

# CONFERENCE AGENDA

Second International Barcode of Life Conference

Taipei, Taiwan 18-20 September 2007

## DAY ONE: TUESDAY 18 SEPTEMBER 2007

### SESSION 1: GLOBAL ACTIVITIES OF THE BARCODE OF LIFE INITIATIVE (BOLD)

**Moderator: Karen Armstrong**, Chair, Conference Program Committee, Lincoln University, New Zealand

- 8:30 - 8:50**      **Conference Opening** - Kwang-Tsao Shao, Conference Chair, Academia Sinica
- 9:00 - 9:30**      **Keynote I -DNA Barcoding in the Genome Era** - Ya-Ping Zhang, Kuming Institute of Zoology, Chinese Academy of Science
- 9:30 - 10:00**    **Keynote II – Biodiversity Research and DNA Barcoding in Korea** - Won Kim, Seoul National University
- 10:00 - 10:30**   **Keynote III: Barcoding for Taxonomic Problems-** Helida Oyieke, National Museums of Kenya
- 10:30 - 11:00**   **COFFEE BREAK**

### SESSION 2: DIVERSE APPLICATIONS OF DNA BARCODING

**Moderator: José Alves-Gomes**, National Institute of Amazonian Research

- 11:00 - 11:15**    **Progress by CBOL since London Conference** - Scott Miller, Smithsonian Institution (CBOL)
- 11:15 - 12:15**    **Brief presentations and panel discussion of major barcoding projects**
- Yvonne Linton, Natural History Museum London, *CBOL Demonstrator Project 1: Mosquito Barcode Initiative*
  - Marc De Meyer, Royal Museum of Central Africa, Belgium, *CBOL Demonstrator Project 2: Tephritid Barcode Initiative*
  - Mark Stoeckle, The Rockefeller University, *All Birds Barcoding Initiative (ABBI) Update*
  - Robert Hanner, University of Guelph, *Fish Barcode of Life Initiative (FISH-BOL)*
  - Mark Bagley, US Environmental Protection Agency, *DNA Barcodes for Assessment of the Biological Integrity of Aquatic Ecosystems*
  - Ann Bucklin, University of Connecticut, *Barcoding marine biodiversity*
- 12:15 - 12:30**    **Open discussion between audience and panel**
- 12:30 - 2:00**      **LUNCH**

### SESSION 3: HOW DOES BARCODING WORK AND HOW WELL DOES IT WORK?

**Moderator: Chaolun Allen Chen**, Research Centre Biodiversity Academia Sinica

- 2:00 - 2:30**      **Keynote Address- Toward a Barcoded World** Paul Hebert, University of Guelph
- 2:30 - 2:45**      **The BARCODE Data Standard: Enabling Molecular Diagnostics for Biodiversity**-Bob Hanner, University of Guelph
- 2:45 - 3:00**      **Barcoding in all-species inventory** - Chris Meyer, University of California Berkeley
- 3:00 - 3:15**      **Barcodes bridge the old and the new: use of museum specimens to identify molecular operational taxonomic units in larvae of scarab beetles (Coleoptera: Scarabaeoidea)** Andrew Mitchell, NSW Department of Primary Industries, Australia
- 3:15 - 3:30**      **DNA barcode, type specimens and species delimitation in the genus *Eumunida***  
Sarah Samadi, Museum National d'Histoire Naturel, Paris
- 3:30 - 4:00**      **COFFEE BREAK**

### SESSION 4: HOW CLOSE ARE WE TO HAND-HELD, FIELD-FRIENDLY, OR TABLE-TOP BARCODERS?

**Moderator: Dan Janzen**, University of Pennsylvania

- 4:00 - 4:15**      **In vitro repair enhances amplicon recovery and accuracy from damaged DNA** -Tom Evans, New England Biolabs
- 4:15 - 4:30**      **Express Barcodes: Racing from Bugs to Identifications** -Natalia Ivanova, University of Guelph
- 4:30 - 4:45**      **Development of a DNA barcode-based DNA chip for identification of marine organisms in the East Sea of Korea** -Youn-Ho Lee, Korea Ocean Research and Development Institute
- 4:45 - 5:00**      **Fish and Chips: microarray-based DNA-barcoding of European Marine Fishes** - Kochzius Marc, University of Bremen
- 5:00 - 5:15**      **Portable Pyrosequencing device for DNA sequencing** -Mostafa Ronaghi, Stanford University
- 5:15 - 5:30**      **Open discussion between audience and speakers**

