2017

medicina

BUENOS AIRES VOL. 77 Supl. I - 2017

MEDICINA

Volumen 77, Supl. I, págs. 1-620

medicina

BUENOS AIRES, VOL. 77 Supl. I - 2017

La Tapa (Ver p. IV)
Imagen ígnea, 1996.
María Esther Gené

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

REVISTA BIMESTRAL
Registro de la Propiedad Intelectual N° 5324261
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, Damasia Becú Villalobos, 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. 77, N° 5, Noviembre 2017

Edición realizada por
GRAFICA TADDEO – Charrúa 3480 – Buenos Aires – Tel: 4918.6300 l 4918.1675 l 4918.0482
e-mail: ctp@graficataddeo.com.ar – www.graficataddeo.com.ar

medicina
BUENOS AIRES, VOL 77 Supl. I - 2017

REUNIÓN CONJUNTA DE SOCIEDADES DE BIOCIENCIAS

LXII REUNIÓN ANUAL DE LA SOCIEDAD ARGENTINA DE INVESTIGACIÓN CLÍNICA (SAIC)

LIII REUNIÓN ANUAL DE LA SOCIEDAD ARGENTINA DE INVESTIGACIÓN BIOQUÍMICA Y BIOLOGÍA MOLECULAR (SAIB)

LXV REUNIÓN ANUAL DE LA SOCIEDAD ARGENTINA DE INMUNOLOGÍA (SAI)

REUNIÓN DE LA SOCIEDAD ARGENTINA DE ANDROLOGÍA (SAA)

XLVI REUNIÓN ANUAL DE LA SOCIEDAD ARGENTINA DE BIOFÍSICA (SAB)

XIX REUNIÓN ANUAL DE LA SOCIEDAD ARGENTINA DE BIOLOGÍA (SAB)

XLIX REUNIÓN ANUAL DE LA SOCIEDAD ARGENTINA DE FARMACOLOGÍA EXPERIMENTAL (SAFE)

REUNIÓN ANUAL DE LA SOCIEDAD ARGENTINA DE FISIOLOGÍA (SAFIS)

REUNIÓN DE LA SOCIEDAD ARGENTINA DE HEMATOLOGÍA (SAH)

XXIX REUNIÓN ANUAL DE LA SOCIEDAD ARGENTINA DE PROTOZOOLOGÍA (SAP)

13-17 de noviembre de 2017
Palais Rouge– Buenos Aires

medicina
BUENOS AIRES, VOL 77 Supl. I - 2017

JOINT MEETING OF BIOSCIENCE SOCIETIES

LXII ANNUAL MEETING OF ARGENTINE SOCIETY OF CLINICAL INVESTIGATION (SAIC)

LIII ANNUAL MEETING OF ARGENTINE SOCIETY OF BIOCHEMISTRY AND MOLECULAR BIOLOGY (SAIB)

LXV ANNUAL MEETING OF ARGENTINE SOCIETY OF IMMUNOLOGY (SAI)

MEETING OF ARGENTINE SOCIETY OF ANDROLOGY (SAA)

XLVI ANNUAL MEETING OF ARGENTINE SOCIETY OF BIOPHYSICS (SAB)

XIX ANNUAL MEETING OF ARGENTINE SOCIETY OF BIOLOGY (SAB)

XLIX ANNUAL MEETING OF ARGENTINE SOCIETY OF EXPERIMENTAL PHARMACOLOGY (SAFE)

ANNUAL MEETING OF ARGENTINE SOCIETY OF PHYSIOLOGY (SAFIS)

MEETING OF ARGENTINE SOCIETY OF HEMATOLOGY (SAH)

XXIX ANNUAL MEETING OF ARGENTINE SOCIETY OF PROTOZOOLOGY (SAP)

November 13 -17, 2017
Palais Rouge– Buenos Aires

used for translational research.

