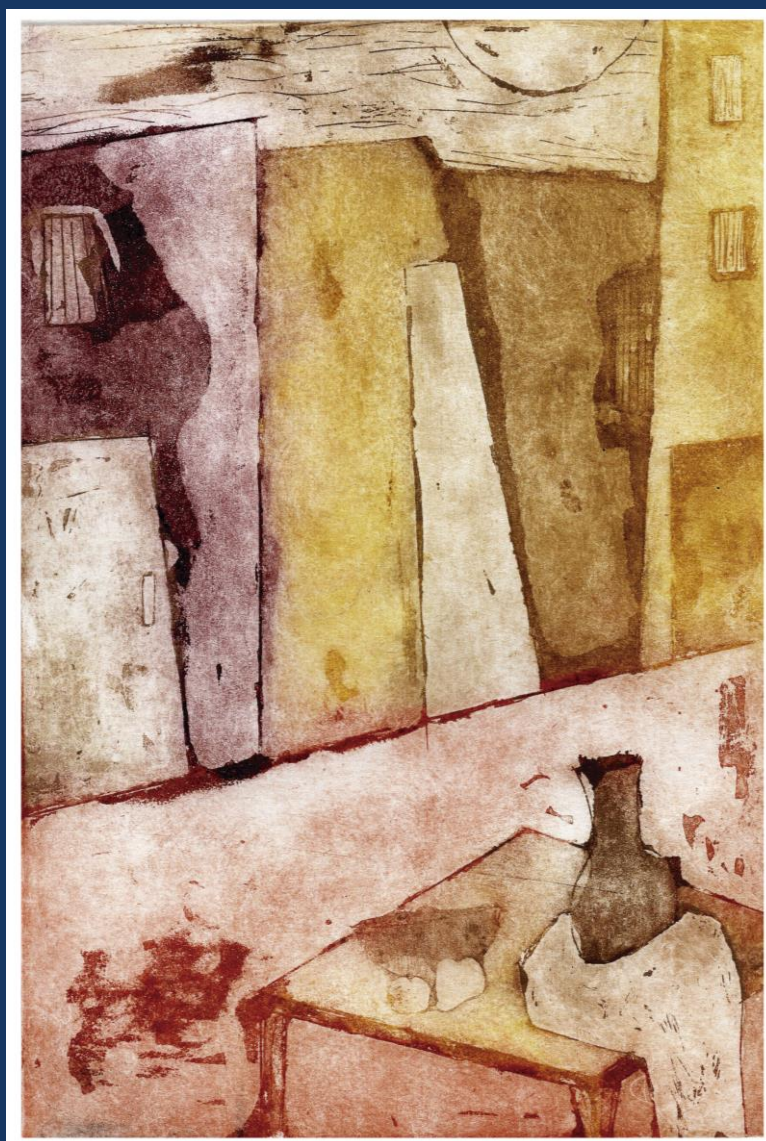


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La Tapa (Ver pág. 4)
Atardecer en la tarde
Antonella Ricagni

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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

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

ANNUAL MEETING OF BIOSCIENCE SOCIETIES 2019

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CHIEF EDITORS

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

12 out of 18 samples. To evaluate *T. gondii* viability, pepsin digested pork material was inoculated in mice (2-3 per sample). Thirty days after inoculation, the animals were euthanized and serum, brain, liver and heart samples were collected. A total of 10 mice were positive for antibodies against *T. gondii*, measured by indirect ELISA, representing 8 meat samples. On the other hand, molecular detection in DNA extracted from mouse brains showed that the parasite was present and viable in 9 meat samples. Additionally, in order to detect possible variations in *T. gondii* tropism, we analyzed liver and heart samples by hemi-nested PCR. We confirmed the presence of the parasite in both organs in 7 meat samples. Future experiments will be focused on the characterization of *T. gondii* strain genotypes to gain insight into the distribution and variability of the parasite in meat products.

0963 - COLONIES INITIALIZATION UNDER LABORATORY CONDITIONS OF NYSSOMYIA NEIVAI AND MIGNEMYIA MIGNONEI (PSYCHODIDAE: PHLEBOTOMINAE) IN THE NORTH OF SALTA PROVINCE, ARGENTINA.

