CHAPTER 7

CONCLUSION
7. Conclusion

In conclusion, UD modulated muscarinic cholinergic system, autophagy, Smo-Gli pathway, insulin signaling pathway and glucose homeostasis in hippocampus resulting in neurocognitive improvement during co-morbidity of depression and diabetes. In addition, UD presents a notable anti-inflammatory, antioxidant and anti-apoptotic effects, which appears to be related with the protection of hippocampal neurons during chronic stress and diabetes. Phytochemical analysis revealed the presence of flavonoids and phenolics like scopoletin, gentisic acid, esculetin, quercetin and rutin in the UD extract, which might possibly involved in the anti-inflammatory, antioxidant and anti-apoptotic effects. UD extract might prove to be effective for the chronic stress and diabetes related neurological disorders. Future studies are warranted to understand the role of bioactive constituents like scopoletin, gentisic acid, esculetin, quercetin and rutin in stress and/or diabetes mediated neurological disorders.