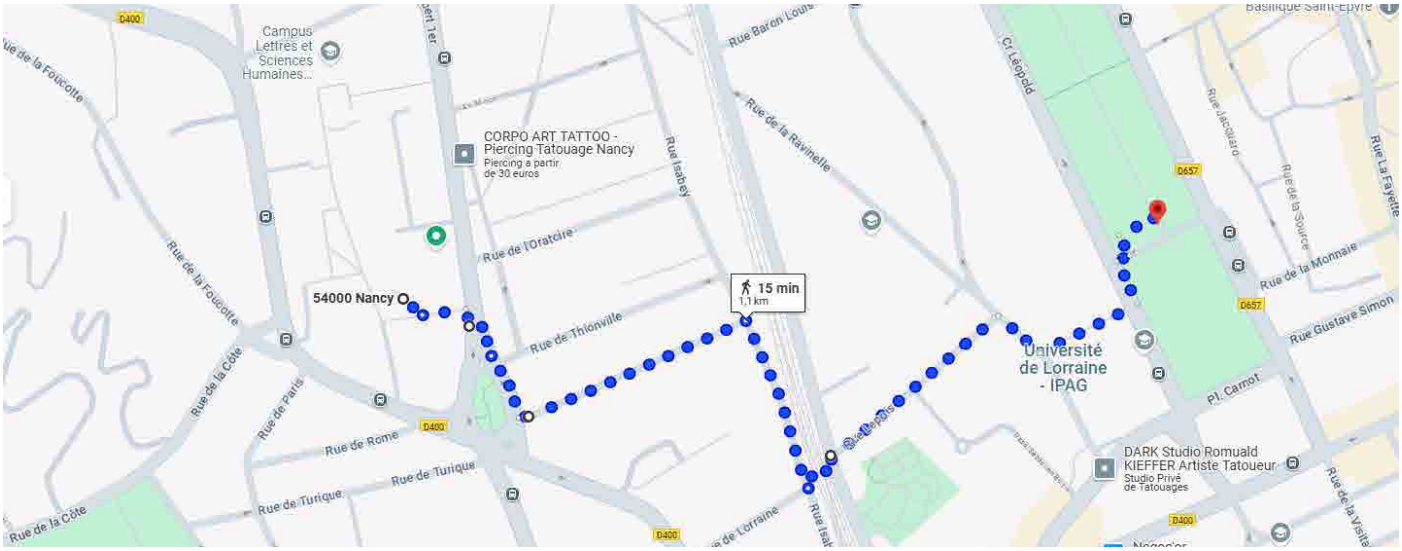

GO TO THE OBELISK

A group departure is planned from the Lettres campus.
The city tour will start at the obelisk in Place Carnot.

Address: Obélisque de Nancy, Allée de l'Obélisque, 54000 Nancy

Social program

Itinerary: from Campus Lettres et Sciences Humaines to obelisk (Place Carnot).
15 min walk

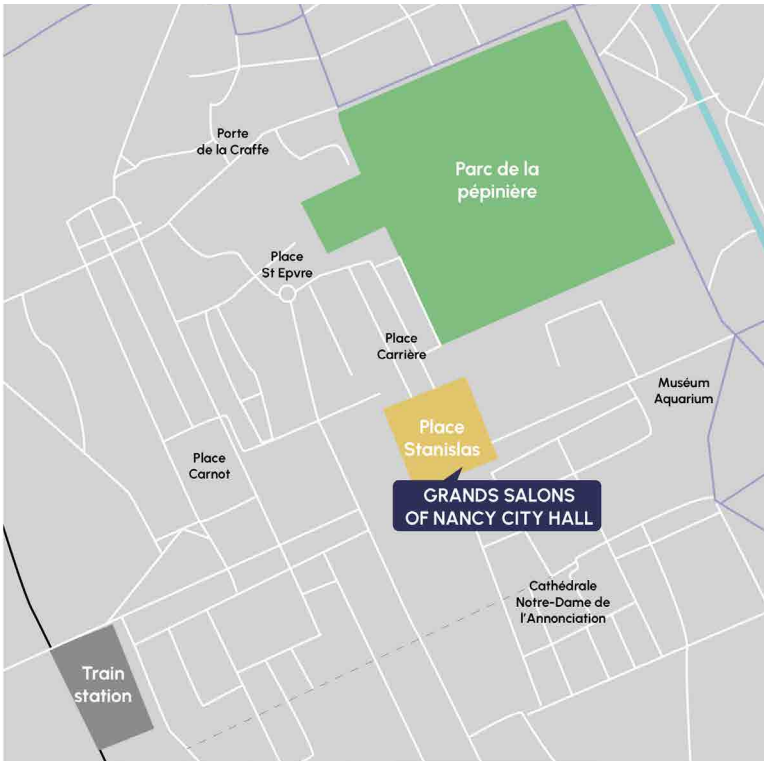


DAY 3 – Wednesday 19th February

GALA EVENING

The gala evening will take place at the Grands Salons de l'Hôtel de Ville (Nancy City Hall). This special evening will be enhanced by the presence of a magician and a performance by the Nancy University Choir. The Gala Dinner is by registration only. Please present your badge on arrival to gain access.

Address: 1 Place Stanislas, 54000 Nancy



A few words about the University Choir

Founded in 1957 as an association, the Chœur Universitaire de Nancy today brings together more than a hundred choral singers, both novice and experienced.

Students and young professionals are welcome without any form of selection.
They take part in intensive rehearsal weekends and produce around ten performances a year.

For 13 years, the choir has been dusting off the image of choral singing under the passionate direction of Madeline and Pierre d'Houtaud. The association explores a rich musical universe blending world songs and contemporary pop music in original a cappella or accompanied arrangements, sometimes tinged with electro. The choir creates multi-disciplinary shows combining choral singing, choreography, theater and scenography (sets and costumes). The choristers perform in a professional setting, with the help of intermittent performers (choirmasters, musicians, sound and light technicians).

For several years now, the Chœur Universitaire has been positioning itself as a cultural player in the region, nationally and internationally on ever more ambitious projects.

As of 2017, Chœur Universitaire performs every year at Nancy's Salle Poirel. In 2016, the association joined the À Cœur Joie choral singing network, paving the way for new collaborations and numerous exchanges. After ElectroGénèse in 2018 and Lūmèn in 2019, its latest show, Le Temps du Rêve, was applauded by over 3,000 spectators in 2022. In 2023, the Chœur Universitaire performed at the Festival International de Musique Universitaire (FIMU, Belfort) and on the international stage of the Zénith de Nancy in front of over 1700 spectators.

DISCOVER THE CHOIR ON THEIR SOCIAL NETWORKS:

- Instagram: @choraleuniversitairenancy
- Facebook: Chorale Universitaire de Nancy
- Youtube: Chorale Universitaire Nancy
- Website: www.chorale-universitaire-nancy.com

A few words about the Magician

The magician will hold a close-up show.

