CHARACTERIZATION OF THERMOTOLERANT COCCI FROM INDIGENOUS FLORA OF FERMENTED MILK IN ALGERIAN ARID AREA AND DNA IDENTIFICATION OF ATYPICAL *Lactococcus lactis* strains

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Lactic acid bacteria are widely used in food industry and their growth performance is important for the quality of the fermented product. By combining results from conventional isolation methods and molecular investigation of 16S rRNA gene and lactococcal/enterococcal specific genes, we identify at species level catalase negative gram positive thermoresistant cocci isolated from traditional 'leben', a
24-h fermented milk in arid area of west Algeria. 40 strains phenotypically related to cocci LAB were identified as belonging to the species *Lactococcus lactis* ssp. *lactis*, *Enterococcus faecalis*, *Enterococcus faecium*, and other *Enterococcus* species. No *Streptococcus thermophilus* strain was isolated. Ten different phenotype groups were recognized, and the species content of these groups were in some cases different from the expected features usually given in genus and species descriptions. In particular, atypical lactococci, able to grow in 6.5% NaCl, at pH 9.5 and showing high resistance to thermal stresses were isolated. Lactococci, but also enterococci isolated from traditional
'leben' produced in the desert area may be therefore of interest in milk fermentation. Further studies to assess this source of diversity within the wild microbial population should provide starter new strains for product innovation.

Key words: arid area, fermented milk, thermotolerant bacteria, DNA, biopreservation, product innovation