Phylogenetic relationships of the genus Kluyvera: transfer of Enterobacter intermedius Izard et al. 1980 to the genus Kluyvera as Kluyvera intermedia comb. nov. and reclassification of Kluyvera cochleae as a later synonym of K. intermedia.

Pavan ME, **Franco RJ**, **Rodriguez JM**, **Gadaleta P**, **Abbott SL**, **Janda JM**, **Zorzopulos J**.

Instituto de Investigaciones Biomedicas Fundacion Pablo Cassara, Saladillo 2452, Buenos Aires (1440), Argentina.

In order to assess the relationship between the genus Kluyvera and other members of the family Enterobacteriaceae, the 16S rRNA genes of type strains of the recognized Kluyvera species, Kluyvera georgiana, Kluyvera cochleae, Kluyvera ascorbata and Kluyvera cryocrescens, were sequenced. A comparative phylogenetic analysis based on these 16S rRNA gene sequences and those available for strains belonging to several genera of the family Enterobacteriaceae showed that members of the genus Kluyvera form a cluster that contains all the known Kluyvera species. However, the type strain of Enterobacter intermedius (ATCC 33110T) was included within this cluster in a very close relationship with the type strain of K. cochleae (ATCC 51609T). In addition to the phylogenetic evidence, biochemical and DNA-DNA hybridization analyses of species within this cluster indicated that the type strain of E. intermedius is in fact a member of the genus Kluyvera and, within it, of the species Kluyvera cochleae. Therefore, following the current rules for bacterial nomenclature and classification, the transfer of E. intermedius to the genus Kluyvera as Kluyvera intermedia comb. nov. is proposed (type strain, ATCC 33110T=CIP 79.27T=LMG 2785T=CCUG 14183T). Biochemical analysis of four E. intermedius strains and one K. cochleae strain independent of the respective type strains further indicated that E. intermedius and K. cochleae represent the same species and are therefore heterotypic synonyms. Nomenclatural priority goes to the oldest legitimate epithet. Consequently, Kluyvera cochleae Muller et al. 1996 is a later synonym of Kluyvera intermedia (Izard et al. 1980) Pavan et al. 2005.