More information on it website: https://www.mysterfred.com/

What is close-up magic?

Close-up magic is a speciality in the art of magic, which consists in creating an illusion right in the heart of the spectators. This type of entertainment is performed right up close to people, often right under their noses, which is bound to irritate even the most skeptical.

Everyday objects such as ropes, rings, coins, cards and many others are used by the magician to mystify each spectator.

MysterFred has also mastered the art of street hypnosis, and uses this trump card to further bluff his audience.

Our sponsors & partnerships

A2F
(Pôle Scientifique Agronomie, Agroalimentaire, Forêt, UL)

Lorraine Université d'excellence

Métropole du Grand Nancy

Société française de microbiologie (SFM)

Société française de biochimie et de biologie moléculaire (SFBBM)

Cytiva

Macherey-Nagel

Organizing entities

DynAMic Laboratory

Inrae

Université de Lorraine

UL Populs

SCIENTIFIC PROGRAM

SCIENTIFIC PROGRAM

Presentation instructions

For all oral conferences

- Your presentation must be in English.
- Your presentation support must be saved as PowerPoint or PDF format on a USB key.
- If you want to use particular formats such as video, sending your presentation in advance is highly recommended. Using a local file is preferred rather than reading an online file.
- We invite you to load your presentation onto the computer in the conference room before the start of your session. Ideally half a day before your presentation, and at the latest during the break before your session.
- To avoid any technical bug and too long installation time, it is better to use only the computer at your disposal. We ask you not to use your personal computer (unless you have a particular need).
- A remote control with laser pointer will be at your disposal.

Keynote

- You will have 45 minutes to realize your presentation
- (40 minutes for presentation + 5 minutes for questions).

Main talk

- You will have 30 minutes to realize your presentation
- (25 minutes for presentation + 5 minutes for questions).

Short talk

- You will have 20 minutes to realize your presentation
- (15 minutes for presentation + 5 minutes for questions).

Poster exhibition

Location: Salle Louis Majorelle, Building D (MDE)

- The recommended poster format is A0 portrait (84.1 cm wide x 118.9 cm height).
- Authors are required to print their own poster and ensure it is displayed from the beginning of the conference until the end, or until their departure from Nancy. The necessary material for hanging will be provided.
- Each poster board onsite will be marked with a number that directly correlates with each poster in the PDF program. Please place your poster on the assigned board.
- Each poster must be hung on the first day of the conference and removed on the last day.

Poster presentation

All the posters should be placed at the begining of the conference. Two sessions are programmed but poster presenters will only have to be in front of their poster for one of the two sessions, according to their poster number:

- **Session 1 - Poster with a even number**

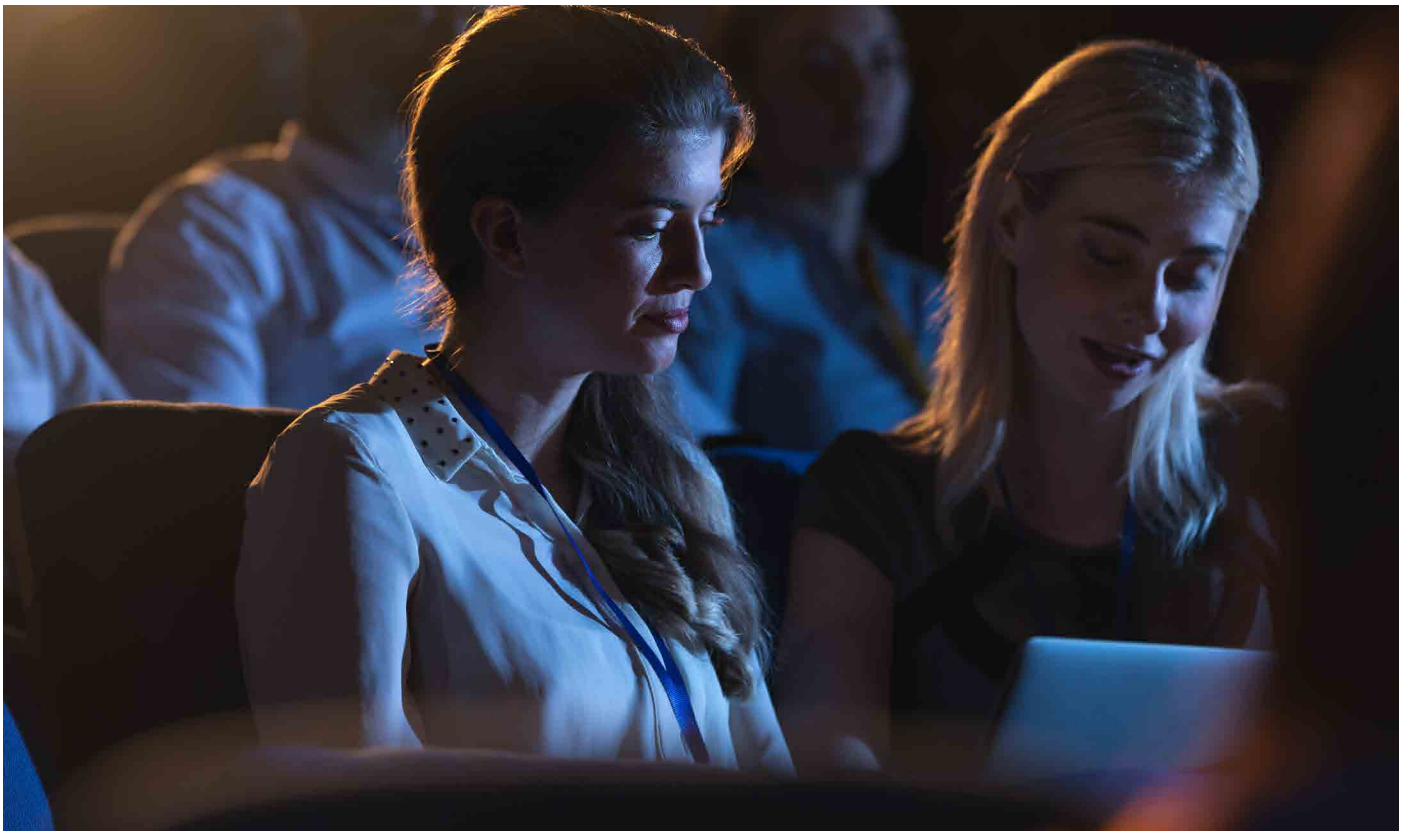
Tuesday 18th February
11:15 - 12:30

- **Session 2 - Posters with an odd number**

Wednesday 19th February
15:25 - 16:30

Scientific themes of the congress

SESSION	THEME
Session 1	**T4SS structure and function:** Structure and dynamics - Assembly mechanisms
Session 2	**Host-Pathogen Interactions:** Effectors diversity and function
Session 3	**T4SS Structure and Function:** Conjugative systems - DNA import/export systems
Session 4	**Bioinformatics, Genomics and Evolution:** Detection and classification, Diversity and Evolution, Bioinformatic Tools
Session 5	**T4SS Structure and Function:** Non-Canonical Systems, Interbacterial Systems
Session 6	**Host-Pathogen Interactions:** Targeting eucaryotic signaling pathways
Session 7	**T4SS Structure and Function:** T4SS effectors recruitment
Session 8	**Impact of Conjugative Transfer:** Dissemination in the environment, Consequence on bacterial fitness, Mobilization



