Record 1 of 29

Title: Effects of Salt Stress on the Antimicrobial Drug Resistance and Protein Profile of Staphylococcus aureus

Author(s): Ganjian, H (Ganjian, Haleh); Nikokar, I (Nikokar, Iraj); Tieshayar, A (Tieshayar, Azita); Mostafaei, A (Mostafaei, Ali); Amirmozafari, N (Amirmozafari, Nour); Kiani, S (Kiani, Sara)

Source: JUNDISHAPUR JOURNAL OF MICROBIOLOGY **Volume:** 5 **Issue:** 1 **Pages:** 328-331 **DOI:** 10.5812/kowsar.20083645.2375 **Published:** WIN 2012

Abstract: Background: Staphylococcus aureus is the causative agent of a high percentage of nosocomially acquired infections and food-borne illnesses. Antimicrobial resistance of S. aureus, especially methicillin-resistant S. aureus (MRSA), continues to be a concern for clinicians worldwide.
Objectives: The aim of this study was to investigate the effects of salt stress on the antimicrobial drug resistance and protein profile of S. aureus.
Materials and Methods: Staphylococcus aureus (ATCC 25823) was grown in trypticase soy broth at 37 C. Cells in the exponential growth phase were gradually exposed to sub-lethal salt stress with concentrations ranging from 5% to 35% (wt/vol). There after, these cells were harvested and re-suspended in a tube containing 0.5mL of saline. To standardize the number of bacteria, the bacterial suspension was compared to the 0.5 McFarland standard suspension. Antibiotic susceptibility was determined using the disk diffusion method, and the method involved plating of cell suspensions with stressed cells and unstressed cells on Mueller-Hinton agar plates. The pooled proteins from each condition were analyzed using sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE).
Results: Compared to the unstressed cells, the cells exposed to salt showed significant changes in resistance to rifampicin (P=0.032), penicillin (P=0.02) and methicillin (P=0.001). Furthermore, SDS-PAGE analysis of pooled proteins from cells exposed to salt showed changes in the protein profile.
Conclusions: We conclude that salt stress is responsible for the changes in protein profile- and antimicrobial resistance of S. aureus, especially to methicillin. (C)2012, AJUMS. Published by Kowsar M.P.Co.All rights reserved.

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Document Type: Article

Author Keywords: Staphylococcus aureus; Salt Stress; Antibiotic Resistance; Electrophoresis; Polyacrylamide Gel

KeyWords Plus: ANTIBIOTIC-RESISTANCE; MUTANT; IMPACT

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29-char Source Abbrev.: JUNDISHAPUR J MICROB
ISO Source Abbrev.: Jundishapur J. Microbiol.
Source Item Page Count: 4

Record 2 of 29

Title: Application of an expert system based on Genetic Algorithm-Adaptive Neuro-Fuzzy Inference System (GA-ANFIS) in QSAR of cathepsin K inhibitors

Author(s): Shahlaei, M (Shahlaei, Mohsen); Madadkar-Sobhani, A (Madadkar-Sobhani, Armin); Saghaie, L (Saghaie, Lotfollah); Fassihi, A (Fassihi, Afshin)

Source: EXPERT SYSTEMS WITH APPLICATIONS **Volume:** 39 **Issue:** 6 **Pages:** 6182-6191 **DOI:** 10.1016/j.eswa.2011.11.106 **Published:** MAY 2012

Times Cited in Web of Science: 0

Total Times Cited: 0

Cited Reference Count: 47

Abstract: One strategy to potentially improve the success of drug design and development is to use chemometrics methods early in the process to propose molecules and scaffolds with ideal binding and to clarify physicochemical features influencing in their activity. Adaptive Neuro-Fuzzy Interference System (ANFIS) was used to construct the nonlinear quantitative structure-activity relationship (QSAR) model. The Genetic Algorithm (GA) was used to select descriptors which are responsible for the cathepsin K inhibitory activity of studied compounds. ANFIS regression is a nonlinear regression technique developed to relate many regressors to one or several response variables. The accuracy of the generated QSAR model (R-2 = 0.916) is described using various evaluation techniques, such as leave-one-out procedure (R-LOO(2) = 0.875) and validation through an external test set (R-pred(2) = 0.932).

Accession Number: WOS:000301013700008

Language: English

Document Type: Article

Author Keywords: QSAR; Genetic Algorithm; Adaptive Neuro-Fuzzy Inference System; Cathepsin K inhibitory activity

KeyWords Plus: SUPPORT VECTOR MACHINE; VARIABLE SELECTION; PREDICTION; IDENTIFICATION; MODELS; EXPLORATION; DERIVATIVES; VALIDATION

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Subject Category: Computer Science; Engineering; Operations Research & Management Science

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ISSN: 0957-4174

29-char Source Abbrev.: EXPERT SYST APPL

ISO Source Abbrev.: Expert Syst. Appl.

Source Item Page Count: 10

Record 3 of 29

Title: Molecular aspects on the interaction of isatin-3-isonicotinylhydrazone to deoxyribonucleic acid: model for intercalative drug-DNA binding

Author(s): Kashanian, S (Kashanian, Soheila); Khodaei, MM (Khodaei, Mohammad Mehdi); Pakravan, P (Pakravan, Parvaneh); Adibi, H (Adibi, Hadi)

Source: MOLECULAR BIOLOGY REPORTS **Volume:** 39 **Issue:** 4 **Pages:** 3853-3861 **DOI:** 10.1007/s11033-011-1164-9 **Published:** APR 2012

Times Cited in Web of Science: 0

Total Times Cited: 0

Cited Reference Count: 55

Abstract: Isatin-3-isonicotinylhydrazone was synthesized and characterized. The interaction of native calf thymus DNA with isatin-3-isonicotinylhydrazone (IINH) in 10 mM Tris-HCl aqueous solutions at neutral pH 7.4 has been investigated by spectrophotometric, circular dichroism (CD), melting temperature (T (m)), spectrofluorimetric, and viscometric techniques. It is found that IINH molecules could intercalate between base pairs of DNA as are evidenced by: hypochromism in UV absorption band of IINH, induced CD spectral changes, sharp increase in specific viscosity of DNA, and increase in the fluorescence of methylene blue (MB)-DNA solutions in the presence of increasing amounts of IINH, which indicates that it is able to release the intercalated MB completely. The binding constants of IINH-DNA complex at four different temperatures (277, 288, 298, and 310 K) were calculated to be 4.7 x 10(4), 2.2 x 10(4), 1.75 x 10(4) and 1.1 x 10(4) M-1, respectively. Furthermore, the enthalpy and entropy of the reaction between IINH and CT-DNA showed

that the reaction is enthalpy-favored and entropy- disfavored (a dagger H = -30.187 kJ mol(-1); a dagger S = -20.46 J mol(-1)K(-1)) which are other evidences to indicate the IINH is able to be intercalated in the DNA base pairs.

