The Tapestry of Life:

Lateral Transfers of Heritable Elements

Beckman Center
of the National Academies
Irvine, California
December 12-13, 2005

Organizers: Siv Andersson, Jonathan Eisen, Claire Fraser and Jeffrey Gordon
Co-Chairs: Claire Fraser and Jeffrey Gordon
December 12th

Session I: "Mechanisms and Experimental Studies of LGT"

Forest Rohwer, Scripps Institute – Global Phage Diversity and the Movement of Genes
Penny Chisholm, MIT – Prochlorococcus Diversity: How to Dominate the Oceans with 2000 Genes
Abigail Salyers, University of Illinois – LGT in the human colon: How Much and How Important?
Marlene Belfort, Wadsworth Center, NYS Department of Health – Molecular Machinery for Lateral Transfer of Introns
Speaker invited from submitted abstracts for short presentation

Session II: "Methods of Detection"

Jeffrey Lawrence, University of Pittsburgh – Measuring Non-Random LGT Among Bacterial Lineages
Herve Philippe, University of Montreal – Are Horizontal Gene Transfers the Most Disturbing Limitation for Inferring Prokaryotic Phylogeny?
Christos Ouzounis, European Bioinformatics Institute – Genome Conservation and the Net of Life
James Lake, UCLA – The Ring of Life and the Origin of Eukaryotes
Speaker invited from submitted abstracts for short presentation

December 13th

Session III: "Case Studies"

Jeffrey Palmer, Indiana University – Plant Mitochondrial Genomes: Unexpected Bounties of Lateral Gene Transfer
Gary Dunny, University of Minnesota – Enterococcal Pheromone-Responsive Plasmids: Broad-Host Range Transfer Controlled by Narrow-Host Range Cell-Cell Signaling
Patrick Forterre, University of Paris – How to Recover the History of the Archaeal Domain, despite Lateral Gene Transfer?
Siv Andersson, University of Uppsala – Comparative Alpha-Proteobacterial Genomics
Speaker invited from submitted abstracts for short presentation

Session IV: "Evolutionary Implications of LGT"

Jonathan Eisen, The Institute for Genomic Research – Environmental Genomics and LGT: Can we Identify Organisms through their DNA if all Organisms are Chimeras?
Sandra Baldauf, University of York – Inferring Eukaryotic Divergences
Patrick Keeling, University of British Columbia – Impact of Lateral Gene Transfer on the Eukaryotic Nuclear Genome
Ford Doolittle, Dalhousie University – Web of Life
Speaker invited from submitted abstracts for short presentation

Wrap-Up: "Impact, Applications, Future Challenges"

Claire Fraser, The Institute for Genomic Research – Comparative Microbial Genomics: Insights into Evolution and Organismal Diversity

For more information and to register for the colloquium, please go to:
www.nas.edu/sackler/tapestry

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