

# SCHEDULE AND PROGRAM

## Saturday, September 23, 2006

**13:00-20:00** Arrival and **Registration** at Main Lodge Lobby

**17:00-18:00** **Reception** at lower level lounge, Bar and Deck

**18:00-20:00** **Dinner** in dining room

**20:00-20:15** **Welcome Address:** **Neal Van Alfen**, Dean of College of Agricultural and Environmental Sciences

**20:15-20:30** Opening of Plasmid Biology 2006: **Donald R. Helinski** and **Clarence I. Kado**

**20:30-21:20** **Keynote address:** **Stanley N. Cohen** "Bacterial plasmids: their extraordinary contributions to molecular biology"

**21:30-00:00** Non-host bar and social

## Sunday, September 24

**07:30-08:30** **Breakfast**

### Session I                      **REPLICATION**

**Chairs:** **Chris D. Thomas** and **Manuel Espinosa**

**08:30-08:50** Troy Bankhead, Kerri Kobryn, and **George Chaconas**  
"Unexpected twist: harnessing the energy in positive supercoils to control the telomere resolution step of *B. burgdorferi* DNA replication"

**08:50-09:10** **Deepak Bastia**, Bidyut K. Mohanty and N.K. Bairwa  
"Cell cycle master kinases CDK and DDK and the checkpoint proteins Tof1/Csm3 control replication termination and plasmid formation from the rDNA repeats of yeast"

**09:10-09:30**    **Tateo Itoh** “The mechanism of initiation of DNA replication in plasmids of the ColE2 family”

**09:30-09:50**    Lisa M. Bowers, Ricardo Krüger, and **Marcin Filutowicz**  
“The activators of ? origin, monomers of p protein, bind iterons cooperatively”

**09:50-10:10**    **Coffee and Tea break**

**10:10-10:30**    **Christopher D. Thomas** and Catherine M. Joce  
“The inverted complementary repeat is a consequence of, not a requirement for, the action of a replication initiator protein at a replication origin”

**10:30-10:50**    Eowyn Tinsley and **Saleem A. Khan**  
“A novel FtsZ-like protein is involved in the replication of the anthrax toxin-encoding pXO1 plasmid in *Bacillus anthracis*”

**10:50-11:10**    José A. Ruiz-Masó, Rudi Lurz, **Manuel Espinosa** and Gloria del Solar  
“The double-strand origin of plasmid pMV158 revisited: RepB initiator interacts with two distinct DNA regions”

**11:10-11:30**    Wenke Zhang, Mark S. Dillingham, Christopher D. Thomas, Stephanie Allen, Clive J. Roberts and **Panos Soutanas**  
“Directional loading of the PcrA helicase at the plasmid replication origin *oriD* by RepD and unwinding of a plasmid”

**11:30-11:50**    Monika Witosinska, Katarzyna Kolatka and **Igor Konieczny**  
“Plasmid RK2 and its minireplicon derivatives localization in symmetrically and asymmetrically dividing bacterial cells”

**11:50-12:10**    Stephen M. Kwong, Ronald A. Skurray, and **Neville Firth**  
“Antisense RNA-mediated replication control of Staphylococcal multiresistance plasmid Psk41”

