

# Seminar

February 6, 14.00 Röda Rummet, Ecology Building

Professor Dr. Dirk Hoffmeister Friedrich-Schiller-Universität, Jena

## **Magnificent Mushrooms and Miraculous Molds: Research on Fungal Natural Products**

A remarkable feature of filamentous fungi is their ability to produce small yet structurally complex and often bioactive natural products. Many of these compounds play important roles as toxins, modulators of redox reactions and various defence reactions. Dirk Hofmeister is a leading scientist within research on the biosynthesis of fungal secondary metabolites. During this seminar, he will give a general overview on fungal secondary metabolism, and then present own work on the biosynthetic pathways of secondary metabolites in various fungi including plant and human pathogens, and saprophytes.

Some references:

**Kalb, D., Lackner, G., Hoffmeister, D. 2013.** Fungal peptide synthetases: an update on functions and specificity signatures. *Fung. Biol. Rev.* 27: 43-50.

**Lackner G, Misiek M, Braesel J, Hoffmeister D. 2012.** Genome mining reveals the evolutionary origin and biosynthetic potential of basidiomycete polyketide synthases. *Fungal.Genet.Biol.* 49: 996-1003.

**Eastwood DC, Floudas D, Binder M, Majcherczyk A, Schneider P, Aerts A, Asiegbu FO, Baker SE, Barry K, Bendiksby M, Blumentritt M, Coutinho PM, Cullen D, de Vries RP, Gathman A, Goodell B, Henrissat B, Ihrmark K, Kauserud H, Kohler A, LaButti K, Lapidus A, Lavin JL, Lee YH, Lindquist E, Lilly W, Lucas S, Morin E, Murat C, Oguiza JA, Park J, Pisabarro AG, Riley R, Rosling A, Salamov A, Schmidt O, Schmutz J, Skrede I, Stenlid J, Wiebenga A, Xie X, Kues U, Hibbett DS, Hoffmeister D, Hogberg N, Martin F, Grigoriev IV, Watkinson SC. 2011.** The plant cell wall-decomposing machinery underlies the functional diversity of forest fungi. *Science.* 333: 762-765.

**Bohnert M, Wackler B, Hoffmeister D. 2010.** Spotlights on advances in mycotoxin research. *Appl.Microbiol.Biotechnol.* 87: 1-7.

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