**DAY 2: WEDNESDAY, 19 SEPTEMBER 2007**

**SESSION 5: ANALYTICAL METHODS FOR BARCODE DATA.**

**Moderator: Javier Cabrera, Rutgers University**

- 8:30 – 8:45 Introduction-Michel Veulle, Museum National d’Histoire Naturel Paris**  
**8:45 - 9:00 Comparing phylogenetic and statistical classification methods for DNA barcoding –**  
Frederic Austerlitz, CNRS/AgroParisTech/Universite Paris Sud  
**9:00 - 9:15 Fast Barcode-Based Species Identification Using String Kernels – Pavel Kuksa, Rutgers**  
University  
**9:15 - 9:30 Species Classification with Optimized Logic Formulas – Giovanni Felici, Consiglio**  
Nazionale delle Ricerche  
**9:30 - 9:45 DNA Barcode sequence identification incorporating taxonomic hierarchy and within**  
**taxon variability – Damon Little, The New York Botanical Garden**  
**9:45 - 10:00 A Comparison of Algorithms for Species Identification based on DNA barcodes – Bogdan**  
Pasaniuc, University of Connecticut  
**10:00 - 10:30 Open discussion between audience and speakers**  
**10:30 - 11:00 COFFEE BREAK**

**SESSION 6: CASE STUDIES I. INTEGRATIVE TAXONOMIC STUDIES USING DNA BARCODING**

**Moderator: Shen-Horn Yen, National Sun Yat-Sen University, Taiwan**

- 11:00 - 11:20 Barcoding, Biogeography and Evolution in the Tropics of the New World - Biff Bermingham, STRI,**  
Panama  
**11:20 - 11:40 Barcoding and its place in Integrative Taxonomy - Benoit Dayrat, University of California, Merced**  
**11:40 - 12:00 Sphingids and Barcodes- The New Taxonomy- Rodolphe Rougerie, University of Guelph**  
**12:00 - 12:20 Bamboozled by bloodsuckers: barcoding backs biodiversity- Mark Siddall, American Museum of**  
Natural History  
**12:10 - 12:30 Open discussion between audience and speakers**  
**12:30 - 2:00 LUNCH**

**SESSION 7: WHAT NEW SCIENCE WILL WE SEE AT THE THIRD BARCODE CONFERENCE?**

**Moderator: Cecilia Saccone, CNR, Bari, Italy**

- 2:00 - 2:20 Barcoding and biodiversity research - Les Christidis, Australian Museum**  
**2:20 - 2:40 "Ecological inventory with a barcoder, the ecological taxascope: who eats what in a complex**  
**tropical forest" - Dan Janzen, University of Pennsylvania**  
**2:40 - 3:40 Panel discussion: What new research can we do with a MILLION Barcode records?**
  - Paul De Barro, CSIRO, Australia
  - Peter Ng, National University of Singapore
  - Axel Meyer, University of Konstanz
  - Robert Andersen, Bigelow Laboratory for Ocean Sciences**3:40 - 4:00 COFFEE BREAK**

**SESSION 8: CASE STUDIES II. DNA BARCODING IN DEVELOPING COUNTRIES.**

**Helida Oyieke, National Museums of Kenya**

- 4:00 - 4:20 DNA Barcoding: considerations for vectors of neglected diseases**  
- Daniel Masiga, ICIPE, Nairobi, Kenya  
**4:20 - 4:40 All Birds Barcoding Initiative in the Neotropics: Identifying and discovering bird species in the**  
**riches avifauna of the World - Pablo Tubaro,**  
National Museum of Natural History, Argentina  
**4:40 - 5:00 FISH-BOL and Barcoding in India - Wazir Lakra,**  
National Bureau of Fish Genetic Resources, India  
**5:00 - 5:15 Transforming taxonomy for effective biodiversity assessment of arthropods in Madagascar -Brian**  
Fisher, California Academy of Sciences  
**5:15 - 5:30 Construction of A DNA Barcode System for Amphibians and Reptiles in Taiwan -Si-Min Lin,**  
Chinese Culture University, Taiwan  
**5:30 - 5:45 Open discussion between audience and speakers**

