Understanding a novel mode of non-canonical CaM activation

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Description:

Proyecto asignado a través de la Red Española de Supercomputación (RES [2]).

Calmodulin (CaM) is the main eukaryotic mediator that confers the ability to respond to intracellular Ca2+ oscillations. CaM binds a huge amount of targets and transmit the Ca2+ signalization in a versatile way, making it a suitable pharmacological target. We are investigating and interaction between a peptide and CaM, which is able to modulate de calcium signal into the cellar excitability dampener Kv7 channel. The aim of this project is to translate the wet experiments to in silico systems to describe at an atomic level how different peptides interact with CaM and translate the calcium signalling to proteins. We believe that this non-canonical mechanism of calcium modulation will provide insights to develop new drug applicable to several diseases, such as, epileptogenic epilepsy and Amyotrophic Lateral Sclerosis (ALS).

Links

[1] https://biofisika.org/ [2] https://www.res.es/