

# Antibodies and Therapeutics

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## Circulating cell free DNA as a predictor of systemic lupus erythematosus severity and monitoring of therapy

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**Background:** Systemic lupus erythematosus (SLE) is characterized by the presence of heterogeneous group of autoantibodies. Recently, the elevation of circulating DNA in SLE patients was a matter of many researches.

**Aim of the study:** The current study aimed to measure cell-free DNA (cf-DNA) in SLE patients as a potential tool to predict disease activity and treatment follow up.

**Subjects & Methods:** 52 of SLE patients as well as 25 healthy control subjects with matched age and gender were included in the study. Full clinical examination and laboratory investigations were done: Complete blood count (CBC), kidney function tests, C reactive protein (CRP), routine autoantibodies for autoimmune diseases, complements (C3 & C4), anti-nucleosome antibodies and cf-DNA by real time PCR (RT-PCR).

**Results:** The levels of anti-double stranded DNA (anti-dsDNA), anti-nucleosome Ab and cf-DNA were significantly increased in SLE patients compared to controls. The cf-DNA level was correlated to markers of disease severity namely CRP and anti-nucleosome. A significant reduction in levels of cf-DNA, anti-nucleosome Ab and anti-dsDNA was noticed after therapy.

**Conclusion:** Our findings support that the measurement of cf-DNA appears to be a useful marker in addition to laboratory tests used in SLE diagnosis. The high correlation with markers of disease severity suggesting its role in disease pathogenesis and decreasing its level after therapy makes it to be a marker of treatment follow-up.

### Biography

Olfat M Hendy completed her MD at the age of 35 years from Clinical pathology department, Menoufia Faculty of Medicine, Menoufia University, Egypt - and become professor of hematology & immunology at the same university at 2009. She is the head of hematology unit at National Liver Institute- Menoufia University, Egypt. She has published more than 28 papers in reputed journals and has been serving as an editorial board member of reputed. She was an supervisor on more than 32 MD and master thesis, and discussed more than 32 thesis. She is a membership in about 4 medical societies.

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