

Viernes, 17 de Septiembre de 2010 a las 12.00 horas

# Understanding environmental interactions in *Streptomyces*



Paul Hoskisson is Dr. in Biology (2001). He did a post-doctoral research (2001-2004) in JIC (Norwich, UK) and another two and a half years (2004-2007) at the University of Aberdeen, investigating novel developmental loci and a novel bacteriophage resistance system in *Streptomyces coelicolor*. He is actually Lecturer in Microbiology at the University of Strathclyde in Glasgow.

*Streptomyces* are Gram-positive soil bacteria, responsible for the production of two thirds of clinical antibiotics, large numbers of anti-cancer agents, immune modulators and herbicides.

They are ubiquitous in the soil and have developed several strategies to enable them to cope with environmental stresses and interactions with other organisms in the soil, such as fungi, protozoa, nematodes and plants. Understanding these interactions can have implications for the evolution of pathogenicity genes in related actinobacterial pathogens of humans and plants. This presentation will introduce these organisms and their lifecycle and focus on some recent work on conserved virulence genes.

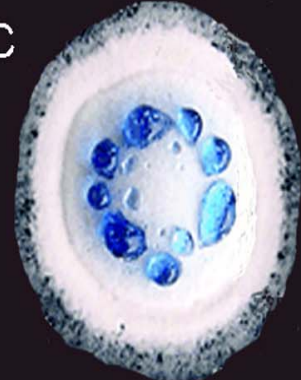
A



B



C



From left to right above: Wild type *Streptomyces coelicolor*- the fuzzy appearance is the aerial hyphae, a *bldH* mutant, note that there are no aerial hyphae, and a *whi* mutant, note the white colour of the aerial hyphae. The blue drops are the antibiotic Actinorhodin, produced by this strain.