

**The Potential of Salted Anchovy (*Stoleporus sp*) Therapy On Protein Profiles and Autoantibody Thyroid Peroxidase Expression (TPOAB) on Rats Hypothyroidism Model Induced by Canine's (caTg)Thyroglobulin**

**ABSTRACT**

Hypothyroidism is a condition in which the thyroid gland is unable to produce the thyroid hormones of *thyroxine* ( $T_4$ ) and *triiodothyronine* ( $T_3$ ). Salted anchovy containing iodine serves to restore the lack of thyroid hormone in the body. The purpose of this study was to study the potency of salted anchovy (*Stolephorus sp*) therapy on protein profiles and *autoantibody thyroid peroxidase* (TPO) expression in rats (*Rattus norvegicus*) hypothyroidism model. In this study, animals were divided into 5 groups: negative control (A), positive control which induced by canine thyroglobulin dose of 200  $\mu\text{g/ml}$  (B), hypothyroidism were treated with salted anchovy therapy dose 6 mg/kg BB for 7 days (C), 14 days (D), and 21 days (E). Parameters measures were protein profiles using SDS-PAGE and the expression of thyroid peroxidase (TPO) using *western blot*. The result showed that protein profiles obtained specific band with molecular weight of 40 kDa (haptoglobin) in group B, C, D, and E. It was a marker of inflammatory reaction in rats (*Rattus norvegicus*). The TPO autoantibodies expression using *western blot* method, showed a protein expression with molecular weight of 72 kDa which is thyroid peroxidase (TPO). On the positive control (hypothyroidism), treatment 7 days and 14 days of therapy showed the high intensity of darker colors on membrane compared with 21 days of therapy. The conclusion from this research, therapy with anchovy (*Stolephorus sp*) salted for 21 days could be used as therapeutic agents of hypothyroidism.

**Keywords:** Anchovy (*Stolephorus sp*), canine thyroglobulin (caTg), Hypothyroidism, protein profile, autoantibody thyroid peroxidase expression