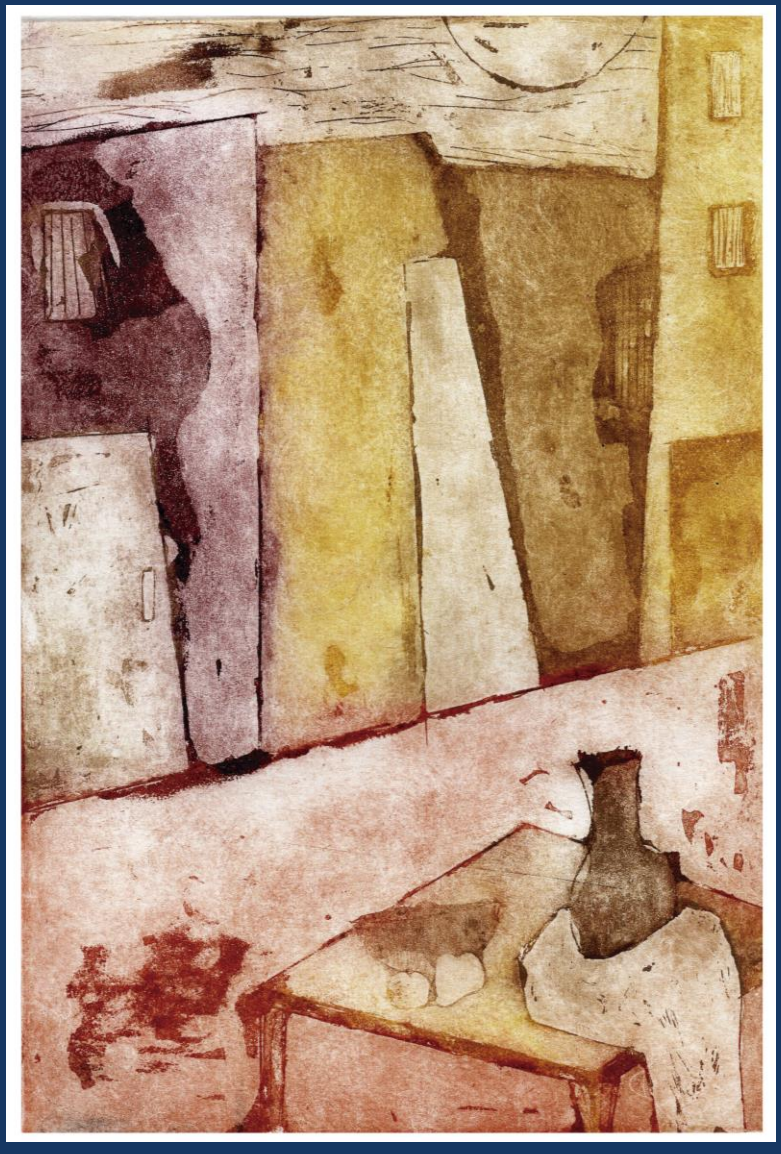
2019

medicina

BUENOS AIRES VOL. 79 Supl. IV - 2019

80° Aniversario



MEDICINA

Volumen 79, Supl. IV, págs. 1-338

medicina

BUENOS AIRES, VOL. 79 Supl. IV - 2019

COMITÉ DE REDACCIÓN

MIEMBROS EMÉRITOS

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

MEDICINA (Buenos Aires) – Revista bimestral – ISSN 0025-7680 (Impresa) – ISSN 1669-9106 (En línea)

REVISTA BIMESTRAL
Registro de la Propiedad Intelectual N° 02683675
Personería Jurídica N° C-7497
Publicación de la Fundación Revista Medicina (Buenos Aires)
Propietario de la publicación: Fundación Revista Medicina
Queda hecho el depósito que establece la Ley 11723

Publicada con el apoyo del Ministerio de Ciencia, Tecnología e Innovación Productiva.
MEDICINA no tiene propósitos comerciales. El objeto de su creación ha sido propender al adelanto de la medicina argentina.
Los beneficios que pudieran obtenerse serán aplicados exclusivamente a este fin.
Aparece en *MEDLINE (PubMed), ISI-THOMSON REUTERS (Journal Citation Report, Current Contents, Biological Abstracts, Biosis, Life Sciences), CABI (Global Health), ELSEVIER (Scopus, Embase, Excerpta Medica), SciELO, LATINDEX, BVS* (Biblioteca Virtual en Salud), *DOAJ, Google Scholar y Google Books.*
Incluida en el Núcleo Básico de Revistas Científicas Argentinas del CONICET.