Awards

We are honoured to be able to offer prizes for the best talks and posters presented by young researchers under the age of 35. These prizes are offered by two prestigious French scientific societies:

Société française de biochimie et de biologie moléculaire (SFBBM)

The Société Française de Biochimie et Biologie Moléculaire (SFBBM), formerly the Société de Chimie Biologique, is a learned society founded by Professor Maurice Nicloux in 1914 at the Collège de France in Paris. Main missions:

- To bring together biochemists and molecular biologists in France.
- Through its Thematic Groups, to lead the community of biochemists and molecular biologists in both research and teaching.
- To represent biochemists and molecular biologists to national and international political and scientific bodies.

SFBBM
Société Française de Biochimie et Biologie Moléculaire

Société française de microbiologie (SFM)

The Société Française de Microbiologie (SFM) is a non-profit association founded in 1937 and recognized as a public utility since 1993.

Formed in the Pasteurian tradition, the SFM aims to bring together microbiologists from France and French-speaking countries, working in the various fields of medical, industrial and environmental microbiology, in physiology, genetics, taxonomy, hygiene, antimicrobial agents, biosafety and biosecurity... concerning bacteria, viruses, fungi and parasites.

SFM Société Française de Microbiologie

Keynote lecture

Pr. Gabriel WAKSMAN

Monday 17TH February 2025 | from 14:45 to 15:30
Session 1 | Chair: Elisabeth Grohmann

TITLE OF THE PRESENTATION:
Progress in the structural and molecular biology of bacterial conjugation in Gram-negative bacteria

Biography:

Courtauld Professor of biochemistry and molecular biology at University College London (UCL), and professor of Structural and Molecular Biology at Birkbeck College, University of London. He was elected to EMBO in 2007, a Fellow of the Academy of Medical Sciences in 2008, a Fellow of the Royal Society in 2012, a member of the German National Academy of Sciences Leopoldina in 2013, and a member of Academia Europaea in 2014. The Waksman lab maintains an active research program in the Structural and Molecular Biology of Bacterial Secretion Systems funded by an investigator award from the Wellcome Trust and a programme grant from MRC. The Waksman lab employs a multi-disciplinary approach, including structural biology, biophysics, molecular and cell biology to understand how bacterial secretion systems assemble and how they work.

Keynote lecture

Pr. Suzana SALCEDO

Tuesday 18TH February 2025 | from 09:00 to 09:45
Session 2 | Chair: Abdelrahim Zoued

TITLE OF THE PRESENTATION:
The Ins and Outs of *Brucella*: deciphering the role of effectors in pathogenesis

Biography:

Suzana P. Salcedo, University of Wisconsin-Madison, USA

Suzana is an Associate Professor of Immunology of Infectious Diseases at the University of Wisconsin-Madison (USA). She studied microbiology in Porto, Portugal, and received a Ph.D. in 2003 from Imperial College London for her work on Salmonella pathogenesis. She did postdoctoral training at the Centre of Immunology Marseille-Luminy, France, and was recruited as an INSERM permanent researcher in 2005 to study how Brucella modulates innate immunity. In 2012, she was awarded a FINOVI Young Researcher grant to start her team at the Laboratory of Molecular Microbiology and Structural Biochemistry, University of Lyon/CNRS, France. She led this team until August 2023 as an INSERM Research Director, studying how bacterial pathogens modulate cellular responses to cause disease in humans and animals, namely Brucella spp. and Acinetobacter baumannii. This work is now continuing at the University of Wisconsin-Madison.

Keynote lecture

Pr. Peter CHRISTIE

Tuesday 18TH February 2025 | from 16:30 to 17:15
Session 4 | Chair: Kevin Macé

TITLE OF THE PRESENTATION:
Structural and Functional Plasticity of the T4SSs Exemplified Through Studies of the F system

Biography:

Professor at the University of Texas Health Science Center at Houston, McGovern Medical School (UTHealth), Department of Microbiology and Molecular Genetics.
Dr. Christie has been investigating the structural and functional diversity of type IV secretion systems (T4SSs) for over 35 years. As a postdoctoral fellow, he initiated studies exploring how Agrobacterium tumefaciens delivers oncogenic T-DNA to plant cells through the now archetypal VirB/VirD4 T4SS. At UTHealth, he continued these studies and expanded investigations into the mechanisms of action of T4SSs functioning in Enterococcus faecalis, Rickettsia spp., and Enterobacteriaceae. Dr. Christie uses a combination of genetic, biochemical and in situ cryoelectron and fluorescence microscopy approaches to explore the scope of T4SS diversity and decipher the mechanisms of action of these fascinating nanomachines.

Keynote lecture

Dr. Hélène CHIAPELLO & Pr. Nathalie LEBLOND-BOURGET

Wednesday 19TH February 2025 | from 08:45 to 09:30
Session 4 | Chair: Virginie Libante

TITLE OF THE PRESENTATION:
Unveilling Integrative Conjugative Elements: detection and annotation in *Bacillota* genomes

Biographies:

Hélène Chiapello:

Hélène Chiapello is a senior INRAE Research Engineer in microbial genomics and bioinformatics at the MaIAGE research unit of INRAE in Jouy-en-Josas.
Helene's research activities now focus on the analysis and characterization of microbial diversity within bacterial (meta)genomes and pangenomes. She is also currently being coordinating a groups of bioinformatics engineers and biostatisticians at INRAE and has recently been nominated data Stewart of the INRAE Microbiology and the Food Chain Division of INRAE. She continues her involvement in a number of cross-disciplinary microbial bioinformatics-related projects, particularly with regard to open science and the development of innovative training courses.

Nathalie Leblond Bourget:

Professor of Microbiology and Genetics at the University of Lorraine, she leads the research team «ICE-Transfer and Adaptation» (ICE-TeA), which develops bioinformatics tools to investigate the prevalence and diversity of integrative and conjugative elements (ICEs) and integrative and mobilizable elements (IMEs). The team's objective is to unravel the role of these mobile elements in genome plasticity and bacterial adaptation to various environments. A key focus of their work is understanding how these elements contribute to the dissemination of antibiotic resistance within bacterial populations. The ICE-TeA team also employs an interdisciplinary approach, combining bacterial genetics, protein biochemistry, and structural biology to elucidate the mechanisms behind ICE and IME transfer. This research aims to pave the way for the development of conjugation inhibitors.

