108 SCREENING OF MENTHA CORDIFOLIA OPIZ BUFFER CRUDE EXTRACT AS A PUTATIVE HIV-1 POST-TRANSLATIONAL PROTEASE INHIBITOR

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Background In the Philippines, Vicroriano conducted a preliminary studyshowing the effect of Philippine local mint MenthacordifoliaOpiz on HIV-1 replication in latently infected cells, the findings provided the evidence that an anti-HIV activity is contained in the plant extract. However, which viral replication step was not elucidated. To expound the mechanism of inhibition of the Philippine mint leaf crude extract a preliminary study was done to specify anti-HIV-1 protease activity and

exclude other HIV-1 viral enzymes and other viral components.

Objectives In this study, it focused primarily on viral protease for which structural information is currently available. The study was on the basis of the backbone folds of the HIV-1 protease, starting with the folds display similarity to those of cellular protease -aspartic protease pepsin.

Methods ELISA based spectrophotometry was employed to determine the inhibitory effect of the plant crude extract agaisnt pepsin which is homologous to HIV-1 protease. Total Flavonoid Contest was determine to elucidate the concemtration of flavonoid in the plant extract tat mey be the putative phytomecal group responsible for the inhibition.

Result The result showed 93.27% inhibition of aspartyl protease pepsin that supports a putative action of the plant extract impedes the post-translational HIV-1 viral protease. The qualitative result of Cyanidin test shown in the study indicated the presence of flavonoids, most probably flavones, in the amount of 353.44±2.1 mg/g Quercitin equivalent flavonoid. This phytochemical in the mint buffer extract may be the putative active group that is responsible in the inhibition of HIV-1 viral protease.

Conclusion The high inhibition percentage (%) of planst extract agaisnt aspartyl protease pepsin supports a putative action of the plant extract impedes the post-translational HIV-1 viral protease. And the phytochemical flavonoid in the mint buffer extract may be the putative active group that is responsible in the inhibition of HIV-1 viral protease.

REFERENCES

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