SEPTEMBER 2ND - 6TH, 2024
Hamamatsu, Japan

PROGRAM

INTERNATIONAL SOCIETY FOR PLASMID BIOLOGY 2024

Program

September 2nd (Monday)

14:30 - 16:30	**Registration**
	Opening Session
16:30 - 17:30	**Differences Between Plasmids and Chromosomes: Focus on DNA Compaction and Physical Properties** Professor Hironori Niki (National Institute of Genetics, Japan)
18:00 – 19:30	**Welcome Reception (Congress Center 3F – Room 31)**

September 3rd (Tuesday)

Evolution (Plasmid-Mediated Bacterial Evolution)
Session Chair: Álvaro San Millán (CSIC, Spain)
Eva Top (University of Idaho, United States)

08:45 – 09:15	IL-1 **Plasmids are drivers of adaptation in bacterial communities** Professor Michael Brockhurst (University of Manchester, United Kingdom)
09:15 – 09:45	IL-2 **Short-term evolution of conjugative plasmids and consequences for antimicrobial resistance** Professor Tatiana Dimitriu (University of St Andrews, United Kingdom)
09:45 – 10:00	O1-1-1 **Plasmids can promote microindel mutations** Mikkel Meyn Liljegren (UiT - The Arctic University of Norway, Norway)
10:00 – 10:15	O1-1-2 **The domestication of mobile DNA – a case study of virulence plasmids of the genus Cronobacter** Rafal Jabluszewski (Institute of Microbiology, University of Warsaw, Poland)
10:15 – 10:30	**Coffee Break**
10:30 – 11:00	IL-3 **Co-infection dynamics of mobile genetic elements** Professor Claudia Igler (University of Manchester, United Kingdom)
11:00 – 11:30	IL-4 **TBD** Professor Lingchong You (Duke University, United States)
11:30 – 11:45	O1-2-1 **Antibiotic resistance mutations promote bacterial evolvability through an increase in plasmid recombination** Ignacio de Quinto Caceres (Hospital Ramón y Cajal (IRYCIS), Madrid, Spain)
11:45 – 12:00	O1-2-2 **Unveiling plasmid functionality in a pristine groundwater system dominated by candidate phyla radiation (CPR) bacteria** Olga Maria Perez Carrascal (Institute of Biodiversity, Friedrich Schiller University Jena, Germany)

September 3rd (Tuesday)

Evolution (Plasmid-Mediated Bacterial Evolution)

Session Chair: Álvaro San Millán (CSIC, Spain)
Eva Top (University of Idaho, United States)

12:00 – 12:15 **O1-2-3** **Beyond Borders: Unveiling the Impact of Horizontal Gene Transfer on the Evolution of Plasmid Transfer Genes in Bacterial Communities**
Olivia Kosterlitz (University of Idaho, United States)

12:30 – 13:30 **Luncheon Seminar**
Sponsored by: On-chip Biotechnologies Co., Ltd

Single-cell analysis of 'plasmid holders' in microbial communities
Professor Masaki Shintani (Shizuoka University, Japan)

Plasmid Classification and Databases (Bioinformatics)

Session Chair: Itzik Mirhazi (Ben-Gurion University, Israel)
Eva Top (University of Idaho, United States)

14:00 – 14:30 **IL-5** **Plasmid Taxonomy**
Professor Fernando de la Cruz (CSIC, Spain)

14:30 – 15:00 **IL-6** **Uncovering and organizing the plasmid diversity across Earth's microbiomes**
Professor Antonio Camrgo (Joint Genome Institute, Lawrence Berkeley National Laboratory, United States)

15:00 – 15:15 **O1-3-1** **Establishing the Accuracy of a Plasmid Assembly Pipeline for Short-Read Sequence Contigs through PFGE Gel Mobility Size Verification**
Caison Warner (University of California, Santa Cruz, United States)

15:15 – 15:30 **O1-3-2** **Plasmids: a number to rule them all**
Paula Ramiro Martinez (Hospital Ramon y Cajal (IRYCIS), Madrid, Spain)

15:30 – 15:45 **Coffee Break**

15:45 – 16:15 **IL-7** **TBD**
Professor Bruno Gonzalez-Zorn (Complutense University of Madrid, Spain)

16:15 – 16:30 **O1-4-1** **Unlocking new insights into plasmid mobility: Identification of the conjugative oriTs**
Manuel Ares Arroyo (Institut Pasteur, France)

16:30 – 16:45 **O1-4-2** **Development of a sequence-based prediction method to determine which bacteria receive plasmids by conjugation**
Maho Tokuda (Shizuoka University, Japan)

16:45 – 17:00 **O1-4-3** **Tracking structural variation in carbapenem-resistance plasmids carried by Enterobacteriaceae from bloodstream infections**
Rob Moran (University of Birmingham, United Kingdom)

17:00 – 17:15 **O1-4-4** **Identifying plasmid outbreaks from short reads using RoundHound**
Leah Roberts (EMBL-EBI, United Kingdom)

