

ABSTRACT

IDENTIFICATION *SINGLE NUCLEOTIDE POLYMORPHISM* (SNP) OF THROMBOSPONDIN-RELATED ANONYMOUS PROTEIN GEN FROM MALARIA *falciparum* PATIENTS IN WORKING AREA PRIMARY HEALTH CARE OF HANURA, PESAWARAN REGENCY LAMPUNG PROVINCE

By

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Background: Malaria is a disease caused by the *Plasmodium* parasite in erythrocytes as evidenced by positive microscopic examination, there are antigens, and the discovery of Deoxyribo Nucleid Acid / Ribonucleid Acid (DNA / RNA) Plasmodium parasite on Polymerase Chain Reaction (PCR). *Plasmodium falciparum* is one of the most deadly species of malaria, and there are many genes that support this parasite to infect, so there are so many genetic variations produced by one gene.

Method: This type of research uses a survey research design with descriptive method. The study sample was obtained from 18 Stored Archived Biological Materials (ABM). This research was conducted using the PCR method which was analyzed by gel electrophoresis and continued to the sequencing method to detect genetic variations of the *Plasmodium falciparum Thrombospondin-related anonymous protein* (PfTRAP) gene.

Result: There were 18 samples that had been carried out nested PCR, then obtained variations in the length of the band in each sample

Conclusion: There are genetic variation in the *Thrombospondin-related anonymous protein* (TRAP) gene.

Keyword: Malaria, *Plasmodium Falciparum Thrombospondin-related anonymous protein* (PfTRAP), *Polymerase Chain Reaction* (PCR), Sequencing.

ABSTRAK

IDENTIFIKASI *SINGLE NUCLEOTIDE POLYMORPHISM* (SNP) GEN *THROMBOSPONDIN-RELATED ANONYMOUS PROTEIN* (TRAP) PADA PENDERITA MALARIA *falciparum* DI WILAYAH KERJA PUSKESMAS HANURA, KABUPATEN PESAWARAN, PROVINSI LAMPUNG

Oleh

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Latar Belakang: Malaria merupakan penyakit yang disebabkan oleh parasit *Plasmodium* di dalam eritrosit dibuktikan dengan pemeriksaan mikroskopis yang positif, terdapat antigen, serta ditemukannya *Deoxyribo Nucleid Acid/ Ribonucleid Acid* (DNA/RNA) parasit *Plasmodium* pada pemeriksaan *Polymerase Chain Reaction* (PCR). *Plasmodium falciparum* adalah salah satu spesies yang paling banyak menyebabkan kasus malaria dan paling mematikan, serta terdapat banyak gen yang mendukung parasit ini untuk menginfeksi, sehingga banyak sekali variasi genetik yang dihasilkan oleh satu gen.

Metode: Jenis penelitian ini menggunakan rancangan penelitian survey dan bersifat deskriptif. Sampel penelitian diperoleh dari Bahan Biologi Tersimpan (BBT) sebanyak 18 sampel. Penelitian ini dilakukan dengan menggunakan metode PCR yang dianalisis dengan gel elektroforesis serta dilanjutkan ke metode sekuensing untuk mendeteksi variasi genetik gen *Plasmodium falciparum Thrombospondin-related anonymous protein* (PfTRAP).

Hasil: Terdapat 18 sampel yang telah dilakukan nested PCR, kemudian diperoleh variasi panjang pita pada setiap sampel.

Kesimpulan: Terdapat variasi genetik gen *Thrombospondin-related anonymous protein* (TRAP).

Kata Kunci: Malaria, *Plasmodium Falciparum Thrombospondin-related anonymous protein* (PfTRAP), *Polymerase Chain Reaction* (PCR), Sekuensing.