Australian National University

PUBLIC LECTURE

Synapse Seminar Series

Unravelling human history with ancient DNA

Thursday 30 January 2020 11:30am–1:30pm

Speakers

Dr Ray Tobler

ARC Discovery Early Career Award Fellow

Australian Centre for Ancient DNA (ACAD), University of Adelaide

Location

McDonald Room

RG Menzies Building,
Australian National University
Fellows Lane, Acton, ACT 2601

Event Details

Refreshments from 11:30am

Seminar begins 12:00pm

Registration required

E communicate.chl@anu.edu.au

http://bit.ly/SynapseJan

Ancient DNA (aDNA) provides a unique window into our past, often revealing novel and unexpected results. In this talk, Dr. Tobler outlines two aDNA projects that have altered our view of human history and evolution. First, he discusses findings from the Aboriginal Heritage Project, which aims to reconstruct the deep history of Australia using a unique collection of >5000 hair samples and extensive genealogical data, collected during anthropological expeditions across Australia between the 1920s and 1960s.

The second project uses DNA from thousands of ancient Eurasian human remains to re-examine the role of natural selection in shaping modern European diversity and health. There is abundant evidence for strong selection on genes involved in cold tolerance, immunity, and metabolic function. Remarkably, widespread population mixing in the past few thousand years means that these selective signals are no longer visible in modern European genomes, implying that our current understanding of human adaptation is biased and incomplete.

Dr Ray Tobler is an ARC Discovery Early Career Award Fellow working at the Australian Centre for Ancient DNA (ACAD) at the University of Adelaide. Having investigated the genomic basis of selection in experimental populations of fruit flies during his PhD, his current research aims to reconstruct the largely unknown human genetic history Australia, New Guinea, and Wallacea. This research utilises a combination of modern and ancient human DNA, the latter coming from historic hair samples that were collected during anthropological expeditions across the Australian continent that started nearly 100 years ago.

Presented by:

ANU College of
Asia & the Pacific
School of
Culture, History & Language