Katedry genetiky a biochémie
Prírodovedeckej fakulty Univerzity Komenského
Ústav molekulárnej biológie SAV
a občianske združenie *NATURA*
v spolupráci so
Slovenskou spoločnosťou pre biochémiu a molekulárnu biológiu

Vás pozývajú na 62. prednášku v rámci Kuželových seminárov:

Prof. Richard M. Losick

Department of Molecular and Cell Biology
Harvard University
Cambridge, USA

Two novel pathways of signal transduction in *Bacillus subtilis* cannibalism system

ktorá sa uskutoční 30. marca 2007 (PIATOK) o 14:30

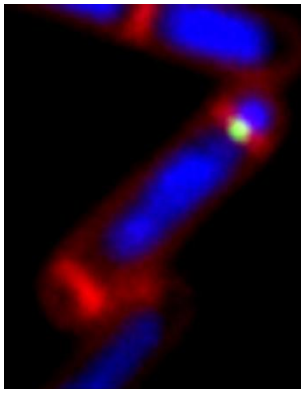
V AULE CH1-1 PRÍRODOVEDECKEJ FAKULTY UNIVERZITY KOMENSKÉHO

http://www.fns.uniba.sk/~kbi/kuzela

Prof. Richard M. Losick

http://www.mcb.harvard.edu/Faculty/Losick.html

Prof. Losick is Maria Moors Cabot Professor of Biology and a Harvard College Professor. He received his B.A. in chemistry from Princeton University and his Ph.D. in biochemistry from the Massachusetts Institute of Technology. He teaches the introductory course on molecular biology at Harvard College; as head tutor, he is responsible for the undergraduate concentration in biochemical sciences. Prof. Losick is a member of the *National Academy of Sciences*, a fellow of the American Academy of Arts and Sciences, a fellow of the *American Association for the Advancement of Science*, a fellow of the American Academy of Microbiology, and a former visiting scholar of the Phi Beta Kappa Society. He is a recipient of the Selman A. Waksman Award in Microbiology from the National Academy of Sciences. In addition, he is on the editorial boards of *Science* and *Cell*.



R. Losick´s laboratory studies development in the spore-forming bacterium *Bacillus subtilis*. *B. subtilis* undergoes an elaborate cycle of cellular differentiation that culminates in the formation of a dormant cell type, the spore. Spore formation involves the transformation of a vegetative cell into a two-compartment sporangium by asymmetric division. The compartments receive an identical chromosome yet have dissimilar developmental fates involving differential expression of distinct sets of genes. The ultimate goal is to elucidate the entire regulatory circuit that governs entry into sporulation, cell-specific gene expression, and the linkage of gene expression to landmark events in morphogenesis. Other topics of interest are protein subcellular localization, chromosome segregation, intercellular signaling, and the formation of architecturally complex communities of cells.

Recent publications:

Dworkin, J. and **Losick, R**. Does RNA polymerase help drive chromosome segregation in bacteria? *Proc Natl Acad Sci U S A* **99:** 14089-94 (2002).

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Gonzalez-Pastor, J.E., Hobbs, E. C. and **Losick, R**. Cannibalism by Sporulating Bacteria. *Science* **301**: 510-513 (2003).

Fujita, M. and **Losick, R.** Evidence that entry into sporulation in *Bacillus subtilis* is governed by a gradual increase in the level and activity of the master regulator Spo0A. *Genes & Development* **19**:2236:2244 (2005).

Kearns, D.B. and **Losick R.** Cell populations heterogeneity during growth of *Bacillus subtilis. Genes & Development* **19**:3083-3094 (2005).

Ellermeier, C.D., Hobbs, Errett C., Gonzalez-Pastor, J.E., **Losick R.** A Three-Protein Signaling Pathway Governing Immunity to a Bacterial Cannibalism Toxin. *Cell* **124**:549-559 (2006).

Bassler, B.L. and **Losick R.** "Bacterially Speaking". *Cell* **125**: 237-246 (2006)

Fujita, M. and **Losick, R**. The master regulator for entry into sporulation in *Bacillus subtilis* becomes a cell-specific transcription factor after asymmetric division. *Genes & Development* **17**: 1166-1174 (2003).