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## Introduction to Malaria species

There are 5 species of malaria which affect man

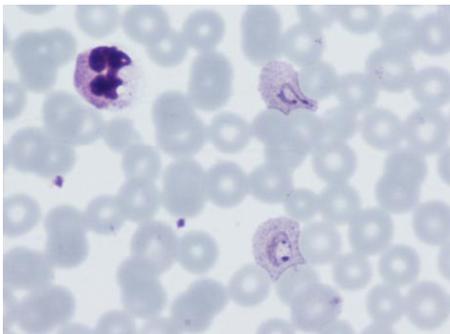
- *Plasmodium falciparum*
- *Plasmodium vivax*
- *Plasmodium ovale*
- *Plasmodium malariae*
- *Plasmodium knowlesi*

### Stages of the malaria parasite seen in the blood

#### The trophozoite stage.

This stage is the most commonly seen; it is often referred to as the ring stage, although it sometimes takes the form of an incomplete ring.

Because the trophozoite form is a growing stage, the parasite within the red cell may vary in size from small to quite large. Pigment appears as the parasites grows. Malaria pigment - haemozoin, is a metabolic by-product of the parasite. It does not stain, but has a colour of its own, which may range from pale yellow to dark brown or black.



#### The schizont stage.

At the schizont stage the parasite starts to divide. This is referred to as schizogony and takes place in the liver and in the peripheral blood.

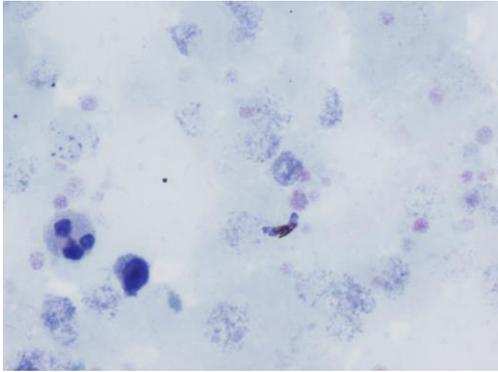
The parasite reproduces by simple division. There are several obvious phases in this stage, ranging from parasites with two chromatin pieces to parasites with a number of chromatin dots and definite cytoplasm - merozoites.

### **The gametocyte stage.**

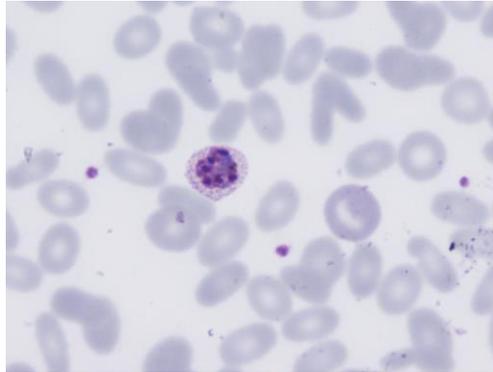
The gametocyte stage is sexual in that the parasites become either male or female in preparation for the next stage, which takes place in the stomach of the female Anopheline mosquito.

Gametocytes may be either rounded or banana/crescent in shape, depending on the species.

The way in which the parasite takes up the stain is usually an indication of which sex the gametocytes are. Male gametocytes appear to stain more of a “pink” colour than do the female gametocytes.



Gametocyte



Schizont