

SATURDAY, AUGUST 13th

14:00-20:00 **Registration of Delegates**

19:00-22:00 **Welcome Party**

SUNDAY, AUGUST 14th

8:30-10:10 **PHAGOCYTOSIS-ENDOCYTOSIS**
Chair : Michael Schleicher

1. **CAP is essential for the functioning of the endo-lysosomal system and provides a link to the actin cytoskeleton**
Hameeda Sultana, Francisco Rivero, Rosemarie Blau-Wasser, Stephan Schwager, Alessandra Balbo, Salvatore Bozzaro, Michael Schleicher and Angelika A. Noegel
2. **The *Dictyostelium* ESCRT machinery**
Sara Mattei, Gérard Klein and Laurence Aubry
3. **Membrane sorting during phagocytosis**
Valentina Mercanti, Steve J. Charette and Pierre Cosson
4. **TOR, the central controller of cell growth negatively regulates phagocytosis**
Daniel Rosel, A. Majithia, T. Khurana and A.R. Kimmel
5. **Function and mechanism of action of *Dictyostelium* Nramp1 in bacterial infection**
Salvatore Bozzaro, Barbara Peracino, Carina Wagner, Alessandra Balest, Alessandra Balbo, Barbara Pergolizzi, Angelika A. Noegel and Michael Steinert

10:10-10:40 *Coffee break*

10:40-12:20 **CHEMOTAXIS I**
Chair : Rick Firtel

6. **Inositol phosphates and chemotaxis: PLC revisited**
Jason King, Emma Dalton, Robin Williams and Adrian J. Harwood
7. **Prolyl oligopeptidase and the regulation of chemotaxis via inositol phosphates**
Karina McQuillan, Jason King, Melanie Keim and Adrian J. Harwood

8. **A cAMP gradient induced a temporally inverted sensitivity-a novel phenomenon reveals that a local inhibition of PI3K is involved in chemoattractant gradient sensing**
Xuehua Xu, Martin Meier-Schellersheim and Tian Jin
9. **A PH domain-containing protein complex is formed at the plasma membrane in response to chemoattractant stimulation**
Vassil A Mihaylov, Frank I Comer, Li-Rong Yu, Timothy D Veenstra and Carole A Parent
10. **About the role of PI3-kinase mediated PI(3,4,5)P₃ signalling in chemotaxis**
Peter J.M. Van Haastert, Harriet Looovers, Marten Postma, Ineke Keizer, Leonard Bosgraaf and Douwe Veltman

12:30-14:00 Lunch

15:40-16:40 **CHEMOTAXIS II**
Chair : Günther Gerisch

11. **Leading the way - how cells sense and respond to chemoattractant gradients.**
Atsuo Sasaki, Susan Lee, Kosuke Takeda, Ruedi Meili and Richard A. Firtel
12. **Directional sensing and lipid signaling in chemotaxing *Dictyostelium***
Stacey Sedore Willard, Miho Iijima, Chris Janetopoulos, Francisca Vazquez, Lingfeng Chen and Peter Devreotes
13. **Polarized dynamics of single molecule cAR1-YFP during chemotaxis.**
Sandra de Keijzer, Arnould Sergé, Piet H.M. Lommerse, Freek van Hemert, Herman P. Spaank, Thomas Schmidt and B. Ewa Snaar-Jagalska

16:40-17:10 Coffee break

17:10-18:30 **CHEMOTAXIS III**
Chair : Gerry Weeks

14. **ERK2 Activity is Regulated by Adaptive and Non-adaptive Pathways in Chemotaxing *Dictyostelium***
Joseph A. Brzostowski and Alan R. Kimmel
15. **A novel *Dictyostelium* RasGEF required for chemotaxis and development**
Maddalena Arigoni, Salvatore Bozzaro, Helmut Kae, Gerald Weeks and Enrico Bracco
16. **Signalling pathways of the RasGEF-containing proteins GbpC and GbpD leading to cell polarity and chemotaxis**
Arjan Kortholt, Leonard Bosgraaf, Helmut Kae, Gerald Weeks, Holger Rehman, Fred Wittinghofer and Peter J.M. Van Haastert

17. **Activated Rheb regulates growth and cell migration**
Amit R. Majithia, Taruna Khurana, Daniel Rosel and Alan R. Kimmel

