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73.

ANTIGENOTOXIC EFFECTS OF THREE SPECIES OF *GRIFOLA* GENUS

Postemsky P[1], Palermo AM[2], Curvetto N[1].
[1]CERZOS-CTT-BB- CONICET, UNSur, Bahía Blanca. [2]CITEFA, Buenos Aires, Argentina. E-mail: apalermo@citefa.gov.ar

G. gargal, G. frondosa and *G. sordulenta* are native edible polypore mushrooms of Argentina with attributed antioxidant properties. They were evaluated for their potential antigenotoxic effects using the eye-SMART assay in *D. melanogaster* and 7-12-dimethylbenz(α)anthracene (DMBA; 25µmol/ vial) as promutagen/ procarcinogen.
Heterozygote larvae (*white/white*$^{+}$) were grown in media with colonized wheat flour (cWF) and the DMBA solution. Wheat flour, the solvent or water were used as negative controls. The induction of a mutational or recombinational event in the eye larval imaginal discs is expressed as a white spot in the red eye of adults since it causes loss of heterozygosity. The addition to the culture media of cWF with any of the three species increased survival of larvae. Spots per 100 eyes in controls were: 21 (water), 27 (solvent), 20 (wheat flour), 88 (DMBA), 79 (wheat flour+DMBA). In all combined treatments (DMBA plus *G. gargal*, *G. frondosa* or *G. sordulenta* cWF) the frequency of spots/100 eyes decreased in 30%, 25% and 20% respectively ($p<0.05$, $\chi 2$ test). The corresponding values were 57 (*G. gargal*), 62 (*G.frondosa*) and 65 (*G sordulenta*) spots/100 eyes. Conclusions: all three mushroom colonized wheat flours were non toxic, antigenotoxic and increased survival of treated larvae. b) these protective effects could be attributed to their content in antioxidants, phenolic compounds, and/or polysaccharides.

74.

$GABA_A$ RECEPTOR ACTIVITY OF OXYGEN-BRIDGED NEUROSTEROID ANALOGS

Rey M[1], Eduardo SL[2], Alvarez LD[2], Coirini H[1,3].
[1]Lab. Neurobiología IBYME-CONICET, [2]Dept. Química. Orgánica. UMYNFOR-FCEN-UBA; [3]Dept. Bioquímica Humana-FMED-UBA. E-mail: rey@dna.uba.ar

Progesterone's metabolites like allopregnanolone (Allo) and its 5ß isomer (Preg), are produced in the nervous system and modulated the activity of the $GABA_A$ receptor. The rapid biotransformation of these steroids could be a disadvantage for therapeutic treatments. The development of synthetic analogs more stables with comparable or better activity may resolve this problem. The aim of this work was to elucidate the interaction of steroids having similar spatial conformation like Allo (SB1: 1-19 oxo; SB2: 4-19 oxo) or Preg (Ns6: 1-11 oxo Δ4) with the $GABA_A$ receptor. ^{3}H-muscimol (MUS 10nM) and ^{3}H-flunitrazepam (FLU 1nM) binding pattern were determined in cortex and cerebellum rat's synaptosomes. Incubations were made at 4ºC by 60-90 min with a range of 25 to 1000 nM of Allo, Preg, SB1, SB2 or Ns6. GABA (10µM) or Diazepam (1µM) were used for the non specific binding respectively. Allo, Ns6 and Preg stimulate the binding of both ligands (EC50 MUS= 22; 44; 118 nM ; FLU= 180;125;104 nM) meanwhile the others two steroids only stimulate FLU (EC50= SB1: 38nM SB2: 250nM) but not MUS binding. Further evaluations in live tissues or whole animals are necessary to validate these steroids as therapeutic drugs.
(UBACYT-M012 - PICT-727).

75.

3α-HYDROXY-6-19-OXIDOPREGN-4-ENE-20-ONE (Ns1) EFFECTS ON ASTROGLIOSIS INDUCED BY HYPOXIA IN ORGANOTYPIC CULTURES OF CEREBRAL CORTEX

Rey M[1], Kruse MS[1], Veleiro A[2], Burton G[2], Coirini H[1,3].
[1]Lab. Neurobiología IBYME-CONICET, [2]Dept Química. Orgánica. UMYNFOR-FCEN-UBA; [3]Dept. Bioq.Humana-FMED-UBA. E-mail: rey@dna.uba.ar

Some progesterone's metabolites produced in the nervous system are able to modulate the action of neurotransmitters on ion channels. One of these steroids Allopregnanolone (Allo) has showed a neuroprotective effect on organotypic cultures from cerebral cortex submitted to hypoxia. On the other hand preliminary studies have indicated that the synthetic steroid 6-19 oxo-pregnene (Ns1) shows a similar binding pattern to $GABA_A$ receptor like Allo. The aim of this study was to evaluate the possible protective action of Ns1 in an '*in vitro*' tissue culture system by determining the astroglial reaction (GFAP) during hypoxia. Tissue cultures were treated with similar concentration of Allo or Ns1 ($5x10^{-6}$M) or vehicle, 24h before and during hypoxia (1h). Then steroids were removed and 24 hours later, tissues were homogenized to determine the expression of GFAP by Western blot. Cultures subjected to hypoxia without steroid treatment showed a significant increase in the expression of GFAP (27% $p<0.05$). Pretreatment with Allo or Ns1 prevented this effect. Therefore Ns1 that shows like Allo similar ability to prevent astrogliosis induced by hypoxia is a possible candidate for future therapeutic applications.
(UBACYT M012 and PICT727).

76.

ANTIVIRAL ACTIVITY EVALUATION OF *Baccharis crispa Sreng*

Rivarola ME, Boris AS, Chavez MG, Konigheim B, Aguilar JJ, Contigiani M.
Instituto de Virología, Facultad Cs. Médicas, UNC. Cba., Argentina.

Baccharis crispa (carqueja) native specie of Cordoba, is used in infusions, for its antiseptic, antirheumatic, colagoga, diuretic and hepatic properties. Our aim was to evaluate the antiviral activity of 5 extracts of *B.crispa*: n-hexane (H), chloroform (Cl) methanol (M), cold and hot water extracts (AF and AC), on Simplex Herpes Type I (HSV-I), Venezuelan Equine Encephalitis (VEEV) and Saint Louis Encephalitis virus (SLEV). *In vitro* cytotoxicity: Several concentrations of the extracts were added in MEM and incubated in VERO cells. The cell viability was observed at 48 hs by neutral red assay (NR). Evaluation of antiviral activity: Subtoxic concentrations of extracts were inoculated on cell infected cultures and incubated at 37 ºC for 3 days for VEEV, HSV-I and 7 days for SLEV. Viruses, cell culture and different concentrations used from each extract were included as controls. The viral inhibition (%I) (estimated by RN assay) were: for Cl on VEEV (50-70%I) and on HSV-I (50-100%I); AC on HSV-I (50-60%I); AF disabled VEEV (40%I) and to HSV-I (50%I). H and M did not shown considerable antiviral activity. These results allow us to conclude that AC, AF and Cl inhibit VEEV and HSV-I. None analyzed extract inhibited SLEV. Further studies will be carried out in order to get a better understanding regarding antiviral properties of *B. crispa*.