**12:15-13:15**    **Lunch**

13:30-17:00

## POSTERS I

Chair: Anne-Laure Moyne\*

1. **Tatiana Venkova-Canova**, Preeti Srivastava and Dhruva K. Chatteraj  
“Transcriptional inactivation of a regulatory site for replication of *Vibrio cholerae* chromosome II”
2. **Preeti Srivastava** and Dhruva K. Chatteraj  
“Role of MreB in chromosome segregation in *Vibrio cholerae*”
3. **Hideaki Nojiri**, Masatoshi Miyakoshi, Masaki Shintani, Tsuguno Terabayashi, Hisakazu Yamane “Interaction of IncP-7 plasmid pCAR1 with host chromosome”
4. **Man Han**, Masaru Yagura and Tateo Itoh  
“Characterization of early steps of initiation of plasmid ColE2-P9 DNA replication”
5. **Masaru Yagura** and Tateo Itoh  
“Structural and functional organization of the replication origin of plasmid ColE2-P9”
6. **Syam P. Anand**, Haocheng Zheng, Sanford Leuba and Saleem A. Khan  
“PcrA helicase displaces the RecA protein from the DNA by a novel mechanism”
7. **Keith E. Weaver** and Smita Patel  
“Addiction toxin Fst has unique effects on chromosome segregation and cell division in *Enterococcus faecalis* and *Bacillus subtilis*”
8. Shiyin Yao, Donald R. Helinski, and **Aresa Toukdarian** “Localization of the naturally occurring plasmid ColE1 at the cell pole”
9. **Grzegorz Wegrzyn**, Anna Szambowska, and Monika Glinkowska  
“The pR and pO promoters and regulation of lambda plasmid replication”
10. Marcin Pierechod, Agnieszka Nowak, Anna Saari and **Igor Konieczny**  
“Conformational alterations of plasmid replication initiator affect its proteolysis by ClpXP system”
11. **Magdalena Rajewska**, Lukasz Kowalczyk and Igor Konieczny  
“Specific mutations within the A+T-rich region of the plasmid replication origin affect either helicase loading or origin opening”

- 12. Monika Witosinska**, Katarzyna Kolatka, and Igor Konieczny  
“Plasmid RK2 and its minireplicon derivatives localization in symmetrically and asymmetrically dividing bacterial cells”
- 13. Katarzyna Zdanowicz**, Slawomir Kubik, and Igor Konieczny  
“Bacterial DnaB helicases in RK2 plasmid replication initiation – structural and functional analysis”
- 14. Jamie A. Caryl** and Christopher D. Thomas  
“The pC221 relaxosome: Essential interactions for nicking and mobilization”
- 15. Jan Deneke** and George Chaconas  
“Tying up loose ends: the missing telomere sequences of *Borrelia burgdorferi*”
- 16. Mariano Pistorio**, María de los Ángeles Giusti, Mauricio Lozano, Gonzalo Torres Tejerizo, Walter Omar Draghi, Juan Sanjuán, and Antonio Lagares  
“Isolation and characterization of replication elements from a small cryptic plasmid of the alfalfa symbiont *Sinorhizobium meliloti*”
- 17. María de los Ángeles Giusti**, Mariano Pistorio, Mauricio Lozano, Gonzalo Torres Tejerizo, Walter Omar Draghi, and **Antonio Lagares**.  
“Isolation and characterization of Dtr elements from a mobilizable cryptic plasmid of the alfalfa symbiont *Sinorhizobium meliloti*”
- 18. Ramón Cervantes** and **Miguel A. Cevallos** “Elements required to activate the origin of replication in a *repABC* plasmid”
- 19. Slade O. Jensen**, Fiona Guan<sup>1</sup>, Stephen M. Kwong, Tracey Berg, Melissa H. Brown, Ronald A. Skurray, and Neville Firth  
“Global regulation of survival functions in conjugative Staphylococcal multiresistance plasmids”
- 20. Masaki Shintani**, Masatoshi Miyakoshi, Tsuguno Terabayashi, Hisakazu Yamane, and Hideaki Nojiri.  
“Transcriptional analysis of genes involved in partition of IncP-7 plasmid pCAR1”
- 21. Christina M. Newport** and Joe Lutkenhaus  
“*Bacillus subtilis* Soj binds DNA through surface exposed arginine residues”
- 22. James Havey**, Lori Ing and Barbara E. Funnell  
“Analysis of potential host factor interactions with P1 ParA protein”
- 23. Anthony Vecchiarelli** and Barbara E. Funnell  
“P1 partition complex assembly involves several modes of protein-DNA recognition”

