

**INFLUENCE OF MENSTRUAL CYCLE STAGES ON NORMAL
MICROBIAL FLORA OF THE REPRODUCTIVE TRACT IN FEMALE
BABOONS (*Papio* species)**

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By

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ABSTRACT

Qualitative and quantitative studies in humans as well as animal model studies have confirmed that the vaginal flora is a dynamic and closely interrelated system. Detailed studies on the effects of the phase of the menstrual cycle which depends on the levels of reproductive hormones, on the vaginal microbial flora are lacking, and there have been no studies on non-human primates, which are considered to be appropriate models for human studies. In this study, the effect of phase of the menstrual on normal vaginal flora was investigated in 59 baboons of reproductive age. Vaginal swabs were obtained once from each animal and cultured on appropriate media for bacterial growth. Identification of bacteria was done on the basis oxygen utilization, culture media, morphology, Gram stain and biochemical reactions.

Many facultative aerobes and anaerobes were identified. Twenty-six different bacterial species were isolated and identified from the olive baboons, and fifteen from the yellow baboons. The most common bacterial isolates were: *Streptococcus viridans*, *Corynebacteria* species, *Proteus vulgaris*, *Staphylococcus aureus*, *Peptococcus* species, *Lactobacillus*, *Staphylococcus* (coagulase negative), *Escherichia coli* and *micrococcus* species. Vaginal pH was acidic and ranged from 4.7 to 6.7. Twenty one different bacterial isolates were recovered from animals in follicular and menstrual phases while all 26 isolates were recovered from animals in luteal phase. There were no major variations in the normal vaginal flora isolated at different phases of the menstrual cycle. Acidic vaginal environment and presence of *Lactobacilli* in the vagina of both the *Papio anubis* and *Papio cynocephalus* may suggest that these animals are suitable models for studies of

reproductive tract infections and sexually transmitted infections which affect the reproductive health of women.