**DAY 3: THURSDAY, 20 SEPTEMBER 2007**

**SESSION 9: BARCODING IN THE WIDER EVOLUTIONARY CONTEXT**  
**Moderator: Ya-Ping Zhang**, Kuming Institute of Zoology, Chinese Academy of Science

**8:30 - 9:30 Panel discussion: Barcoding and other initiatives in evolutionary research**

- Michael Donoghue, Yale University, *Assembling the Tree of Life*
- Masaki Miya, Natural History Museum, Chiba University, *Evolutionary History of Fishes: An overview based on >1000 whole mitochondrial genome sequences*
- Dan Faith, The Australian Museum, *How large-scale barcoding promotes large-scale biodiversity assessment*
- Richard Lane, Natural History Museum London

**9:30 - 10:00 Open discussion between audience and panel**

**10:00 - 10:30 COFFEE BREAK**

**SESSION 10: STATE-OF-THE-ART PRACTICES: HOW TO MANAGE YOUR BARCODE DATA.**

**Moderator: Bob Hanner**, University of Guelph, Database Working Group Chair

**10:30 - 10:50 BOLD, the Barcoding Workbench** - Sujevan Ratnasingham, University of Guelph

**10:50 - 11:50 Panel discussion: How are the BAROCDE data standards being implemented?**

- Scott Federhen, NCBI/NIH, *BARCODE records in GenBank*
- Simon Tillier, Museum National d'Histoire Naturel, Paris, *BARCODE data, museum catalogs and GBIF*
- Andrew Polaszek, ICZN, London, *Zoobank- the open-access animal name registry-working with CBOL towards the new taxonomy*

**11:50 - 12:10 Barcode Data and the Encyclopedia of Life** - Jim Edwards, Smithsonian Institution (EOL)

**12:10 - 12:30 Open discussion between audience and speakers**

**12:30 - 2:00 LUNCH**

**SESSION 11: STATE-OF-THE-ART PRACTICES: HOW DO THE BEST BARCODE LABS DO THEIR WORK?**

**Moderator: Paul Hebert**, University of Guelph

**2:00 - 2:20 Technology Transfer, an efficient DNA barcoding workflow: how we do it and more importantly to you, how we can help you do it-** Lee Weigt, Chair, CBOL DNA Working Group, Smithsonian Institution

**2:20 - 2:40 African Wildlife Tissue Banking** - Paul Bartels, BioBank, South Africa

**2:40 - 3:00 Recovering historic DNA (HDNA) and ancient DNA (ADNA): Implications for DNA barcoding** - David Lambert, Allan Wilson Centre, New Zealand

**3:00 - 3:20 Exploring archival and environmental samples through minimalist barcodes-** Mehrdad Hajibabaei, University of Guelph

**3:20 - 3:30 Open discussion between audience and speakers**

**3:30 - 4:00 COFFEE BREAK**

**SESSION 12: BARCODING WITH NON-COI GENE REGIONS.**

**Moderator: Freek Bakker**, Chair, CBOL Scientific Advisory Board, Wageningen University

**4:00 - 4:20 Optimising selection of DNA barcode regions and CBOL's guidelines for non-CO1 selection** Freek Bakker, University of Wageningen, Netherlands Herbarium

**4:20 - 4:40 Standardized land plant barcoding requires a multi-loci approach** - Robyn Cowan, Royal Botanic Gardens Kew

**4:40 - 5:00 Using DNA barcodes to test the identity and purity of plant-based medicines and herbals** - John Kress, Smithsonian Institution

**5:00 - 5:20 DNA-barcoding on a different scale: Challenges within *Coccoidea*** - Lynn Cook, University of Queensland

**5:20 - 5:40 Canadian plant barcoding results with some global implications** - Sean Graham, University of British Columbia

**5:40 - 6:00 Progress toward DNA barcoding the vast diversity of fungi-** Amy Rossmann, USDA Beltsville

**6:00 Closing remarks and adjournment** - Kwang-Tsao Shao, Conference Chair, Academia Sinica