Griselda Noemí COPA (1) | Maria Cristina ALMAZAN(1) | Gabriela Del Valle FLORES(2) | Andrés ESCALADA(3) | Lorena Vanesa ARAMAYO(1) | Ruben CIMINO(4) | Julio NASSER(1) | José Fernando GIL(5)

CÁTEDRA DE QUÍMICA BIOLÓGICA. FACULTAD DE CIENCIAS NATURALES. UNIVERSIDAD NACIONAL DE SALTA (1); INSTITUTO DE INVESTIGACIONES TROPICALES- UNSA - SEDE ORÁN (2); INSTITUTO DE INVESTIGACIONES DE ENFERMEDADES TROPICALES (3); INSTITUTO DE INVESTIGACIONES DE ENFERMEDADES TROPICALES - UNSA- SEDE ORÁN (4); INENCO-CONICET (5)

Abstract/Resumen: Leishmaniasis are vector-borne diseases with sand fly insects (Psychodidae: Phlebotominae) as vectors. In Oran (Salta, Argentina) *Nyssomyia neivai* is the most prevalent species followed by *Migonemyia migonei*, they have medical relevance because were found infected with *Leishmania* sp. in Argentina and Brazil. The establishment and maintenance of sand flies in colonies results key to study their biology, behavior, and relationships with pathogens. The aim of our work was to study the life cycle of *Ny. neivai* and *Mg. migonei* under laboratory conditions and to elaborate a horizontal life table for them. For this, sand flies were captured in a peridomestic area of Orán city. The blood fed females were captured using manual aspirators both on domestic animals and tree bark. A female with 5 males were maintained in rearing pots at 25 ± 2 ° C and 85-95 % relative humidity. Larval food consisted of a mixture of rabbit feces, fish feed, rabbit feed, while adult sand fly food provided was sugar solution (30 %). A total of 82 females were conditioned for oviposition, the 41.4 % of them survived and oviposited. Thirty-two specimens were *Ny. neivai* and two *Mg. migonei*. The average number of eggs laid per female were 40.81 (*Ny. neivai*) and 59.50 (*Mg. migonei*). A total of 78 adults of *Ny. neivai* and 27 of *Mg. migonei* (p<0.001) emerged under laboratory conditions. For *Ny. neivai* and *Mg. migonei*, the time range occurred between the egg and adult stages was 37 and 36 days, respectively. The proportions of the original surviving cohorts (lx) in each stage, for both species, were higher in the first stage (L1). The proportion of deaths per stage (dx) for *Ny. neivai* was higher in eggs and L1, while in *Mg. migonei* was in L2. Following this protocol, sand fly colonies could be initiated under laboratory conditions, which will allow the development of future projects for incriminating vectors and reservoirs in the north of Argentina.

0967 - VEGETATION COVER AND HUMIDITY INFLUENCE ON THE ABUNDANCE OF SANDFLIES IN COLONIA SANTA ROSA LOCALITY, NORTHWEST OF ARGENTINA.

Lorena Vanesa ARAMAYO (1) | Griselda Noemí COPA(2) | Carlos Lorenzo HOYOS(3) | Julio Rubén NASSER(1) | José Fernando GIL(4)

CÁTEDRA DE QUÍMICA BIOLÓGICA Y BIOLOGÍA MOLECULAR - FCN (1); INSTITUTO DE INVESTIGACIONES DE ENFERMEDADES TROPICALES - UNSA- SEDE ORÁN (2); CONSEJO NACIONAL DE INVESTIGACIONES CIENTÍFICAS Y TÉCNICAS (CONICET) (3); INSTITUTO DE INVESTIGACIÓN EN ENERGÍA NO CONVENCIONAL (INENCO-CONICET) (4)

Abstract/Resumen: Tegumentary Leishmaniasis (TL) is endemic in northern of Argentina, with a zoonotic transmission pattern in northern of Salta and Oran department is the most affected. The vegetation cover and humidity can influence the presence and abundance of sandflies. The aim of this work was to analyze the potential influence of the vegetation cover and the humidity on the sandflies species captured in Colonia Santa Rosa locality (CSR) from the Salta province. To sandflies capture, CDC traps were placed in 14 sites during four nights in January 2016, between 18 pm and 7 am. The sampling sites were distributed in downtown housing yards, periphery and edges of residual vegetation. The species were determined through identification of spermatheca, cibarios and genitalia. The NDVI (normalized difference vegetation index; estimate the vegetation cover) and NDWI (normalized difference water index; estimate the humidity) for the study area were obtained from Google Engine. Then, using the QGIS 3.6 software, circular buffers of 100 meters of radius were generated whose centroids were the sampling sites. The average of the values of the NDVI and NDWI pixels extracted by means of the circular area were used to perform a correlation analysis with the abundance of the different species of sandflies using the non-parametric Spearman method. A total of 435 sandflies were captured. The species found and their abundances expressed by capture effort were: *Nyssomyia neivai* (133.33 %), *Mygonemyia migonei* (5.66 %), *Cortelezzii* Complex (4 %), *Evandromyia sallesi* (0.33 %) and sp (2 %). The values of NDVI and NDWI versus the total abundance of sandflies (r= 0.78; r= 0.70; p<0.05) and *Nyssomyia neivai* (r= 0.76; r= 0.68; p<0.05) showed statistically significant correlations. The effect of vegetation cover and humidity on the abundance of sandflies can be used potentially as a tool to generate interventions for control and prevention of LT in northern Salta.

