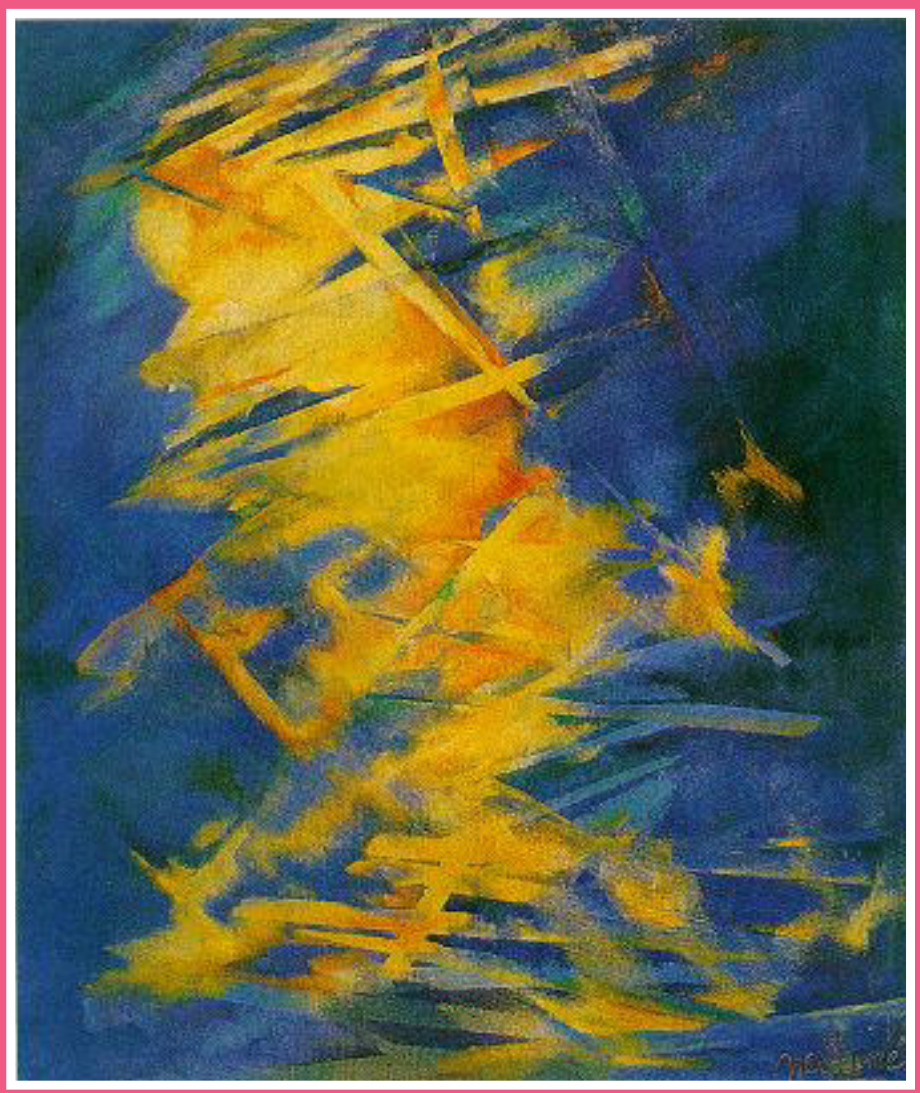
2017

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

(1) Universidad de Buenos Aires. Facultad de Farmacia y Bioquímica. Cátedra de Nutrición. (2) Universidad de Buenos Aires. Facultad de Farmacia y Bioquímica. INFIBIOC. (3) Universidad de Buenos Aires. Hospital de Clínicas "José de San Martín". Departamento de Hemoterapia.