September 3rd (Tuesday)

Plasmid maintenance

Session Chair: Barbara Funnell (University of Toronto)

17:30 – 18:00 **IL-8** **In vivo assembly of plasmid partition condensates: LLPS behavior, beyond trend and reality**
Professor Jean-Yves Bouet (CNRS, France)

18:00 – 18:30 **IL-9** **Plasmid partition and host cell division control by ParA-family ATPases with mechanisms involving reaction-diffusion principles**
Professor Kiyoshi Mizuuchi (NIH, Japan)

18:30 – 18:45 **O1-5-1** **Single-cell RNA sequencing to understand bacterial heterogeneity and plasmid-host interactions**
Rodrigo Ibarra Chavez (University of Copenhagen, Denmark)

18:45 – 19:00 **O1-5-2** **An IncI2 plasmid partitioning system that co-regulates other plasmid maintenance functions**
Christopher Thomas (University of Birmingham, United Kingdom)

September 4th (Wednesday)

Ecology and Environmental Plasmid Biology

Session Chair: Søren J. Sørensen (University of Copenhagen, Denmark)
Kornelia Smalla (Julius-Kuehn Institute, Germany)

09:00 – 09:30 **IL-10** **Intertwining plasmids, microbial interactions and adaptations to gut environments**
Professor Itzhak Mizrahi (Ben-Gurion University, Israel)

09:30 – 10:00 **IL-11** **Plasmid dynamics and maturation of the infant gut microbiome**
Professor Søren J. Sørensen (University of Copenhagen, Denmark)

10:00 – 10:15 **O2-1-1** **What can we learn about marine plasmids from available microbiome metagenomic data?**
Shay Tal (Israel Oceanographic & Limnological Research, Israel)

10:15 – 10:30 **O2-1-2** **Assessing the role of bacterial innate and adaptive immunity as barriers to conjugative plasmids**
Berit Siedentop (Institute for Integrative Biology, ETH Zurich, Switzerland)

10:30 – 10:45 **O2-1-3** **Searching for conflicts between MGEs: novel fertility inhibition factors against broad-host-range plasmids**
Daniel Garcia Lopez (IBBTEC (CSIC-UC, Spain)

10:45 – 11:00 **O2-1-4** **How to lay low: decoding the regulation of a conjugative plasmid-encoded T6SS**
Maria del Mar Quinonero Coronel (IBBTEC (CSIC-UC), Spain)

11:00 – 11:15 **Coffee Break**

September 4th (Wednesday)

Other Mobile Genetic Elements and Computational Biology

Session Chair: Michael Brockhurst (University of Manchester, United Kingdom)

11:15 – 11:30 **O2-2-1** **SGI1 encodes a fertility inhibitor of IncC plasmid and reveals afunctional domain of MOBH1 relaxase**
Florence Deschenes (Université de Sherbrooke, Canada)

11:30 – 11:45 **O2-2-2** **Plasmid or phage? Insights into the replicon of M13 gained from study of staphylococcal plasmids of the pT181 family.**
Chris Thomas (University of Leeds, United Kingdom)

11:45 – 12:00 **O2-2-3** **Unveiling plasmid functional elements using DNA language**
Jianan Canal Li (University of California, United States)

Luncheon Seminar
Sponsored by: PacBio Japan

12:30 – 13:30 **Antimicrobial Resistance and Plasmids in Microbiome**
Professor Masato Suzuki(Antimicrobial Resistance Research Center, National Institute of Infectious Diseases, Japan)

Spread of antibiotic resistance and pathogenicity

Session Chair: Kornelia Smalla (Julius-Kuehn Institute, Germany)

14:00 – 14:30 **IL-12** **Determinants of plasmid acquisition and selection**
Professor Allison Lopatkin (University of Rochester, United States)

14:30 – 14:45 **O2-3-1** **Conjugative-killer plasmids, a novel antimicrobial alternative**
Pedro Dorado Morales (Bacterial Genome Plasticity Unit- Institut Pasteur, France)

14:45 – 15:00 **O2-3-2** **Deciphering the molecular mechanisms of interaction between conjugative plasmids and integrative mobilizable elements**
Alfred Fillol Salom (Imperial College London, United Kingdom)

15:00 – 15:15 **O2-3-3** **Composite-Sample Complex: Building a genomics model to understand the evolutionary history of antimicrobial resistance gene movement**
Amy Mathers (University of Virginia, USA)

15:15 – 15:30 **O2-3-4** **Identification of plasmid-mediated antimicrobial resistance genes among nordic biogas plants**
Gabriela Kraychete (Federal University of Rio de Janeiro, Brazil)

15:30 – 16:00 **Coffee Break**

Poster — Spread of antibiotic resistance and pathogenicity

16:00 – 18:00 **P1-01** **Transcriptomic responses of clinical enterobacteria to carriage of a carbapenem-resistance plasmid**
Laura Toribio-Celestino (Centro Nacional de Biotecnologia, Spain)