0972 - EVALUATION OF THE IMMUNOGENICITY OF THE RECOMBINANT PROTEIN GSTMU OF FASCIOLA HEPATICA (RFHGSTMU) ADSORBED ON ALUMINUM HYDROXIDE IN SHEEP

Vanessa FERNANDEZ | Javier SOLA | María Celeste MORAN | Silvina GUTIERREZ | Silvia Marcela ESTEIN

CIVETAN CONICET

Abstract/Resumen: *Fasciola hepatica* is a zoonosis which causes significant economic losses in ruminants. The development of a vaccine emerges as an alternative for the control of this disease. The recombinant protein GST Mu from *F. hepatica* (rFhGSTMu) adsorbed on aluminum hydroxide (rGSTMu + Al(OH)₃) conferred 90 % protection against this parasite in the mouse model. The objective of this work was to evaluate the humoral and cellular immune response against this vaccine in the susceptible species. Corriedale female sheeps were immunized twice every 30 days. The humoral immune response was analyzed by an indirect ELISA. Blood was obtained every 15 days from day 0 to 75. The in vivo immune cell response was evaluated on the day 75 by performing the intradermal test with rFhGSTMu. Specific serum IgG antibodies increased after each boost unlike that observed in the control group (without immunization), which maintained baseline levels throughout the trial. The differences were maximum and significant (p<0.05) two weeks after the last immunization. The presence of a cellular immune response was not detected in vivo. This preliminary result indicates that rGSTMu + Al(OH)₃ is immunogenic in sheep.

In the future, we will evaluate the protection conferred against *F. hepatica* in sheep.

AACyTAL I

Chairs: Marcelo Asprea | Eliana Cicale | Judith Van Luijk

0030 - ENVIRONMENTAL ENRICHMENT IN STANDARD-SIZED CAGES: EFFECTS ON FEMALE SWISS MICE

Agustina RESASCO (1) | Rocío Beatriz FOLTRAN(1) | Cecilia CARBONE(2) | Silvina Laura DIAZ(1)

IBCN, FACULTAD DE MEDICINA, UNIVERSIDAD DE BUENOS AIRES (1); LABORATORIO DE ANIMALES DE EXPERIMENTACIÓN (LAE), FCV,UNLP (2)

Abstract/Resumen: Environmental enrichment (EE) consists on increasing the complexity of the cages, which promotes the species' specific behavior. EE has been used to improve the welfare of laboratory animals as well as a treatment per se in experiments in the field of neuroscience. We aimed to study EE effects in standard-sized cages, on several biological parameters. Female SWISS mice were housed in 3 conditions (20 mice/group): no enrichment (NE), simple enrichment (SE), and complex enrichment (CE). The experiment lasted 8 weeks and afterwards, anxiety-like behavior was assessed using a modified-novelty suppressed feeding (NSF) test. Brains were collected to determine the survival of newborn cells in the hippocampus (HC). Additionally, corticosterone metabolites were measured in fecal samples. Mice in CE had higher levels of corticosterone in feces and behaved less anxiously in the NSF test than mice from the NE group ($p < 0.05$). Correspondingly, the number of new cells in the HC was significantly higher in both the enriched groups ($p < 0.01$). The higher levels of corticosterone in the CE might have been due to an overall increase in the in-cage activity, therefore reducing boredom; while the CE also reduced a negatively-valenced affective state like anxiety. These findings are consistent with an improvement of animal welfare. Furthermore, both enrichments had an adaptive value to the brain, as they increased the survival of new cells in the HC. SE is commonly used without proper standardization, but it might generate confounded effects at least in neuroscience experiments. Additional studies are needed to assess the effect of EE in standard-sized cages.

