

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** - TBD
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 BARCORDERS?

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 - Sujeewan 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
- TBD – replacing Tom Orrell
- 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