Proteomics Platform at CIC bioGUNE participates in the Chromosome Centric Project (C-HPP) within Human Proteome Organisation (HUPO) through ProteoRed-ISCIII Network

With the generation of a well characterized human genome map together with the availability of in depth transcriptomics, the genesis of C-HPP came from the realization that the proteomic community was well placed to study the full complexity of human proteome. The primary goal of the C-HPP is to constitute a proteomic catalog that should be put in the context of the chromosomal gene sequences in order to promote more effective collaborations with molecular biologists and to shed light on the biological context of proteomics data sets. Chromosome analysis has been addressed to countries who have proven to be active in the proteomics arena, and Spain is in charge of the analysis of chromosome 16.

The Journal of Proteome Research has just published an especial issue covering first steps in this project and the Spanish Consortium has shown preliminary data. The Spanish part of the project is conceived on a multi-centre configuration (16 laboratories), assuming the standards and integration procedures already available in ProteoRed-ISCIII, which is encompassed within HUPO initiatives.

The products of the 870 protein coding genes in chromosome 16 were analyzed in three different types of cells by using gene expression microarray and shotgun proteomics approaches, aiming an ample coverage of chromosome 16. The data obtained during the progress of this project will be integrated with the biology and disease driven project (B/D HPP). The obtained information and the improvements in the employed methodologies throughout the project will allow a better performance on more complex proteomics studies. Among others, these findings shall boost the possibility for multiplexed experiments in clinics a crucial step for achieving better diagnostics.

Spanish human proteome project: dissection of chromosome 16.

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Segura V, Medina-Aunon JA, Guruceaga E, Gharbi SI, González-Tejedo C, Sánchez Del Pino MM, Canals F, Fuentes M, Casal JI, Martínez-Bartolomé S, Elortza F, Mato JM, Arizmendi JM, Abian J, Oliveira E, Gil C, Vivanco F, Blanco F, Albar JP, Corrales FJ.

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