Accession Number: WOS:000301108500056

Language: English

Document Type: Article

Author Keywords: CT-DNA; Isatin-3-isonicotinylhydrazone; Intercalation

KeyWords Plus: CALF THYMUS DNA; RUTHENIUM(II) COMPLEXES; ANTIMICROBIAL ACTIVITY; ISATIN DERIVATIVES; ETHIDIUM-BROMIDE; GROOVE BINDING; IN-VITRO; HYDRAZONES; SCHIFF; LIGAND

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Publisher: SPRINGER

Publisher Address: VAN GODEWIJCKSTRAAT 30, 3311 GZ DORDRECHT, NETHERLANDS

Web of Science Category: Biochemistry & Molecular Biology

Subject Category: Biochemistry & Molecular Biology

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Record 4 of 29

Title: Proliferation and differentiation potential of cryopreserved human skin-derived precursors

Author(s): Bakhtiari, M (Bakhtiari, M.); Mansouri, K (Mansouri, K.); Sadeghi, Y (Sadeghi, Y.); Mostafaie, A (Mostafaie, A.)

Source: CELL PROLIFERATION **Volume:** 45 **Issue:** 2 **Pages:** 148-157 **DOI:** 10.1111/j.1365-2184.2011.00803.x **Published:** APR 2012

Times Cited in Web of Science: 0

Total Times Cited: 0

Cited Reference Count: 40

Abstract: Objectives: Skin-derived precursors are recognized to be a potentially autologous and accessible source of neural precursor cells for drug screening or cell-based treatments, in many neurological disorders. Thus, it is necessary to investigate appropriate methods for cryopreservation of such human skin-derived precursors (hSKPs). The aim of this study was to evaluate different cryopreservation techniques for retention of hSKPs to discover an optimized protocol.
Materials and methods: We cryopreserved hSKPs treated with 0%, 10%, 20%, 30% and 40% foetal bovine serum (FBS) and three concentrations of dimethylsulphoxide (DMSO) 5%, 10% and 15%, with two different storage periods in liquid nitrogen (2 days: short-term storage; and 2 months: long-term storage). Then, we assessed survival and proliferation levels of the cells after freeze-thaw processes, by viability measurement and colony-forming assay. For detecting hSKPs, we used immunocytochemistry and RT-PCR assessments.
Results: Our findings indicated that hSKPs cryopreserved in 5% DMSO without FBS, had better survival and proliferation potentials compared to other working formulations. With various concentrations of cryoprotectants over different time periods, hSKPs retained their differentiation potentiality and were able to differentiate into neurons (NFM and bIII tubulin-positive), glial cells (GFAP-positive) and smooth muscle cells (SMA-positive).
Conclusions: Results revealed that in only 5% DMSO, hSKPs could be cryopreserved for long-term storage with considerable survival and proliferation levels, without losing multipotency.

Accession Number: WOS:000300837900007

Language: English

Document Type: Article

KeyWords Plus: MYELINATING SCHWANN-CELLS; EMBRYONIC STEM-CELLS; PROGENITOR CELLS; NEURONAL DIFFERENTIATION; NERVOUS-SYSTEM; NEURAL STEM; SPINAL-CORD; RAT; TRANSPLANTATION; MULTIPOTENCY

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Deputy University for Research of Kermanshah Medical University - Ministry of Health and Medical education	

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Record 5 of 29

Title: Thymidylate synthase and methionine synthase polymorphisms are not associated with susceptibility to childhood acute lymphoblastic leukemia in Kurdish population from Western Iran

Author(s): Rahimi, Z (Rahimi, Zohreh); Ahmadian, Z (Ahmadian, Zainab); Akramipour, R (Akramipour, Reza); Vaisi-Raygani, A (Vaisi-Raygani, Asad); Rahimi, Z (Rahimi, Ziba); Parsian, A (Parsian, Abbas)

Source: MOLECULAR BIOLOGY REPORTS **Volume:** 39 **Issue:** 3 **Pages:** 2195-2200 **DOI:** 10.1007/s11033-011-0968-y **Published:** MAR 2012

Times Cited in Web of Science: 0

Total Times Cited: 0

Cited Reference Count: 27

Abstract: In order to determine the influence of polymorphism in thymidylate synthase (TS 28-bp repeat) and methionine synthase (MS A2756G) genes on the susceptibility to acute lymphoblastic leukemia (ALL), 73 children with ALL and 128 age and sex matched unrelated healthy individuals from the Kermanshah Province of Iran were screened. The genotyping of TS 28-bp repeat and MS A2756G polymorphisms were performed by polymerase chain reaction (PCR) and PCR-RFLP, respectively. The frequency of TS 2R allele in patients and controls were 41.5 and 38%, respectively (Odds ratios (OR) = 1.13, 95% CI 0.73-1.74, P = 0.56). The allelic frequency of G allele of MS was higher (25%) in patients compared with healthy subjects (23%) (OR = 1.09, 95% CI 0.67-1.75, P = 0.71). Considering MS AA and TS 3R3R genotypes as reference indicated that individuals with MS GG + TS 2R2R genotypes have 1.3-fold increase in the risk of ALL (OR = 1.3, 95% CI 0.6-2.7, P = 0.5). Our results showed that neither TS 28-bp repeat nor MS A2756G polymorphisms are risk factors for susceptibility to ALL in Western Iran.