Directores Responsables:
Basilio A. Kotsias, Eduardo L. De Vito, Isabel Narvaiz Kantor, Guillermo B. Semeniuk

Secretaría de Redacción: Ethel Di Vita, Instituto de Investigaciones Médicas Alfredo Lanari, Combatientes de Malvinas 3150, 1427 Buenos Aires, Argentina
Tel. 5287-3827 Int. 73919 y 4523-6619
e-mail: revmedbuenosaires@gmail.com – http//: www.medicinabuenosaires.com

Vol. 79, Supl. IV, Noviembre 2019

medicina
BUENOS AIRES, VOL 79 Supl. IV - 2019

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

medicina
BUENOS AIRES, VOL 79 Supl. IV - 2019

ANNUAL MEETING OF BIOSCIENCE SOCIETIES 2019

LXIV Annual Meeting of
Sociedad Argentina de Investigación Clínica (SAIC)

LI Annual Meeting of
Asociación Argentina de Farmacología Experimental (SAFE)

XXI Annual Meeting of
Sociedad Argentina de Biología (SAB)

XXXI Annual Meeting of
Sociedad Argentina de Protozoología (SAP)

IX Annual Meeting of
Asociación Argentina de Nanomedicinas
(NANOMED-ar)

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

with the participation of
The Histochemical Society

November 13th – 16th, 2019
Hotel 13 de Julio - Mar del Plata

CHIEF EDITORS

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

observed changes in oxidative metabolism that take place in macrophages exposed to PM.

0634 - NANOVENOMS SYNTHESIS FOR ITS POTENTIAL USE IN ANTISERA PRODUCTION AGAINST RATTLESNAKE VENOM (CROTALUS DURISSUS TERRIFICUS)

Federico Gastón BAUDOU (1) | Exequiel GIORGI (1) | María Eugenia DIAZ(1) | Luciano FUSCO(2) | Sofía MUNICOY(3) | Martín DESIMONE(3) | Laura LEIVA(2) | Mauricio DE MARZI(1)

UNIVERSIDAD NACIONAL DE LUJAN - DEPARTAMENTO DE CIENCIAS BASICAS (1); UNIVERSIDAD NACIONAL DEL NORDESTE (2); IQUIMEFA. UNIVERSIDAD DE BUENOS AIRES, FACULTAD DE FARMACIA Y BIOQUÍMICA (FFYB) (3)

Snake antivenoms (AV) production involves successive inoculations of venom (V) in increasing form together with the addition of adjuvants (ADJ) that improve the immune response of animals destined for immunizations. On the other hand, nanoparticles (NP) are being studied with multiple purposes due to their potential therapeutic and immunomodulatory use, and for their ability to transport antigens and induce a specific response against it. Therefore, it is of interest to associate V to NP in order to replacing conventional ADJ in AV production. In this work, nanovenoms (NV) were synthesized by adsorption of Crotalus durissus terrificus (C.d.t.) V proteins with silica NP (NPsi) of 400 nm size (positive/negative charge, +/-). The NPsi (-) were synthesized according to the Stöber method, while a fraction was modified with APTES (NPsi +), and its load and size was verified by potential Z and DLS (dynamic light scattering) respectively. Then, 10 mg of NPsi +/- were incubated with 1 mg / ml of whole V in PBS for 3 h under stirring to favor proteins adsorption to the NPs surface. NV were photographed under MET and also a FTIR (Fourier Transform Infrared) was performed. Crotoxin presence, the main toxic component of C.d.t. venom, was analyzed by hemolysis radial test both in NV and supernatant. NV proteins desorbed by heat treatment were analyzed by SDS-PAGE and immunoblotting. NV FTIR spectra showed intermediate values between those that exhibited C.d.t. V and the NPsi separately. SDS-PAGE and immunoblotting tests confirmed the presence of proteins in NPsi particles and hemolytic halos demonstrated that NPsi +/- were capable of binding crotoxin molecules on their surface. The results reveal the presence of V in both types of NPsi, preserving its activity and therefore its native structure, evidences that allow progress in an upcoming study such as the evaluation of immunogenic activity in experimental animals.

0662 - SILVER NANOPARTICLES SYNTHESIZED WITH QUERCETIN: SYNTHESIS, CHARACTERIZATION AND EFFECT IN HUMAN TROPHOBLAST EXPOSED TO NEONICOTINOID

Pamela Soledad BUSTOS(1) | **Eliana Daniela LOPEZ VENDITTI** (2) | Jose Luis CABRERA(3) | Maria Gabriela ORTEGA(3) | Paulina PÁEZ(4) | Natalia GUIÑAZÚ(5)

CITAAC-CONICET-UNIVERSIDAD NACIONAL DEL COMAHUE; FCQ-UNIVERSIDAD NACIONAL DE CÓRDOBA (1); CITAAC - CONICET - UNIVERSIDAD NACIONAL DEL COMAHUE (2); IMBIV-CONICET; FCQ-UNIVERSIDAD NACIONAL DE CÓRDOBA (3); UNITEFA - CONICET - UNIVERSIDAD NACIONAL DE CÓRDOBA (4); CITAAC-CONICET-UNIVERSIDAD NACIONAL DEL COMAHUE; FACIAS-UNIVERSIDAD NACIONAL DEL COMAHUE (5)

