# **Titre d’article**: Molecular characterization of Echinococcus granulosus sensu lato genotypes in dromedary camels from extreme Sahara of Algeria based on analysis of nad2 and nad5 genetic markers

**Abstract :**

Cystic echinococcosis is parasitic disease caused by the metacestodes belonging to the Echinococcus granulosus sensu lato (s.l.) species complex. Cystic echinococcosis is of considerable economic and public health importance. It is endemic in both livestock and humans in North African countries, including Algeria. The present study aimed to characterize E. granulosus s.l. genotypes in dromedary camels (Camelus dromedarius) from the extreme Sahara of Algeria, using recently developed mitochondrial genetic markers (NADH dehydrogenase subunit 2 and NADH dehydrogenase subunit 5) for reliable identification of different genotypes. A total of 75 Echinococcus cysts were collected from 49 dromedary camels, including 65 and 10 cysts from 45 and four camels originating from two slaughterhouses of Tindouf and Illizi provinces, respectively. E. granulosus sensu stricto (s.s.) G1 and G3 were identified in camels from both areas based on nad5 (649 bp) gene sequences, whereas E. granulosus s.l. G6 was identified in camels from Tindouf region based on concatenated nad5 and nad2 gene sequences (total 1336 bp). Identified samples clustered into 11 different haplotypes (ALG1-ALG11), including four haplotypes (ALG8- ALG11) for E. granulosus s.s. G1, one haplotype (ALG7) for E. granulosus s.s. G3, and six haplotypes (ALG1-ALG6) for E. granulosus s.l. G6. The present study provides valuable molecular data, including genotyping and hap lotypic variability, on E. granulosus s.l. in dromedary camels from two regions in the extreme Sahara of Algeria. Future characterization of the G1, G3, and G6 samples based on sequencing of complete mitochondrial genomes would be of considerable significance for a more comprehensive understanding of molecular epidemiology of CE in Algeria.