

ESTRUS SYNCHRONIZATION

Lecture 1

Introduction, estrous cycle, endocrine regulation and hormonal concentration

Content Creator

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Introduction

- **Animal husbandry – Back bone of rural economy**
- **70 per cent people depend on Agriculture and Animal Husbandry activity**
- **Highest milk producer in the world**
- **Low milk yield/cow**
- **Desi cow: Low genetic makeup**
- **Exotic & Crossbred cow: early maturity, high milk yield, but less disease resistant & more infertility problem**

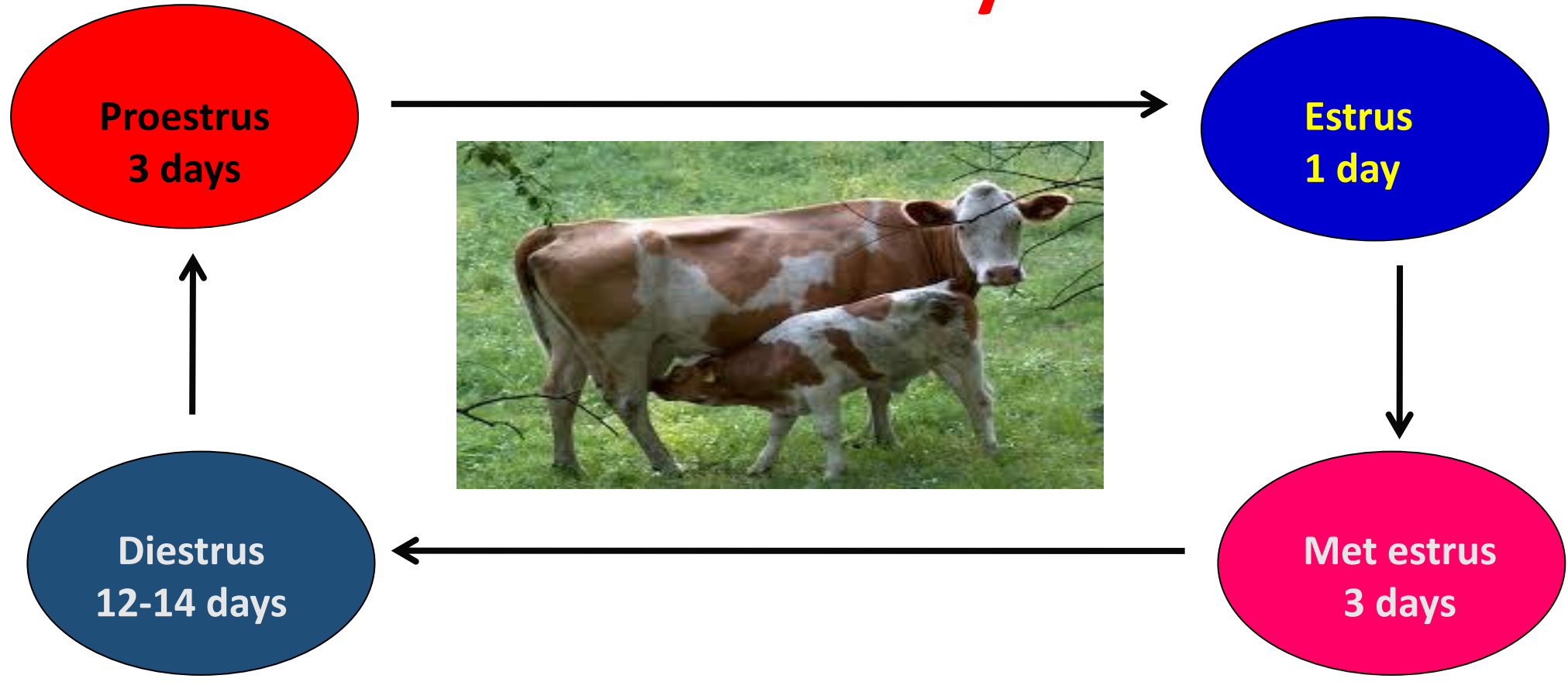
Ideal dairy cow should have

S.No.	Parameters	Optimum age/value
1	Age at puberty	18 months
2	Age at First calving	30 months
3	Conception rate	70 per cent
4	AI per conception	1.3 to 1.7
5	Calving interval	12 to 18 months
6	Calving to conception	60 to 90 days

