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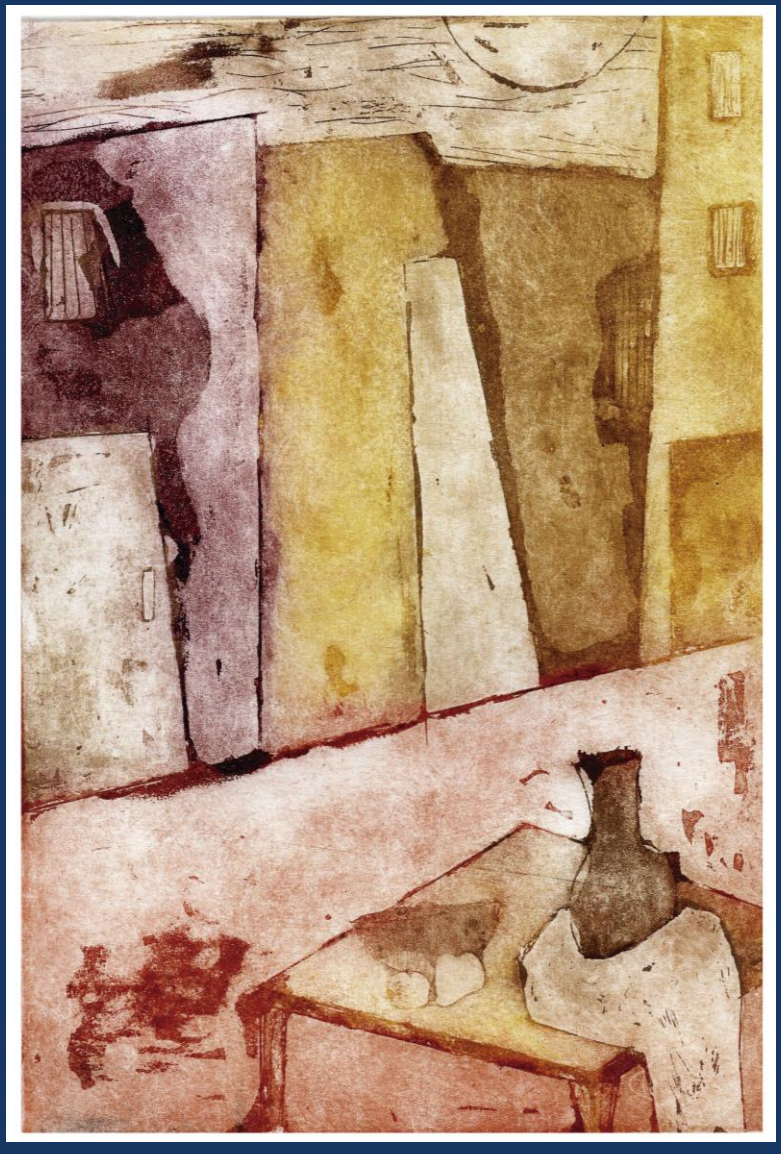

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REUNIÓN ANUAL DE SOCIEDADES DE BIOCIENCIA 2019

LXIV Reunión Anual de la
Sociedad Argentina de Investigación Clínica (SAIC)

LI Reunión Anual de la
Asociación Argentina de Farmacología Experimental (SAFE)

XXI Reunión Anual de la
Sociedad Argentina de Biología (SAB)

XXXI Reunión Anual de la
Sociedad Argentina de Protozoología (SAP)

IX Reunión Anual de la
Asociación Argentina de Nanomedicinas
(NANOMED-ar)

VI Reunión Científica Regional de la Asociación Argentina
de Ciencia y Tecnología de Animales de Laboratorio
(AACyTAL)

con la participación de
The Histochemical Society

13 - 16 de noviembre de 2019
Hotel 13 de Julio - Mar del Plata

EDITORES RESPONSABLES

Dra. Mónica Costas
Dra. Gabriela Marino
Dr. Pablo Azurmendi

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ANNUAL MEETING OF BIOSCIENCE SOCIETIES 2019

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Asociación Argentina de Nanomedicinas
(NANOMED-ar)

VI Regional Scientific Meeting of Asociación Argentina
de Ciencia y Tecnología de Animales de Laboratorio
(AACyTAL)