Accession Number: WOS:000301107800016

Language: English

Document Type: Article

Author Keywords: ALL; Gene polymorphism; MS A2756G; TS 28-bp repeat; Western Iran

KeyWords Plus: METHYLENETETRAHYDROFOLATE REDUCTASE MTHFR; FOLATE METABOLIC PATHWAY; GENETIC POLYMORPHISMS; RISK; LYMPHOMA; HAPLOTYPES; CHILDREN; ADULTS

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Publisher: SPRINGER

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Kermanshah University of Medical Sciences, Kermanshah, Iran	

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Record 6 of 29

Title: Synergism between paraoxonase Arg 192 and the angiotensin converting enzyme D allele is associated with severity of coronary artery disease

Author(s): Vaisi-Raygani, A (Vaisi-Raygani, Asad); Rahimi, Z (Rahimi, Zohreh); Tavilani, H (Tavilani, Haidar); Vaisi-Raygani, H (Vaisi-Raygani, Hadiss); Kiani, A (Kiani, A.); Aminian, M (Aminian, M.); Shakiba, E (Shakiba, E.); Shakiba, Y (Shakiba, Y.); Pourmotabbed, T (Pourmotabbed, Tayebeh)

Source: MOLECULAR BIOLOGY REPORTS **Volume:** 39 **Issue:** 3 **Pages:** 2723-2731 **DOI:** 10.1007/s11033-011-1027-4 **Published:** MAR 2012

Times Cited in Web of Science: 0

Total Times Cited: 0

Cited Reference Count: 54

Abstract: We have previously shown that angiotensin-converting enzyme (ACE) gene D allele is an independent risk factor for early onset coronary artery disease (CAD). Little is known about the concomitant presence of the ACE gene D allele and paraoxonase (PON1) codon 192 arginine (Arg) on the severity of CAD. Regarding the high rate of CAD among Iranians the aim of present study was to examine the hypothesis of synergistic effects between ACE-D and PON1-Arg alleles on predisposition and the severity of CAD in our population. The PON1 192 and ACE insertion/deletion (I/D) genotypes were detected by PCR-RFLP and PCR, respectively in 414 individuals undergoing their first coronary angiography. Patients were placed into one of two groups: CAD and control without CAD or diabetes. We mentioned the synergistic effects of both genes and not ACE gene alone is a risk factor for CAD. We found that PON1 Arg 192 and ACE D allele act synergistically to

increase the risk of CAD (OR 1.3, P = 0.044). Our results showed a significant correlation between the possession of both PON1 192 Arg and the ACE D allele and the extent of CAD in CAD patients and CAD subjects without diabetes, represented by the increased frequency of three-vessel disease with OR 2.7, P = 0.046; chi(2) = 4, P = 0.046 and OR 2.4, P = 0.051; chi(2) = 3.8, P = 0.051, respectively. We found that PON1 Arg 192 and ACE D alleles act synergistically to increase the risk of CAD in CAD patients and CAD subjects without diabetes from west of Iran, who have high frequency of three-vessel disease. Our data suggest that PON1 192 Arg and the ACE D allele in combination with each other can be important independent risk factor for severity of CAD in patients carrying both PON1 192 Arg and the ACE D allele in a west population of Iran.

Accession Number: WOS:000301107800075

Language: English

Document Type: Article

Author Keywords: Paraoxonase; Coronary artery disease; Diabetes mellitus; Genetic polymorphism; Lipid profile; Vessel stenosis

KeyWords Plus: APOLIPOPROTEIN-E POLYMORPHISM; HIGH-DENSITY-LIPOPROTEIN; II TYPE-1 RECEPTOR; HEART-DISEASE; MYOCARDIAL-INFARCTION; GENE POLYMORPHISM; RISK-FACTOR; INSERTION/DELETION POLYMORPHISM; DIABETES-MELLITUS; HUMPONA GENE

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Record 7 of 29

Title: Comparison of physicochemical characteristics and drug release of diclofenac sodium-eudragit (R) RS100 nanoparticles and solid dispersions

Author(s): Barzegar-Jalali, M (Barzegar-Jalali, Mohammad); Alaei-Beirami, M (Alaei-Beirami, Mahmood); Javadzadeh, Y (Javadzadeh, Yousef); Mohammadi, G (Mohammadi, Ghobad); Hamidi, A (Hamidi, Aliasghar); Andalib, S (Andalib, Sina); Adibkia, K (Adibkia, Khosro)

Source: POWDER TECHNOLOGY **Issue:** 219 **Pages:** 211-216 **DOI:** 10.1016/j.powtec.2011.12.046 **Published:** MAR 2012

Times Cited in Web of Science: 0

Total Times Cited: 0

Cited Reference Count: 34

Abstract: The aim of the present study was to formulate and characterize diclofenac sodium (DNa)-eudragit (R) RS100 nanoparticles and solid dispersions. The conventional double-emulsion solvent diffusion technique for preparing nanoparticles of the water-soluble drugs is limited due to low encapsulation efficiency because of the drug rapid partitioning to t\he external aqueous phase. So therefore, nanoparticles of DNa with different amounts of eudragit (R) RS100 were prepared by a modified single-emulsion solvent diffusion method. The solid dispersions were also formulated using co-evaporation technique. The physicochemical characteristics of the prepared formulations were assessed operating particle size analysis, differential scanning calorimetry. X-ray crystallography, Fourier transform infrared spectroscopy and transmission electron microscopy. The release rate of DNa from the prepared nanoparticles and solid dispersions was investigated as well. The size of relatively monodisperse nanoparticles ranged from 103 nm to 170 nm. Employing the modified single-emulsion solvent diffusion technique to prepare the nanoparticles could perfectly improve the drug encapsulation efficiency. Both nanoparticles and solid dispersions of DNa-eudragit (R) RS100 displayed lower crystallinity and the intermolecular interaction between drug and polymer could not be ruled out. All the solid dispersions revealed slower drug release rate in comparison with the nanoparticles. DNa-eudragit (R) RS100 nanoparticle with the low drug/polymer ratios could relatively reduce the drug release rate up to 5 h whereas the solid dispersions were found to be suitable to control drug release for an extended times. As stated by these findings, formulation of the DNa-eudragit (R) RS100 nanoparticles was able to adjust the physicochemical characteristics of the drug and may well increase the anti-inflammatory effects of drug following its ocular or intra-joint administration.

