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ESR No. 7
Host Institution: Biotech Vana SL, Valencia
ESR enrolled at: Universitat Pompeu Fabra, Barcelona

Institute	Biotech Vana SL
Lab	
Responsible person	Carlos Llorens, PhD
Job title	Early Stage Researcher: PhD thesis on integrative genomics/proteomics of yeast infections
Job description	<p>Short description:</p> <ul style="list-style-type: none"> - Required degree: MSc in Informatics, Mathematics, Physics, Biology or equivalent - Preferred qualification and expertise: building bio-databases, bioinformatics, computational biology, formal grammars, regular expressions, C++, JAVA, PHP, and Python, Graph theory and Network Systems, Bayesian Method - Duration: 36 months - Language: English (essential), - Contact: Carlos Llorens, PhD, Tel.: +34 961 435 783; Mail: carlos.llorens@biotechvana.com <p>Biotech Vana SL: Biotech Vana SL (BIOTECHVANA) is a SME created in 2006 as a spin-off of the University of Valencia that provides research products and services in Computational Biology and Bioinformatics. The company performs fundamental and applied research including internet services, database design, research projects, state-of-the-art software, and science publishing. The Biotechvana headquarters are located at the European Business and Innovation Centre of Valencia (CEEI). In Biotechvana, Dr. Carlos Llorens leads an interdisciplinary group of biologists and computer engineers. Biotechvana headquarters are located at the European Business and Innovation Centre of Valencia (CEEI) in Valencia. The research premises of Biotechvana consist of 60 m2 of computer lab in the CEEI of Valencian and the cluster of servers of Biotechvana, physically emplaced in the Cientific Park of the University of Valencia.</p> <p>PhD project Objectives: To implement a computational infrastructure for the integrative analysis of disparate highthroughput methodologies (i.e. genomics and proteomics). This infrastructure will form the core of the OPATHY database and will be oriented to enable data-driven discoveries of new biomarkers of yeast infections, by exploiting the data produced in OPATHY and elsewhere. She/he will also use this infrastructure in combination with data-mining approaches to highlight biomarker candidates.</p> <p>Methodology: We will use standard methods on a Linux operative system using the languages php and Java in combination with MySQL and Wikimedia database architecture templates. Data-mining will be based on ontologies</p> <p>Expected Results: Prioritization of potential biomarkers from data-mining approaches. The OPATHY central database and new computational analyses workflows will be produced.</p> <p>Planned secondment(s): P1 CRG (3 months; Y1; integration of analysis pipelines); Illumina PO2 (1 month; Y2; assessment of genomics data types).</p>