Delay in conception rate after 90 days of parturition lead to

S.No.	Parameters	Details
1	Loss of milk production	32 per cent
2	Medicine cost	13 per cent
3	Calf loss	13 per cent
4	Added breeding cost	11 per cost
5	Dry animal maintenance	31 per cent

Bovine estrous cycle



- ✓ Physiological functional rhythm of the reproductive system is called as **estrous cycle**
- ✓ Poly estrus
- ✓ Length of estrus cycle – 18-21 days

Estrous Cycle

Proestrus

Estrus

Metestrus

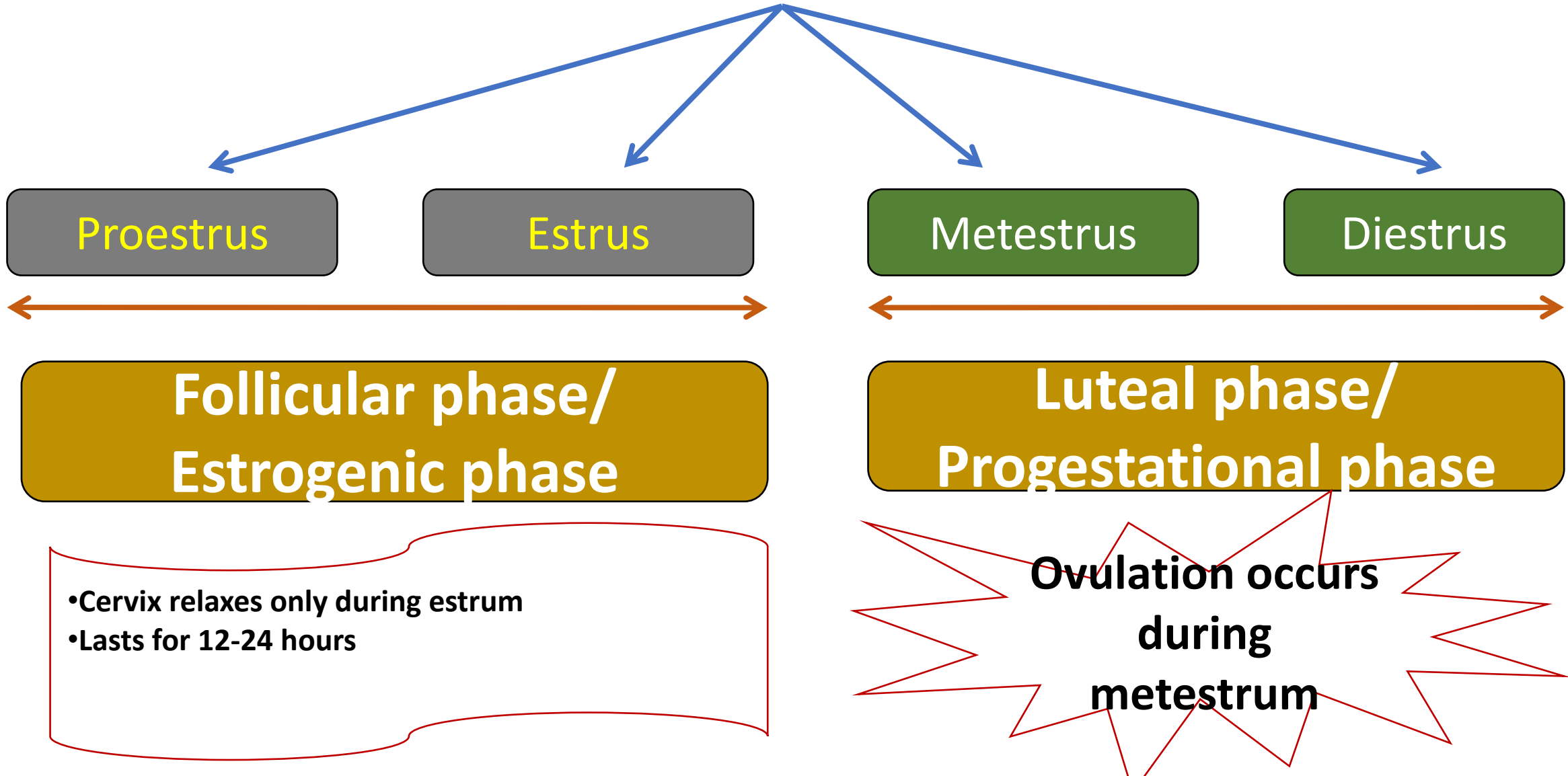
Diestrus

Follicular phase/
Estrogenic phase

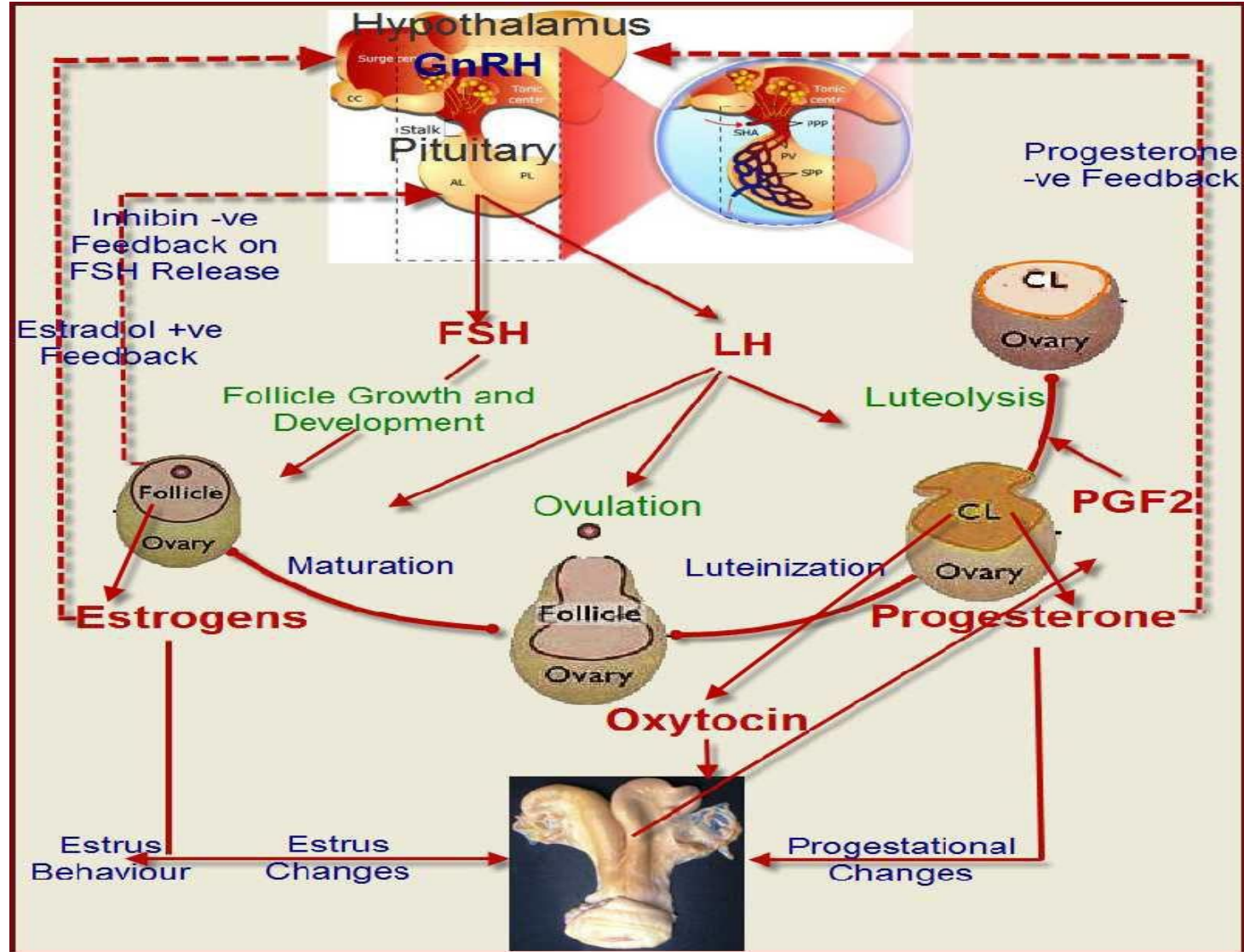
Luteal phase/
Progestational phase