- 24.** Krystyna Krajewska-Grynkiewicz, Wojciech Staniszewski, Marc Lemonnier, David Lane, and **Malgorzata Loboeka**  
“New phenotypes associated with overproduction of plasmid partitioning ATPases, including a specific effect of their parB partners”
- 25.** Aneta Dobruk-Serkowska and **Malgorzata Loboeka**  
“Optimization of the intracellular levels and ratios of P1 plasmid partition proteins by differential expression of genes of the P1 par operon”
- 26. Sarah. M. Batt**, Lewis E. H. Bingle and Christopher. M. Thomas  
“Active partitioning in plasmid RK2”
- 27. Mei-Hui Lin** and Shih-Tung Liu  
“The F plasmid is critical to the stable maintenance of a ColE1-like plasmid, pSW100, from *Pantoea stewartii* SW2”
- 28. I.K. Blaby** and D.K. Summers  
“Influence of the global regulator FIS on high copy number plasmid stability”
- 29. Sonia Chahal** and Keith E. Weaver  
“Structures regulating translation and stability of a toxin-encoding RNA affect species specificity of the toxin”
- 30.** Sidra Tul Muntaha, Kalliopi Kostelidou, Maciej R. Lukaszewicz, Lewis E. Bingle and **Christopher M. Thomas**  
“Global regulation in broad host range plasmid RK2: mapping the region of partitioning/global regulation protein KorB that interacts with repressors KorA and TrbA”
- 31.** Nelly Dubarry, **Franck Pasta** and David Lane  
“Role of ParABS systems in partition of *Burkholderia cenocepacia* chromosomes”

**17:00-18:30**      **Reception (Old Lodge and Deck)**

**18:30-20:00**      **Dinner**

## Session II            PARTITION AND STABILITY

**Chairs: Kenn Gerdes and Stuart Austin**

**20:00-20:10**    **Stuart Austin** (overview of field)

**20:10-21:00**    **Kurt Nordström (EMBO Lecturer)**  
“Past, present and future of plasmid biology”

**21:00-21:20**    **Barbara Funnell** , Anthony Vecchiarelli, Maria A. Schumacher,  
and Jennifer Surtees    “P1 ParB architecture on single and paired pars partition  
sites”

**21:20-21:40**    **Sota Hiraga** and Shun Adachi  
“Partition mechanism of F plasmid as a reaction diffusion  
system”

**21:40-21:50**    **Coffee & Tea Break**

**21:50-22:10**    Nelly Dubarry, **Franck Pasta** and David Lane  
“Role of ParABS systems in partition of *Burkholderia cenocepacia* chromosomes”

**22:10-22:30**    F. Pratto, A. I. Cicek, W. I. Weihofen, R. Lurz, W. Saenger, and  
**Juan Alonso**    “Partitioning proteins delta (ParA) and omega (ParB) reveal  
mechanism that contributes to *Streptococcus pyogenes* pSM19035 segregation”

**22:30-22:50**    Preeti Srivastava and **Dhruba Chatteraj**  
“Segregation of *Vibrio cholerae* chromosomes at different growth rates”

**23:00-01:00**            **no host bar**

## **Monday, September 25**

**07:30-08:30**            **Breakfast in dining room**

## Session III

## TRANSFER I

**Chairs: Fernando de la Cruz and Laura Frost**

**08:30-08:50 Joel F. Schildbach**, Sarah L. Williams, Chris Larkin, Lubomir Dostal “Molecular analysis of F Tral function”

**08:50-09:10** Carolina Elvira César, Fernando de la Cruz, and **Matxalen Llosa** “Characterisation of the site-specific recombinase activity of conjugative relaxase TrwC”

**09:10-09:30 Renee Tsois** “How do the *Brucella* VirB proteins function during infection?”

**09:30-09:50 Beth Traxler**, Eliora Gachelet, and Rembrandt Haft “Functional analysis of the F plasmid coupling protein TraD within the *E. coli* cell envelope”

**09:50-10:10 coffee and tea break**

**10:10-10:30 Kelly Baptista** and Diane E. Taylor “Characterization of the transfer proteins of the temperature sensitive IncH1 plasmid R27”

**10:30-10:50** Jens Reuther, Cordula Gekeler, Yvonne Tiffert, Jutta Vogelmann, and **Gunther Muth** “Conjugal DNA transfer by the FtsK-like TraB protein in antibiotic-producing *Streptomyces*”

**10:50-11:10 Geraldine Van der Auwera** and Jacques Mahillon “Transcriptome of conjugative plasmid pAW63 from *Bacillus thuringiensis*”

**11:10-11:30 Steve W. Matson**, Debi Haisch, Ernesto Villareal, Jun-Hyuk Choi, and Heather Ragonese “The F plasmid-encoded TraM protein stimulates rexlaxosome mediated cleavage at *oriT* through an interaction with Tral”

