

## Update on *B. pseudomallei* soil surveillance

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*B. pseudomallei* infection is acquired from the environment through inoculation, aerosols or ingestion. Environmental suitability for *B. pseudomallei* has been predicted throughout many tropical regions from which environmental detection of the pathogen has never been reported. An increasing number of melioidosis case reports from parts of Asia, Africa and the Americas suggest a worldwide, but grossly underreported distribution of this pathogen. Most studies on the environmental prevalence of *B. pseudomallei* in different parts of the world have relied on culture-based methods. However, current culture methods are very laborious, especially for a large-scale screening and seem to have limited and variable sensitivity in soil samples of various origin. Major parts of potential endemic areas have never been examined for environmental *B. pseudomallei*.

This presentation will address methodological aspects of *B. pseudomallei* environmental surveillance and will discuss the usefulness of quantitative multi-target based molecular approaches. Moreover, abiotic and biotic parameters which might determine the environmental presence of *B. pseudomallei* in different habitats will be addressed. Results of a collaborative study with the Sri Lankan team, led by Dr. Enoka Corea, using quantitative direct molecular screening for *B. pseudomallei* in soil samples from Sri Lanka, together with attempts to culture the pathogen from those samples will be presented. Understanding of the ecological factors that determine the environmental dissemination and persistence of *B. pseudomallei* will be important for undertaking any preventive measures. Standardization of sampling methods, sample analysis and biobanking will be fundamental for understanding the global epidemiology of *B. pseudomallei* and melioidosis.

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