

## Diabetes mellitus as atherosclerosis risk

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Diabetes alters function of multiple cell types, including endothelium, smooth muscle cells, and platelets, indicating the extent of vascular disarray in this disease. The increased risk of atherosclerotic disease in diabetic subjects may be due to enhanced foam cell formation following an increased susceptibility of low density lipoprotein to oxidative modification. The aim of this study was to assess the LDL susceptibility to lipid peroxidation (LDL ox) in two study groups of elderly patients (aged  $65 \pm 11$  years): a group of patients with atherosclerosis and a group of patients with atherosclerosis associated with type 2 diabetes mellitus. The LDL susceptibility to in vitro induced lipid peroxidation was evaluated following its incubation with a prooxidant system. Results obtained showed the susceptibility of LDL to in vitro oxidation was increased in diabetic group (14.52 %) compared with atherosclerosis group. This study indicates that low-density lipoprotein from diabetic subjects is more susceptible to oxidation. Atherosclerosis appears to proceed at a more rapid rate and is more extensive in diabetic than in nondiabetic patients. Much of this risk is related to insulin resistance and is associated with both traditional and nontraditional atherosclerotic vascular disease risk factors. Therefore, measurement of LDLox may be helpful for identifying high-risk patients with type 2 diabetes and atherosclerosis.

### Biography

Gianina Ioana Constantin has completed Bucharest University – Chemistry section and she is scientific researcher III, principal chemist – medical biochemistry specialization, at National Institute of Gerontology and Geriatrics "Ana Aslan" from 2004. She has published as author/co-author in more than 8 scientific papers, over 63 national and international congresses and co-worker in 4 national research programs and 1 FP7 - Health international program. Research fields: studying cellular and molecular mechanisms in normal and pathologic aging; markers of atherogenesis process - LDL ox, sialic acid, circulating immune complexes; immunoassay methods for determination of tumor markers and hormones by Tosoh AIA 360.

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