Intraocular tumor samples taken by the ophthalmologist at the time of enucleation were used to make the cell culture. After the cell culture was established, evaluations were made to assess the origin of the cell using different types of lineage specific markers includingdiasylgangliosideGD2,arrestin3 (ARR3) and synaptophysin by immunohistochemistry and the expression of cone-rod homebox (CRX) through RTq-PCR.Double time (DT) was also calculated. Pharmacological characterizations were made by the determination of theconcentration of drugs that inhibit 50% of the cell viability (IC50) using melphalan, carboplatin and topotecan. The study protocol and informed consent were approved by the Institutional Committee Review board (Protocol #N662).

We established two cell models derived from a bilateral patient with RB: one from the left eye tumors and one from the right eye tumors.Both cell models expressed GD2 and synaptophysinillustrating that they derived from a neuroectodermal tumor. Also, both cultures expressed ARR3 and CRX demonstrating that the cultures were indicative of retinal progenitor cells. The culture derived from the right eye was observed to be growing more slowly (DT=4.5 days) than the one derived from the left eye (DT=3.4 days). However, there was no significant difference observed between the IC50 for all three drugs between both eyes (p>0.05).

Altogether, we were able to develop an effective cell models. These models may be useful to understand the progression and tumor development in a bilateral patient and in other preclinical models.

Keywords : Retinoblastoma, cell models, naïve, bilateral.

(82) **EVALUATION OF DRUG-DRUG INTERACTIONS IN CATTLE USING INTESTINAL EXPLANTS**

Adrian Lifschitz, Vanina Perez, Mariana Ballent, Paula Viviani, Carlos Lanusse, Guillermo Virkel

Centro de Investigación Veterinaria de Tandil (CIVETAN) (UNCPBA-CICPBA-CONICET), Facultad de Cs. Veterinarias, Tandil, Buenos Aires

The concurrent administration of drugs is currently used in veterinary medicine. In cattle, the coadministration of anthelmintics may be a useful pharmacological tool to delay the parasite resistance. Different transporter proteins such as P-glycoprotein (P-gp) are involved in the excretion process of anthelmintics. Previous studies corroborated *in vivo* pharmacokinetic changes obtained after the coadministration of two macrocyclic lactones. The aim of the current trial was to evaluate the modulation of intestinal transport of macrocyclic lactones in cattle using the intestinal explants model. Bovine ileum samples from Aberdeen Angus/Hereford crossbreed steers were obtained from a slaughterhouse located in Tandil area. Immediately following sacrifice, a segment of caudal ileum (30 cm) was opened by the mesenteric border, rinsed with ice-cold 1.15% KCl and immersed in ice-cold Euro-Collins solution containing abamectin (ABM) alone (0.5 μM) or ABM plus ivermectin (IVM) (1μM). Containers were covered, chilled in ice, and transported to the laboratory within 30–40 min for subsequent procedures. Intestinal explants (19 mm of diameter) were prepared and transferred to 6-well culture plates with 6 ml of Wiliams´ medium E inside a container with a humidified atmosphere of 95% O2:5% CO2 at 37 ºC. Intestinal explants were harvested between 15 and 60 minutes post-incubation and frozen at -20 ºC. ABM concentrations were measured by HPLC with fluorescent detection. The concentrations of ABM in the explants were significantly higher after the coincubation with IVM ($P<0.05$). ABM accumulation in the intestinal explants was 2.3 fold higher at 30 minutes post-incubation with IVM. The ABM accumulation rate during the 60 minutes of incubation was 50 % higher in the presence of IVM. As was previously corroborated *in vivo*, the intestinal explants were a useful model to evaluate the drug-drug interaction between macrocyclic lactones in bovine.