**11:30-11:50** Isabella C.Y. Lau, Tracy L. Raivio, and **Laura Frost** “The Cpx envelope stress response destabilizes the F plasmid transfer activator, TraJ, via the HSLVU protease in *Escherichia coli*”

**12:10-13:10 Lunch**

**13:30-17:00**

**POSTERS II**  
**Chair: Anne-Laure Moyne**

- 1. Sharik R. Khan**, S. Su, and Stephen K. Farrand  
“Degradation of acyl-HSLs by AttM lactonase and its role in controlling the conjugative transfer of Ti-plasmids in *Agrobacterium tumefaciens*”
- 2. Shengchang Su** and Stephen K. Farrand  
“How does the Ti plasmid stop conjugative transfer?”
- 3. Yinping Qin**, Shengchang Su and Stephen K Farrand  
“Structural model of the antiactivation complex formed between TraM And the quorum-sensing activator TraR”
- 4. Karsten Arends**, Cem Soellue, Ertugrul-Kaan Celik, Jolanta Kopec, Katarzyna Schiwon, Yaser Mohammed Abajy, and Elisabeth Grohmann.  
“ORF7 – a specialized lytic transglycosylase (SLT) from gram-positive bacteria, encoded by the type IV secretion like system from the broad-host-range plasmid pIP501”
- 5. Rembrandt Haft\***, Eliora Gachelet, and Beth Traxler  
“Molecular mechanisms of bacterial conjugation”
- 6. Jennifer A. Parsons**, Trudi L. Bannam, Rodney J. Devenish and Julian I. Rood “The *tcpA* gene is required for the conjugative transfer of pCW3 in *C. perfringens*”
- 7. Wee L. Teng**, Trudi L. Bannam and Julian I. Rood.  
“Conjugative plasmid transfer in *Clostridium perfringens*: functional characterization and localization of the pCW3-encoded TcpH protein, a homologue of ORF15 from Tn916”
- 8. Susana Brom\***, Alejandro García-de los Santos, Laura Cervantes, and David Romero “Conjugative transfer of *Rhizobium* plasmids”
- 9. Edgardo Sepúlveda**, Daniel Pérez-Mendoza, Socorro Muñoz, Miguel A. Ramirez-Romero, Maria José Soto, Laura Cervantes, José A. Herrera-Cervera, Isabel López-Lara, Otto Geiger, Juan Sanjuán, Susana Brom\* and David Romero “Regulation of conjugal transfer of the *Rhizobium etli* Sym plasmid”
- 10. Mario Juhas\***, Derrick W. Crook, Ioanna D. Dimopoulou, Gerton Lunter, Rosalind M. Harding, David J.P. Ferguson, Derek W. Hood  
“Novel type IV secretion system involved in propagation of genomic islands”
- 11. Hortensia G. Rolán\*** and Renée M. Tsolis

“How does the *Brucella abortus* Type IV Secretion System influence the immune response during infection?”

**12. Laura E. Williams\***, Valerie Hilliard, and Anne O. Summers

“Large and small plasmids are abundant in *Salmonella* and *Escherichia coli* reference collections”

**13. Randal E. Fox** and Eva M. Top “Invasion of a plasmid free population of *E. coli* by the IncP-1 $\beta$  plasmid pB10”

**14. Masahiro Sota\*\***, Leen De Gelder, Eva M. Top

“Stability of an IncP-1 $\beta$  mini-replicon and its adaptation to various hosts”

**15. Masahiro Sota and Eva Top** “Transposition of Tn21 to a cryptic IncP-1 $\beta$  plasmid pBP136 helps to explain the structural similarity of IncP-1 $\beta$  plasmids”

**16. Hirokazu Yano**, Christine Garruto, Masahiro Sota, Yoshiyuki Ohtsubo, Yuji Nagata, Gerben J. Zylsra, Peter A Williams and Masataka Tsuda “Genetic organization of IncP-7 TOL plasmid pWW53 and the movement of its residing transposons”

**17. Duyen Bui, Nohemy Sorto\***, Sonia Trigueros, Jason S. Newmark, David J. Sherratt, and **Marcelo E. Tolmasky** “Role of replicative transposons in plasmids’ host range expansion: implications in dissemination of antibiotic resistance”