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Language: English

Document Type: Article

Author Keywords: Nanoparticles; Solid dispersions; Diclofenac sodium; Eudragit (R) RS100; Drug release; Physicochemical characteristics

KeyWords Plus: HYDROXYPROPYL-BETA-CYCLODEXTRIN; ENDOTOXIN-INDUCED UVEITIS; MICROCRYSTALLINE CELLULOSE; DISSOLUTION

PROPERTIES; KINETIC-ANALYSIS; DELIVERY; SODIUM; IBUPROFEN; NANOSUSPENSIONS; HYDROCHLORIDE

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Web of Science Category: Engineering, Chemical

Subject Category: Engineering

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Record 8 of 29

Title: Efficacy of prophylaxis and genotype-phenotype correlation in patients with severe Factor X deficiency in Iran

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Source: HAEMOPHILIA **Volume:** 18 **Issue:** 2 **Pages:** 211-215 **DOI:** 10.1111/j.1365-2516.2011.02635.x **Published:** MAR 2012

Times Cited in Web of Science: 0

Total Times Cited: 0

Cited Reference Count: 15

Abstract: We aimed to evaluate the effect of regular prophylaxis with a Factor X (FX)

concentrate for patients with severe FXD in Iran and to assess the correlation of the genotype and phenotype in these patients. Ten patients with severe FXD (FX activity <1%) were enrolled and characterized during 2010-2011. Prophylaxis with 20 IU FX P Behring per kg body weight was administered once a week. FX levels, were monitored at baseline, 15 and 30 min, 1, 3, 6, 12, 24, 48, 72 and 96 h after starting prophylaxis. All patients were followed for 1 year. The mean age of the patients was 15 +/- 7.8 years (age range of: 627 years). One patient had anaphylactic reaction after the first infusion, and the treatment was stopped. During one-year follow-up after starting prophylaxis, no bleeding symptoms occurred in any patient who tolerated and remained on the prophylaxis programme and all of them had a FX level of 1% or above. The maximum level of FX activity has been observed at 15 min after starting prophylaxis. A level of 1.53.5% was detected after 96 h. Homozygous mutations p.Arg40Thr (Arg-1Thr), p.Gly51Arg and p.Glu69Lys were detected in patients with intracranial haemorrhage. In our patients, significant decrease in symptoms without any complication after administration of FX, was demonstrated in all except one patient who had an anaphylactic reaction. It seems that the dose of 20 IU kg-1 could be probably the best choice for patients with severe FXD, who require regular prophylaxis.

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Language: English

Document Type: Article

Author Keywords: efficacy; Factor X deficiency; genotype; Iran; prophylaxis

KeyWords Plus: INTRACRANIAL HEMORRHAGE; COAGULATION DISORDERS; GENE-MUTATIONS; SOUTHERN IRAN; DIAGNOSIS; SPECTRUM

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Web of Science Category: Hematology

Subject Category: Hematology

IDS Number: 897PL

ISSN: 1351-8216

29-char Source Abbrev.: HAEMOPHILIA

ISO Source Abbrev.: Haemophilia

Source Item Page Count: 5

Record 9 of 29

Title: High level expression of recombinant BoNT/A-Hc by high cell density cultivation of

Escherichia coli

Author(s): Yari, K (Yari, Kheirollah); Fatemi, SSA (Fatemi, Seyed Safa-Ali); Tavallaei, M (Tavallaei, Mahmood)

Source: BIOPROCESS AND BIOSYSTEMS ENGINEERING **Volume:** 35 **Issue:** 3 **Pages:** 407-414 **DOI:** 10.1007/s00449-011-0579-y **Published:** MAR 2012

Times Cited in Web of Science: 0

Total Times Cited: 0

Cited Reference Count: 22

Abstract: The carboxylic domain of the Clostridium botulinum neurotoxin heavy chain (BoNT/A-HC), which has been reported as a vaccine candidate, contains the principle protective antigenic determinants. In this study, the high level expression of the BoNT/A-Hc was achieved by high cell density cultivation of recombinant Escherichia coli in a 2-l batch stirred-tank bioreactor. In order to maximize protein expression, post-induction time and IPTG inducer concentration were optimized by the Taguchi statistical design method. Results showed that the middle of the logarithmic phase and an IPTG concentration of 1 mM presented the optimum conditions for the maximum expression of BoNT/A-HC. High cell density cultivation was subsequently carried out as an effective strategy for the high level expression of recombinant BoNT/A-Hc. Consequently, soluble BoNT/A-Hc was produced at the maximum level of 486 mg l(-1), at 3 h post-induction, which was approximately 9.3 and 7.8 times higher than the levels produced by the shake flask and batch culturing methods, respectively.

Accession Number: WOS:000300248900011

Language: English

Document Type: Article

Author Keywords: Clostridium botulinum; Escherichia coli; High cell density cultivation; Taguchi method; Fed-batch

KeyWords Plus: BOTULINUM NEUROTOXIN SEROTYPE; HUMAN INTERFERON-GAMMA; PROTECTIVE ANTIBODIES; FERMENTATION; PURIFICATION; SELECTION; PROTEINS

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Web of Science Category: Biotechnology & Applied Microbiology; Engineering, Chemical

Subject Category: Biotechnology & Applied Microbiology; Engineering

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29-char Source Abbrev.: BIOPROC BIOSYST ENG

ISO Source Abbrev.: Bioprocess. Biosyst. Eng.

