Katedry mikrobiológie a virológie, genetiky a biochémie
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Vás pozývajú na 71. prednášku v rámci Kuželových seminárov:

Dr. Christoph Schüller

University of Vienna, Max F. Perutz Laboratories
Department of Biochemistry and Cell Biology

Genome wide analysis of environmental stress response in yeast and close relatives

ktorá sa uskutoční **25. novembra 2009** (streda) o **14:00**

v miestnosti **CH1-222** Prírodovedeckej fakulty UK

http://www.naturaoz.org/seminare.html

Dr. Christoph Schüller

Education:

02/04 *venia docendi* for genetics at the faculty for life sciences at the University of Vienna
06/90 - 10/94 *Dr.rer. nat.* degree in Biochemistry
05/90 Diploma (*Mag*.) degree in natural sciences
1983-90 enrolled Biochemistry at the University of Vienna

Research Experience

09/09 Group Leader at MFPL
05/06 – 08/09 Group Leader at MFPL and eLearning Designer
05/04 – 05/06 Gastprofessor for Biochemistry at the University of Vienna
06/00 – 12/03 Postdoc with Prof. Karl Kuchler
10/97 - 05/00 Postdoc with Prof. Helmut Ruis
08/94 - 09/97 Postdoc of BurnsPhilp R&D Ltd in the lab of Prof. H. Ruis

Dr. Schüller started his independent research group, whose aim is to understand mechanisms involved in stress-induced changes in gene regulation in yeast, especially in the opportunistic pathogen *Candida glabrata*. He chose this human fungal pathogen fungus because of its similarity to *S. cerevisiae*. He suspected that the virulence of this fungus might be partly explained by adapted transcriptional patterns. He and his colleagues characterized the environmental stress gene transcription program of *C. glabrata*. Also, in functional-genomic screens they uncovered a coordination of oxidative and nutrient stress responses. Furthermore, they are investigating host-pathogen interactions of the fungus with phagocytic cells. They found that autophagocytic mechanisms greatly improve survival of *C. glabrata* in a phagocytosis situation. This exciting finding provides insights into the strategies of the fungal pathogen and opens an avenue to be followed in the future to integrate regulated autophagy and environmental stress response.

Recent publications:

1. Klopf E, Paskova L, Solé C, Mas G, Petryshyn A, Posas F, Wintersberger U, Ammerer G, **Schüller C**. (2009). Cooperation between the INO80 complex and histone chaperones determines adaptation of stress gene transcription in the yeast *S. cerevisiae*. *Mol. Cell. Biol*. 29(18): 4994-5007.
2. Hosiner D, Lempiäinen H, Reiter W, Urban J, Loewith R, Ammerer G, Schweyen R, Shore D, **Schüller C**. (2009). Arsenic toxicity to *Saccharomyces cerevisiae* is a consequence of inhibition of the TORC1 kinase combined with a chronic stress response. *Mol. Biol. Cell* 20(3): 1048-1057.
3. Heeren G, Rinnerthaler M, Laun P, von Seyerl P , Kössler S, Klinger H, Hager M, Bogengruber E, Jarolim S, Simon-Nobbe B, **Schüller C**, Carmona- Gutierrez D, Breitenbach-Koller L, Mück C, Dürr PJ, Criollo A, Kroemer G, Madeo F and Breitenbach M. (2009). The mitochondrial ribosomal protein of the large subunit, Afo1p, determines cellular longevity through mitochondrial back-signaling via TOR1. *Ageing* 1(7): 622-636.
4. Roetzer A, Gregori C, Jennings AM, Quintin J, Ferrandon D, Butler G, Kuchler K, Ammerer G, and **C. Schüller**. (2008). *Candida glabrata* environmental stress response involves *Saccharomyces cerevisiae* Msn2/4 orthologous transcription factors. *Mol. Microbiol*. 69(3): 603-620.
5. **Schüller C.** , Y.M. Mamnun , H. Wolfger, N. Rockwell , J. Thorner, and K. Kuchler. (2007). Membrane-active compounds activate the transcription factors Pdr1 and Pdr3 connecting pleiotropic drug resistance and membrane lipid homeostasis in *Saccharomyces cerevisiae*. *Mol. Biol. Cell* 18(12): 4932-4944.