Keynote lecture

Dr. Sagar BHOGARAJU

Wednesday 19TH February 2025 | from 14:00 to 14:45
Session 6 | Chair: Steffen Backert

TITLE OF THE PRESENTATION:
Effectors of *Legionella* pneumophila and their interaction with the host ubiquitin system

Biography:

Sagar was born in Nizamabad, India and studied biological sciences at the Indian Institute of Technology, Kanpur. He then moved to Munich, Germany to pursue his doctoral studies on eurkaryotic cilium at the Max Planck Institute of Biochemistry. After PhD, Sagar moved to Frankfurt to pursue postdoctoral research in the topic of ubiquitin signaling at the Goethe University, Frankfurt Germany.

In 2018, he was appointed Group leader at the European Molecular Biology Laboratory in Grenoble France.

Sagar's research group at EMBL focuses on various topics under the umbrella of ubiquitin signaling in disease and physiology. The research in his group is funded by Agence Nationale de Recherche (ANR), EMBL and EMBO.

Bhogaraju group webpage: https://www.embl.org/groups/bhogaraju/

Keynote lecture

Dr. Uli KLÜMPER

Thursday 20TH February 2025 | from 10:25 to 11:00
Session 8 | Chair: Xavier Bellanger

TITLE OF THE PRESENTATION:
Insights into the T4SS-mediated spread of plasmids and antimicrobial resistance'

Biography:

Dr. Uli Klümper is a microbial ecologist at the Institute of Hydrobiology at Dresden Technical University in Germany. He holds a PhD from the Technical University of Denmark and was awarded a Marie Skłodowska Curie Individual Research Fellowship to join the University of Exeter. His main research focus is on understanding the proliferation of antimicrobial resistance in the environment with a specific focus on the underlying ecological and evolutionary processes involved. He is specifically interested in the spread and selection dynamics of antibiotic resistance genes and plasmids in complex bacterial communities and the environmental drivers that cause changes in their abundance. To identify such drivers, he has developed several state-of-the-art microbiological and molecular methods to quantify plasmid transfer and the mobility of antibiotic-resistance genes. Dr. Klümper serves as a scientific advisory board member of the German "One Health Plattform" and works closely with the German Environmental Agency to define safe levels of antibiotic pollution in the environment.

Overview of the scientific program

T4SS – Global Program

Monday 17th February	Tuesday 18th February	Wednesday 19th February	Thursday 20th February
	8:30-9:00 Welcome Participants	8:15-8:45 Welcome Participants	8:15-8:45 Welcome Participants
	9:00–11:15 I Session 2 Host-Pathogen Interactions : Effectors diversity and function	8:45-11:00 I Session 4 Bioinformatics, Genomics and Evolution : Detection and classification, Diversity and Evolution, Bioinformatic Tools	8:45-10:05 I Session 7 T4SS Structure and Function : T4SS effectors recruitment
	9:00 I Keynote Lecture Suzana SALCEDO	8:45 I Keynote Lecture H.CHIAPELLO & N.LEBLOND-BOURGET	
	11:15 I Coffee Break	11:00 I Coffee Break	10:05 I Coffee Break
	11:15 -12:30 Poster Session 1 Even posters	11:20-12:30 Session 5 – T4SS Structure and Function : Non-Canonical Systems, Interbacterial Systems	10:25-13:00 I Session 8 Impact of Conjugative Transfer : Dissemination in the environment, Consequence on bacterial fitness, Mobilization
			10:25 I Keynote Lecture Uli KLÜMPER
12:00-14:30 Registration & poster set-up	12:30 -14:00 Lunch	12:30-14:00 Lunch	13:00-14 :00 Poster & talk prices Concluding remarks
14:30 Opening of the conference	14:00-16:30 City Tour & Coffee Break - 16:00	14:00-18:25 I Session 6 Host-Pathogen Interactions : Targeting eucaryotic signaling pathways	14 :00 I Lunch Bag
14:45-18:20 I Session 1 T4SS Structure and Function: Structure and dynamics- Assembly mechanisms	16:30-18:45 I Session 3 T4SS Structure and Function : Conjugative systems - DNA import/export systems	14:00 I Keynote Lecture Sagar BHOGARAJU	
14:45 I Keynote Lecture Gabriel WAKSMAN	16:30 I Keynote Lecture Peter CHRISTIE	15:25-16:30 I Coffee Break & Poster Session 2 – Odd posters	
18:30 I Welcome Cocktail		20:00 I Diner Gala	

Oral communications

Session 1:

T4SS structure and function:
Structure and dynamics - Assembly mechanisms

S1.1	Monday 17th February – 14:45-16:40 Amphitheater K03 - Building K Chair: Elisabeth Grohmann	
14:45	KEYNOTE 45 min	Progress in the structural and molecular biology of bacterial conjugation in Gram-negative bacteria Gabriel WAKSMAN *Institute of Structural and Molecular Biology, Birkbeck, London, UK* *Institute of Structural and Molecular Biology, University College London, London, UK*
15:30	Short talk 20 min	Elucidating assembly and function of VirB8 cell wall subunits refines the DNA translocation model in Gram-positive Type IV secretion system Robine MAFFO-WOULEFACK *Université de Lorraine, INRAE, DynAMic, Nancy, France*
15:50	Short talk 20 min	Uncovering the molecular architecture of a Gram-positive Type IV secretion system Kieran DEANE-ALDER *Department of Medical Biochemistry & Biophysics, Umeå University, Sweden*
16:10	Main talk 30 min	Structural and functional analysis of the Legionella pneumophila Dot/Icm Type IV secretion system Melanie OHI *Life Sciences Institute, University of Michigan, Ann Arbor, USA* *Department of Cell and Developmental Biology, University of Michigan, Ann Arbor, USA*

S1.2	Monday 17th February – 17:10-18:20 Amphitheater K03 - Building K Chair: Elisabeth Grohmann	
17:10	Main talk 30 min	Functional and Structural Characterization of essential and regulatory components of a Gram-positive Type IV secretion system Walter KELLER *Institute of Molecular Biosciences, University of Graz, Austria* *BioTechMed Graz, Graz, Austria*
17:40	Short talk 20 min	The VirB type IV secretion system is localized at the growth pole in *Brucella* abortus Charline FOCANT *Research Unit in Biology of Microorganisms (URBM), University of Namur* *Research Institute for Life Sciences (NARILIS), University of Namur*
18:00	Short talk 20 min	Molecular interactions required for secretion of Helicobacter pylori CagA Chiamaka OKOYE *Department of Pathology, Microbiology, and Immunology, Vanderbilt University School of Medicine, Nashville, TN, USA*