**18. Lukasz Dziewit, Magdalena Jazurek, Lukasz Drewniak, Jadwiga Baj, and Dariusz Bartosik** “Identification of a novel family of addiction systems”

**19. Ichizo Kobayashi** “Genetic addiction: theme and variation”

**20. Virginia S. Lioy, Oscar Rey, Teresa Pellicer, Dolores Balsa, Haike Antelmann, Jerry M. Wells and Juan C. Alonso** “*Streptococcus pyogenes* PSM19035-encoded toxin ? induces stasis without selectively affecting protein translation”

**21. Ryo Miyazaki**, Yukari Sato, Michihiro Ito, Yoshiyuki Ohtsubo, Yuji Nagata, and Masataka Tsuda “Exogenous isolation of a plasmid involved in the degradation of  $\gamma$ -hexachlorocyclohexane from its contaminated soil”

**22. Yoriko Sakai**, Naoto Ogawa, Sho Morimoto and Takeshi Fujii “Analysis of degrading genes and plasmids of 3CB degrading bacteria isolated from soil”

**23. Hiroaki Naka\***, and Jorge H. Crosa

“A plasmid acquisition event during evolution resulted in the hegemony of the ferric siderophore anguibactin uptake system in the fish pathogen *Vibrio anguillarum*”

- 24. Gonnet, Mathieu**, Gael. Erauso, Marc Le Romancer, and Daniel Prieur “Unexpected abundance and diversity of plasmids in deep-sea hyperthermophiles: a reservoir for novel gene families?”
- 25. Grazyna Rudzicz**, Ewa Piechucka, Lukasz Dziewit, Dariusz Bartosik and **Mirosława Włodarczyk** “Mobile genetic elements in carotenoids producer-*Paracoccus marcusii* DSM11574”
- 26. Tuong Tran**, Beltran Rodriguez Brito, and Forest Rohwer “Uncultured microbial plasmid communities: isolation, purification, characterization, and horizontal gene transfer”
- 27. Anna Kulinska**, Magda Ochocka, Patrycja Dolowy, Finbarr Hayes and **Grazyna Jagura-Burdzy** “Complete nucleotide sequence of the RA3 plasmid from IncU group. Analysis of the backbone functions”
- 28. Sletvold, H., P. J. Johnsen**, G. S., Simonsen, A. Sundsfjord, and K.M. Nielsen. “Complete DNA sequence of the *Enterococcus faecium vanA* plasmid pIP816, and comparative analyses to *vanA* plasmids isolated from poultry and poultry farmer *E. faecium* strains”
- 29. Aspa Chatziefthimiou\***, Jonna Coombs, and Tamar Barkay “The design, optimization, and testing of a hybridization array for the characterization of broad Host range metal resistance plasmids”
- 30. Indra Sandal**, Mohamed N. Seleem, Shaadi Elswaifi, Nammalwar Sriranganathan, and Thomas J. Inzana “Construction of high efficiency “construction of high efficiency expression vectors for *Histophilus somni*”
- 31. Monika Knoppová**, Mongkol Phensajjai, Martina Zemanová, **Jan Nešvera** and Miroslav Pátek “Novel plasmid vectors for testing *in vivo* promoter activities In *Corynebacteria* and *Rhodococci*”
- 32. M. Kunnimalaiyaan**, M.S. Scholle, C. A. White, G. Baisa, Y.-S. Zhou, V. Lukyanchuk, and **P.S. Vary** “The seven compatible plasmids of *Bacillus megaterium* QM B1551. Sequencing and replication”
- 33. Andrew J. Spiers**, Adrian Tett, Dawn Field and Mark J. Bailey “The complete genome of the environmental plasmid pQBR103, its role in bacterial adaptation and the pan-microbial sugar beet phytosphere community genome”
- 34. William Klimke**, Stacy Ciufu, Boris Fedorov, Yuri Kapustin, Boris Kiryutin, Andrey Kochergin, Kathleen O’Neill, Sergei Resenchuk, Igor Tolstoy, and Tatiana Tatusova “NCBI entrez resources for genomes and plasmids”