Source Item Page Count: 8

Record 10 of 29

Title: Effect of modified multi-walled carbon nanotubes on release characteristics of indomethacin from symmetric membrane coated tablets

Author(s): Madaeni, SS (Madaeni, Sayed Siavash); Derakhshandeh, K (Derakhshandeh, Katayoun); Ahmadi, S (Ahmadi, Sara); Vatanpour, V (Vatanpour, Vahid); Zinadini, S (Zinadini, Sirus)

Source: JOURNAL OF MEMBRANE SCIENCE **Volume:** 389 **Pages:** 110-116 **DOI:** 10.1016/j.memsci.2011.10.021 **Published:** FEB 1 2012

Times Cited in Web of Science: 0

Total Times Cited: 0

Cited Reference Count: 41

Abstract: In this study, symmetric membrane coated tablets were prepared to control delivery of drug in oral osmotic pump system. Effects of various preparation parameters such as concentration of the polymer, concentration of the pore former, thickness of membrane and presence of carbon nanotubes as additives on the permeability and the release characteristics of indomethacin drug was evaluated. The main purpose of this research was to inspect capability of using multi-walled carbon nanotubes (MWCNTs) in drug delivery membranes systems for improving the release rate. The results indicate that addition of virgin MWCNTs in coating solution undesirably decreases the rate of indomethacin release, because MWCNTs tend to agglomerate and make bundles in solution. However, addition of low amounts of functionalized MWCNTs (0.01 wt.%) to cellulose acetate (CA) increased the release rate and improved zero order release pattern of indomethacin. This was attributed to increasing hydrophilicity and changing structure and porosity of the membranes by blending functionalized MWCNTs. The coated membrane on the tablet was broken in higher content of oxidized MWCNTs. Addition of acid oxidized MWCNTs (0.01 wt.% with respect to CA) in coating solution containing 5 wt.% CA and 10 wt.% PEG; and membrane thickness of 500 mu m was adopted as a suitable formulation. (C) 2011 Elsevier B.V. All rights reserved.

Accession Number: WOS:000300529100012

Language: English

Document Type: Article

Author Keywords: Drug delivery membrane; Oral osmotic pump; In vitro release; Multi-walled carbon nanotubes; Poorly soluble drugs

KeyWords Plus: OSMOTIC DRUG-DELIVERY; WATER-SOLUBLE DRUGS; CELLULOSE-ACETATE; IN-VITRO; BIOCOMPATIBILITY; CAPSULES; SYSTEM; FABRICATION; COATINGS; GROWTH

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Web of Science Category: Engineering, Chemical; Polymer Science
Subject Category: Engineering; Polymer Science
IDS Number: 895XD
ISSN: 0376-7388
29-char Source Abbrev.: J MEMBRANE SCI
ISO Source Abbrev.: J. Membr. Sci.
Source Item Page Count: 7

Record 11 of 29

Title: Binding Studies of Pyriproxyfen to DNA by Multispectroscopic Atomic Force Microscopy and Molecular Modeling Methods

Author(s): Ahmadi, F (Ahmadi, Farhad); Jamali, N (Jamali, Nasibeh); Moradian, R (Moradian, Rostam); Astinchap, B (Astinchap, Bandar)

Source: DNA AND CELL BIOLOGY **Volume:** 31 **Issue:** 2 **Pages:** 259-268 **DOI:** 10.1089/dna.2011.1303 **Published:** FEB 2012

Times Cited in Web of Science: 1

Total Times Cited: 1

Cited Reference Count: 58

Abstract: In this work, multispectroscopic atomic force microscopy and molecular modeling [ONIOM 2(B3LYP/6-31 + + G(d,p): Universal Force Field (UFF)) level] techniques were used to study the interaction between Calf-Thymus-DNA (CT-DNA) and pyriproxyfen (PYR) insecticide. The binding constant of PYR with double-strand deoxyribonucleic acid (ds-DNA) was obtained by ultraviolet-visible absorbance spectroscopy as 2.8 x 10(4) at 20 degrees C. Thermodynamic parameters, that is, Delta H, Delta S degrees, and Delta G, were -53.82 kJ mol(-1), 96.11 J mol(-1) -82.46 KJ mol(-1), respectively. Thermal denaturation study of DNA with PYR revealed the Delta T-m of 3.0 and 6.0 degrees C at r(i) = 0.5 and 1.0, respectively. The Fourier transform infrared study showed a major interaction of PYR with G-C and A-T base pairs and a minor perturbation of the backbone PO2 group. Further, PYR induces detectable changes in the circular dichroism spectrum of CT-DNA. In fluorimetric studies, the dynamic enhancement constants (k(D)) and bimolecular enhancement constant (k(B)) were calculated, which showed that the fluorescence enhancement was initiated by a static process in the ground state. The hybrid of quantum mechanical/molecular mechanics theoretical calculations revealed that the interaction is base sequence dependent, and PYR interacts more with DNA via the AT base sequence. From the data we concluded that PYR may interact with ds-DNA via two modes: intercalating and outside groove binding.

Accession Number: WOS:000300127500016

Language: English

Document Type: Article

KeyWords Plus: ELECTROPHORESIS SCGE ASSAY; GEL-ELECTROPHORESIS; COMET ASSAY; IN-VITRO; SPECTROSCOPIC METHODS; ETHIDIUM BROMIDE; NUCLEIC ACIDS; CHO-CELLS; DRUG-DNA; PESTICIDES

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Subject Category: Biochemistry & Molecular Biology; Cell Biology; Genetics & Heredity

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Record 12 of 29

Title: On the role of astrocytes in epilepsy: A functional modeling approach

Author(s): Amiri, M (Amiri, Mahmood); Bahrami, F (Bahrami, Fariba); Janahmadi, M (Janahmadi, Mahyar)

Source: NEUROSCIENCE RESEARCH **Volume:** 72 **Issue:** 2 **Pages:** 172-180 **DOI:** 10.1016/j.neures.2011.11.006 **Published:** FEB 2012

Times Cited in Web of Science: 0

Total Times Cited: 0

Cited Reference Count: 53

Abstract: In the present research, we extend a biologically plausible cortical neural population model (CPM), which was developed previously in the literature, by integrating the functional role of astrocytes in the synaptic transmission in the model. In other words, the original CPM is modified to consider neuron-astrocyte interaction. Then, two modified CPMs (MCPMs) are coupled via excitatory synapses; the astrocytes are also coupled through gap junctions. Using the coupled MCPMs (CMCPMs), it is demonstrated that the healthy astrocytes provide appropriate feedback control in regulating neural activity. As a result, the astrocytes compensate the coupling variations between CPMs in order to maintain the normal level of synchronized behavior. Next, malfunction of astrocytes in the regulatory feedback loop as one of the plausible causes of seizures is investigated. In this way, dysfunctional

astrocytes are not any more able to regulate the excessive increase of the inter-population coupling strength. Consequently, disruption of the homeostatic function of astrocytes may initiate the hypersynchronous firing of neurons. This suggests that the neuron-astrocyte interaction may represent a novel target to develop effective therapeutic strategies for epilepsy.

