

**ABSTRACT****Identification of *Plasmodium* species based on microscopy and *Polymerase chain reaction* in asymptomatic malaria case at Barito Utara district of Middle Kalimantan****Widho Aspriyanto**

Asymptomatic malaria can be a serious problem for controlling. Until now, the identification of *Plasmodium* species in asymptomatic malaria cases has not yet been examined at Barito Utara district of Middle Kalimantan, where is certified to be an elimination malaria since 2014. This study aimed to find the prevalence of *Plasmodium* species in asymptomatic malaria cases at Barito Utara district of Middle Kalimantan based on microscopic examination and nested PCR method. The study used a cross sectional study design that was conducted by informed consent at Sei Rahayu 1 in April 2016. *Plasmodium* parasites were identified by Giemsa stained thick and thin smear under microscope and by nested PCR. In total 219 people were willing to participate in this study. Thirteen of 219 people who had the body temperature  $<37,5^{\circ}\text{C}$  suffered from malaria falciparum by microscopic (13/219; 5,9%) and by *nested* PCR. In contrast, the microscopic examination under student resulted 16 of 219. It suggested that the asymptomatic malaria identification due to the low density parasite needs to be confirmed by *nested* PCR. This study concluded that the prevalence of asymptomatic malaria falciparum was 5.9% occurred at elimination malaria areas and larva *Anopheles* were found in Sei Rahayu 1, Barito Utara Middle Kalimantan. In addition, it is necessary to conduct the regular active surveillance in elimination malaria areas in order to reduce malaria transmission.

Key words: Identification of *Plasmodium*, asymptomatic malaria and Barito Utara district.