19:00-20:30 *Dinner*

20:30-22:30 **POSTER SESSION I**

MONDAY, AUGUST 15th

8:30-10:10 **GENE REGULATION/EXPRESSION I**
Chair : Bill Loomis

18. **Distribution of transposable elements in social amoebae**
Gernot Glöckner, Elisha Westbrook and Thomas Winckler
19. **Identification of Regulatory Binding Sites and Corresponding Transcription Factors Involved in the Developmental Control of 5'-nucleotidase and alkaline phosphatase Expression in *Dictyostelium discoideum***
Bradley R. Joyce, Natasha S. Wiles, Can M. Eristi and Charles L. Rutherford
20. **Evidence for DNA methylation in the *D. discoideum* genome**
Mariko Katoh, T. Curk, Q. Xu, B. Zupan, A. Kuspa and G. Shaulsky
21. **DNA double strand break repair pathways**
J. Hudson, D-W. Hsu, N. Zhukovskaya, K. Guo, J. G. Williams, Cathy Pears and N. Lakin
22. **C-module-DNA-binding factor regulates the aggregation-specific adenylyl cyclase**
Thomas Winckler, Sebastian Steube, Oliver Siol, Ilse Zündorf and Theodor Dingermann

10:10-10:40 *Coffee break*

10:40-11:40 **GENE REGULATION/EXPRESSION II**
Chair : Rob Kay

23. **A feed-forward loop regulates post-aggregation gene expression**
William F. Loomis, Negin Iranfar and Danny Fuller
24. **Visualising transcriptional pulses of a eukaryotic gene**
Jonathan R. Chubb and Robert H. Singer

25. **Modes of developmental gene expression and their relation to protein function**
Ezgi O. Booth, Nancy Van Driessche, Adam Kuspa and Gad Shaulsky

11:40-12:20 ***DIF SIGNALLING I***
Chair : Pauline Schaap

26. **Identification of a novel polyketide synthase producing DIF-1**
Tamao Saito, Stephen Haydock, Atsushi Kato and Robert Kay
27. **The genome-wide regulation of gene expression by DIF**
Gareth Bloomfield, J. Skelton, T. Saito, R. Kay and A. Ivens

12:30-14:00 *Lunch*

15:40-16:40 ***DIF SIGNALLING II***
Chair : Pauline Schaap

28. **Control of DIF Responses by bZIP Transcription Factor Interactions**
Eryong Huang, Simone Blagg, Thomas Keller, Gad Shaulsky and Chris Thompson
29. **Regulation of *Dictyostelium* prestalk-specific gene expression by a novel bZIP transcription factor**
Natasha Zhukovskaya, Masashi Fukuzawa, Tsuyoshi Araki, Yoko Yamada and Jeffrey Williams
30. **Non-vacuolar cell death in *Dictyostelium***
Pierre Golstein, Hannane Boukarabila, Artemis Kosta, Catherine Laporte, David Lam, Marie-Françoise Luciani and Emilie Tresse

16:40-17:10 *Coffee break*

17:10-18:30 ***EVOLUTION/ECOLOGY I***
Chair : David Queller

31. **How *D. caveatum* inhibits the development of other Dictyostelids and then eats them**
Clement Nizak, Marin Roje, Frank J. Shin, Young P. Jang, Yasuhiro Itagaki, Koji Nakanishi, Stanislas Leibler and Richard H. Kessin
32. **The evolution of morphological complexity in the Dictyostelids**
Elisa Alvarez-Curto, Thomas Winckler, Michaela Nelson, James Cavender, Hiromitsu Hagiwara, Rupert Mutzel, Sandra Baldauf and Pauline Schaap

33. **Social behaviour in mixtures of related and unrelated strains of *Dictyostelium giganteum***
Bandhana Katoch, Channabasavangowda, A. Sankarganesh, Sonia Kaushik and Vidyanand Nanjundiah
34. **Kin recognition in *Dictyostelium***
Joan Strassmann, Natasha Mehdiabadi, Tiffany Talley-Farnham, Chandra Jack, Thomas Platt, Gad Shaulsky and David Queller

19:00-20:30 Dinner

20:30-22:30 **WORKSHOP I**
Chair : Rex Chisholm

35. **Progress Report of the Dicty Stock Center (DSC)**
Jakob Franke, Stephanie A. Marsh and Richard H. Kessin
36. **dictyBase Workshop 2005**
Karen E. Pilcher, Pascale Gaudet, Petra Fey, E. M. Just, S. N. Merchant, W. A. Kibbe and R. L Chisholm.

