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### Impact of HLA-class I alleles on response to HCV treatment in a cohort of Egyptian patients

**Aims & Background:** Extensive allele diversity is observed in HLA associations with response to HCV combined therapy (pegylated interferon+ ribavirin) in different populations. The aim of the study is to assess the frequency and association of certain HLA-class I alleles in Egyptian persons with persistent HCV and others with sustained viral response (SVR).

**Methods & Materials:** The study was a retrospective cohort study that included 246 HCV patients who received combined therapy; 106 cases responded to treatment (SVR) and 140 individuals did not respond to treatment (persistent HCV infection). Both groups are subjected to genotyping for HLA-class I.

**Results:** According to logistic regression analysis, Cw17 was considered as the most predictor allele as it was the highest significant allele (OR=16.70; 95% CI: 2.64–105.58; P = 0.003), whereas the presence of the HLA-B45 and HLA-B27 alleles has a 19.35-fold risk and 15.7 fold risk, respectively of non-response to interferon therapy in chronic HCV patients (OR= 19.35; 95% CI: 1.05–357.24; P=0.04) and (OR= 15.69; 95% CI: 1.179–208.9; P =0.04) can act also as high predictor alleles, and the lowest significant predictor allele was B44 (OR=6.535; 95% CI: 1.55–27.63; P = 0.01). The presence of the HLA-A alleles might have a limited role in prediction for the non-responders, as the A32 was significantly higher among the SVR patients, but, it cannot have a predictor role (OR: 0.161, CI: 0.03–1.056, P=0.049).

**Conclusion:** Cw17, HLA-B45, and HLA-B27 alleles can predict the non-responders to HCV combined therapy.

### Biography

Howayda Ezz El Din Gomaa has completed her MD in Clinical and Chemical Pathology from Faculty of Medicine, Cairo University, Egypt and Post-doctoral studies in microbiology, immunology of infectious diseases from the National Research Centre (Egypt). She published more than 30 papers and serves as a reviewer in scientific journals and in the scientific committee of the National Research Centre (Egypt). Presently, she is Professor of Clinical and Chemical Pathology - Clinical and Chemical Pathology Department - NRC-Egypt.

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