**INTRODUCTION**

- Mediterranean female goats show a clear seasonality of their reproductive activity. This seasonality is controlled by photoperiod but it is strongly influenced by different factors, like level of nutrition and neuroendocrinological systems.
- There are very few studies on goats about the role of the different neuroendocrinological mechanisms on the seasonal variations of the reproductive activity of female goats.

**AIMS**

- Determine the role of different neuroendocrinological systems (opioidergic, dopaminergic, and serotonergic systems) in the control of LH secretion in Mediterranean goat females and whether such role could be modified by nutrition during the onset of the seasonal anoestrus.

**MATERIAL AND METHODS**

**Aims**

- Determine the role of different neuroendocrinological systems (opioidergic, dopaminergic, and serotonergic systems) in the control of LH secretion in Mediterranean goat females and whether such role could be modified by nutrition during the onset of the seasonal anoestrus.

**Treatments during the onset of the seasonal anoestrus**

- **Naloxone**
  - Opiate receptor antagonist
- **Cyproheptadine**
  - Serotonergic 5-HT2/5-HT1c receptor antagonist
- **Pimozide**
  - Dopaminergic D2 receptor antagonist

**Results**

A clear effect of level of nutrition was observed on mean LH concentrations before injection of the different antagonist (0.33 ng/mL vs 0.16 ng/mL, respectively, P<0.001).

**CONCLUSIONS**

Results provide evidence that opioidergic or serotonergic systems seem not involved in the inhibition of LH secretion at the onset of the seasonal anoestrous. However, the ability of pimozide to increase LH concentrations could be enhanced by a higher plane of nutrition in Mediterranean goat females.

**Acknowledgements**

This work was supported by Grant AGL2006-01426 from C.I.C.Y.T. (Spain).