Natural selection in functional pathways: an approach to evolutionary systems biology

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Evolutionary analysis at the molecular level provides new tools to biology by considering the action of natural selection in genes on their functional setting of molecular pathways of their gene products. Gene products function in molecular networks, as such, the position within the network may determine the strength of selection applied to the gene. It is possible to interrogate how selection is distributed across the molecular networks. This analysis may be applied to the pathway level (with a low number of interacting units but a very detailed molecular knowledge), the entire metabolome, or even the whole interactome. We present here all these cases in order to relate selection to the specificity of reactions and their function. This analysis opens the scope of understanding how natural selection works within the biomolecular complexity of life

WHERE?Seminars Room, I2SysBioWHEN?Monday, February 12, 12:30 h

