BIOTECHNOLOGY-2011
doi:10.4172/jpb.1000240

OMICS Group Conferences
Accelerating Scientific Discovery

World Congress on
Biotechnology

In silico docking analysis of piperine amino acid analogues against carcinogenic activating enzymes

M Taraka Ramji, K Deepthi, K Aruna Lakshmi and P Uma devi

GITAM University, India

Black pepper (Piper nigrum) is the most used spices because of its distinct biting quality attributed by the alkaloid, piperine. In recent decades, black pepper, its extracts and piperine, have been reported to have many physiological effects. Piperine has been documented to enhance the bioavailability of curcumin against cancers and many other diseases. More recent reports suggest that amino acids increase the bioavailability when tagged to a compound. In the present study, piperine was conjugated with twenty different amino acids and docked using molecular docking tools such as Molegro Virtual docker against different carcinogenic activating receptors. The piperine analogues with Trp, Try, Phe, His were found to have a greater inhibiting activity than piperine itself. The amino acids analogues of piperine are being synthesized to validate the results of in silico studies.