



VABILO NA PREGLOV KOLOKVIJ / INVITATION TO THE PREGL COLLOQUIUM

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The cryptic code of bilitranslocase and its role in the nature

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**Velika predavalnica Kemijskega inštituta / Lecture Hall at the
National Institute of Chemistry; Hajdrihova 19, Ljubljana**

Membrane transporters play a fundamental role in life: by controlling the exchange of matter between the environment and the cell, they dictate the deployment of any other function of the cell.

This is clearly seen when studying the role of the plasma membrane transporter bilitranslocase in experimental models of the cardiovascular system.

Bilitranslocase is a membrane transport protein firstly identified in the liver and later found in other mammalian epithelia. Its substrates are structurally heterogeneous aromatic compounds, such as phthaleins, tetrapyrrols, flavonoids, nucleotides. The property of bilitranslocase to transport nucleotides suggests that the cell might exchange these fundamental molecules with the external milieu. Nucleotides are the building blocks of nucleic acids, and the latter are essential to life itself. In this frame, it makes no wonder that bilitranslocase has been detected also in plants: basic functions of the cells are conserved in all forms of life.

The abnormal gene coding of bilitranslocase, consisting in the antisense strand of the ceruloplasmin gene, might be a relic of a primordial organization of the genetic information. The deep study of the structure and function of this transporter will help unveiling not only some secrets of life origin, but also open new perspectives in drug discovery.

Vljudno vabljeni! / Kindly invited!