Abstract: Hepcidin is an iron (Fe) homeostasis regulator peptide. Limited information is available on this biomarker in the argentine population. In order to quantify serum hepcidin levels and their correlation with Fe nutritional status, 40 male blood donors (18-62y) attending Departmento de Hemoterapia, Hospital de Clínicas (UBA) (2017) were enrolled. Serum hepcidin (sHep) (DRG Hepcidin 25 (bioactive) HS ELISA Kit), serum ferritin (SF) (IMMULITE Ferritin, DPC) and transferrin saturation (TS) (%) (IRON2 and Tina-quant Transferrin, Cobas) were determined in blood samples negative for infectious diseases and C-reactive protein (PCR-latex, Wiener lab). Daily Fe Intake (FeI), hem Fe intake (hem FeI) and Fe from flour enrichment (Ley 25630) were estimated by a "Food Consumption Frequency" questionnaire (ARGENFOODS and USDA National Nutrient Database on Standard Reference). sHep values (ng/mL) were: mean±SD (range): 33.6±20.9 (7-80); median: 25,0; 2.5th-97th Percentile: 8.85-68.9. Two donors (5%) showed sHep > 81 ng/mL, range assay upper limit. SF (ng/mL) and TS (%) were: mean±SD (range): 213±172 (42-753) and 32.6±12.8 (17.9-90.7), respectively. Criteria of Fe overload (SF>300 ng/mL and TS 50%) was observed in 5% of donors. FeI (mg Fe/d) was: mean±DS (range): 24.2±9.0 (10.0-47.2). No participant presented FeI lower than EAR (6 mg Fe/d), and one donor surpassed 45 mg Fe/d (UL) (NAS, 2001). Hem FeI and Fe from flour enrichment were 8.7% and 35% of daily FeI, respectively. A significant correlation was found between sHep and SF (r=0.52; p=0.00097), but not with FeI (r=0.014; p=0.9308), nor with hem FeI (r=0.194, p=0.263). These results show high FeI and a strong correlation between sHep and Fe stores. Therefore, local feeding habits (54.9 Kg meat/per capita/yr, FAO 2011) and mandatory flour fortification with Fe, could enhance adverse effects in individuals unaware of any family history of Fe overload. *Universidad de Buenos Aires, UBACyT 20720150100004BA*

Keywords: iron, hepcidin, biomarkers of iron status, iron intake; food fortification

(378) **BONE VASCULAR ACTIONS OF THE NUTRACEUTICAL GENISTEIN**

Sabrina Cepeda, Marisa Sandoval, Belén Rauschemberger, Virginia Massheimer

Instituto de Ciencias Biológicas y Biomédicas del Sur (INBIOSUR), Universidad Nacional del Sur (UNS), CONICET, Departamento de Biología, Bioquímica y Farmacia, Cátedra de Bioquímica Clínica II, Bahía Blanca, Argentina.

Previously we reported that the phytoestrogen (PE) Genistein (Gen) prevents the atherosclerotic plaque genesis via estrogen receptor (ER) activation and the inhibition of the cellular/molecular events involved in vascular damage. Indeed, vascular muscle cell transdifferentation into osteoblasts (OB) like cells was also impaired. Here we studied the role of Gen on the bone-vascular axis interaction with focus on OB growth and angiogenesis. To that end, aortic rings (AR), primary cultures of aortic endothelial cells (EC) and calvaria OB isolated from female Wistar rats, exposed to Gen (10nM-1uM) were employed. OB proliferation and differentiation are regulated by several factors such as BMP-2, Runx2 and the bioactive compound NO. We showed that short term exposure of OB to Gen enhanced NO production (33-20% above C, 15-30 min treatment, p<0.05, Griess reaction). NO was involved in OB proliferation since in presence of a nitric oxide synthase inhibitor, L-NAME (10uM), OB growth was blunted (p<0.001). In RT-PCR assays we found that Gen significantly increased Runx2 and BMP-2 mRNA levels. The PE genomic action was extended to an up-regulation of alpha and beta ER mRNA expression (p<0.05). Angiogenesis depends on EC proliferation and migration that finally lead to capillary formation. These events were evaluated using conditioned medium (CM) obtained from OB exposed to Gen (72h). CM stimulated EC proliferation (0.47±0.07 vs 0.38±0.07, Gen vs C, p<0.02, MTT technique) and markedly enhanced EC migration (30;187% above C, Gen 10;100nM, p<0.05, wound healing assays). Capillaries formation was studied by seeding AR on a collagen matrix for 15 days in presence or absence of CM and quantified by optical microscopy. A high number of three-dimensional tubular structures around AR were detected. This work provided evidence of OB maturation induced by Gen with beneficial impact on vascular tissue promoting angiogenesis, crucial events involved in bone formation and remodeling.

