

Screening of mutations in the *GCK* gene in Jordanian maturity-onset diabetes of the young type 2 (MODY2) patients

R. Khalil¹, F. Al-Sheyab², E. Khamaiseh², M.A. Halaweh¹ and H.A. Abder-Rahman³

¹Biotechnology and Genetic Engineering Department, Philadelphia University, Jordan ²Genetic Engineering and Biotechnology Department, Jordan University of Science and Technology, Jordan ³Forensic Medicine and Pathology Department, Faculty of Medicine, The University of Jordan, Jordan

Corresponding author: R. Khalil E-mail: r_khalil@philadelphia.edu.jo

Genet. Mol. Res. 8 (2): 500-506 (2009) Received February 6, 2009 Accepted March 13, 2009 Published May 5, 2009

ABSTRACT. Maturity-onset diabetes of the young type 2 (MODY2) is a genetic form of diabetes mellitus caused by mutations in the glucokinase gene (*GCK*). We assessed the frequency of *GCK* gene mutations in Jordanian suspected MODY2 patients. We screened exons 7, 8 and 9, which are specific for pancreatic glucokinase, for mutations at positions 682A>G, p.T228A; 895G>C, p.G299R, and 1148C>A, p.S383X, respectively, in 250 subjects (100 patients suspected to have MODY2 and 150 healthy controls without family history of diabetes mellitus). We did not find any association of these mutations in Jordanian suspected MODY2 patients or in healthy controls, different from data on Caucasian Italian patients screened for the same mutations.

Key words: Glucokinase; MODY2; Mutation; Jordanian