Silver nanoparticles gained popularity due to their applications in medicine. The synthesis of nanoparticles using plant extracts or their antioxidant metabolites as reducing and stabilizing agents is the most adopted method for green production. Previous studies showed toxic effects of the insecticide neonicotinoid (Neo) acetamiprid on human trophoblasts mainly due to oxidative imbalance. The aim of this work was to obtain green silver nanoparticles (AgNPs) able to avoid Neo toxicity. AgNPs were synthesized in the presence of the antioxidant plant metabolite quercetin (Q), a flavonoid isolated from Flaveria bidentis. AgNPs synthesis conditions evaluated: $AgNO_3$ (1-10 mM), Q (0.5-2 mM), use of sodium citrate as stabilizer, stirring time (0-24 h) and pH (7-12). AgNPs were characterized by UV/Vis spectroscopy, TEM and DLS. To test the possible protective effect of AgNPs, the HTR-8/SVneo trophoblast cell line was pre-treated 1 h with AgNPs, and then incubated for 24 h with Neo (100 µM). Controls of synthesis precursors, Neo and AgNPs dilutions (1/5-1/1000) were included. Three AgNPs were obtained, AgQ3NPs (18 nm), AgQC4NPs (50 nm) and AgQC7NPs (33 nm). AgQC7NPs, unlike its precursors, showed no cytotoxic effect on trophoblast, while AgQ3NPs and AgQC4NPs caused a significant decrease in cell viability at 1/5 dilution. Regarding the protective AgNPs effect against Neo toxicity, AgQ3NPs and AgQC7NPs at 1/250, 1/500 and 1/1000 dilutions, avoided the decrease of cell viability (MTT method) and the reactive oxygen species (ROS) production (NBT method) induced by Neo. AgQC4NPs, avoided cell viability loss at 1/500 and 1/1000 dilutions, with a concentration-dependent effect in ROS production reaching values significantly similar to the control at 1/1000. Q synthesized green AgNPs demonstrated a protective effect for Neo induced cytotoxicity and oxidative imbalance in trophoblast. Future studies will be necessary to deepen the study of this protective effect.

0694 - THE PESTICIDE CHLORPYRIFOS INDUCES EPITHELIAL-MESENCHYMAL TRANSITION RELATED WITH BREAST CANCER PROGRESSION AND METASTASES.

Marianela Soledad LASAGNA (1) | Clara VENTURA(2) | Noelia V MIRET(3) | Soledad HIELPOS(4) | Andrea Silvana RANDI(3) | Mariel NÚÑEZ(2) | Claudia COCCA(1)

INSTITUTO DE QUÍMICA Y FISICOQUÍMICA BIOLÓGICAS "PROF. ALEJANDRO C. PALADINI" (UBA-CONICET) (1); LABORATORIO DE RADIOISÓTOPOS, DEPARTAMENTO DE FÍSICO-MATEMÁTICA, FFYB, UBA (2); LABORATORIO DE EFECTOS BIOLÓGICOS DE CONTAMINANTES AMBIENTALES, DEPARTAMENTO DE BIOQUÍMICA HUMANA, UBA (3); CATEDRA DE FISICA. FACULTAD DE FARMACIA Y BIOQUÍMICA. UNIVERSIDAD DE BUENOS AIRES (4)

Breast cancer is the malignancy most common diagnosed in women around the world. Endocrine disruptors and some environmental factors may act as breast cancer risk. Chlorpyrifos is widely used for control crops in agriculture in our country. We have previously demonstrated its xenoestrogenic action. Epithelium-mesenchymal transition (EMT) is known to be related to tumor progression and metastasis. In order to determine if CPF may promote EMT and thus became a risk factor promoting breast cancer progression, we exposed MCF-7 and MDA-MB-231 breast cancer cells to CPF (0.00; 0.05 or 50 µM). We evaluated cell morphology after 72 h of exposure by fluorescence and optic microscopy, spheroids formation by hanging drop technique, invasion induced in spheroids laden in collagen gel matrix, proteins involved in EMT activation by WB and immunofluorescence. Mamosphere formation was used as an indicator of an enrichment of cancer stem cells (CSC). Results: CPF 0.05 and 50 µM diminished the number of cell-cell contacts, increased cytoplasmatic projections and changed nucleous-cytomplasm rate in MCF-7 cells. An increment of actin polymerization foci and cytoplasmic projections were observed in MDA-MB-231 cells. Both concentrations of CPF induced an increment of the area of invasion after 7 days of exposure ($p<0.01$). E-cadherin ($p<0.01$) and beta-catenin ($p<0.01$) were downregulated by CPF (0.05 or 50 µM) in an ER-dependent way and both proteins were detected in the perinuclear zone in MCF-7 cells. Vimentin was induced after 72 h of exposure in this cell line. In MDA-MB-213 cells, we detected an increment of vimentin ($p<0.001$) and a decrease of beta-catenin ($p<0.01$) in a c-SRC dependent way. CPF 0.05 µM increased the number and the diameter of MCF-7 mammospheres in a ER dependent way. Our results support evidences that point CPF