TUESDAY, AUGUST 16th

8:30-10:10 **CYTOSKELETON I**
Chair : Angelika Noegel

37. **Dynamics of actin assembly in cell motility, chemotaxis, and phagocytosis**
Günther Gerisch, Till Bretschneider, Annette Müller-Taubenberger, Stefan Diez and Kurt Anderson
38. **Mechanical Induction of Actin-Mediated Phagosome Rocketing**
Margaret Clarke, Annette Müller-Taubenberger, Kurt Anderson and Günther Gerisch
39. **An interaction network links a myosin I to the membrane trafficking and actin nucleation machineries during phagocytosis**
Yosuke von Heyden, Régis Dieckmann and Thierry Soldati
40. **Investigation of the function of Copine A in *Dictyostelium***
Cynthia K. Damer, Marina Bayeva, Adam E. Goldman-Yassen, Emily S. Hahn, Lilian K. Ho, Lauren C. Naliboff, Javier Rivera and Catherine I. Socec
41. **Ste20-like kinases in *Dictyostelium discoideum* are involved in phagocytosis, chemotaxis, development and cytokinesis**
Meino Rohlfs, Rajesh Arasada, Petros Batsios and Michael Schleicher

10:10-10:40 Coffee break

10:40-11:40

CYTOSKELETON II

Chair : Margaret Clarke

- 42. **A SIN-related pathway regulates cytokinesis in *Dictyostelium***
Annette Müller-Taubenberger, E. Burghardt, M. Schleicher and G. Gerisch
- 43. **Cell mechanosensitivity and polarization under shear flow. How do cells reorient and how do proteins from the cytoskeleton relocate under flow reversals ?**
Jérémie Dalous, Till Bretschneider, Günther Gerisch and Franz Bruckert
- 44. **Two mechanically distinct modes of protrusion formation in amoeboid movement**
Kunito Yoshida and Thierry Soldati

11:40-12:40

EVOLUTION/ECOLOGY II

Chair : Yasuo Maeda

- 45. **Control of cheating by high relatedness in a natural population**
David Queller, Owen Gilbert, Kevin Foster, Natasha Mehdiabadi and Joan Strassmann
- 46. **Comparing the *Dictyostelium* and *Entamoeba* genomes reveals an ancient split in the Conosa lineage**
J. Song, Q. Xu, R. Olsen, W. F. Loomis, G. Shaulsky, A. Kuspa and Richard Sucgang
- 47. ***Acanthamoeba polyphaga* mimivirus : Genome analysis of the largest known virus to date suggests possible links to *Dictyostelium***
Karsten Suhre

12:50-14:20 Lunch

14:30-20:00

**Tour to the Caves of Choranche
or
Hiking in the Vercors**

20:30 Banquet

WEDNESDAY, AUGUST 17th

8:30-10:10

STRESS & DISEASES I

Chair : Adrian Harwood

48. **A system biology approach reveals Hg induced stress responses in the social amoeba *Dictyostelium discoideum***
Francesco Dondero, Jonsson H., Marsano F., Ranzato E., Pesce G., Boatti L., Bloomfield G., Skelton J., Magnelli V., Cavaletto M., Kay R., Griffin J. , Ivens A. and Viarengo A.
49. **PI3K activity and small GTPase signalling are targeted by VPA: Implications for epilepsy, bipolar disorder, migraine and cancer treatment.**
Xuehua Xu, Helmut Kae, Annette Müller-Taubenberger, Kathryn Adley, Nadine Pawolleck, Gerry Weeks, Jan Faix, Markus Maniak, Tian Jin and Robin SB Williams
50. **Sphingolipid control of anticancer drug resistance in *Dictyostelium discoideum* and human cells**
Junxia Min, Priya Sridevi, Arvan Chan, Bandhana Katoch, Hannah Alexander and Stephen Alexander
51. **Functional characterization of DdLIS1 and DdDCX, two microtubule-associated proteins involved in lissencephaly**
Irene Schulz, Jan Faix, Thi-Hieu Ho, Markus Rehberg and Ralph Gräf
52. **The Shwachman-Diamond Syndrome Gene Encodes an RNA-Binding Protein That Localizes to the Pseudopod of *Dictyostelium* Amoebae During Chemotaxis**
Deborah Wessels, Thyagarajan Srikantha, Spencer Kuhl, L. Aravimal and David R. Soll

