THE EVALUATION OF ANTIHYPERTENSIVE PLANTS UTILIZED BY BRUNEIAN MALAY IN PAPAR USING OSMOTIC FRAGILITY TEST

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ABSTRACT

THE EVALUATION OF ANTIHYPERTENSIVE PLANTS UTILIZED BY BRUNEIAN MALAY IN PAPAR USING OSMOTIC FRAGILITY TEST

Use of medicinal plants are traditional remediation that have been practiced by the local communities to treat various diseases including hypertension. Hypertension is a chronic medical condition where the blood is flowing in arterial blood vessels at elevated pressure. The purpose of this research is to study the ability of medicinal plants used in the treatment of hypertension by Brunei Malay ethnic in Papar Sabah, and its effect in protecting the erythrocyte membrane from the haemolysis through the osmotic fragility test. Data collection was obtained from the interview and semi-structured questionnaire by using snowball technique. A total of 22 medicinal plants species that belong to 19 families were recorded in the studied areas. The medicinal plants were collected for further preserved, documented and extracted. The collected data from the interviewed was then measured quantitatively by using Relative Frequency of Citation (RFC). The results come out with four plants species that have high RFC values, which are *Orthosiphon stamineus* (67.5%), *Annona muricata* (30.0%), *Averrhoa bilimbi* (30.0%) and *Gynura procumbens* (30.0%) and were further tested by using osmotic fragility test to evaluate their potential in protecting the erythrocyte membrane from the haemolysis. These four tested plants showed the ability to inhibit the haemolysis of erythrocyte depending upon the concentration of plant extract. It is strongly recommended to strengthen the policies in plant conservation and reforestation. Furthermore, conducting a study more on the underutilized plants since there are still abundant of natural resources that were still underutilized and undocumented. Lastly, improving the plants extraction method such as ethanolic plant extract to increase the effectiveness of plant extract in an experiment.