

S 4-4

Description of '*Francisella novicida*' FSC454^T as a novel species of the genus *Francisella*B. Huber¹, H.-J. Busse¹, E. Seibold², H. C. Scholz², P. Kämpfer³, W. D. Splettstoesser²¹Institute of Bacteriology, Mycology & Hygiene, Vienna, Austria, ²Bundeswehr Institute of Microbiology, Munich, Germany, ³Institut für Angewandte Mikrobiologie, Justus-Liebig-Universität Gießen, Gießen, Germany

'*Francisella novicida*' FSC454^T = FnSp1^T = F62^T, isolated from human blood in Spain (2003), was examined in order to clarify its taxonomic position. By 16S rRNA and recA gene sequencing, this strain had been recently shown to belong to the genus *Francisella*, with similarity values greater than 99% in the 16S rRNA gene to *F. tularensis* and 84–91% in the recA gene to the other *Francisella* species. The genus affiliation was supported by a quinone system typical of *Francisella* (Q-8 as the major component), a complex polar lipid profile similar to *Francisella tularensis* with the major components phosphatidylethanolamine, phosphatidylcholine and an unknown aminophospholipid and a fatty acid profile consisting mainly of C10:0, C14:0, C16:0 and C18:1 ω₉c and the hydroxy acid C18:0 3-OH. DNA-DNA hybridization unambiguously showed that FSC454^T represents a novel species. Together with the results from examination of biochemical properties these observations allowed genotypic and phenotypic differentiation of the isolate from all hitherto described *Francisella* species. A multiplex-PCR developed in the course of this study discriminated FSC454^T from representatives of all other *Francisella* species and subspecies, clades A.I and A.II of *F. tularensis* subsp. *tularensis* and *F. tularensis* subsp. *holarctica* biovar *japonica* and between these representatives as well. Hence, from our point of view assignment of '*Francisella novicida*' FSC454^T to a novel species is justified.