



# CHARACTERIZATION OF WOOLLY MONKEY'S (*Lagothrix poeppigii*) MENSTRUATION



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## Introduction

Reproductive information is critical for the development of management strategies for any species. The menstrual cycle consists of three phases: menstrual phase, proliferative phase and secretory phase. *Lagothrix poeppigii* is considered "Vulnerable" by the IUCN, it is the most frequently hunted non-human primate in the Amazon region. Poeppig's woolly monkeys belongs to New World primates. Woolly monkey females have a 21-day ovarian cycle. However, the reproductive biology of *Lagothrix poeppigii* is poorly known.



## Objectives

### General:

Characterization of *Lagothrix poeppigii*'s menstrual cycle.

### Specifics:

- Endometrial thickness.
- Distribution and evolution of blood vessels.
- Distribution and evolution of endometrial glands.
- Expression of type IV collagen.

## Materials and methods

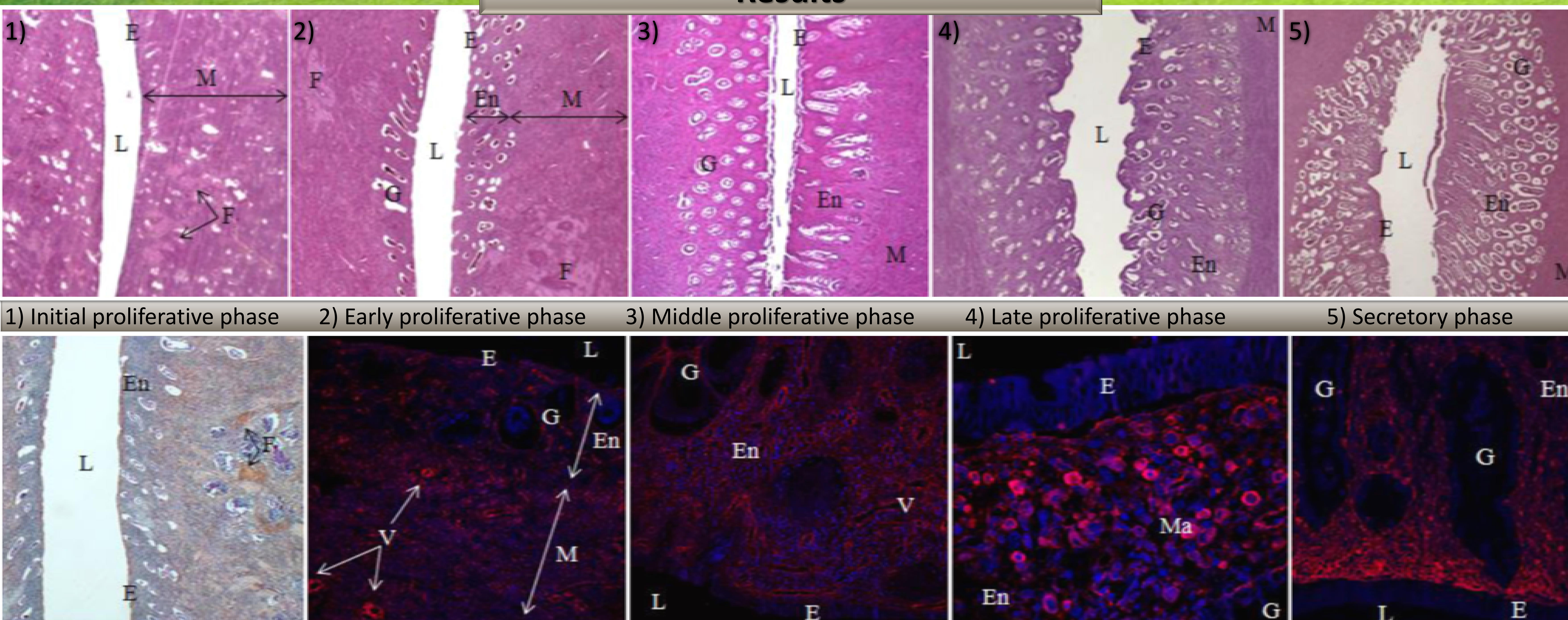
Recollection of genital organs from 60 adult females in the Peruvian Amazon.

Ovaries and uterus samples embedded in paraffin wax.

Methods:

- Measurement of ovarian structures.
- Haematoxylyn-eosin and haematoxylin-acid phosphotungstic.
- Immunohistochemistry of type IV collagen.

## Results



Horizontal section of uterus samples. L: uterus light; E: uterus epithelium; M: myometrium; En: endometrium; F: fibrin; G: endometrial glands; V: blood vessels; Ma: macrophages. Haematoxylin-eosin, phosphotungstic acid-haematoxylin (PTAH), immunohistochemistry.

## Conclusions

- 1) *Lagothrix poeppigii* has an ovulatory cycle similar to the women's cycle.
- 2) Changes observed in the endometrium during the proliferative phase and the secretory phase, correspond to those of a menstrual cycle.
- 3) Typical endometrial detachment and hemorrhage of the menstrual cycle haven't been observed in any sample.
- 4) The expression of type IV collagen follows the same pattern as in humans, becoming very evident during the secretory phase.
- 5) The presence of fibrin may indicate that some type of microscopic bleeding has occurred in the endometrium.
- 6) The obtained results suggest that *Lagothrix poeppigii* presents menstrual cycle without external menstruation, like other New World monkeys.