Session 2:

Host-Pathogen Interactions:
Effectors diversity and function

S2	Tuesday 18th February – 9:00-11:15 Amphitheater K03 - Building K Chair: Abdelrahim Zoued	
9:00	KEYNOTE 45 min	The Ins and Outs of *Brucella*: deciphering the role of effectors in pathogenesis Suzana SALCEDO Department of Pathobiological Sciences, University of Wisconsin–Madison, USA
9:45	Short talk 20 min	Characterization of a new nucleomodulin of *Legionella pneumophila* Monica ROLANDO *Institut Pasteur, Université Paris Cité, Biologie des Bactéries Intracellulaires, Paris, France*
10:05	Short talk 20 min	The multifunction Coxiella effector Vice stimulates macropinocytosis and interferes with the ESCRT machinery Matteo BONAZZI *Institut de Recherche en Infectiologie de Montpellier (IRIM), CNRS, Université de Montpellier, France*
10:25	Short talk 20 min	Disruption of the nucleoli and translation by a *Legionella* Dot/Icm T4SS effector Gunnar SCHROEDER *Wellcome-Wolfson Institute for Experimental Medicine, Queen's University Belfast, Belfast, UK*
10:45	Main talk 30 min	Composition and function of the Helicobacter pylori cag pathogenicity island encoded type IV secretion system Steffen BACKERT *Friedrich Alexander University Erlangen-Nuremberg, Department of Biology, Division of Microbiology, Erlangen, Germany*

Session 3:

T4SS Structure and Function:
Conjugative systems - DNA import/export systems

S3	Tuesday 18th February – 16:30-18:45 Amphitheater K03 - Building K Chair: Kevin Macé	
16:30	KEYNOTE 45 min	Structural and Functional Plasticity of the T4SSs Exemplified Through Studies of the F system Peter CHRISTIE *Microbiology and Molecular Genetics, McGovern Medical School, UTHealth Houston, Texas, USA*
17:15	Short talk 20 min	Visualizing the structure and dynamics of the horizontal gene transfer during bacterial conjugation Shubha UDUPA *Department of Biochemistry and Pharmacology, University of Melbourne, Melbourne, VIC, Australia*
17:35	Short talk 20 min	Exploration of DNA processing mediated by MOBT relaxases during bacterial conjugation Haifa LAROUSSI *Université de Lorraine, INRAE, DynAMic, Nancy, France*
17:55	Short talk 20 min	Cryo-EM structure of the F plasmid relaxosome provides a molecular basis for DNA recruitment and processing in bacterial conjugation Sunanda WILLIAMS *Institute of Structural and Molecular Biology, School of Natural Sciences, Birkbeck College, London, UK*
18:15	Main talk 30 min	Molecular Mechanism For Loading Two Relaxases During Conjugation Initiation Aravindan ILANGOVAN *School of Biological and Behavioural Sciences, Queen Mary University of London, UK*

Session 4:

Bioinformatics, Genomics and Evolution:

Detection and classification, Diversity and Evolution, Bioinformatic Tools

S4	Wednesday 19th February – 8:45-11:00 Amphitheater K03 - Building K Chair: Virginie Libante	
8:45	KEYNOTE 45 min	Unveilling Integrative Conjugative Elements: detection and annotation in *Bacillota genomes* Hélène CHIAPELLO[1] and Nathalie LEBLOND-BOURGET[2] *1 - MaIAGE, Université Paris-Saclay, INRAE, Jouy-en-Josas, France* *2 - Université de Lorraine, INRAE, DynAMic, Nancy, France*
9:30	Short talk 20 min	PO-CBR for delimiting integrated mobile elements transferred by conjugation Toufik HAMADOUCHE *DynAMic, Université de Lorraine, INRAE, Nancy, France* *LORIA, Université de Lorraine, CNRS, Inria, Nancy, France*
9:50	Short talk 20 min	Prevalence and diversity of Integrative and conjugative or mobilizable elements carrying antimicrobial resistance genes in *Streptococcus suis* Sophie PAYOT *DynAMic, Université de Lorraine, INRAE, Nancy, France*
10:10	Short talk 20 min	Conjugative sabotage: new fertility inhibitors against broad-host-range plasmids Daniel GARCIA-LOPEZ *Instituto de Biomedicina y Biotencología de Cantabria, UC-CSIC, Santander, Spain*
10:30	Main talk 30 min	Evolution of plasmid mobility: origin and fate of non-conjugative plasmids Charles COLUZZI *Institut Pasteur, Université de Paris Cité, CNRS, UMR3525, Microbial Evolutionary Genomics, Paris, France*

Session 5:

T4SS Structure and Function:
Non-Canonical Systems, Interbacterial Systems

S5	Wednesday 19th February – 11:20-12:30 Amphitheater K03 - Building K Chair: Ronnie Bertsson	
11:20	Main talk 30 min	Substrate selection and fratricide avoidance by the bactericidal Type IV secretion system of *Xanthomonadaceae* Chuck FARAH *Departamento de Bioquímica, Universidade de São Paulo, São Paulo, Brazil*
11:50	Short talk 20 min	Type IV secretion system drives interbacterial competition in the plant pathogen *Xanthomonas* Chloé PEDUZZI *Earth & Life Institute, applied microbiology-plant health UCLouvain, Louvain-la-Neuve, Belgium*
12:10	Short talk 20 min	The non-canonical TraB-dependent Actinomycete ICEs (AICEs) mediate large-scale chromosomal transfer in *Streptomyces* Pauline GASCHT *Université de Lorraine, INRAe, DynAMic, Nancy, France*

Session 6:

Host-Pathogen Interactions:
Targeting eucaryotic signaling pathways

S6.1	Wednesday 19th February – 14:00-15:25 Amphitheater K03 - Building K Chair: Steffen Backert	
14:00	KEYNOTE 45 min	Effectors of *Legionella pneumophila* and their interaction with the host ubiquitin system Sagar BHOGARAJU *EMBL Grenoble, Auvergne-Rhône-Alpes, France*
14:45	Short talk 20 min	Revisiting effector functions: involvement of a putative T4SS effector in the envelope integrity of *Brucella* Maren KETTERER *Biozentrum, University of Basel, Basel, Switzerland*
15:05	Short talk 20 min	Exploring novel protein-protein interactions and functions of selected Helicobacter pylori Cag Type 4 secretion system (CagT4SS) outer proteins Christine JOSENHANS *Max von Pettenkofer-Institut, Chair for Medical Bacteriology and Hygiene, Ludwig Maximilian University Munich, München, Germany*