10:10-10:40 Coffee break

10:40-11:40

STRESS & DISEASES II

Chair : Salvo Bozzaro

53. **A new, resistant cell type in *Dictyostelium*: the aspidocyte**
Yanni Serafimidis and Rob Kay
54. **The role of AMP-activated protein kinase (AMPK) in phototaxis and mitochondrial diseases in *Dictyostelium discoideum***
Paul Bokko and Paul R. Fisher
55. **Human versus *Dictyostelium*: comparative genomics to study the function of highly conserved genes of unknown function**
Patricia Torija, Juan J. Vicente, Tiago B. Rodrigues, Alicia Robles, Sebastián Cerdán, Leandro Sastre, Rosa M. Calvo and Ricardo Escalante

11:40-12:20

CELL GROWTH & DIFFERENTIATION I

Chair : Alan Kimmel

56. **Analysis of Phosphoprotein Phosphatase PP2A in Growth and Development of *Dictyostelium discoideum***
Chirag Mandavia, Srividhya Venkatesan, Avalon Garcia, Sara Anderson, Nicola James, Robert Salzler, Jinha Jung, Hideshi Otsuka, Julian Gross and Robert P. Dottin
57. **Cnr1, a putative frizzled/smoothened-like protein participates in group size regulation and cell proliferation in *Dictyostelium discoideum***
Tong Gao, Debbie Brock, R. Diane Hatton, Yitai Tang, and Richard H. Gomer

12:30-14:00 Lunch

14:30-16:40

WORKSHOP II

Chair : Ed Cox & Adam Kuspa

58. **Kenneth Raper, Elisha Mitchell and *Dictyostelium***
Eugene R. Katz
59. **The *Dictyostelium* Kinome - analysis of the protein kinases from a simple model organism**
Jonathan M. Goldberg, Gerard Manning, Allen Liu, Petra Fey, Karen E. Pilcher, and Janet L. Smith
60. **Phenotyping and screening of *Dictyostelium* mutants based on dynamical features**
Satoshi Sawai, Xiao-Juan Guan, Christopher Dinh, Jennifer Watt, Adam Kuspa and Edward C. Cox
61. **A Deletion Set for *Dictyostelium***
Edward C. Cox and Adam Kuspa

16:40-17:10 Coffee break

17:10-18:30

CELL GROWTH & DIFFERENTIATION II

Chair : Jeff Williams

62. **Innate immunity and detoxification mediated by specialized cells during *Dictyostelium* development**
Guokai Chen, Olga Zhuchenko and Adam Kuspa
63. **Aberrant stalk development and breakdown of tip dominance in *Dictyostelium* cell lines with RNAi-silenced expression of calcineurin B**
Katrina Boeckeler, Rupert Mutzel and Barbara Weissenmayer

64. **Priming and processing of the spore differentiation factor SDF-2**
Christophe Anjard, Matthew Cabral, Adam Kuspa and William F. Loomis
65. **Establishment of a system for elucidating precisely the function of individual mitochondrial genes**
Junji Chida, Masashi Tanaka, Aiko Amagai and Yasuo Maeda

19:00-20:30 Dinner

20:30-22:30 POSTER SESSION II

THURSDAY, AUGUST 18th

8:30-9:10 SEXUAL CYCLE
Chair : Richard Kessin

66. **Ethylene induces zygote formation through an enhanced expression of a novel *zyg1* gene in *Dictyostelium mucoroides***
Aiko Amagai
67. **Gene sharing between sexual and asexual development in *Dictyostelium discoideum***
Hideko Urushihara, Sufen Li, Kinuyo Goto, Jin Hiraga, and Tetsuya Muramoto

9:10-9:30 Coffee break

9:30-10:50 BIOPHYSICAL APPROACHES OF CELL MOTION
Chair : Thierry Soldati

68. **The behaviour of *D. discoideum* from the point of view of the dynamical theory of nonlinear systems**
Lenka Sebestikova, Petra Vankova, Tomas Godula and Hana Sevcikova
69. **Threshold for Chemotactic Motion in *Dictyostelium discoideum***
Loling Song, Sharvari M. Nadkarni, Hendrik U. Boedeker, Carsten Beta, Albert Bae, Carl Franck, Wouter-Jan Rappel, William F. Loomis and Eberhard Bodenschatz
70. **Random motion of *Dictyostelium discoideum*: quantitative analysis using model-free methods**
Hendrik Ulrich Boedeker, Carsten Beta and Eberhard Bodenschatz

71. Measurements of the mechanical forces exerted by migrating *Dictyostelium* slugs using the flexible substrata method

Jean-Paul Rieu, Catherine Barentin, Yasuo Maeda and Yasuji Sawada

12:00-14:00 Lunch

14:00

Departure