P2-02 **Dissecting pOXA-48 fitness effects in clinical enterobacteria using plasmid-wide CRISPRi screens**
Alicia Calvo-Villamanan (National Centre for Biotechnology, CBB-CSIC, Spain)

September 4th (Wednesday)

Poster — Spread of antibiotic resistance and pathogenicity

16:00 – 18:00
*Odd Numbers:
16:00 – 17:00
Even Numbers:
17:00 – 18:00

P1-03 **Studies aimed at improving the properties of conjugative pCURE plasmids**
Akram Sultan (University of Birmingham, United Kingdom)

P1-04 **Hidden reservoirs of resistance: Contribution of plasmids to antibiotic resistance in Staphylococcus aureus**
Rachel Contarin (ANSES, France)

P1-05 **Efficient transfer of a clinically derived IncP plasmid in murine gut**
Melvin Yong (National University of Singapore, Singapre)

P1-06 **Dynamic changes in the plasmidome and resistome in the gastrointestinal tract of chickens**
Marketa Rysava (University of Veterinary Sciences Brno, Czech Republic)

P1-07 **Assembly dynamics of the replicative transposition complex of Tn4430 in vitro and in vivo**
Loic Codemo(UCLouvain, Belgium)

P1-08 **Key mobile genetic carriers responsible for the dissemination of multidrug-resistant phenotypes among Enterobacter spp**
Rafal Jabluszewski(University of Warsaw, Poland)

P1-09 **Impact of transfer and resistance patterns on the spread of plasmid-mediated resistance in Neisseria gonorrhoeae**
Tabea Elsener (University of Oxford, United Kingdom)

P1-10 **Reporting carbapenemase-encoding plasmid transmission to public health labs**
Nicole Lerminiaux (Public Health Agency of Canada, Canada)

P1-11 **Identifying the Genetic Factors Involved in the Maintenance and Spread of the Conjugative Plasmid pOXA-48a**
Yannick Baffert (Université Lyon, France)

P1-12 **Unraveling the molecular mechanism of collateral sensitivity induced by plasmid mediated beta-lactam resistance**
Laura Alvaro Llorente (Ramon y Cajal Institute for Health Research, Spain)

P1-13 **Secondary functions of resistance genes: impact of ereA2 on bacterial motility.**
Alberto Hipolito (MBA lab. Universidad Complutense de Madrid, Spain)

P1-14 **Genomic characterization of IncX3 plasmids harboring the blaNDM-5 carbapenemase gene isolated during Japanese national AMR surveillance in 2019-2020**
Hui Zuo (AMR-Center, National Institute of Infectious Diseases, Japan)

September 4th (Wednesday)

Poster — Spread of antibiotic resistance and pathogenicity

16:00 – 18:00

*Odd Numbers:
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17:00 – 18:00

P1-15 **Polymicrobial Biofilms on Urinary Catheters**
Philip Karlsson (Uppsala University,Sweden)

P1-16 **Exploring plasmids carrying antimicrobial resistance genes in the hospital sink drain microbiome**
Gregory McCallum (University of Liverpool, United Kingdom)

P1-17 **PCA, PC-CVA and Random Forest of mass spectrometry data for the elucidation of bacterial envelope differences and composition in antibiotic resistance research**
Alfred Fransson (University of Gothenburg, Sweden)

P1-18 **The Impact of Pesticides on the Transmission of Antibiotic Resistance**
Silvana Smits (University of Gothenburg, Gothenburg, Sweden)

P1-19 **Characterization of the vanA-plasmid in the vancomycin-resistant Enterococcus faecium ST80 outbreak in Hiroshima, Japan**
Takaya Segawa (National Institute of Infectious Diseases, Japan)

P1-20 **Pervasive crosstalk between plasmid and chromosome unveils therapeutic targets**
Cristina Herencias (Instituto Ramón y Cajal de Investigación Sanitaria, Spain)

P1-21 **Trimethoprim-resistant Bacteria and Genes: A Case Study of an Urban River in India**
Madhu Kumar Kumara (Indian Institute of Technology Hyderabad, India)

P1-22 **Understanding antibiotic-induced blooms driving horizontal gene transfer of antibiotic resistance**
Laura de Nies (University of Oxford, United Kingdom)

P1-23 **Dissemination of Ceftriaxone-Resistant Salmonella Enteritidis harboring plasmids encoding blaCTX-M-55 or blaCTX-M-14 gene in China**
Xiaoting Hua (Zhejiang University, China)

P1-24 **DNA binding mechanism of TraA relaxase from gram-positive Type IV secretion system**
Kirill Kuhlmann (University of Graz, Austria)

P1-25 **Unravelling the molecular mechanisms of Type IV-A3 CRISPR-Cas and its ecological significance in plasmid competition**
Fabienne Benz (Institut Pasteur, France)

P1-26 **Multilevel transmission of ESBL genes driven by plasmids and other mobile genetic elements across One Health network**
Dr Timmer Balint (University of Debrecen, Hungary)

