

# MEGHÍVÓ

Tisztelt Kolléga!

Szeretettel meghívjuk Önt és munkatársait az MTA Rényi Alfréd Matematikai Kutatóintézet Valószínűségszámítás osztálya által szervezett  
**Epstein-Barr vírus (EBV)**  
című előadássorozatra,  
amelyet **2009. április 21-27.** között rendezünk.

Előadónk: **Prof. Michael Steinitz**, (The Department of Pathology, The Hebrew University-Hadassah Medical School)

Az előadássorozat helye: MTA Rényi Alfréd Matematikai Kutatóintézete,  
Nagy előadóterem, 1053 Bp. Reáltanoda utca 13-15., I. em.

## Program

Április 21. (kedd), 10:00 – 12:00

- Normal and transformed cells *in vitro*
- DNA replication in normal and in transformed cells
- Tumorigenic viruses

Április 22. (szerda), 10:00 – 12:00

- Latencies of viruses
- Host response:
  - Inflammation
  - The immune response: innate and acquired
  - B and T lymphocytes

Április 23. (csütörtök), 10:00 – 12:00

- Characterization of EBV
- Host-virus relationship

Április 24. (péntek,) 10:00 – 12:00

- Immune surveillance in EBV carriers
- Infectious disease
- Malignancies

Április 27. (hétfő), 10:00 – 12:00

- In vitro immortalization
- EBV latencies
- Virus-transcribed molecules
- Anti-EBV *in vivo* and *in vitro* immune surveillance
- EBV and human monoclonal antibodies

Az április 27-i előadás előtt, 14:00 órától 15:00 óráig Prof. Steinitz,

Összintézeti Szemináriumot tart, az alábbi címmel:

## **Introduction to the biology of the Epstein Barr virus**

(A special lecture for mathematicians)

### Abstract:

Epstein-Barr virus, frequently referred to as EBV, is a member of the herpesvirus family and one of the most common human viruses. The virus occurs worldwide, and most people become infected with EBV sometime during their lives. When infection with EBV occurs during adolescence or young adulthood, it causes infectious mononucleosis 35% to 50% of the time. Although the symptoms of infectious mononucleosis usually resolve in 1 or 2 months, EBV establishes a lifelong dormant infection in the B cells making protective antibodies. Many healthy people can carry and spread the virus intermittently for life. For this reason, transmission of the virus is almost impossible to prevent.

Viruses are responsible for 15 percent of all cancers in humans. The viruses combine with acquired genetic mutations to produce malignant disease. EBV has also been implicated in at least five kinds of human cancer including Burkitt's lymphoma – a malignancy endemic in African children – lymphomas in AIDS patients and one half of all Hodgkin's disease cases.

Burkitt's lymphoma is an aggressive B cell malignancy characterized by rapid cell proliferation that can be fatal within months if not treated immediately. EBV expresses a protein (EBNA-1) that is found in all EBV-related tumors but not in normal cells. This protein required for the viral DNA to be replicated in cells. EBNA-1 rescues B cells from their programmed death, and allows the cells to continue to proliferate. In children destined to develop Burkitt's lymphoma, multiple events must occur in addition to infection with EBV. But the continued functioning of EBNA-1 is pivotal to the survival of these tumor cells.

Paraphrasing Thornton Wilder, EBV bridges the land of the living and the land of the dead that provides a unique possibility to be exploited by bio-informaticians. To this end, the Alfred Rényi Institute of the Hungarian National Academy of Sciences organizes a course with special interest on those aspects of EBV that might be relevant to bio-informaticians. The course is given by Prof. Dr. Michael Steinitz, internationally renowned expert on EBV, from The Hebrew University-Hadassah Medical School.

*The lecture does not require any special knowledge. Its general aim is to facilitate the cooperation of life science researchers and mathematicians.*