Accession Number: WOS:000299853400008

Language: English

Document Type: Article

Author Keywords: Astrocytes; Synchronization; Functional modeling; Epilepsy

KeyWords Plus: CENTRAL-NERVOUS-SYSTEM; CALCIUM WAVES; GAP-JUNCTIONS; GLUTAMATERGIC ACTIVITY; SYNAPTIC-TRANSMISSION; NEURONAL-ACTIVITY; BRAIN; HIPPOCAMPUS; NETWORKS; DYNAMICS

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Web of Science Category: Neurosciences

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Record 13 of 29

Title: Association of Endothelial Nitric Oxide Synthase Gene Variant (G894T) With Coronary Artery Disease in Western Iran

Author(s): Rahimi, Z (Rahimi, Zohreh); Nourozi-Rad, R (Nourozi-Rad, Reza)

Source: ANGIOLOGY **Volume:** 63 **Issue:** 2 **Pages:** 131-137 **DOI:** 10.1177/0003319711409741 **Published:** FEB 2012

Times Cited in Web of Science: 0

Total Times Cited: 0

Cited Reference Count: 42

Abstract: There are conflicting reports about the association of endothelial nitric oxide synthase (eNOS) gene polymorphism and the risk of coronary artery disease (CAD). To determine the frequency of eNOS G894T variant and to find the possible association between this polymorphism with CAD we studied 207 unrelated patients with total CAD (with and

without diabetes) and 92 controls. The eNOS variants were detected by polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP). The presence of GT + TT genotype was associated with 2.1-fold (P = .006), 2.29-fold (P = .006), and 1.93-fold (P = .032) increased risk of CAD in total CAD, CAD with diabetes, and in CAD without diabetes patients, respectively. The presence of T allele of eNOS increased the risk of CAD 2.15-fold (P = .001). The levels of low-density lipoprotein cholesterol (LDL-C) and triglycerides (TG) tended to be higher in patients carrier for T allele compared to those with G allele. The results of present study revealed that eNOS G894T polymorphism is associated with increased risk of CAD in our population.

Accession Number: WOS:000299170000010

Language: English

Document Type: Article

Author Keywords: eNOS G894T; coronary artery disease; lipids; Western Iran

KeyWords Plus: ACUTE MYOCARDIAL-INFARCTION; ISCHEMIC-HEART-DISEASE; GLU298ASP POLYMORPHISM; TURKISH POPULATION; ENOS GENE; COMMON VARIANT; BLOOD-PRESSURE; RISK-FACTOR; METAANALYSIS; 894G-GREATER-THAN-T

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Record 14 of 29

Title: Concomitant presence of endothelial nitric oxide 894T and angiotensin II-converting enzyme D alleles are associated with diabetic nephropathy in a Kurdish population from Western Iran

Author(s): Rahimi, Z (Rahimi, Zohreh); Vaisi-Raygani, A (Vaisi-Raygani, Asad); Rahimi, Z (Rahimi, Ziba); Parsian, A (Parsian, Abbas)

Source: NEPHROLOGY **Volume:** 17 **Issue:** 2 **Pages:** 175-181 **DOI:** 10.1111/j.1440-1797.2011.01533.x **Published:** FEB 2012

Times Cited in Web of Science: 0

Total Times Cited: 0

Cited Reference Count: 35

Abstract: Aim: The present study investigated the influence of insertion (I)/deletion (D) polymorphism of the angiotensin II-converting enzyme (ACE) gene in combination with endothelial nitric oxide (eNOS) G894T polymorphism on the predisposition to diabetic nephropathy (DN). Methods: Using polymerase chain reaction (PCR) and PCR-restriction fragment length polymorphism (PCR-RFLP) method, the ACE and eNOS polymorphisms were genotyped in 72 microalbuminuric, 68 macroalbuminuric and 72 normoalbuinuric type 2 diabetes mellitus (T2DM) patients from Western Iran. Results: The presence of eNOS T or ACE D allele was not associated with increased risk of macroalbuminuria (odds ratio (OR) = 1.36, P = 0.27 and OR = 1.6, P = 0.062, respectively). However, in the presence of both alleles there was a trend towards increased risk of macroalbuminuria (fivefold, P = 0.05). Conclusion: Our study indicates that the concomitant presence of both ACE D and eNOS T alleles tends to be associated with an elevation risk of macroalbuminuria compared with the presence of each polymorphism alone. This risk could be attributed to the increasing activity of ACE and angiotensin II level in the presence of D allele and decreasing NO production in the presence of T allele accelerating diabetic nephropathy.

Accession Number: WOS:000299252400010

Language: English

Document Type: Article

Author Keywords: ACE I; D; eNOS G894T; macroalbuminuria; microalbuminuria; type 2 diabetes mellitus

KeyWords Plus: STAGE RENAL-DISEASE; ENOS GLU298ASP POLYMORPHISM; SYNTHASE GENE; INSERTION/DELETION POLYMORPHISM; ACE GENE; TYPE-2; HYPERTENSION; RISK; CLEAVAGE; VARIANT

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Web of Science Category: Urology & Nephrology

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Record 15 of 29

Title: QSAR study of anthranilic acid sulfonamides as methionine aminopeptidase-2 inhibitors

Author(s): Fassihi, A (Fassihi, Afshin); Shahlaei, M (Shahlaei, Mohsen); Moeinifard, B (Moeinifard, Behzad); Sabet, R (Sabet, Razieh)

Source: MONATSHEFTE FUR CHEMIE **Volume:** 143 **Issue:** 2 **Pages:** 189-198 **DOI:** 10.1007/s00706-011-0541-3 **Published:** FEB 2012

Times Cited in Web of Science: 0

Total Times Cited: 0

Cited Reference Count: 46

Abstract: Quantitative relationships between molecular structure and methionine aminopeptidase-2 inhibitory activity of a series of cytotoxic anthranilic acid sulfonamides were determined by the partial least-squares (PLS) method. Evaluation of a test set of ten compounds with the developed PLS model revealed it is reliable and has good predictive power. Because the QSAR study was performed on the basis of theoretical descriptors calculated completely from molecular structure, the proposed model could potentially provide useful information about the activity of the compounds studied. Various tests and criteria, for example leave-one-out cross validation, leave-many-out cross validation, and criteria suggested by Tropsha, were used to examine the predictive power and robustness of the model. The model could explain and predict 73 and 64% of variances in the pIC (50) data.