P1-27 **Interplay between Temperature and Carriage of Multiple Plasmids Influences KPC Prevalence**
Katie Barry (University of Virginia, United States)

September 4th (Wednesday)

Poster — Spread of antibiotic resistance and pathogenicity

16:00 – 18:00

*Odd Numbers:
16:00 – 17:00
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17:00 – 18:00

P1-28 **Detecting AMR plasmid variants in Shigella sonnei**
Sally Partridge (The Westmead Institute for Medical Research, Australia)

P1-29 **Enterococcal pELF1-type linear plasmids spread antimicrobial resistance genes across genera in the environment**
Yusuke Hashimoto (Gunma University Graduate School of Medicine, Japan)

P1-30 **Identification of transfer Pseudomonas plasmids carrying carbapenem resistance genes in the Philippines**
Rin Yamazaki (Shizuoka University, Japan)

P1-31 **Emergence of Acinetobacter towneri harboring a novel plasmid withblaNDM-1 and tet(X7) from a hospital wastewater in the Philippines**
Zoe Mallonga (University of the Philippines Tacloban College, Phillipines)

P1-32 **Comparative sequence analysis of IncP-1 related tetracycline resistant plasmids in N. gonorrhoeae**
Ryota Ishii (Keio University, Japan)

P1-33 **Mosaic mobile elements provide insight in the rapid acquisition of multiple antimicrobial resistances in Staphylococcus pseudintermedius**
Linda van der Graaf (Utrecht University, the Netherlands, Netherlands)

P1-34 **Engineering phagemids to tackle plasmid-mediated antibiotic resistance**
Ada Munoz Cazalla (Microbiology service, IRYCIS, Spain)

P1-35 **Molecular mechanism of the TraI relaxase dimer loading onto oriT**
Danylo Gorenkin (University of London, United Kingdom)

P1-36 **Phenogenetic dynamics of blaNDM-1 gene adaptive amplification**
Mario Pulido Vadillo (Complutense University of Madrid, Spain)

P1-37 **Transmission of Antibiotic Resistance among Enterobacteriaceae across Habitats**
Xiaoqing Xu (The University of Hong Kong, Hong Kong)

P1-38 **The expression of integron arrays is shaped by the translation rate of cassettes**
Jose Antonio Escudero (University Complutense of Madrid, Spain)

Plasmid maintenance

P1-39 **Method for efficient quantification of short-term plasmid loss kinetics**
Christina Egami (UC Santa Cruz, United States)

P1-40 **Interbacterial killing by a conjugative plasmid in Vibrio cholerae**
Celine Fetz (EPFL, Switzerland)

September 4th (Wednesday)

Poster

16:00 – 18:00

*Odd Numbers:
16:00 – 17:00
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Plasmid maintenance

P41 **A good defense is a bad offense: CRISPR-Cas in inter-plasmid competition**
David Sunderhauf (University of Exeter, United Kingdom)

P1-42 **Killing of low- and non-receptive recipients by a multidrug-resistant conjugative plasmid**
Yahua Chen (National University of Singapore, Singapore)

P1-43 **Immediate Transcriptional Response of Host Cells Triggered by Plasmid Acquisition**
Chihiro Liu (The University of Tokyo, Japan)

P1-44 **Molecular investigation of the role of ParB on the segregation of virulence plasmid pB171 in Escherichia coli**
Asmaa Alhelal (University of York, United Kingdom)

P1-45 **Host metabolism reducing fitness costs loaded by plasmid carriage**
Masaaki Hidaka (The University of Tokyo, Japan)

Plasmid classification and databases (bioinformatics)

P1-46 **Classifying the wild diversity of Rhizobium repABC plasmids**
Peter Young (University of York, United Kingdom)

P1-47 **DFAST_QC: Rapid Quality Checking and Taxonomic Identification Tool for Prokaryotic Genomes**
Mohamed Elmanzalawi (The Graduate University for Advanced Studies (SOKENDAI), Japan)

P1-48 **Annotating plasmid genomes using DFAST**
Yasuhiro Tanizawa (National Institute of Genetics, Japan)

P1-49 **Suitability of plasmids as biological safety measures according to the German Genetic Engineering law**
Andre Friedrich (Federal Office of Consumer Protection and Food Safety, Germany)

P1-50 **Multiple variants of IncF-type alleles challenge plasmid typing**
Michaela Ruzickova (CEITEC, VETUNI, Czech Republic)

P1-51 **Novel in silico approaches for identifying previously unclassified plasmids in Pseudomonas species based on replicon types**
Rani Rudramadevi Sreerama (Shizuoka University, Japan)

P1-52 **Genotypic reassessment of Pseudomonas plasmid incompatibility groups according to recent sequence-based approaches**
Yosuke Nishimura (JAMSTEC, Japan)

September 5th (Thursday)

Plasmid Replication

Session Chair: Christopher Thomas (University of Birmingham, United Kingdom)

08:45 – 09:15 **IL-13** **Initiators temporal occupation of replication origins**
Professor Igor Konieczny (University of Gdańsk, Poland)

