

# BIG seminar 2011-2012

Biology and integrative genomics

Monday,  
9 January  
17h



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“Environmental reservoirs  
of pathogenic microbacteria.”

Tuberculosis (TB) is one of the most widespread infectious diseases and a major cause of death for adults worldwide. Although much attention has focused on treatment and prevention of human tuberculosis, human tuberculosis from animal origin (zoonotic tuberculosis due to *Mycobacterium bovis*) is an important and re-emerging public health concern in developing countries. In the developing world where there are little or no animal control measures in place, the impact is much wider with the economy, ecosystems and human health affected. The WHO has recently designated bovine tuberculosis as a neglected zoonosis, with particular reference to the developed world. *M. bovis* has been shown to persist in the environment for a substantial period of time, several months to years, raising questions about the role of environmental reservoirs in the chronic persistence of bTB in some cattle herds and wildlife populations. We have developed a number of methods for environmental detection of *M. bovis* and have studied survival and physiology outside of the host, which is the badger within the UK and a range of wildlife and cattle in a study being conducted in Tanzania. We have identified the environment as a further potential component of the *M. tuberculosis* complex transmission cycle.

BIG is an initiative of the faculty of Biology and Medicine,  
University of Lausanne and is organized by Uta Paszkowski,  
Laurent Keller, Henrik Kaessmann and Jan Roelof van der Meer.  
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