Accession Number: WOS:000299179700003

Language: English

Document Type: Article

Author Keywords: QSAR; Partial least-squares; Anticancer agents; Aminopeptidase-2 inhibitors

KeyWords Plus: QUANTITATIVE STRUCTURE-ACTIVITY; SACCHAROMYCES-CEREVISIAE; MOLECULAR DESCRIPTORS; TERMINAL METHIONINE; ESCHERICHIA-COLI; ANGIOGENESIS; GROWTH; FUMAGILLIN; DISCOVERY; DESIGN

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Subject Category: Chemistry
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ISO Source Abbrev.: Mon. Chem.
Source Item Page Count: 10

Record 16 of 29

Title: A Comparative Study of the Effects of Low-Dose Topiramate Versus Sodium Valproate in Migraine Prophylaxis

Author(s): Afshari, D (Afshari, Dariush); Rafizadeh, S (Rafizadeh, Shabnam); Rezaei, M (Rezaei, Mansour)

Source: INTERNATIONAL JOURNAL OF NEUROSCIENCE **Volume:** 122 **Issue:** 2 **Pages:** 60-68 **DOI:** 10.3109/00207454.2011.626908 **Published:** FEB 2012

Times Cited in Web of Science: 0

Total Times Cited: 0

Cited Reference Count: 29

Abstract: The present study was performed to evaluate the efficacy of low-dose topiramate and compare it with sodium valproate that is prevalently prescribed as a migraine prophylaxis. This was a randomized, double-blind, parallel-group clinical trial on 56 patients who completed the course of study. Topiramate and valproate were administered at 50 mg/day and 400 mg/day, respectively, during the follow-up period. Frequency, intensity, duration, associated symptoms with headaches, analgesics use, as well as drugs' side effects were studied. Participants completed MIDAS and HIT-6 questionnaires before and after treatment. Frequency, intensity, and duration of migraine headaches as well as MIDAS score and symptomatic medications decreased significantly between repeated follow-up visits in both groups. Responder rate for patients treated with topiramate and valproate were 71.6% and 64.3%, respectively, and the difference between the two groups was not statistically significant. The reduction of headache severity in the topiramate group was significantly more than that in the valproate group ($p = .027$). During the study, no statistically significant reduction in associated symptoms with migraine were observed in both the groups. Topiramate dose of 50 mg/day with fewer side effects in comparison with its higher doses may be an appropriate substitution for first-line migraine prophylaxis such as valproate.

Accession Number: WOS:000298995200002

Language: English

Document Type: Article

Author Keywords: low dose; migraine; prophylaxis; sodium valproate; topiramate

KeyWords Plus: DOUBLE-BLIND; CONTROLLED-TRIAL; DIVALPROEX SODIUM; RANDOMIZED-TRIAL; PREVENTION; EFFICACY; PLACEBO; THERAPY; ADOLESCENTS; SAFETY

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Record 17 of 29

Title: Functional contributions of astrocytes in synchronization of a neuronal network model

Author(s): Amiri, M (Amiri, Mahmood); Bahrami, F (Bahrami, Fariba); Janahmadi, M (Janahmadi, Mahyar)

Source: JOURNAL OF THEORETICAL BIOLOGY **Volume:** 292 **Pages:** 60-70 **DOI:** 10.1016/j.jtbi.2011.09.013 **Published:** JAN 7 2012

Times Cited in Web of Science: 0

Total Times Cited: 0

Cited Reference Count: 58

Abstract: In the present study, a biologically plausible neuronal population model is developed, which considers functional outcome of neuron-astrocyte interactions. Based on established neurophysiologic findings, astrocytes dynamically regulate the synaptic transmission of neuronal networks. The employed structure is based on the main physiological and anatomical features of the CA1 subfield of the hippocampus. Utilizing our model, we demonstrate that healthy astrocytes provide appropriate feedback control in regulating neural activity. In this way, the astrocytes compensate the increase of excitation coupling strength among neurons and stabilize the normal level of synchronized behavior. Next, malfunction of astrocytes in the regulatory feedback loop is investigated. In this way, pathologic astrocytes are no longer able to regulate and/or compensate the excessive increase of the excitation level. Consequently, disruption of astrocyte signaling initiates hypersynchronous firing of neurons. Our results suggest that diminishing of neuron-astrocyte cross-talk leads to an abnormal synchronized neuronal firing, which suggests that astrocytes

could be a proximal target for the treatment of related disorders including epilepsy.

Accession Number: WOS:000297450100007

Language: English

Document Type: Article

Author Keywords: Astrocyte; Neuronal population model; Synchronization; Epilepsy

KeyWords Plus: TEMPORAL-LOBE EPILEPSY; SYNAPTIC-TRANSMISSION; COUPLED EQUATIONS; GLUTAMATE RELEASE; DELAYED FEEDBACK; BRAIN; OSCILLATIONS; INHIBITION; MODULATION; INSIGHTS

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Web of Science Category: Biology; Mathematical & Computational Biology

Subject Category: Life Sciences & Biomedicine - Other Topics; Mathematical & Computational Biology

IDS Number: 853UB

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29-char Source Abbrev.: J THEOR BIOL

ISO Source Abbrev.: J. Theor. Biol.

