



UNIVERSITÀ
di VERONA

Scuola di Dottorato
di SCIENZE DELLA VITA E DELLA SALUTE

Corso di Dottorato in Medicina
Biomolecolare



Annuncio di seminario

Venerdì 1 dicembre 2017 ore 14:30

Aula E – Istituti Biologici

Strada Le Grazie 8, 37134 Verona

Dr. Francesco Raimondi

CellNetworks Excellenz Cluster
University of Heidelberg
Germany

"Leveraging protein structure and mechanistic knowledge to better understand human diseases in the personalized-medicine era"

I'm broadly interested in applying structural and integrative bioinformatics approaches to characterize and combine heterogeneous experimental information, with a special focus on understanding signal transduction mechanisms in health and disease.

I will present the results of an ongoing collaborative project aimed at revealing, through integrative modelling, the structure and function of *LRRK2*, a multi-domain protein with dual GTPase and Kinase activities, which represents the main cause of congenital Parkinson Disease. We have recently proposed the first model of the quaternary structure of this key enzyme, which is now illuminating on new potential ways to allosterically modulate its kinase activity.

I also employ multi-scale methods, spanning from 3D structures to biological pathways, to interpret the functional consequences of protein variations and modifications from large-scale genomics and proteomics datasets. I will show recent applications of these approaches in cancer genomics, discussing their potential as predictive tools for personalized-medicine applications.

Info: daniele.dellorco@univr.it; massimo.donadelli@univr.it