**35.** Joanna Andrzejewska, Sae Kyung Lee, Patrick Olbermann, Nina Lotzing, Elena Katzowitsch, Bodo Linz, Mark Achtman, **Clarence I. Kado**, Sebastian Suerbaum, and Christine Josenhans

“Characterization of the pilin ortholog of the *Helicobacter pylori* type IV *cag* pathogenicity apparatus, a surface-associated protein expressed during infection”

**36. Lisa K. Nolan**, Timothy J. Johnson, Yvonne Wannemuehler, and Jerod A. Skyberg “Plasmids in APEC Virulence and Antimicrobial Resistance: An Overview”

**37. T. J. Johnson**, Y. Wannemuehler, S. J. Johnson, and L. K. Nolan  
“Analysis of Three Virulence Plasmids Provides Insight into the Evolution and Dissemination of F-Type Plasmids among Avian *Escherichia coli*”

**17:00-18:30 Reception**

**18:30-20:00 Dinner**

## **Session IV                      TRANSFER II**

Chairs: **Laura Frost** and **Ellen Zechner**

**20:00-20:20 Elisabeth Grohmann**, Mohammad Yaser Abajy, Cem Söllü, Ertugrul-Kaan Celik, Karsten Arends, Jolanta Kopec, Walter Keller, Guenther Koraimann “Model for a type IV secretion-like system required for plasmid transfer in Gram-positive pathogens”

**20:20-20:40 Peter J. Christie**, Krishnamohan Atmakuri, Simon Jakubowski, Vidhya Krishnamoorthy, Eric Cascales, Richard Bayliss, and Gabriel Waksman “Requirements for receptor binding and DNA translocation through the *A. tumefaciens* VirB/D4 type IV secretion system”

**20:40-21:10 Eva M. Camacho**, Ana Serna, and **Josep Casadesus**  
“Regulation of conjugal transfer by DNA adenine methylation in the virulence plasmid of *Salmonella enterica*”

**21:10-21:30** Monika Nuk, Andreas Reisner and **Ellen Zechner**  
“Recombinase-based expression technology detects activation of plasmid promoters”

**21:30-21:40** coffee and tea break

**21:40-22:00** Yuqing Chen and **Gary M. Dunny** “Comparative Analysis of the Conjugative DNA Processing Systems of the *Enterococcus faecalis* Plasmid pCF10 and the *Lactococcus lactis* Plasmid pRS01”

**22:00-22:20** M. Pilar Garcillán-Barcia, Blanca González, María Lucas, Paola Jurado, Gabriel Moncalián, Luis A. Fernández and **Fernando de la Cruz**  
“Analysis of the termination reaction in conjugative DNA processing catalyzed by plasmid R388 relaxase TrwC”

## Tuesday, September 26

**07:30-08:30** Breakfast

### Session V VIRULENCE AND PATHOGENICITY

Chairs: **Steve Winans** and **Steve Farrand**

**08:30-09:00** **Stephen K. Farrand**, John S. Reader and Ingyu Hwang  
“Rhizosphere Wars: A Tale of Three Plasmids”

**09:00-09:20** **Richard Novick** and Carles Ubeda  
"Comparative genetics and replication behavior of the super-antigen-carrying staphylococcal pathogenicity islands"

**09:20-09:40** **Joseph P. Vogel** “The adapted conjugation system of *Legionella pneumophila*”

**09:40-10:10** **Yasunori Machida**, Shinji Terakura, Hideaki Tagami, Saeko Kitakura, Yoshihisa Ueno, and Chiyoko Machida  
“An oncoprotein from the plant pathogen *Agrobacterium* has histone-chaperone activity”

**10:10-10:30** coffee and tea break

**10:30-10:50** **Jorge H. Crosa** “The pJM1 plasmid is essential in iron transport and microbial virulence”

**10:50-11:10 Glenn Young**

“Transcriptional regulation of virulence traits in pathogenic *Yersinia* by the second messenger cAMP and the transcription factor CRP”

**11:10-11:30 Julian I. Rood**, Trudi L. Bannam, Wee L. Teng, Jennifer A. Parsons, Dieter Bulach, Radhika Bantwal, Rachael Poon, Meredith Hughes, Vicki Adams, Dena Lyras and Rodney J. Devenish “Conjugative plasmid transfer in *Clostridium perfringens* requires the Tcp locus, a descendant of an ancient version of Tn916”

