

# TWINCORE - Seminar

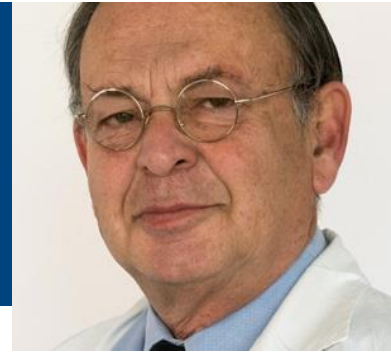
Tuesday November 8<sup>th</sup>, 2016

Business lunch 12.30 h

Lecture 13.00 h

TWINCORE Lecture Hall

## How ancient is the hepatitis B virus? Tracing hepatitis B virus to the 16th century in a Korean mummy



### Prof. Dr. Daniel Shouval

The discovery of a mummified Korean child with relatively preserved organs enabled a search for ancient hepatitis B virus (aHBV). With the viral DNA sequences recovered from laparoscopic-derived liver biopsies of the mummy, the entire ancient hepatitis B viral genome could be mapped and represents the oldest full viral genome described in the scientific literature to date. Analysis of the complete aHBV genome (3,215 base pairs) revealed a unique HBV genotype C2 (HBV/C2) sequence commonly spread in Southeast Asia, which probably represents an HBV that infected the Joseon Dynasty population in Korea. Comparison of the aHBV sequences with contemporary HBV/C2 DNA sequences revealed distinctive differences along four open reading frames. Genetic diversity between contemporary and recovered aHBV/C2 DNA may be the result of immunologic, environmental, and/or pharmacologic pressures.

The ancient HBV genomes can now serve as a model for future study of the evolution of chronic hepatitis B and help us understand how the virus spread, possibly from Africa to East Asia.

### Who is Daniel Shouval?

- Professor Emeritus of Medicine and the Haim Yassky Professor of Social Medicine at the Hebrew University and Hadassah Medical Faculty in Jerusalem, former Dean of the Faculty of Medicine and former Director of the Liver Unit
- Founding and Co-Editor of the FOCUS section in the Journal of Hepatology together with Dr Scott Friedman
- Adviser to the European Viral Hepatitis Prevention Board (VHPB) and the World Health Organization (WHO)

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