S6.2	Wednesday 19th February – 16:30-17:20 Amphitheater K03 - Building K Chair: Steffen Backert	
16:30	Main talk 30 min	Translocation of YopJ family effector proteins through the VirB/VirD4 T4SS of *Bartonella* Christoph DEHIO *Biozentrum, University of Basel, Basel, Switzerland*
17:00	Short talk 20 min	*Legionella pneumophila*: Assessment of effector secretion kinetics in real time in Acanthamoeba Carmen BUCHRIESER *Institut Pasteur, Université Paris Cité, Biologie des Bactéries Intracellulaires,Paris, France*

Session 7:

T4SS Structure and Function:
T4SS effectors recruitment

S7	Thursday 20th February – 8:45-10:05 Amphitheater K03 - Building K Chair: Christine Josenhans	
8:45	Main talk 30 min	The T4bSS of *Legionella* features a two-step secretion pathway with an inner membrane intermediate for secretion of transmembrane effectors Samuel WAGNER *Interfaculty Institute of Microbiology and Infection Medicine, Cellular and Molecular Microbiology, University of Tübingen, Tübingen, Germany Excellence Cluster 'Controlling Microbes to Fight Infections', University of Tübingen, Tübingen, Germany German Center for Infection Research, partner site Tübingen, Tübingen, Germany*
9:15	Short talk 20 min	Exploring the structure and function of *Brucella* abortus virulence factor VirJ in T4SS effectors translocation Chloé DUGELAY *CNRS-Université Lyon UMR5086, Molecular Microbiology and Structural Biochemistry, Lyon, France*
9:35	Main talk 30 min	Architectural asymmetry enables DNA transport through the Helicobacter pylori cag Type IV secretion system Carrie SHAFFER *Department of Microbiology, Immunology, and Molecular Genetics, University of Kentucky, Lexington, USA* *Department of Veterinary Science, University of Kentucky, Lexington, USA* *Markey Cancer Center, University of Kentucky, Lexington, USA*

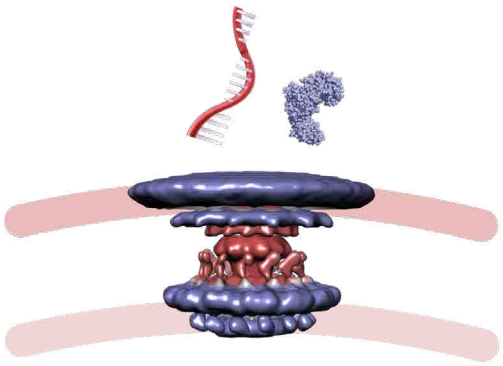
Session 8:

Impact of Conjugative Transfer:
Dissemination in the environment, Consequence on bacterial fitness, Mobilization

S8	Thursday 20th February – 10:25-13:00 Amphitheater K03 - Building K Chair: Xavier Bellanger	
10:25	KEYNOTE 45 min	Insights into the T4SS-mediated spread of plasmids and antimicrobial resistance Uli KLÜMPER *TU Dresden, Dresden, Germany*
11:10	Short talk 20 min	Bacterial conjugation – based tools for manipulating and exploring long-range horizontal gene transfer Matxalen LLOSA *IBBTEC, University of Cantabria, Santander, Spain*
11:30	Short talk 20 min	Structural insights into a ParB-like protein of the F-plasmid that reprograms the gene expression profile of the recipient cell Laurent TERRADOT *Molecular Microbiology and Structural Biochemistry (MMSB), Université Lyon 1, CNRS, Inserm, UMR5086, Lyon, France*
11:50	Short talk 20 min	Competition between conjugative plasmids by fertility inhibition protein Sarah BIGOT *Laboratory of Molecular Microbiology and Structural Biochemistry (MMSB), CNRS-University Lyon,France*
12:10	Short talk 20 min	Uncovering the role of IMEs in antimicrobial resistance and horizontal gene transfer Virginie LIBANTE *DynAMic, Université de Lorraine, INRAE, Nancy, France*
12:30	Main talk 30 min	Entry and surface exclusion of IncC plasmids and SGI1: an asymmetric interplay gene transfer Vincent BURRUS *Department de biologie, Université de Sherbrooke, Sherbrooke, Canada*

INTERNATIONAL CONFERENCE ON TYPE IV SECRETION SYSTEM

17 - 20 February 2025
Nancy, France



T4SS

Structure

Function

Impact

Posters

Posters exhibition Room Louis Majorelle – Maison des étudiants (MDE) Opening hours : 8:00 -17:00	
P1	Stabilizing the interaction between E.coli pKM101 T4SS ATPases for structural work **Natalie AL-OTAIBI** and Gabriel WAKSMAN *Institute of Structural and Molecular Biology, Department of Biological Sciences, Birkbeck College, London, UK*
P2	To kill but not to be killed: Inhibition of bactericidal X-T4SS-mediated trans-intoxication by XAC2611 **Camilla ADAN[1],** Gabriel OKA[1,2], Thiago SANTOS[1], William CENENS[1], Diorge SOUZA[1] and Chuck FARAH[1] *1 - Departament of Biochemistry, Universidade de São Paulo, São Paulo, Brazil* *2- Institut Européen de Chimie et Biologie – CNRS, University of Bordeaux, Pessac, France*
P3	Exploring oriT Binding Site Specificity in the MOBT Relaxase Family **Hicham Sekkouri ALAOUI[1,2],** Zoé BRUCHON[1], Haifa LAROUSSI[1], Louise THIRIET[1], Frédérique FAVIER[2], Claude DIDIERJEAN[2], Nathalie LEBLOND-BOURGET[1], Nicolas SOLER[1] *1 - Université de Lorraine, INRAE, DynAMic, Nancy, France* *2 - Université de Lorraine, CNRS, CRM2, Nancy, France*
P4	Type 4 Coupling Proteins as molecular targets to control antibiotic resistance spread **Itziar ALKORTA[1],** Kepa ARBÉ-CARTON[1], Nagore SANTOS-FERNÁNDEZ[1], Sofía RUIZ-CRUZ[1], Ana REY-SOGO[1], Lide ARANA[2], Sonsoles MARTÍN-SANTAMARÍA[3] and Carlos GARBISU[4] *1 - Department of Biochemistry and Molecular Biology, University of the Basque Country (UPV/EHU), Bilbao, Spain* *2 - Department of Applied Chemistry, University of the Basque Country (UPV/EHU), Donostia, Spain* *3 - Department of Structural and Chemical Biology, Centro de Investigaciones Biológicas Margarita Salas, CIB-CSIC, Madrid, Spain* *4 - Department of Conservation of Natural Resources, NEIKER-Basque Institute for Agricultural Research and Development, Basque Research and Technology Alliance (BRTA), Derio, Spain*
P5	Study of the CagH, CagI and CagL protein interactions and its role in the biogenesis of Helicobacter pylori Cag type IV secretion system pilus **Alpay AYDIN[1],** Priscillia LAGOUTTE[1], Marine BLANC[1], Wolfgang FISHER[2] and Laurent TERRADOT[1] *1 - UMR 5086 Molecular Microbiology and Structural Biochemistry CNRS-Université de Lyon, Institut de Biologie et Chimie des Protéines, Lyon, France* *2 - Max von Pettenkofer-Institut für Hyiene und Medizinische Mikrobiologie, Ludwig Maximilians Universität, München, Germany*
P6	Elucidation of the structural and mechanistic basis of the pilus subunit-incorporation cycle in conjugative T4SSs **Magnus BLOCH[1]** and Gabriel WAKSMAN[1,2] *1 - Institute of Structural and Molecular Biology, Birkbeck, University of London, London, UK* *2 - Institute of Structural and Molecular Biology, University College London, London, UK*