- Cervix relaxes only during estrum
- Lasts for 12-24 hours

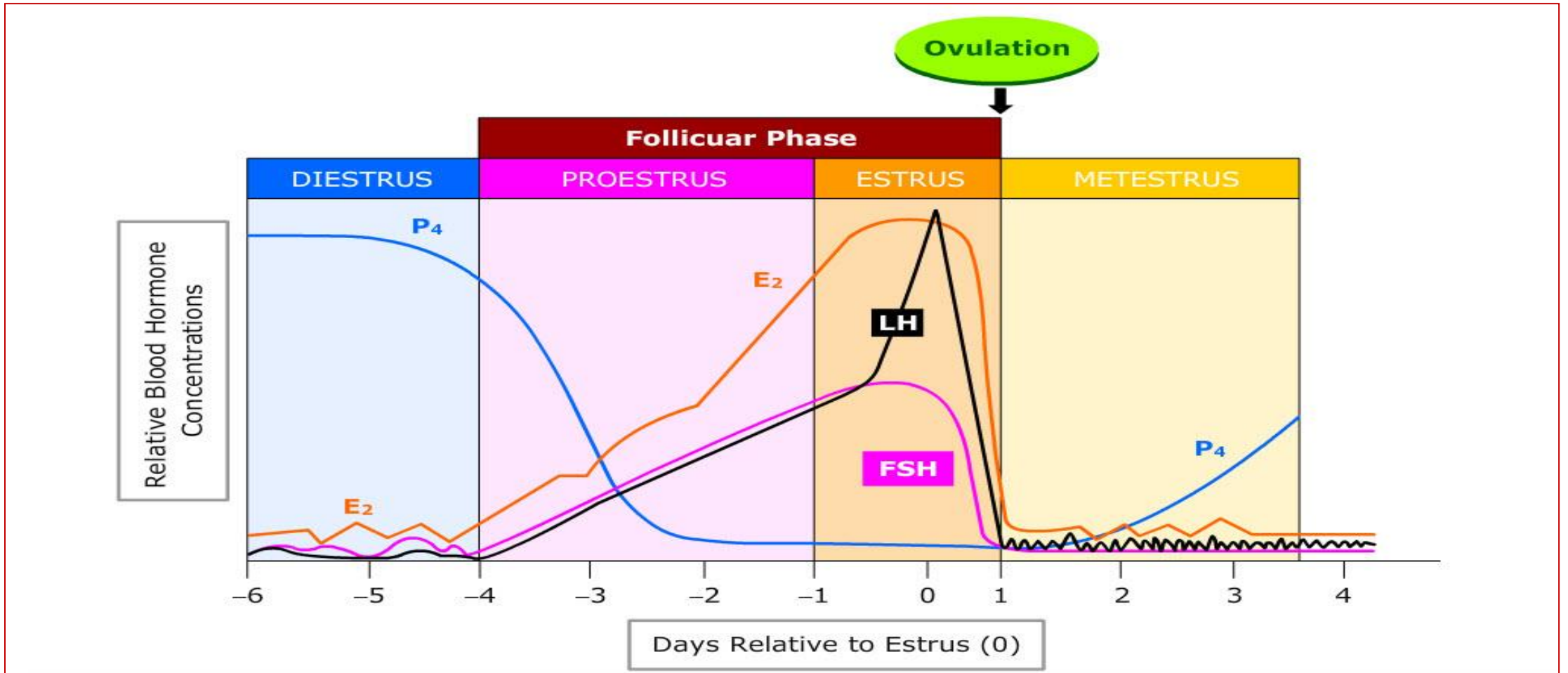
Ovulation occurs
during
metestrum



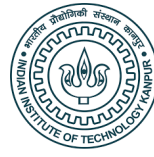
Endocrine Control of Oestrus Cycle



Hormone Concentrations During the Follicular Phase



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THANK YOU