0033- HIGHLIGHTS ALONG THE HISTORICAL RECORD OF THE FCEyN, UBA INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE (IACUC) AND 3 Rs IMPLEMENTATION

Fernando A. DYZENCHAUZ (1) | Lirane MACHADO MOUTINHO(2) | Zaira NAGUILA(3)

IBBEA, CONICET-UBA (1); IFIBYNE, CONICET-UBA (2); BIOTERIO FCEN-UBA (3)

Abstract/Resumen: There is a growing social awareness on issues related to the protection of animal welfare. In the year 2011 was founded the FCEN/IACUC whose mission is to adopt principles, policies, programs, and regulations aimed at ensuring the ethical use of research animals. To achieve this goal, we worked on two axes: 1) a required course for teachers, researchers, and students of the faculty involved in the use of animals, with a 5 years validity period, and 2) the evaluation of the experimental protocols dealing with animals. Our IACUC undertook the endeavor of the 3Rs implementation. We developed a form for submission of experimental protocols, with

evaluation criteria based on the analysis of a wide array of considerations, such as objective and rationale of the project, technical and environmental aspects, experimental and surgical procedures, classification of severity of the procedure, justification for the use of animals with regards to alternative methods, experimental design, anaesthesia, analgesia, and humanitarian end point. Since its founding, 125 protocols were evaluated. It is noteworthy the diversity of the areas of knowledge of the analyzed protocols, while 5% of them include wild animals and 95%, laboratory animals. Disaggregating data by species, the mouse represents 70% of the animals used, rats (11%), fish (9%), frogs (8%), and birds (5%). Strikingly, nearly a third of the protocols submitted for evaluation, have not continued in the evaluation process due to the neglect of those who submitted them. Additionally, there is an evident bias in the gender of animals used, since more than 70% of the protocols submitted by the scientific community of the FCEN-UBA, similarly to the international scientific community, use only males as experimental subjects. Finally, in order to monitor the compliance with the welfare assurance of the animals used in research, the IACUC has implemented an oversight of the protocols wherever the experiments are carried out.

0061 - REFINEMENT OF A FEMUR SURGERY TO TEST DENTAL IMPLANTS IN RATS: A PILOT STUDY

Katya Mariel KLUG GOMEZ | Agustina RESASCO | María Clara VERCELLINI | José Luis BELTRANO | Martín CARRIQUIRIBORDE | Ana Cristina CARRANZA MARTÍN | Juan Martín LABORDE | Fabricio Alejandro MASCHI | María Del Pilar CAGLIADA | Cecilia CARBONE | Miguel AYALA

LABORATORIO DE ANIMALES DE EXPERIMENTACIÓN (LAE) FACULTAD DE CIENCIAS VETERINARIAS, UNLP

Abstract/Resumen: The refinement of the different techniques is an important part of Laboratory Animal Science. In our lab we have establish a model to bone regeneration. In order to refine the technique, we aimed to study how two types of bone perforation (one long defect vs two smaller ones) would affect animal welfare. For this purpose, 8 WKAH/HokLAE rats were employed, housed in SPF conditions. After the surgical procedure, pain management and antibiotic therapy were given to the rats. Their weight, food consumption and performance in the burrowing test were measured before and after the surgery, and compared using paired t-tests. No significant differences in food consumption were detected between groups after a week ($p \geq 0.05$). Nevertheless, a trend in body weight reduction was observed after that period for the group with the long defect ($p \geq 0.05 \leq 0.1$), whereas significant differences were observed for the rats with the double defect ($p < 0.05$). Regarding the burrowing test, significant differences were observed 72 hs after the surgery only in the rats with the long defect ($p < 0.05$). The original values for the burrowing test were restored when it was repeated a week after the procedure ($p \geq 0.05$). As deviations from the original values were observed, further research into these two models will be performed in order to improve the refinement of this technique.

0070 - A RETROSPECTIVE ANALYSIS OF PROTOCOL REVIEW: THREE YEARS OF IBYME-IACUC

Natalia Alejandra VASTA | Rosa María MORALES | Amalia BOTO | Graciela SANITÁ | Ernesto GULIN

INSTITUTO DE BIOLOGÍA Y MEDICINA EXPERIMENTAL (IBYME-CONICET)

Abstract/Resumen: The Instituto de Biología y Medicina Experimental Institutional Animal Care and Use Committee (IBYME-IACUC) oversees laboratory animal welfare in research and reviews the protocols involving animals used at the institution. The lack of a National Law aiming at regulating and protecting the use of animals for educational and research