09:15 – 09:30 **O3-1-1** **Molecular switching of a DNA-sliding clamp to a repressor mediates long-range gene silencing on a multi-drug resistant plasmid**
Thomas McLean (John Innes Centre, United Kingdom)

09:30 – 09:45 **O3-1-2** **Secondary chromosome of Allorhizobium vitis S4 contains a novel structural type of repABC replication-partitioning modules**
Elvira Krakowska (University of Warsaw, Warsaw, Poland)

09:45 – 10:00 **O3-1-3** **Dissection of DNA transactions during conjugative plasmid transfer**
Yoshiharu Yamaichi (I2BC / CNRS, Japan)

10:00 – 10:15 **O3-1-4** **Plasmid copy number variation in bacterial pathogenesis and antibiotic resistance**
Helen Wang (Uppsala University, Sweden)

10:15 – 10:30 **Coffee Break**

Spread of Antibiotic Resistance and Pathogenicity

Session Chair: Kornelia Smalla (Julius-Kuehn Institute, Germany)

10:30 – 11:00 **IL-14** **The transferable resistome of biosolid bacteria influenced by the size of the wastewater treatment plant?**
Professor Kornelia Smalla (Julius-Kuehn Institute, Germany)

11:00 – 11:15 **O3-2-1** **Plasmid-encoded insertion sequences promote rapid adaptation of clinical enterobacteria**
Jorge Sastre-Dominguez (Centro Nacional de Biotecnologia (CNB-CSIC), Madrid, Spain)

11:15 – 11:30 **O3-2-2** **The Line of Duty: How to maintain a giant linear plasmid in antibiotic-producing Streptomyces**
Leah McPhillips (John Innes Centre, United Kingdom)

11:30 – 11:45 **O3-2-3** **Plasmid copy number increase mediates piperacillin-tazobactam heteroresistance in Escherichia coli**
Elin Svedholm (Uppsala University, Sweden)

11:45 – 12:00 **O3-2-4** **Megaplasmid-mediated spreading of the RND-type multidrug efflux pump gene cluster tmexCD-toprJ among Pseudomonas species**
Aki Hirabayashi (National Institute of Infectious Diseases, Japan)

12:00 – 13:30 **Lunch Break**

September 5th (Thursday)

Spread of Antibiotic Resistance and Pathogenicity

Session Chair: Kornelia Smalla (Julius-Kuehn Institute, Germany)

13:30 – 14:00 **IL-15** **Mating Pair Formation Complex of a Type IV Secretion System from Gram-positive Pathogens: Mechanistic and Structural Insights**
Professor Elisabeth Grohmann (Berlin University of Applied Sciences, Germany)

14:00 – 14:15 **O3-3-1** **Virulence plasmids of extra-intestinal pathogenic Escherichia coli**
Zheng Jie Lian (The University of Queensland,Australia)

14:15 – 14:30 **O3-3-2** **Chromosomal insertion of blaCTX-M genes in Escherichia coli in Australia**
Alicia Fajardo Lubian (The University of Sydney, Australia)

14:30 – 14:45 **O3-3-3** **Genomics studies support the role of food strains of E. coli as plasmid reservoirs for genetic exchange of virulence and antibiotic resistance genes with clinical strains**
Manel Camps (University of California Santa Cruz, United States)

14:45 – 15:00 **O3-3-4** **Convergent evolution of Enterobacteriaceae in epidemiological networks with high antimicrobial use**
Yi Ling Tam (University of Bath, United Kingdom)

15:00 – 15:15 **O3-3-5** **Multidrug resistance plasmids commonly reprogramme expression of metabolic genes in Escherichia coli**
Rebecca Hall (University of Birmingham, United Kingdom)

15:15 – 15:30 **Coffee Break**

Poster — Plasmid transfer

15:30 – 17:30
*Odd Numbers: 15:30 – 16:30
Even Numbers: 16:30 – 17:30

P2-01 **CAAX protease and bacteriocin-processing (CPBP)-type intramembrane proteases mediate competitive transfer between conjugative plasmids**
Sarah Bigot (MMSB-CNRS-University Lyon-France, France)

P2-02 **pMG1-like eneterococcal highly conjugative plasmids**
Haruyoshi Tomita (Gunma University Graduate School of Medicine, Japan)

P2-03 **Restriction modification systems play a major role in carbapenemase-encoding plasmid acquisition in hvKp**
Guodong Oo (Yong Loo Lin School of Medicine ,Singapore)

P2-04 **Assessment of Bacillus subtilis plasmid pLS20 conjugation in the absence of quorum sensing repression**
Kenichi Yoshida (Kobe University, Japan)

P2-05 **Identification of unique conjugation genes in pELF1-type enterococcal linear plasmid family**
Jun Kurushima (Gunma University, Japan)

P2-06 **Deciphering the structure and function of the transcriptional terminator PrfaH for understanding the conjugation regulation of IncX Plasmids**
Jun Yang (Guangdong Pharmaceutical University, China)

