Mycobacterium nebraskense, a Newly Recognized Slow Growing Opportunistic Pathogen

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Researchers at the University of Nebraska Medical Center recently described a previously uncharacterized bacterial species isolated from multiple patients with pulmonary disease. The Judicial Commission of the International Committee on Systematic Bacteriology has officially validated the new species now named Mycobacterium nebraskense (ne.bras.ken’s, referring to the State of Nebraska). Distinct mycobacterial sequences characteristic of the 16S rRNA gene and the ITS-1 region target along with uniqueness of the mycolic acid profile and other phenotypic characteristics, confirmed that the isolate represented a novel Mycobacterium species. Phylogenetic analysis using the 16S rRNA gene sequences showed that M. nebraskense is closely related to other slow growing Mycobacterium species such as to M. kansasii, M. scrofulaceium, M. malmoense, and M. avium. The isolation of this new species from the sputum of 5 immunocompromised patients with respiratory symptoms suggests a likely causative association between infection with this pathogen and pulmonary disease. The type strain has been deposited into the American Type Culture Collection (ATCC BAA-837\(^T\)) and into the German culture collection (DSM 44803\(^T\)).

Questions about this new pathogen can be directed to Dr. Peter Iwen at 402-559-7774.

Reference