Wednesday, 5 September 2007

**Molecular- and Microbiology I**

*Chairs: D.E. Rawlings / D.B. Johnson*

**8:30 KEYNOTE LECTURE**

Biomining in the post-genomic age: advances and perspectives  
C. Jerez, University of Chile, Santiago/CL

**9:10** Concentrate mineralogy dictates the composition of bioleaching microbial consortia  
D.B. Johnson, Y. Liu, K. Coupland, K.B. Hallberg, N. Okibe, University of Wales, Bangor/UK

**9:30** Geographical distribution and physiological diversity of moderately thermophilic members of the *Thermoplasmatales*  
R. Hawkes, CSIRO, Wembley, WA/AUS; J. Plumb, CSIRO, Webley, WA/AUS; G. O’Hara, Murdoch University/AUS

**9:50** Microbial ecology of *Leptospirillum spp.* in Rio Tinto, a model of interest to biohydrometallurgy  
R. Amils, Universidad Autonoma Madrid, Madrid/E; A. Garcia-Moyano, E. Gonzalez-Toril/E

**10:10** Molecular assessment of microbial diversity and community structure at uranium mines of Jadugoda, India  
P. Sar, P. Dhal, E. Islam, S. Kazy, Indian Institute of Technology, Kharagpur/IND

**10:30 COFFEE BREAK WITH POSTER PRESENTATION**

**Molecular- and Microbiology II**

*Chairs: D.B. Johnson / D.E. Rawlings*

**11:00** Related arsenic resistance transposons occur in *Leptospirilli* isolated from different continents  
A. Kloppers, S.M. Deane, D.E. Rawlings, Stellenbosch University/ZA

**11:20** Interactions of *Acidithiobacillus ferrooxidans* with heavy metals, various forms of arsenic and pyrite  
S.R. Dave, K.H. Gupta, Gujarat University, Ahmedabad/IND

**11:40** Arsenic oxidation by a moderately acidophilic, facultative chemolithoautotrophic *Thiomonas sp.*  
D. Slyemi, J. Ratouchniak, V. Bonnefoy, C.N.R.S., Marseille/F

**12:00** The effect of multiple stresses on *Sulfolobus*-like cultures in bioleaching systems: super-imposing stress responses to metal concentration and solids loading  
N.J. Coram-Uliana, K. Ntshabele, R.P. van Hille, S.T.L. Harrison, University of Cape Town/ZA

**12:20** The selection and characteristics of acidophiles for bio-reactor processing of chalcopyrite at high temperature  
H. Luckarift, P.R. Norris, University of Warwick, Coventry/UK
12:40 Differential genetic expression in heap bioleaching process of low-grade copper sulphide ore at Escondida Mine, Chile
C. Demergasso, Universidad Católica del Norte, Antofagasta/RCH; P. Galleguillos, Centro de Investigación Científica y Tecnológica para la Minería, Antofagasta/RCH; F. Galleguillos, Universidad Católica del Norte, Antofagasta/RCH; V. Zepeda, Centro de Investigación Científica y Tecnológica para la Minería, Antofagasta/RCH; D. Castillo, Johannesburg Technology Centre BHP-Billiton/ZA

13:00 LUNCH

14:00 Insights into the metabolism and ecophysiology of three *acidithiobacilli* species by comparative genome analysis
J. Valdes, I Pedroso, R Quatrini, D.S. Holmes, Life Science Foundation, Santiago/RCH

14:20 Involvement of iron-oxidation enzyme system in sulfur oxidation of *A. Ferrooxidans* ATCC 23270
T.M. Taha, T. Kanao, T. Sugio, Okayama University/J

14:40 The effect of total iron concentration and iron speciation on the rate of ferrous iron oxidation kinetics of *Leptospirillum ferriphilum* in continuous tank systems
J. Petersen, T.V. Ojumu, University of Cape Town, Rondebosch/ZA

15:00 A new acid-stable, Fe-oxidizing/O₂-reducing supercomplex spanning both inner and outer membranes, isolated from the extremophile *Acidithiobacillus*
C. Castelle, M. Guiral, M.T. Giudici-Orticoni, CNRS, Marseille/F

15:20 COFFEE BREAK WITH POSTER PRESENTATION

15:40 Keynote lecture
Biological removal of ions. The evolution of applications
M. Tsezos, University of Athens/GR

16:20 Lead and gold removal using sugar-beet pectin gels with and without immobilized *Fucus vesiculosus*
A. Ballester, Y.N. Mata, M.L. Blazquez, F. Gonzalez, J.A. Munoz, Universidad Complutense de Madrid/E

16:40 A novel hydrogenation and hydrogenolysis catalyst using palladized biomass of Gram negative and Gram positive bacteria
N. Creamer, I.P. Mikheenko, K. Deplanche, P. Yong, J. Wood, University of Birmingham/UK; K. Pollmann, S. Selenska-Pobell, FZD-Rossendorf, Dresden/D; L.E. Macaskie, University of Birmingham/UK

17:00 Closing Remarks

19:30 CONFERENCE DINNER

23:30 End of the 3rd day