P2-07 **A genomics to genetics approach to uncovering entry exclusion interactions during bacterial conjugation**
Wen Wen Low (National University of Singapore, Singapore)

September 5th (Thursday)

Poster — Plasmid transfer

15:30 – 17:30
*Odd Numbers:
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16:30 – 17:30

P2-08 **In vitro transferability of ESBL-harboring IncI1 plasmids between chicken and human isolates of Escherichia coli.**
Matteo Buffoni (UMC Utrecht, department of Medical Microbiology ,The Netherlands)

P2-09 **Nucleoside analogues as conjugation inhibitors in Escherichia coli and Klebsiella pneumoniae**
Ilyas Alav (University of Birmingham ,United Kingdom)

P2-10 **Roles of Phospholipids in Conjugative Transfer**
Kouhei Kishida (Tohoku University ,Japan)

P2-11 **Distinct clustering of antibiotic resistance genes in Escherichia coli reveals contributions of genetic linkage and selection to shaping the evolution of antibiotic resistance**
Manel Camps (University of California, United States)

P2-12 **Analysis of factors affecting the efficiency of plasmid transfer in Bacillus subtilis natto.**
Wakana Suda (Tokyo University of Agriculture, Japan)

P2-13 **Characterization of features in replication and conjugative transfer of plasmids in the novel subgroups of IncP/P-1**
Shunta Tsuruga (Shizuoka University, Japan)

P2-14 **Hierarchical organization of complementary strand synthesis during conjugative plasmid establishment**
Nathan Fraikin (Molecular Microbiology and Structural Biochemistry, France)

P2-15 **Deciphering the role of proteins of the broad-host-range Firmicutes T4SS from the conjugative plasmid pIP501**
Claudia Michaelis (Berliner Hochschule für Technik ,Germany)

P2-16 **Campylobacter plasmid typing and transfer between species**
Linda van der Graaf (Utrecht University, the Netherlands ,Netherlands)

P2-17 **In vivo assembly of bacterial partition condensates: LLPS behavior, beyond trend and reality**
Hirotada Mori (Lab of Syst & Syn Microbiol, Guandong Academy of Agr. Sci, China)

P2-18 **Plasmids Fight Back: Anti-Defense Systems Boost Conjugation Efficiency**
Bruria Samuel (Tel-Aviv University, Israel)

Evolution (plasmid-mediated bacterial evolution)

P2-19 **How do interactions between mobile genetic elements enhance resistance gene spread?**
Victoria Orr (University of Liverpool ,United Kingdom)

P2-20 **The Plasmidome of Extra-Intestinal Pathogenic E. coli Lineages**
Joao A Gama (Ramón y Cajal Institute for Health Research, Madrid, Spain)

P2-21 **Temporal GWAS identifies a widely distributed putative adhesin carried on a medium-copy number plasmid contributing to pathogen success in Shigella spp.**
P Malaka De Silva (University of Cambridge ,United Kingdom)

September 5th (Thursday)

Poster — Evolution (plasmid-mediated bacterial evolution)

15:30 – 17:30
*Odd Numbers:
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16:30 – 17:30

P2-22 **Where compensatory mutations for plasmid costs occur is determined by cost reduction and its trade-offs with resistance and conjugation**
Christopher Witzany (ETH Zurich ,Switzerland)

P2-23 **Investigating Selection for Horizontal and Vertical Transfer in IncP Plasmids**
Elizabeth Duan (University of Washington, Department of Biology, United States)

P2-24 **Plasmid and Prejudice: A tale of plasmid-host compatibility in Pseudomonas aeruginosa**
Prajwal Vishwanath Bharadwaj (University of Liverpool, United Kingdom)

P2-25 **A new approach to study the evolution of bacterial plasmids**
Kamil Krakowski (University of Warsaw, Poland)

P2-26 **Mobile genetic elements carrying the genes for γ-hexachlorocyclohexane degradation in sphingomonads**
Yuji Nagata (Tohoku University, Japan)

P2-27 **Inferring gains and losses of the 2,4-dichlorophenol hydroxylase gene (tfd) in IncP-1 plasmids from phylogenetic trees and gene presence/absence patterns**
Tianyu Lu (Keio University, Japan)

P2-28 **Revisiting the taxonomic distribution and phylogenetic relationships of the membrane-associated guanylate kinase (MAGUK) family of scaffolding proteins**
Lianne Cagalingan (Keio University, Japan)

P2-29 **A continuously evolving DNA barcode for plasmid lineage tracing**
Sophia Wiesenfeld (Harvard Medical School, United States)

Ecology and environmental plasmid biology

P2-30 **Long reads reveal complete plasmids in the genus Tenacibaculum**
Ashton Sies (The University of Regina ,Canada)

P2-31 **Sigma factor BacL2 promotes pheromone-induced expression of bacteriolysin Bac41 to enhance HGT in Enterococcus faecalis**
Jun Kurushima (Gunma University, Japan)

