## L305

## COMPUTATIONAL STUDY ON GPCR - G PROTEIN INTERFACES

Stefan Mordalski, Andrzej J. Bojarski

Institute of Pharmacology Polish Academy of Sciences, 12 Smetna St, Krakow, Poland

Recent studies show growing interest in targeting the cytoplasmatic interface of GPCRs with drugs [1,2]. New compounds, both petides and small molecules, prove promising pharmacological effects, however the detailed mechanism of interactions with intracellular interface of GPCRs has not been revealed yet.

Since the publication of the  $\beta 2$  Adrenergic receptor in complex with  $G_s$  protein is available [3], the aim of this study is to provide an information about other types of GPCRs interacting with  $G_i$  (Muscarinic M2 receptor and 5-HT<sub>1B</sub> receptor) and  $G_o$  (5-HT<sub>2B</sub> receptor) through bioinformatic analysis and molecular dynamics simulations.

## Acknowledgements:

The study was partially supported by the grant PLATFORMEX (Pol-Nor/198887/73/2013) financed within the Polish-Norwegian Research Programme.

## References:

- 1.) Dowal, L. et al., PNAS, 2011, 108(7), 2951-6.
- 2.) O'Callaghan, K., Kuliopulos, A., Covic, L., J. Biol. Chem., 2012, 287(16), 12787-96.
- 3.) Rasmussen, S. G., et al., Nature., 2011, 477, 549-555.