VIRULENCE- ASSOCIATED PROPERTIES OF EMERGING MULTI-DRUG RESISTANT *MYCOBACTERIUM TUBERCULOSIS* STRAINS OF BEIJING GENOTYPE CONTRIBUTE TO THEIR SUCCESS IN CAUSING DISEASE

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The epidemiologically important Beijing genotype *M. tuberculosis* strains, highly endemic in East Asia, have become an emerging infection in certain geographic areas, including Russia, due to increasing prevalence and association with multidrug- resistance (MDR). To verify whether MDR Beijing strains circulating in the emerging regions present any biological particularities that could contribute to their success in causing disease, in comparison with the sporadic strains from locations with low prevalence of the Beijing genotype, we evaluated virulence-associated characteristics of the MDR Beijing strains isolated in Russia and compared them with those of the drug- resistant and susceptible Beijing strains from Brazil and reference H37Rv strain. We found that circulating in Russia MDR strains demonstrated increased bacterial fitness and growth in THP-1 macrophages, as well as higher capacity to induce non-protective cytokine synthesis and necrotic macrophage death, whereas the biological properties of the strains isolated in Brazil largely resembled those of the H37Rv strain, with the exception of the drug-resistant isolates that presented significantly reduced fitness. The data demonstrate that the emerging MDR strains of the Beijing genotype circulating in Russia do express a pattern of properties associated with the enhanced virulence favoring its clonal dissemination in this region.