P2-32 **Single-cell analysis identifies the original hosts of PromA plasmid**
Megumi Masumoto (Shizuoka University, Japan)

P2-33 **The key metabolic genes for alkane degradation in Rhodococcus qingshengii N9T-4 were located in their two plasmids, pN9T4-1 and pN9T4-2.**
Yuka Sato (Shizuoka University, Japan)

P2-34 **Comprehensive plasmidome characterization of a model cow rumen microbiome system**
Rebecca Garner (University of California, Berkeley, United States)

P2-35 **Ecological Dynamics of Marine Plasmids: Insights from Global Metagenomic Analysis**
Lucy Androsiuk (Ben-Gurion University of the Negev, Israel)

September 5th (Thursday)

Poster

15:30 – 17:30
*Odd Numbers:
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Ecology and environmental plasmid biology

P2-36 **Worldwide diversity of genotypes determining the bacterial catabolism of 2,4-D in 2,4-D treated arable fields**
Anahita Modabberi (KU Leuven,Belgium)

P2-37 **Using Hi-C and target capture to monitor plasmid transfer in the barley rhizosphere**
Thibault Stalder (Inserm ,France)

P2-38 **Genomic epidemiology of Acinetobacter baumannii plasmids from environmental and clinical sources**
Soon Keong Wee (Nanyang Technological University, Singapore)

Other mobile genetic elements and Computational biology

P2-39 **Interplay between the Xer system and the dissemination of antibioresistance in Acinetobacter baumannii**
Corentin Blanchais (LMGM-CBI, France)

P2-40 **VicMAG: visualizing circular metagenome-assembled genomes focused on bacterial virulence and antimicrobial resistance**
Yusuke Tsuda (Kyoto University Hospital, Japan)

P2-41 **Identification of the cellular interactants of the bacterial transposon Tn4430**
Claire Stulemeijer (UCLouvain, Belgium)

P2-42 **Variation in the plasmid backbone and dif module content of R3-T33 Acinetobacter plasmids**
Stephanie Ambrose (The University of Sydney, Australia)

P2-43 **Systematic analysis of prophages, other types of integrative elements and defense systems in the Serratia marcescens complex using 142 closed genomes**
Debora S Nagano (Kyushu University, Japan)

P2-44 **Vibrio parahaemolyticus encode diverse type I-F CRISPR-Cas variants in mobile genetic elements**
Carlos Emmanuel Panerio (University of the Philippines Diliman ,Phillipines)

P2-45 **Engineering staphylococcal prophages for therapeutic applications against methicillin-resistant Staphylococcus aureus**
Huong Minh Nguyen (Jichi Medical University ,Japan)

P2-46 **Leveraging protein language models to study hyperparasitic mobile genetic elements**
Urvish Trivedi (University of Copenhagen, Denmark)

P2-47 **Unraveling the role of plasmids in disseminating prokaryotic immune systems across different ecosystems**
Mario Rodriguez Mestre (University of Copenhagen, Denmark)

P2-48 **Prevalence of the insertion sequence IS1071 in differentially anthropogenically impacted soils and its contribution to microbial community adaptation**
Dirk Springael (KU Leuven, Belgium)

September 5th (Thursday)

Poster — Other mobile genetic elements and Computational biology

15:30 – 17:30
*Odd Numbers: 15:30 – 16:30
Even Numbers: 16:30 – 17:30

P2-49 **Monitoring gene recruitment and lateral gene transfer of adaptive genes by the bacterial insertion sequence IS1071 in complex microbial communities**
Mah-e-Neema Nawaz (KU Leuven, Belgium)

Plasmid replication

P2-50 **Discovery of Novel Replication Proteins for Large Plasmids in Cyanobacteria and Their Potential Applications in Genetic Engineering.**
Satoru Watanabe (Tokyo University of Agriculture, Japan)

P2-51 **Studies on novel plasmid replication factors found in cyanobacteria and their replication initiation mechanisms.**
Minori Sakata (Tokyo University of Agriculture, Japan)

P2-52 **Prediction and comparison of repA promoters in different PromA plasmids**
Nanako Isogai (Shizuoka University, Japan)

P2-53 **The unique structure and properties of the replication system of Klebsiella pneumoniae plasmid pIGMS31**
Pawel Wawrzyniak (University of Warsaw)

September 6th (Friday)

Plasmid Transfer

Session Chair: Fernando de la (CSIC, Spain)
Álvaro San Millán (CSIC, Spain)

09:00 – 09:30 **IL-16** **Plasmid CRISPR Conflicts: Type IV-A3 in the Spotlight**
Professor Rafael Pinilla Redondo (University of Copenhagen, Denmark)

09:30 – 10:00 **IL-17** **The architecture and function of an antimicrobial resistance propagator**
Professor Tiago R D Costa (Imperial College London, United Kingdom)

10:00 – 10:15 **O4-1-1** **A functional genomic approach to unravel complex genetic mechanisms of AMR plasmid stability and transfer**
Minh Duy Phan (The University of Queensland, Australia)

