

## 2<sup>nd</sup> International Conference on **Endocrinology**

October 20-22, 2014 DoubleTree by Hilton Hotel Chicago-North Shore, USA

### **Metoclopramide-induced hyperprolactinemia effects on the pituitary and uterine prolactin receptor expression**

Vinicius Cestari do Amaral, Gustavo Arantes Rosa Maciel, Katia Candido Carvalho, Rodrigo Rodrigues Marcondes, Jose Maria Soares Junior and Edmund Chada Baracat

University of Sao Paulo, Brazil

In this work we have evaluated the gene expression profile of prolactin and prolactin receptor in the pituitary and the uterus of female mice with metoclopramide-induced hyperprolactinemia treated with estrogen and/or progesterone. For this purpose, 49 Swiss female mice were allocated to seven groups. Study followed a 50-day treatment with metoclopramide, progesterone and estrogen. Our results showed that in the pituitary, metoclopramide-induced hyperprolactinemia increased prolactin expression. In the castrated animals, progesterone, with or without estrogen, produced an increase in prolactin. Pituitary prolactin receptor and the estrogen and progesterone treatment were responsible for the rise in PRLR-S2. In the uterus, no differences in prolactin expression were found between the different study groups. PRLR-S1 had its expression reduced in all castrated animals as against the castrated group treated with vehicle. In the noncastrated animals, PRLR-S2 rose in the metoclopramide-treated group, and, in the castrated animals, its expression diminished in all groups in relation to the vehicle-treated castrated controls. An increase in PRLR-S3 was found in the oophorectomized animals treated with a combination of estrogen and progesterone. PRLR-L rose in the oophorectomized animals treated with progesterone in isolation or in association with estrogen. These findings suggest that metoclopramide associated to progesterone or estrogen may determine an increase in pituitary prolactin and PRLR-S2 expression. The estrogen-progesterone may enhance the expression of PRLR-S3 and PRLR-L isoform of prolactin receptor.

#### **Biography**

Vinicius Cestari do Amaral has completed his PhD at the age of 28 years (2012) from University of Sao Paulo. Today, his post-doctoral research aims to analyze the protein expression of prolactin and its receptors in the uterus and evaluate the presence and methylation degree of genes related to prolactin.

[vcdoamaral@gmail.com](mailto:vcdoamaral@gmail.com)