



PIRAMID

PROTEIN INTERACTIONS
IN RATIONAL APPROACHES
FOR MEDICINAL
INNOVATIVE DRUGS

Protein-Protein Interaction RhoA



Context :

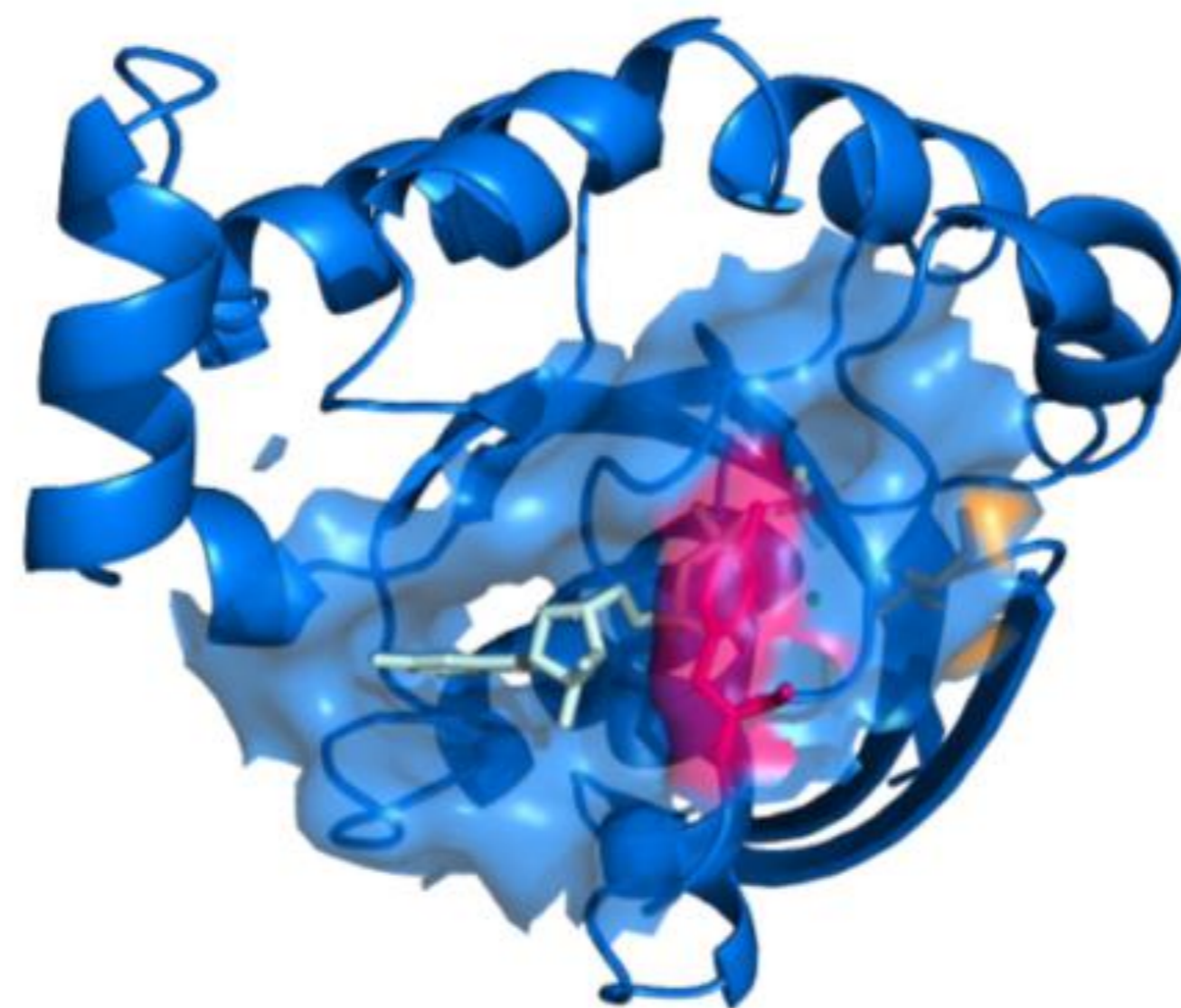
There is an increasing body of evidence supporting a causal role of aberrant activity of **small GTPases of the Rho protein family in human diseases** including cancers, neuronal disorders, pulmonary and cardiovascular diseases, thus identifying Rho protein signaling cascades as potential **targets** for new therapeutic strategies.