P7	The multifunction Coxiella effector Vice stimulates macropinocytosis and interferes with the ESCRT machinery **Matteo BONAZZI[1],** Arthur BIENVENU[1], Mélanie BURETTE[1], Franck CANTET[1], Chantal CAZEVIEILLE[2], Stacey GILK[3], Delphine MURIAUX[1] and Eric MARTINEZ[1] *1 - Institut de Recherche en Infectiologie de Montpellier (IRIM), CNRS, Université de Montpellier, France* *2 - Institut des Neurosciences de Montpellier (INM), Université de Montpellier, INSERM, France* *3 - Department of Pathology and Microbiology, University of Nebraska Medical Center, Omaha, NE, USA*
P8	Cryo-EM structure of the core complex of the X-T4SS from the opportunistic pathogen Stenotrophomonas maltophilia **Michella BRESCIA[1]**, Germán SGRO[2], Santiago JUSTO[1] and Chuck FARAH[1] *1 - Department of Biochemistry, University of São Paulo, São Paulo, Brazil* *2 - Department of Biomolecular Sciences, University of São Paulo, Ribeirão Preto, Brazil*
P9	Species-specific components of the Helicobacter pylori Cag type IV secretion system **Kaeli BRYANT[1]**, Arwen FRICK-CHENG[2], Lauren SOLECKI[1], Heather KROH[1], Hayes MCDONALD[3,4], Borden LACY[1,5], Mark MCCLAIN[6], Melanie OHI[2,7], and Timothy COVER[1,5,6] *1 - Department of Pathology, Microbiology, and Immunology, Vanderbilt University Medical Center, Nashville, U.S.A* *2 - Life Sciences Institute, University of Michigan, Ann Arbor, U.S.A* *3 - Mass Spectrometry Research Center, Vanderbilt University School of Medicine, Nashville, U.S.A* *4 - Department of Biochemistry, Vanderbilt University, Nashville, U.S.A* *5 - Veterans Affairs Tennessee Valley Healthcare System, Nashville, U.S.A* *6 - Department of Medicine, Vanderbilt University School of Medicine, Nashville, U.S.A* *7 - Department of Cell and Developmental Biology, University of Michigan, Ann Arbor, U.S.A*
P10	T4SS Drives Lipid Mixing During Substrate Exchange **David CHETRIT[1,2]**, Craig ROY[3] and Erdem KARATEKIN[1,2] *1 - Department Cellular and Molecular Physiology, Yale School of Medicine, New Haven, Connecticut, USA* *2 - Nanobiology Institute, Yale University, West Haven, Connecticut, USA.* *3 - Department of Microbial Pathogenesis, Yale University School of Medicine, New Haven, Connecticut, USA*
P11	Activation of Integrative and Conjugative Element ICEclc is influenced by the oxidative stress response heterogeneity, at single cell and lineage level **Anthony CONVERS[1]**, Vladimir SENTCHILO[1], Helena TODOROV[1] and Jan Roelof van der MEER[1] *Department of Fundamental Microbiology, UNIL, Lausanne, Switwerland, UNIL, Lausanne, Switzerland*
P12	Uncovering the molecular architecture of a Gram-positive type 4 secretion system **Kieran DEANE-ALDER[1]**, Josy TER BEEK[1,2], Annika BREIDENSTEIN[1,2] and Ronnie BERNTSSON[1,2] *1 - Department of Medical Biochemistry & Biophysics, Umeå University, Sweden* *2 - Wallenberg Centre for Molecular Medicine & Umeå Centre for Microbial Research, Umeå University, Sweden*
P13	Mechanistic Insights and Inhibition Strategies of DNA Transfer during Bacterial Conjugation **Mario DELGADILLO-GUEVARA[1,2]**, Shubha UDUPA[2], Debnath GHOSAL[2], and Marc ERHARDT[1,3] *1 - Institute of Biology, Humboldt-Universität zu Berlin, Berlin, Germany* *2 - University of Melbourne, Melbourne, Australia* *3 - Max Planck Unit for the Science of Pathogens, Berlin, Germany*

P14	Characterization of OrfA, the peptidoglycan hydrolase involved in ICESt3 conjugation in Streptococcus thermophilus **Rachida ESSMIMIH**, Stéphane BERTIN, Louise THIRIET, Nathalie LEBLOND, Yvonne ROUSSEL *Université de Lorraine, INRAE, DynAMic, Nancy, France*
P15	Sentinel plasmids: a novel approach to trace horizontal gene transfer in natural environments **Andrea FERNÁNDEZ-GÓMEZ**[1,2], Danielle MOONEY[2], Dolores GUZMÁN-HERRADOR[1,2] and Matxalen LLOSA[1,2] *1 - Departamento de Biología Molecular, Universidad de Cantabria (UC), Santander, Spain* *2 - Instituto de Biomedicina y Biotecnología de Cantabria (IBBTEC), UC-CSIC-SODERCAN, Santander, Spain*
P16	The VirB type IV secretion system is localized at the growth pole in Brucella abortus **Charline FOCANT[1,2]** and Xavier DE BOLLE[1,2] *1 - Research Unit in Biology of Microorganisms (URBM), University of Namur, Belgium* *2 - Namur Research Institute for Life Sciences (NARILIS), University of Namur, Belgium*
P17	Conjugative sabotage: new fertility inhibitors against broad-host-range plasmids **Daniel GARCÍA-LÓPEZ,** Sheila GONZÁLEZ-GUTIÉRREZ, Fernando DE LA CRUZ and M. Pilar GARCILLÁNBARCIA *Instituto de Biomedicina y Biotencología de Cantabria, UC-CSIC, Santander, Spain*
P18	Cryo EM elucidation of the TraI relaxase dimer loading onto oriT **Danylo GORENKIN**, Ruina LIANG and Aravindan ILANGOVAN *School of Biological and Behavioural Sciences, Queen Mary University of London, UK*
P19	Conjugation to Gram-positive bacteria as the basis for their genetic modification **Pablo GURIDI-FERNANDEZ**, Dolores L GUZMAN-HERRADOR, Andrea FERNANDEZ-GOMEZ and Matxalen LLOSA *IBBTEC, University of Cantabria, Santander, Spain*
P20	PO-CBR for Delimiting Integrated Mobile Elements transferred by Conjugation **Toufik HAMADOUCHE[1,2],** Gérard GUEDON[1], Thibaut LIMBACH[3], Jean LIEBER[2] and Nathalie LEBLOND-BOURGET[1] *1 - DynAMic, Université de Lorraine, INRAE, Nancy, France* *2 - LORIA, Université de Lorraine, CNRS, Inria, Nancy, France* *3 - Faculté des Sciences et Technologies, Vandoeuvre-Lès-Nancy, France*
P21	Studies on DNA binding mechanism of TraA relaxase from a gram-positive Type IV secretion system **Lena HIRTENFELDER[1]**, Kirill Kuhlmann[1], Claudia MICHAELIS[2], Tamara BERGER[1], Anna REISENBICHLER[1], Michelle BOELCKE[2], Elisabeth GROHMANN[2], Walter KELLER[1] and Tea PAVKOV-KELLER[1] *1 - Institute of Molecular Biosciences, University of Graz, Graz, Austria* *2 - Faculty of Life Sciences and Technology, Department of Microbiology, Berliner Hochschule für Technik, Berlin, Germany*
P22	Exploring novel protein-protein interactions and functions of selected Helicobacter pylori Cag Type 4 Secretion System (CagT4SS) outer proteins **Christine JOSENHANS[1]**, Felix METZ[1], Johanna BEILMANN[1], Simon BATS[1], Wolfgang FISCHER[1], Sebastian SUERBAUM[1] and Laurent TERRADOT[2] *1 - Max von Pettenkofer-Institut, Chair for Medical Bacteriology and Hygiene, Ludwig Maximilian University Munich, München, Germany* *2 - UMR5086, IBCP, Lyon, France*