**11:30-11:50 Adam Roberts\*\*** and Peter Mullhany “Characterization of a conjugative transposon from *Enterococcus faecium*; demonstration of the modular nature of mobile genetic elements”

**11:50-12:10 Steve Winans** (summation)

**12:10-13:30** lunch in dining room

## **Session VI EVOLUTION AND ECOLOGY**

Chairs: **David Romero and Eva Top**

**13:30-14:00 Christopher M. Thomas (USB Keynote Speaker)**, Anthony Haines, Lewis Bingle, Yanina Sevastyanovich “Evolution of the IncP-1 and IncP-9 plasmids”

**14:00-14:20 Stephen M. Krone**, Ruinan Lu, Randal Fox, and Eva M. Top “Modeling the spatial dynamics of plasmid transfer and persistence”

**14:20-14:40** Hope McCaslin, Tsukasa Ito, Satoshi Okabe, Winnie DeJonghe, Joao de Bivar Xavier, and **Stefan Wuertz** “Bioaugmentation via conjugation in biofilms treating 3-chloroaniline: effects of selective pressure”

**14:40-15:10 David Romero**, Alejandro García-de los Santos and Susana Brom. “Essential plasmids in *Rhizobium*”

**15:10-15:30 coffee and tea break**

**15:30-15:50 Wesley Loftie-Eaton**, and **Douglas Rawlings** “Insights into the evolution of IncQ plasmids derived from studies on pRAS3”

**15:50-16:10 Masahiro Sota\*\***, Eva M. Top, and Masataka Tsuda “Genomic and functional analysis of catabolic plasmids and transposons”

**16:10-16:30 Eva M. Top**, Leen De Gelder and Julia Williams. “Adaptive plasmid evolution improves the stability of a broad-host-range plasmid in an unfavorable host”

**16:30-18:30 Grand reception (California wine tasting) Old Lodge Deck**

**18:30-20:30 Banquet**

**20:30 on Social and no host bar**

Wednesday, September 27

**07:30-08:30 Breakfast**

## **Session VII NOVEL PLASMIDS AND USES IN BIOTECHNOLOGY AND BIOINFORMATICS**

Chairs: **Saleem Khan and M. Gabriela Kramer**

**08:30-09:00 Maider Zabala, Christine Perret, Juan José Lasarte, Jesús Prieto and M. Gabriela Kramer** “Gene Therapy of Cancer Using Plasmid-Based Vectors”

**09:00-09:20 Joy Wireman and Anne Summers** “Update on progress in plasmid genomics and bioinformatics”

**09:20-09:40 Hideki Suzuki, Miguel A. Dominguez, Jennifer L. Wendt, Marcin Filutowicz, Li-Ke He, Andrea Szilagyi, Richard L. Gamelli, and Ravi Shankar** “Novel strategy to treat multi-drug-resistant Gram-negative pathogens using bacterial conjugation”

**09:40-10:00 Maria Kornienko, Allison Montalvo, Michael Lenard, Pravien Abeywickrema, Dawn L. Hall, Paul L. Darke** “Protein expression plasmids produced rapidly: streamlining cloning protocols and robotic handling” in assay and drug development technologies”

**10:00-10:30 Check out of room**

**10:30-10:50 Ronald Godiska**, Vinay Dhodda, Valerie Gilbert, Nikolai Ravin, and David Mead “Novel linear vector for cloning “unclonable” DNAs and constructing dual-insert libraries”

**10:50-11:10** Robin Wong, Miriam Land, and **Cliff S. Han**  
“The story told by 100 shotgun sequenced microbial genomes -- Why the clonability for genomes are different”

**11:10-11:30 Ananda M. Chakrabarty** “Bacterial plasmid in potential cancer therapy”

**11:30-12:00 Chris M. Thomas** (Brian Wilkins Prize awardees; conference summary, future prospects and venue)

**12:00-13:00 Lunch**

**13:00 Farewell and Departure**

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**\*NSF sponsored minority recipient**

**\*\*Brian Wilkins prize recipient**