Keywords: intestinal explants, cattle, drug-drug interactions, P-glycoprotein

(747) **FLUOROQUINOLONE DEPLETION IN EDIBLE COMPARTMENTS OF EGGS IN LAYING HENS**

Carlos Alberto Errecalde (1), Guillermo Fermín Prieto (1), Natalia Urzúa Pizarro (1), María Paula Tonini (1), Romina Gramaglia (1), María Emilia Errecalde (1), Rosendo Liboa (2)

(1) Farmacología, FAV, UNRC, (2) Bromatología, FAV, UNRC

Fluoroquinolones are antimicrobials approved for use in domestic animals but are not allowed in laying birds because they generate residues in eggs that compromise food safety, although they are usually applied against infectious diseases that defy animal life. This study was performed to establish depletion in the edible compartments of the egg. Laying hens in postural peak were used, divided into two groups, group A (N = 15) and B (N = 10) receiving 7.3 and 1.5 mg / kg of danofloxacin (DFX) and marbofloxacin (MFX) respectively in the drinking water 5for 11 days. At the end of the administration, eggs were collected daily and separated into clear and yolk. In group A the extraction of the analyte was performed with 200 µL of sample, 200 µL of water, 800 µL of a solution of methanol: water: perchloric acid 50: 50: 2 v / v / v and norfloxacin as internal standard and in group B with methanol: water: perchloric acid: phosphoric acid (50: 50: 2 v / v / v) and enrofloxacin as internal standard.The whole was centrifuged 25 minutes at 13500 rpm at 4 ° C. Separation and quantification was performed by HPLC reverse phase isocratic elution with C-18 column, fluorescence detector at λ_{ex} 295 nm and λ_{em} 490 (DFX) and 500 nm (MBX) and mobile phase composed of water, acetonitrile and triethylamine (79: 19:1 v/v/v) at pH 3. Using peak areas of known concentrations, the concentrations of test samples were calculated by simple linear regression. According to the complexity of matrix studied, the procedures applied are simple, fast and sensitive for monitoring programs and control of residues. Levels that declined significantly after the second day were established, and persists until 9 and 15 (DFX) and 8 and 9 days (MBX) in clear and yolk, respectively, Being more relevant in yolk according to the liposolubility of fluoroquinolones and the time required by each egg compartment for its formation, according to the extension of the treatment.

Key words: fluoroquinolones, eggs, disposition

(996) **NEW UHPLC-MS/MS METHOD FOR THE IDENTIFICATION OF BENZNIDAZOLE AND REDUCTION METABOLITES IN BIOLOGICAL FLUIDS**

Carlos Alberto Pérez Montilla, Daniela Marisa Rocco, Facundo García Bournissen.

Benznidazole (BNZ) is the drug of choice for the treatment of Chagas' disease, but its metabolism and elimination have never been studied in depth. The aim of this study was to develop the methodology required for BNZ metabolism studies, using liquid chromatography linked to mass spectrometry (UHPLC-MS/MS). A new UHPLC-MS/MS method was developed for the rapid identification of BNZ, reduction metabolites like aminobenznidazole (BNZ-H2) and hydroxyaminobenznidazole (BNZ-HOH), and their glucuronidated forms (BNZ-OH-Gluc) and (BNZ-H-Gluc), in biological fluids. Spectrometric parameters were optimized by direct infusion of a BNZ-Water:Acetonitrile solution in an *ABSciex QTRAP 6500* triple quadrupole mass spectrometer. After optimizing the mass spectrometry parameters, the chromatographic conditions were optimized by injecting 3 µL of the BNZ solution through a C18 Shim-Pack XR-ODSII column 75 mm long, 3 mm internal diameter and 2.2 µm particle size, on a Shimadzu Nexera X2 UHPLC, coupled to the spectrometer using electrospray ionization in positive mode. Once BNZ identification was optimized, we proceeded to study urine samples from BNZ-treated Chagas' disease patients. Samples were extracted in acetonitrile and centrifuged, and the supernatants injected in the UHPLC-MS/MS system. BNZ and its reduced derivatives were detected and characterized using enhanced mass scans (EMS), Q1-Multiple Ion, enhanced product ion (EPI) and MS3 modes, whereas glucuronic acids were recognized by the neutral loss of glucuronic acid (+176 m/z) in neutral loss mode (NL), in conjunction with EPI and MS3. The method developed enables the five compounds to be monitored in 3 minutes by the *MRM Scheduled Scan* mode with high reliability, based on their transitions and characteristic chromatographic times. This method could allow rapid identification and exploration of BNZ metabolites in patients, an especially useful tool in the follow-up of pediatric patients treated for Chagas' disease.