P23	Revisiting effector functions: Involvement of a putative T4SS effector in the envelope integrity of Brucella **Maren KETTERER,** Petra CHIQUET, Mara ESPOSITO, Jaroslaw SEDZICKI, Maxime QUEBATTE and Christoph DEHIO *Biozentrum, University of Basel, Basel, Switzerland*
P24	Chromosomal Factors Essential for F Plasmid Conjugative Transfer **Kouhei KISHIDA**, Ren KUMAGAI, Sakura IJIMA, Yoshiyuki OHTSUBO and Yuji NAGATA *Graduate School of Life sciences, Tohoku University, Sendai, Japan*
P25	Investigating the structure and interaction of TrwB/VirD4 within the T4SS **Julien KOWALEWSKI[1]** and Gabriel WAKSMAN[1,2] *1 - Institute of Structural and Molecular Biology, Department of Biological Sciences, Birkbeck College, London, UK* *2 - Institute of Structural and Molecular Biology, Division of Biosciences, University College of London, London, UK*
P26	Structural studies on TraF, a transmembrane protein from a G+ Type IV secretion system **Kirill KUHLMANN[1]**, Tamara BERGER[1], Claudia MICHAELIS[2], Amrutha STALLINGER[1], Elisabeth GROHMANN[2], Walter KELLER[1] and Tea PAVKOV-KELLER[1] *1 - Institute of Molecular Biosciences, University of Graz, Graz, Austria* *2 - Faculty of Life Sciences and Technology, Department of Microbiology, Berliner Hochschule für Technik, Berlin, Germany*
P27	Establishment of in vivo photo-crosslinking in Legionella **Ann-Kathrin KUWERTZ**, Sarah TRENZ and Samuel WAGNER *Interfaculty Institute of Molecular Microbiology and Infection Medicine (IMIT), University of Tübingen, Tübingen, Germany*
P28	Deciphering the repeat II domain structure and function of CagY from Helicobacter pylori **Priscillia LAGOUTTE[1]**, Alpay AYDIN[1], Marine BLANC[1], Wolfgang FISCHER[2] and Laurent TERRADOT[1] *1 - UMR 5086 Molecular Microbiology and Structural Biochemistry CNRS-Université de Lyon, Institut de Biologie et Chimie des Protéines, Lyon, France* *2 - Max von Pettenkofer-Institut für Hygiene und Medizinische Mikrobiologie Medizinische Fakultät I LMU München, München, Germany*
P29	Exploration of DNA processing mediated by MOBT relaxases during bacterial conjugation **Haifa LAROUSSI[1],** Robine MAFFO-WOULEFACK[1], Louise THIRIET[1], Emilie CLÉMENT[2], Nathalie LEBLOND-BOURGET[1] and Nicolas SOLER[1] *1 - Université de Lorraine, INRAE, DynAMic, Nancy, France* *2 - Université de Lorraine, CNRS, IAM, Nancy, France*
P30	Biochemical Characterisation of TraI Relaxase Dimer Loading onto oriT during Bacterial Conjugation **Ruina LIANG**, Danylo GORENKIN and Aravindan ILANGOVAN *School of Biological and Behavioural Sciences, Queen Mary University of London, UK*
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P32	Establishing proximity biotinylation as tool to investigate Dot/Icm T4SS effectors in Legionella pneumophila **Daniel LOCKWOOD[1]**, Mohammad AREFIAN[2], Jack PENNY[2], Prof. Ben COLLINS[2], Prof. Miguel VALVANO and Dr. Gunnar SCHROEDER[1] *1 - Welcome-Wolfson Institute of Experimental Medicine, Queen's University Belfast, Belfast, UK* *2 - School of Biological Sciences, Queen's University Belfast, Belfast, UK*
P33	Elucidating assembly and function of VirB8 cell wall subunits refines the DNA translocation model in Gram-positive T4SSs **Robine MAFFO-WOULEFACK[1]**, Abbas MOHAMAD ALI[1], Haifa LAROUSSI[1], Julien CAPPÈLE[2], Felipe ROMERO-SAAVEDRA[3], Nancy RAMIA[1], Emilie ROBERT[1#], Sandrine MATHIOT[2], Nicolas SOLER[1], Yvonne ROUSSEL[1], Rémi FRONZES[4], Johannes HUEBNER[3], Claude DIDIERJEAN[2], Frédérique FAVIER[2*], Nathalie LEBLOND-BOURGET[1*] and Badreddine DOUZI[1] *1 - Université de Lorraine, INRAE, DynAMic, Nancy, France* *2 - Université de Lorraine, CNRS, CRM2, Nancy, France* *3 - Division of Pediatric Infectious Diseases, Dr. von Hauner Children's Hospital, Ludwig. Maximillian's University, Munich, Germany* *4 - Institut Européen de Chimie et Biologie, University of Bordeaux, Pessac, France* *5 - CNRS UMR 5234 Microbiologie Fondamentale et Pathogénicité, Bordeaux, France* *#Current address: Université de Lorraine, INRAE, IAM, Nancy, France*
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