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CHIEF EDITORS

Dra. Mónica Costas
Dra. Gabriela Marino
Dr. Pablo Azurmendi

weeks (75.30 %; p<0.05). At all the times evaluated, the LXRs expressions were increased in liver (LXRa: 11.70-42.24 % and LXRb: 29.00-100.60 %; p<0.05) and hypothalamus (LXRa: 8.92-29.67 % and LXRb: 25.50-49.52 %; p<0.05), but 2 weeks of HF diet did not modify the hypothalamic LXRa expression. The correlational studies considering all the weeks together revealed that TC and/or TG levels significantly correlated with both LXRs expression in liver (negatively to LXRa and positively to LXRb) and hypothalamus (both negative). The obtained results add relevant information about the role of LXRs on lipid homeostasis. Also, the hypothalamic LXRs results reinforce the idea that these receptors are sensitive to peripheral changes caused by dietary habits Supported by CONICET-PIP860, CONICET-PIP00243 and PIO-CONICET-022 grants.

0206 - HISTIDINE DECARBOXILASE INHIBITORS IN COMBINATION WITH CARBOPLATIN AS A NEW THERAPEUTIC OPTION FOR THE TREATMENT OF LEYDIG CELL TUMORS

Adriana María Belén ABIUSO (1) | María Luisa VARELA(1) | Marcos BESIO MORENO(1) | Juan Manuel LAZZATI(2) | Omar PIGNATARO(1) | Alicia BELGOROSKY(2) | Esperanza BERENSZTEIN(2) | Carolina MONDILLO(1)

IBYME-CONICET (1); HOSPITAL DE PEDIATRÍA JUAN P. GARRAHAN - SERVICIO DE ENDOCRINOLOGÍA (2)

Testicular Leydig cell tumors (LCT) are endocrine tumors which lead to various clinical complications in boys and adults. To date, carboplatin (CP) and orchiectomy are considered the gold standard for LCT management. However, treatment-related infertility highlights the need for new therapeutic options. We have previously shown that histamine (HA), a biogenic amine synthetized by Histidine Decarboxylase (HDC), plays a role as autocrine growth factor in R2C and MA-10 Leydig tumor cells, the former characterized by aromatase (CYP19) overexpression. Given that both cell lines express high HDC levels as human pediatric LCT, herein we evaluated the efficacy of HDC inhibitors (a-MHD and EGCG, synthetic and natural, respectively) alone or in combination with CP, as anti-LCT agents. In vitro: R2C and MA-10 cells were treated with HDC inhibitors for 48 h and then subjected to [3H]-Thymidine incorporation to assess cell proliferation. C57 x BALB/c offspring (F1) and Swiss Nu/Nu mice were injected with MA-10 cells and R2C cells to generate allograft and xenograft LCT models, respectively. When LCT volume reached 40 mm^3, mice were treated every other day with a-MHD or EGCG, alone or combined with CP. a-MHD and EGCG decreased R2C and MA-10 cell proliferation in vitro (p<0.01). In F1 mice, a-MHD + CP was more effective than CP alone at reducing tumor growth (56 vs. 38 %, p<0.05), whereas EGCG had no effect. In Swiss Nu/Nu mice, EGCG was even more effective than a-MHD at enhancing CP anti-tumor potential (p<0.0001), possibly because R2C tumors rely on CYP19 overexpression for sustained tumor growth and EGCG can inhibit CYP19 expression as well as HDC activity. Conclusion: HDC inhibitors increase the anti-tumor effect of CP in murine LCT models and could be a promising therapeutic option in patients. EGCG is known to protect spermatogenesis against irradiation in vivo, underscoring the importance of our results in terms of fertility preservation.

0292 - PROGESTERONE AND ESTRADIOL MODULATE GONADOTROPIN-RELEASING HORMONE EFFECT OVER LH SURGE IN THE SOUTH AMERICAN PLAINS VIZCACHA, LAGOSTOMUS MAXIMUS.

