Food Dyes are Inhibitors of Human Protein Tyrosine Phosphatases (PTP1B) Molecular Docking Studies

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Abstract

Protein Tyrosine Phosphatase 1B (PTP1B) is an enzyme that plays a critical role in down-regulating insulin signaling through dephosphorylation of the insulin receptor. Inhibitors of PTP1B showed increased insulin sensitivity and normalize plasma glucose level and thus are use full therapeutic agents for the treatment of diabetes. The aim of the current study is to identify PTP1B inhibitors by means of virtual screening with docking. Six food dyes molecules have been screened and based on energy MolDok scores and hydrogen bonding interactions. L5, L1 potential inhibitors were identified in cavity1 and 2 respectively.

References

- Östman A. and Böhmer F. D. 2001. Regulation of receptor tyrosine kinase signaling by
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