CHAPTER 8

Future aspects

CHAPTER 8

Future scope

Using glucose-loaded and STZ-induced hyperglycemic rats, the hypoglycemic efficacy of a traditional herbal combination (PHE) including Harra fruit, Bahera fruit, Kalmegh herb, Daruharidra stem, Harsingar leaf, and Agnimantha leaf extract was assessed in Wistar albino rats. Studies have demonstrated that this PHE has demonstrated encouraging outcomes that are on equivalent with the reference standard metformin and the commercially available Dabur madhu rakshak (DMR). Although the precise biological active ingredient causing the hypoglycemic effect has not yet been identified, a bioinformatic analysis suggested that bioactive molecules in it might be useful in the management of diabetes. PHE was discovered to be another important prospective strategy for lowering the hyperglycemic index against the pathogenesis of diabetes mellitus. It changed the composition of both the beneficial and harmful gut microbiota. Because of the enhanced phytochemicals and regenerated beneficial gut microbiota-associated SCFAs in the dual therapy of PHE, we discovered unexpected impacts on the hypoglycemic effects of PHE in the management of DM in this investigation. Finally, our study strengthened the possibility that PHE and possibly gut microbiota metabolites from this investigation could one day be novel medications and approaches in the field of pharmacological intervention for diabetes.

When taken as a whole, the encouraging PHE reported in this study may prove to be a lead medication option in the future that helps with diabetes management. Thus, the best ways to incorporate PHE into the pharmaceutical treatment of diabetes should be revealed by the results of future clinical trials (proposal authorized and registered at CTRI with study REF/2022/05/0546678 and reg. no. for this study, CTRI/2022/06/043069).