10:15 – 10:30 **Coffee Break**

10:30 – 11:00 **IL-18** **DNA transfer by conjugation in live cells**
Professor Christian Lesterlin (CNRS, France)

11:00 – 11:30 **ML-01** **Plasmids & Pill: an appreciation of Laura Frost(1949-2023)**
Professor Beth A. Traxler (University of Washington, United States)

11:15 – 11:30 **O4-2-1** **Study of exclusion systems protecting against the acquisition of the F plasmid by horizontal transfer**
Couturier Agathe (MMSB CNRS, France)

11:30 – 11:45 **O4-2-2** **Interruption of the tir genes in IncL and IncM plasmids does not lead to higher conjugation frequencies but rather growth inhibition**
Muhammad Kamruzzaman(Westmead Institute for Medical Research, Australia)

September 6th (Friday)

12:00 – 13:30 **Lunch Break**

Plasmid Transfer

Session Chair: Fernando de la (CSIC, Spain)
Álvaro San Millán (CSIC, Spain)

13:30 – 13:45 **O4-3-1** **The recipient cell modulates donor cell activation and conjugation through the expression of capsule**
Galain C Williams (Monash University, Australia)

13:45 – 14:00 **O4-3-2** **Should I stay or should I go: Optimal timing of prophage induction and plasmid conjugation**
Jana Sanne Huisman (Massachusetts Institute of Technology, United States)

14:00 – 14:15 **O4-3-3** **Exploring the potential of bacterial conjugation in gene editing: A delivery mechanism for relaxase-driven CRISPR-Cas system**
Dolores Guzman Herrador (IBBTEC-UC, Spain)

14:15 – 15:00 **Coffee Break**

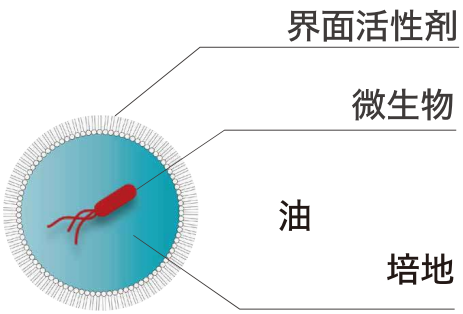
15:00 – 16:30 **ISPB meeting, Special Lecture**
Professor Hideaki Nojiri (The University of Tokyo)

18:00 – 20:00 **Banquet (Okura ACT CITY HOTEL 4F "Heian")**

従来の 1000 倍のスループット！細胞 / 微生物スクリーニング装置

第36回 中小企業優秀新技術・新製品賞
中小企業庁長官賞 受賞

細胞・微生物スクリーニングに革新をもたらす
On-chip Droplet Selector



油中 Droplet

大量に作り出した微生物を内包した油中 Droplet の解析、分離、シングル分注が可能な装置。
数十年革新がない、生きた微生物の
スクリーニング方法に革新をもたらしつつある。

従来比 1000 倍のハイスループット

	従来技術：プレート法		本製品：Droplet 法
対応サンプル数	1 万サンプル（100 枚のプレート）	100 倍	100 万サンプル（1 本の試験管）
必要な試薬や培養液	数リットル	1/1,000,000	数ミリリットル
人手・時間	数名　数日	1/10 以下	1 名　1 日
	新たな発見は運		新たな発見

株式会社オンチップ・バイオテクノロジーズ

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人工遺伝子合成サービス

IVT-RNA合成サービス

受託サービスでmRNA医薬研究を加速しませんか

ユーロフィンジェノミクス株式会社のIVT-RNA合成サービスは、弊社にて人工遺伝子を合成し、その後 T7 RNA Polymeraseを使用してIVT (In vitro Transcription)反応によりRNAを合成します。
オプションとして、Pseudo UTPの利用、キャップ反応も対応が可能です。国内ラボ作業のため、早くて安心です。ぜひ、お客様の時間の節約のためにIVT-RNA合成サービスをお試しください

人工遺伝子合成 → プラスミド調製 → 直鎖化 → mRNA合成

価格および納期

価格 人工遺伝子合成料金 +¥75,000 ～

納期 人工遺伝子合成 + 7 営業日

特長

●安心、安定の国内受託
●One-Stop ソリューション　<人工遺伝子合成～mRNA合成>
●1反応の収量目安：20 µg~ *(鋳型により変動いたします)
●お客様のプラスミドをテンプレートにIVTのみの作業可能

*収量保証はできずあくまでも目安量です。鋳型により収量には変動がございます。

納品物

●IVT-RNA(テンプレートの納品可*) *別途追加料金がかかります
●QC 結果 (キャピラリー電気泳動結果、濃度・収量データ)

RNA修飾*

●N1-Pseudo UTP
●5'Capping(Cap1)の付加

*別途追加料金がかかります

●お問い合わせ●
ユーロフィンジェノミクス株式会社
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これからも、
じぶんらしく。
じぶんらしく
なく。

NAGASE
Delivering next.