RhoA

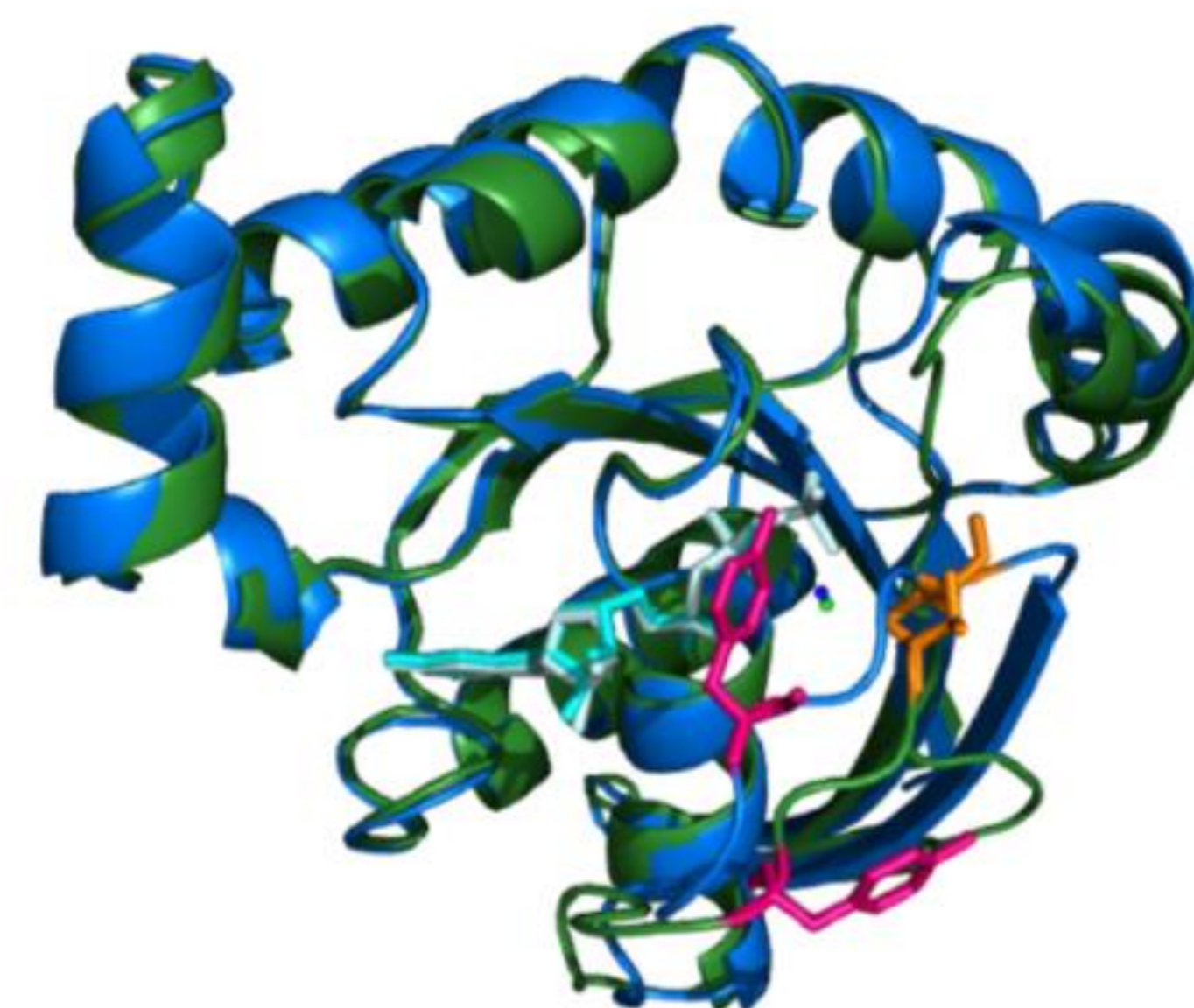
The activity of Rho proteins results from **a tightly regulated balance between the GTP-bound, active state and the GDP-bound, inactive state.**



RhoA-GDP (PDB 1ftn)



RhoA-GTP (PDB 1a2b)



Superposition RhoA-GDP et RhoA-GTP

Goals and ambitions :

The aim of our project is to **develop Rho GEF/GTPase interaction-specific small-molecule inhibitors.** We expected that our project would **lead to the discovery of innovative GEF-specific RhoA inhibitors** with potential therapeutic applications in hypertension.

Resources :

2 PhD

Project proposal Next – project TROPIC

Laboratory **CEISAM**, Laboratory **UFIP** and the **Thorax Institut**



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