



The Hebrew University of Jerusalem

Israel Institute for Advanced Studies

INTERNATIONAL RESEARCH CONFERENCE ON

# Studying Human Evolution from Ancient DNA

May 17-20, 2015

## Organizers:

Liran Carmel and Gila Kahila Bar-Gal (The Hebrew University of Jerusalem)

(All lectures will take place at the Israel Institute for Advanced Studies, Edmond J. Safra campus of The Hebrew University of Jerusalem, Feldman Building, Room-130, Givat Ram)

## Sunday, May 17

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| 9:00 – 10:15  | <b>Registration</b>   |
| 10:15 – 10:30 | <b>Opening remarks</b>  |
| 10:30 – 13:00 | <b>Session: Human Evolution (chairs: Charles Greenblatt, Marina Faerman)</b>  |
| 10:30 – 11:00 | Mattias Jakobsson, Uppsala University, Sweden<br><i>The genomic footprints of Neolithic Europeans</i>   |
| 11:00 – 11:30 | Ben Krause-Kyora, Kiel University, Germany<br><i>Insights into the evolutionary history of Mycobacterium Leprae gained from sequencing medieval genomes</i> |
| 11:30 – 12:00 | Coffee break  |
| 12:00 – 12:30 | Albert Zink, EURAC Research, Italy<br><i>Paleogenomics of mummies: insights into the genetic ancestry of the Iceman and disease predisposition</i>          |
| 12:30 – 13:00 | Cristina Gamba, Natural History Museum, Denmark<br><i>A 5,000-year journey into European prehistory: genomes from the petrous bone</i>                      |
| 13:00 – 15:00 | <b>Lunch</b>  |
| 15:00 – 17:30 | <b>Session: Population Genetics (chair: Mattias Jakobsson)</b>  |
| 15:00 – 15:30 | Johannes Krause, MPI for the Science of Human History, Germany<br><i>Ancient human genomes suggest three ancestral populations for modern Europeans</i>     |
| 15:30 – 16:00 | Eran Halperin, Tel Aviv University, Israel  |

- Inference methods for not-so-ancient ancestry*
- 16:00 – 16:30 Coffee break
- 16:30 – 17:00 Clio der Sarkissian, Natural History Museum, Denmark  
*Microbial metagenomics of archaeological remains - tapping into the unseen majority*
- 17:00 – 17:30 Hila May, Tel Aviv University, Israel  
*Non-evolutionary issues in aDNA studies*
- 17:30 – 17:45 **Greetings**
- 18:00 – 22:00 **Reception and Posters**

## **Monday, May 18**

- 10:00 – 13:00 **Session: Domestication of Animals and Plants (chair: Albert Zink)**
- 10:00 – 10:30 Ludovic Orlando, Natural History Museum, Denmark  
*A paleogenomic perspective on horse domestication*
- 10:30 – 11:00 Almut Nebel, Kiel University, Germany  
*Direct insights into phenotype selection during pig domestication by aDNA analysis*
- 11:00 – 11:30 Meirav Meiri, Israel Finkelstein, Tel Aviv University, Israel  
*Ancient DNA of pigs and Mobility between the Aegean and the Levant in the Late Second Millennium BCE*
- 11:30 – 12:00 Coffee break
- 12:00 – 12:30 Dan Bradley, Trinity College Dublin, Ireland  
*The best bones, parchment and ancient genomics*
- 12:30 – 13:00 Elyashiv Drori, Ariel University, Israel  
*Deep sequencing of aDNA as a tool towards solving the mystery of Israel's lost grapevine varieties*
- 13:00 – 15:00 **Lunch**
- 15:00 – 16:00 **Session: Human Archaeology in the Southern Levant (chair: Almut Nebel)**
- 15:00 – 15:30 Naama Goren-Inbar, The Hebrew University of Jerusalem, Israel  
*Out of Africa: a levantine perspective*
- 15:30 – 16:00 Charles Greenblatt, The Hebrew University of Jerusalem, Israel  
*Molecular archaeology of the Holy Land*

## **Tuesday, May 19**

- 8:30 – 10:00 **Tour at the paleontological and archaeozoological collections, National Natural History Collections, Institute of Earth Sciences, Institute of Archaeology, The Hebrew University of Jerusalem.**
- 10:00 – 13:00 **Session: Pathogens of Ancient Populations (chair: Johannes Krause)**
- 10:00 – 10:30 Mark Pallen, University of Warwick, UK  
*Metagenomic recovery of historical pathogen genomes from Brucella and Mycobacterium Tuberculosis*
- 10:30 – 11:00 Daniel Shouval, The Hebrew University of Jerusalem, Israel  
*Tracing Hepatitis B virus to the 16th century in a Korean mummy*
- 11:00 – 11:30 Suheir Ereqat, Al-Quds University, Palestinian Authority  
*Molecular detection and identification of Mycobacterium Tuberculosis in an early Bronze Age skeleton from tell es-Sultan, ancient Jericho*
- 11:30 – 12:00 Coffee break
- 12:00 – 12:30 Mark Spigelman, The Hebrew University of Jerusalem, Israel  
*Mutualism -how bacteria helped shape human evolution and vice versa*
- 12:30 – 13:00 Marina Faerman, The Hebrew University of Jerusalem, Israel  
*In pursuit of Malaria*
- 13:00 – 15:00 **Lunch**

- 15:00 – 18:00 **Session: Ancient DNA Technology (chair: Ludovic Orlando)**
- 15:00 – 15:30 Yigal Erel, The Hebrew University of Jerusalem, Israel  
*Toxic metals in Iron Age humans from the Faynan area, Jordan: what can geochemical tools tell us?*
- 15:30 – 16:00 Rasmus Nielsen, UC Berkeley, USA  
*Robust estimation of ancestry for ancient DNA*
- 16:00 – 16:30 Carla Oz, Israel Police, Israel  
*Forensic DNA and the Israel police: present and future*
- 16:30 – 17:00 Coffee break
- 17:00 – 17:30 Steve Weiner, Weizmann Institute of Science, Israel  
*3D hierarchical organization of lamellar bone: bone is composed of two different materials*
- 17:30 – 18:00 Israel HersHKovitz, Tel Aviv University, Israel  
*A 55 thousand year cranium from Manot Cave (Israel) and its relevancy to modern human evolution*

## **Wednesday, May 20**

- 6:00 – 22:00 **Excursion to northern Israel (invited speakers)**