



Pozvánka

Přírodovědecká fakulta a Fakulta životního prostředí UJEP si vás dovolují v rámci aktivit projektu OPVK ENVIMOD pozvat na dvojici přednášek **předního světového odborníka na termodynamiku vodných roztoků a otce moderní molekulární teorie vody,**

Prof. Arieha BEN-NAIMA

Hebrew University, Jerusalem

Ve středu 20. června od 13:30 hodin:

- **Hydrophobic-hydrophilic interactions in protein folding, protein-protein association, and molecular recognition (1)**

Ve čtvrtek 21. června od 13:30 hodin:

- **Shannon's measure of information and the thermodynamic entropy (2)**

Přednášky se konají v budově PŘF v posluchárně CN-221, v budově kateder, České mládeže 8.

ABSTRACT 1:

An analysis of all the solvent induced contributions to the thermodynamic driving force for protein folding and protein-protein association reveals that, contrary to the commonly accepted paradigm, hydrophilic interactions might be more important than hydrophobic interactions.

For over fifty years the hydrophobic effects were believed to be the dominant factors in biochemical processes. Ten years ago, after critically examining the data on the various contributions to the driving forces for protein folding, and protein-protein association, I reached the conclusion that the *hydrophilic* interactions, rather *hydrophobic* interactions are the more important in biochemical processes. Examples on the role of hydrophilic interactions on solubility of proteins, protein folding, protein-protein association and molecular recognition will be presented.

ABSTRACT 2:

We start with a clear distinction between Shannon's Measure of Information and the Thermodynamic Entropy. The first is defined on any distribution, and therefore it is a very general concept. On the other hand Entropy is defined on a very special set of distributions. Next we show that the Shannon measure of Information (SMI) provides a solid and quantitative basis for the interpretation of the thermodynamic entropy. For an ideal gas the entropy measures the uncertainty in the location and momentum of a particle, as well as two corrections due to the uncertainty principle and the indistinguishability of the particles.

Bližší informace poskytnou prof. Nezbeda Ivonez@icpf.cas.cz a Mgr. Kohlová Monika.Kohlova@ujep.cz



INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