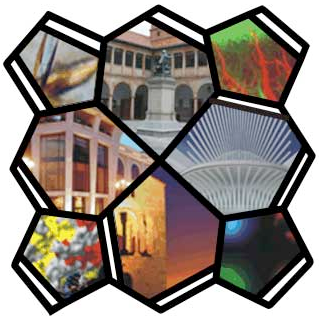

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Autor que presenta	P. Tarilonte
E-mail	ptarilonte@iib.uam.es
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ALPHA-DYSTROGLYCAN GLYCOSYLATION: MAN1A1 MANNOSIDASE IMPLICATION IN CANCER

P. Tarilonte[1], L. Gonzalez[1], O. Fano[1], M. Raducu[1], A. Izquierdo[2], O. de Luis[2], A. Coloma[2], J. Cruces[1]

[1]Departamento de Bioquímica. Instituto de Investigaciones Biomédicas "Alberto Sols" CSIC-UAM. Facultad de Medicina. Universidad Autónoma de Madrid [2]Dpto. de Ciencias de la Salud III. U. Rey Juan Carlos, Alcorcón-Madrid, España

Dystroglycan (DG) is a membrane receptor, involved in physically connecting extracellular matrix (ECM) to cytoskeleton. It was first described in muscular tissue 15 years ago, but nowadays functions in other tissues have been described for DG: it is the gate for arenaviruses to enter the cell, it is involved in embryogenesis, cell signalling, and cancer progression, although it is well-known as being on the basis of secondary dystroglycanopathies. Cell migration or adhesion defects are common in all the fields in which DG is involved.The interaction between DG and the ECM come through the *O*-mannosylglycan chains present in its mucin region. Alterations in these glycosylic chains are the known cause of secondary dystroglycanopathies and the defects in cell migration.
The attachment to basal membranes is the key to keep physiological tissue architecture, and the miss-matching of it, is one the first steps taken by tumoral cells to go on the metastatic process. Hypoglycosylation of α-DG has been reported in several tumor and tumor cell lines. Determining the causes involved in the alteration of DG glycosylation, will be a key to understand these processes. The fact that many cancer cell lines and tumors present mannosidases over-expressed in their cancer signatures, lead us to think about their possible implication in breaking DG *O*-mannosyglycan chains. In this work we have tried to determine the possible implication of MAN1a1 mannosidase, deglycosylating DG, in the progression of cancerous processes.