Keywords: phytoestrogens, genistein, bone-vascular axis, angiogenesis

(964) **CALCIUM ABSORPTION EFFECTIVENESS OF PREBIOTICS IS AFFECTED BY THE NUTRITIONAL STATUS OF VITAMIN D**

Susana Zeni (1), Mariana Seijo (1), Mariana Rey Saravia (1), Gabriel Bryk (1), Maria Luz De Portela (2), Susana N Zeni (1)

(1) INIGEM (UBA/CONICET), (2) Cat. de Nutricion. Fac. de Farm. y Bioq.

Vitamin D (VD) regulates Ca absorption (Abs) which is positively affected by prebiotics through lowering intestinal pH and increasing colonic cells growth. VD insufficiency could affect prebiotic effectiveness on CaAbs.

Galactooligosaccharides/Fructooligosaccharides (GOS/FOS®) effectiveness to increase CaAbs was evaluated in an experimental model of VD insufficiency and established osteopenia. Ovariectomized Wistar rats fed a VD-free (0 IU%) diet to become VD insufficient (-D) (n=32) or a normal VD diet (100 IU%) (+D) (n=16), during 45 days. Thereafter, for an additionally 45-days period D+ fed: AIN´93 (control diet) (+*D0.5%)*; AIN´93 containing 0.3%Ca or 2.5%GOS/FOS® (9:1) (+*D0.3%P*) while D- fed: VD free-AIN´93 (-*D0.5%)*; VD free-AIN´93 containing 0.3%Ca (-*D0.3%)*; last diet containing 2.5% (-*D0.3%P*) or 5% GOS/FOS (-*D0.3%:2xP)*. Food intake and faeces (F) were collected for CaI and CaF and CaAbs% calculated .

Results CaAbs% (mean±SD):.-D0.5%: 32.71±1.74; -D0.3%: 38.33±2.33; -D0.3%P: 44.71±1.84; -D0.3%x2P: 56.40±1.39; +D0.3%P: 87.45±1.82; +D0.5%: 67.80±2.21.

VD insufficiency reduced CaAbs% (-D0.5% and –D0.3% vs. +D0.5%; p<0.001) while GOS/FOS® effectiveness was negatively affected (-D0.3%P vs. +D0.3%P; p<0.001). CaAbs% of D- diets containing GOS/FOS® was improved by increasing dietary prebiotic % (-D0.3%P vs. -D0.3:2xP; p<0.01).

Effectiveness of prebiotics on Ca Abs was affected by VD nutritional status. Grants: UBACyT 20020130100091BA and PIP (CONICET) 11220130100199CO.

(998) **CONSEQUENCES OF MATERNAL FRUCTOSE INTAKE ON BROWNING POTENTIAL OF RETROPERITONEAL ADIPOSE TISSUE FROM ADULT OFFSPRING**

Ana Alzamendi (1), Eduardo Spinedi (2), Andrés Giovambattista (1)

(1) Unidad de Neuroendocrinología (IMBICE; CIC-CONICET-UNLP), (2) Centro de Endocrinología Experimental y Aplicada, CENEXA (CONICET-UNLP).

Beige adipocytes are highly adapted to convert chemical energy into heat through the action of uncoupling protein-1 (UCP1). Cold exposure or β3 adrenergic agonist treatment stimulates generation of these cells in white adipose tissue (WAT). Our aim was to assess whether maternal fructose intake during pregnancy, affects browning capability of retroperitoneal adipose tissue (RPAT) from adult male offspring. On pregnancy day 1, dams were provided with either tap water alone (CTR, control) or containing fructose (10%w/v; FRD) and fed *ad libitum* with chow up to delivery. Lactating dams and their pups (between 21 and 60 days) received water and chow *ad libitum*. C and F indicate pups born to CTR and FRD dams. On experimental day (age 60 days) RPAT was dissected and stromal vascular fraction (SVF) cells were isolated. mRNA expression levels of beige and white adipogenic markers were assessed in RPAT SVF cells and pads. SVF cells were cultured and differentiation parameters were quantified by qPCR. Previously we found that pre-natal nutritional intervention decreased the adipogenic potential of adult