Accepted Manuscript

Title: Shaping the niche in macrophages: Genetic diversity of the *M. tuberculosis* complex and its consequences for the infected host

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PII: \$1438-4221(17)30294-1

DOI: http://dx.doi.org/10.1016/j.ijmm.2017.09.009

Reference: IJMM 51160

To appear in:

Received date: 16-6-2017 Revised date: 9-9-2017 Accepted date: 11-9-2017

Please cite this article as: Reiling, Norbert, Homolka, Susanne, Kohl, Thomas A., Steinhäuser, Christine, Kolbe, Katharina, Schütze, Stefan, Brandenburg, Julius, Shaping the niche in macrophages: Genetic diversity of the M.tuberculosis complex and its consequences for the infected host.International Journal of Medical Microbiology http://dx.doi.org/10.1016/j.ijmm.2017.09.009

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Shaping the niche in macrophages: Genetic diversity of the M. tuberculosis complex and its

consequences for the infected host

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Abstract:

Pathogenic mycobacteria of the Mycobacterium tuberculosis complex (MTBC) have co-evolved with

their individual hosts and are able to transform the hostile environment of the macrophage into a

permissive cellular habitat. The impact of MTBC genetic variability has long been considered largely

unimportant in TB pathogenesis. Members of the MTBC can now be distinguished into three major

phylogenetic groups consisting of 7 phylogenetic lineages and more than 30 so called sub-

lineages/subgroups. MTBC genetic diversity indeed influences the transmissibility and virulence of

clinical MTBC isolates as well as the immune response and the clinical outcome. Here we review the

genetic diversity and epidemiology of MTBC strains and describe the current knowledge about the

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