

International Conference and Exhibition on

Lung Disorders & Therapeutics

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Du Toit Loots

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“TB or not TB” that is the question – Understanding and diagnosing TB using metabolomics

Despite the fervent genomic and proteomic based research efforts to date, since its discovery in 1882, TB is still a major global problem, and hence new approaches are necessary to better characterize and diagnose this disease. Using a variety of LC-MS, GC-MS and NMR metabolomics based methodologies, we have investigated tuberculosis from a variety of different perspectives, for the purpose of identifying new biomarkers which better explain the mechanisms related to drug resistance, virulence, growth and host-microbe interactions/adaptations. Furthermore, these biomarkers are also showing promise for the development of improved diagnostic approaches, not only for identifying TB complex, but also for detecting drug resistant strains, distinguishing various *Mycobacterium* species, and predicting treatment outcome.

Biography

Du Toit Loots currently heads the “Infectious and Acquired Disease Metabolomics” unit at NWU, with a focus on new biomarker discovery for better characterizing and diagnosing diseases, TB in particular. He has, to date, contributed to a total of 68 publications: 60 of which are peer reviewed scientific manuscripts in top international journals, 4 chapters in books and 4 publications in non-peer reviewed popular magazines. He is currently International Editor for Journal of Cell and Tissue Research and has additionally registered 1 full patent, with application to TB diagnostics, and published a new synthesis method for NaFe(III)EDTA, a highly bioavailable form of iron for combating anaemia. In recognition of these efforts, he received a number of awards including the: International Nestle Nutrition Institute for Africa Research Award; Janssen-Cilag Award, International ARP Walker Research Award and International Scripps Centre for Integrative Medicine’s Research Award.

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