Sofia PROIETTO (1) | María Clara CORSO(1) | Santiago Andrés CORTASA(1) | Alejandro Raúl SCHMIDT(1) | Pablo Ignacio Felipe INSERRA(1) | Kevin FEEHAN(1) | Noelia DI GIORGIO(2) | Alfredo VITULLO(1) | Julia HALPERIN(1) | Verónica Berta DORFMAN(1)

CEBBAD, UNIVERSIDAD MAIMÓNIDES (1); IBYME-CONICET (2)

During estral cycle, massive release of pituitary luteinizing hormone (LH) is required for the ovulatory event to occur. This is regulated by gonadotropin-releasing hormone (GnRH) and the ovarian hormones estradiol (E2) and progesterone (P4). Ovarian P4 enhances the positive feedback of E2 on GnRH and finally in the LH surge, suggesting that this hormone is also involved in the release of LH. Vizcachas have shown reproductive axis activity during gestation with release of ovarian and hypothalamic hormones and an increased LH surge at mid-pregnancy. The aim of this work was to determine the effects of E2 and P4 on GnRH receptor (GnRHR) and LH in the vizcacha. Ex vivo and in vivo approaches were developed: 1- Pituitaries of non-pregnant vizcachas were cultured under different conditions: a) Buffer, b) E2, c) GnRH, d) GnRH+E2; n= 4/group. 2- Non-pregnant females were ovariectomized (OVX) and treated with E2 (OVX+E2, 5 µg/kg); n= 4/group. 3- Pituitaries of non-pregnant females were probed in a pulsatil assay under different conditions: a) Buffer, b) P4, c) P4+RU486 (PR antagonist). LH release was measured by RIA, whereas pituitary GnRHR, ERalpha and PR expression was studied by immunohistochemistry and Western blot. A significant induction of LH release was determined in the pituitary cultures supplemented with GnRH and E2 (p<0.05). In addition, an increase in GnRHR expression was determined (p<0.05). On the other hand, significant increase of LH release was induced by P4 (p<0.05). Significant increment in the number of cells expressing PR was observed in OVX+E2 related to OVX (p<0.05). These results suggest that both ovarian hormones would be involved in the modulation of GnRH effect over LH release.
Supported by Fundación Científica Felipe Fiorellino, PIP110/14 and PICT1281/2014 grants.

0349 - MAMMARY GLAND-SPECIFIC REGULATION OF GNRH AND GNRH-RECEPTOR GENE EXPRESSION IS LIKELY PART OF A LOCAL AUTOREGULATORY SYSTEM IN FEMALE VIZCACHAS (CHINCHILLIDAE: RODENTIA).

María Clara CORSO (1) | Sofia PROIETTO(1) | Santiago Andrés CORTASA(1) | Alejandro Raúl SCHMIDT(1) | Kevin FEEHAN(1) | Victoria FIDEL(1) | Ruth CWIRENBAUM(1) | Pablo Ignacio Felipe INSERRA(1) | Marina Olga FERNANDEZ(2) | Alfredo Daniel VITULLO(1) | Verónica Berta DORFMAN(1) | Julia HALPERIN(1)

CEBBAD, UNIVERSIDAD MAIMÓNIDES (1); IBYME-CONICET (2)

Our laboratory has recently reported gonadotropin-releasing hormone (GnRH) protein expression in mammary gland (MG) epithelial cells of vizcachas during pregnancy and lactation. In addition, we also shown that prolactin (PRL) modulates GnRH MG content. The present work aims to study GnRH gene expression in MG and also, to explore a possible GnRH-autocrine mechanism over this tissue. We amplified GnRH, GnRH-receptor (GnRH-R), early growth response factor 1 (Egr-1), PRL, PRL-receptor (PRL-R) and α-lactalbumin by RT-PCR using mRNA from MG at different stages of pregnancy and lactation. We established local transcription of GnRH at all the analyzed stages and the amplicon sequencing confirmed GnRH identity. Maximum transcription of GnRH occurred at early pregnancy and this coincides with maximum transcription of GnRH-R (p<0.05, n= 5). Egr-1 showed a similar pattern although slighted shifted, i.e., its maximum was recorded at mid-pregnancy (p<0.05). To asses GnRH effect on its own expression, on that of GnRH-R and that of Egr-1 as well as over PRL signaling pathway, MG explants supplemented with or without a GnRH analogue were cultured for 6 and 24 h. According to the RIA, the GnRH released to the culture medium by the GnRH-treated explants was higher than that of controls, both after 6 and 24 h incubation (p<0.05, n= 6). GnRH and Egr-1 mRNA expressions were significantly higher in GnRH-treated explants vs. control explants (p<0.05). No differences were found in transcription levels of, PRL-R or α-lactalbumin between explants groups. In summary, the expression pattern of GnRH, GnRH-R and its target gene, Egr1, throughout pregnancy suggest that these gene transcriptions