Joint PhD Program in Molecular Biology (JuMBO)
&
Department of Medicine, University of Udine

SEMINAR

"Transthyretin amyloidosis: from a rare to a common disease"

Vittorio Bellotti has worked on protein misfolding disorders for over 25 years. He joined UCL in October 2011 when he established a new laboratory in the Wolfson Drug Discovery Unit of the Centre for Amyloidosis and Acute Phase Proteins. His team works in a unique environment in close connection with the National Amyloidosis Centre where patients affected by senile systemic amyloidosis and hereditary Transthyretin (TTR) amyloidosis are diagnosed and monitored.

In the talk he will show how the study of a particularly rare but aggressive TTR mutation led to the discovery of a newly identified mechano-enzymatic mechanism, based on proteolyisis and shear stress effect. This new mechanism was soon recognised to be applicable to other more common amyloidogenic variants of TTR, including the wild type form, which causes senile systemic amyloidosis presenting with increasing frequency from age 60 onwards.

Drugs, so far tested by their capacity to inhibit TTR dissociation and aggregation induced by low pH *in vitro*, will be now identified to protect from proteolytic cleavage and fibrillogenesis according to the new mechanism able to reproduce *in vitro* genuine amyloid fibrils.

Prof. Vittorio Bellotti

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December 15, 14.30
Seminar Room DAME