Source Item Page Count: 11

Record 18 of 29

Title: Acclimatization related proteins and factors in somaclone lines in kiwifruit (Actinidia deliciosa)

Author(s): Miraghaee, SS (Miraghaee, Sayed Sharam); Mostafaie, A (Mostafaie, Ali); Kahrizi, D (Kahrizi, Danial)

Source: JOURNAL OF FOOD AGRICULTURE & ENVIRONMENT **Volume:** 10 **Issue:** 1 **Pages:** 198-202 **Part:** Part 1 **Published:** JAN 2012

Times Cited in Web of Science: 0

Total Times Cited: 0

Cited Reference Count: 45

Abstract: Kiwifruit is adapted to Ramsar region (north of Iran) with high relative humidity. Twenty somaclone lines were collected and transplanted from Ramsar to Sahneh region (west of Iran) with moderate and low relative humidity. After five years of transplantation, only one clone acclimatized to new conditions, grown and set fruit and seed successfully. Current study was focused on ecological adaptation related proteins and factors (such as leaf proline,

soluble leaf sugar, chlorophyll a and b and relative water content) in this line and comparison with stock plant in Ramsar. This research was conducted to compare electerophoretic protein patterns and main physiological traits in kiwifruit from Ramsar and Sahneh. Results of SDS-PAGE and two-dimensional electrophoresis showed maximal and minimal differences for leaf and seed proteins, respectively. Actinidin, as main protease of kiwifruit, is expressed in fruit of Ramsar line and leaves of Sahneh kiwifruit line mainly. Its expression was relatively low in leaves of Ramsar plant and fruit of Sahneh line. Statistical analysis showed significant differences between kiwifruit of Sahneh and its stock plant in Ramsar for proline, sugar, total protein (of seed, fruit and leaf) and chlorophyll content. Correlation between sugar and proline content was positive and significant (0.931). Total protein of leaf and fruit correlated with proline significantly and negatively (0.879 and 0.835, respectively). It is concluded that protein expression in kiwifruits was affected by environmental conditions seriously. Switch on and off and down or up regulating of some proteins may be in adaptation process.

Accession Number: WOS:000300924100040

Language: English

Document Type: Article

Author Keywords: Kiwifruit; protein electrophoresis; actinidin; adaptation

KeyWords Plus: GENE-EXPRESSION; DROUGHT CONDITIONS; FRUIT-DEVELOPMENT; WATER-STRESS; KIWI FRUIT; IN-VITRO; PLANTS; WHEAT; CARBOHYDRATE; CULTIVARS

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Publisher Address: MERI-RASTILANTIE 3 C, HELSINKI, FI-00980, FINLAND

Web of Science Category: Food Science & Technology

Subject Category: Food Science & Technology

IDS Number: 900XC

ISSN: 1459-0255

29-char Source Abbrev.: J FOOD AGRIC ENVIRON

ISO Source Abbrev.: J. Food Agric. Environ.

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The support of Medical Biology Research Center, Kermanshah University of Medical Sciences, Kermanshah, Iran is acknowledged. Thanks to Mr Azizi for collecting of the kiwifruit lines.

Record 19 of 29

Title: Intravenous Drug Use and Hepatitis C Virus in Iran

Author(s): Zobeiri, M (Zobeiri, Mehdi); Adibi, P (Adibi, Peyman); Alavian, SM (Alavian, Seyed Moayed)

Source: HEPATITIS MONTHLY **Volume:** 12 **Issue:** 1 **Pages:** 9-10 **DOI:** 10.5812/kowsar.1735143X.797 **Published:** JAN 2012

Times Cited in Web of Science: 0

Total Times Cited: 0

Cited Reference Count: 25

Accession Number: WOS:000300925400002

Language: English

Document Type: Editorial Material

Author Keywords: Substance Abuse; Intravenous; Hepatitis C

KeyWords Plus: RISK-FACTORS; PREVALENCE; INFECTION; PRISON; TRANSMISSION; INMATES; HIV

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Publisher Address: GASTROENTEROLOGY & LIVER DISEASES, TEHRAN, 00000, IRAN

Web of Science Category: Gastroenterology & Hepatology

Subject Category: Gastroenterology & Hepatology

IDS Number: 900XM

ISSN: 1735-143X

29-char Source Abbrev.: HEPAT MON

ISO Source Abbrev.: Hepat. Mon.

Source Item Page Count: 2

Record 20 of 29

Title: Antibacterial activity of clarithromycin loaded PLGA nanoparticles

Author(s): Valizadeh, H (Valizadeh, H.); Mohammadi, G (Mohammadi, G.); Ehyaei, R (Ehyaei, R.); Milani, M (Milani, M.); Azhdarzadeh, M (Azhdarzadeh, M.); Zakeri-Milani, P (Zakeri-Milani, P.); Lotfipour, F (Lotfipour, F.)

Source: PHARMAZIE **Volume:** 67 **Issue:** 1 **Pages:** 63-68 **DOI:** 10.1691/ph.2012.1052 **Published:** JAN 2012

Times Cited in Web of Science: 0

Total Times Cited: 0

Cited Reference Count: 31

Abstract: Novel drug delivery systems such as nanoparticles (NPs) have been proved to enhance the effectiveness of many drugs. Clarithromycin is a broad spectrum macrolide antibiotic, used in many infectious conditions like upper and lower respiratory tract infections, and skin and other soft tissue infections. This paper describes the preparation and enhanced in vitro antibacterial activities of clarithromycin loaded poly (lactic-co-glycolic acid) (PLGA) nanoparticles. A modified quasi-emulsion solvent diffusion (MQESD) method was used to prepare clarithromycin (CLR) NPs. The antibacterial activity of the NPs was evaluated using the agar well diffusion method against Escherichia coil (PTCC 1330), Haemophilus influenzae (PTCC 1623), Salmonella typhi (PTCC 1609), Staphylococcus aureus (PTCC 1112) and Streptococcus pneumoniae (PTCC 1240). The inhibition zone diameters related to each nano formulation were compared with those for untreated CLR at the same concentrations. The results indicated that the mean inhibition zone diameters of NPs against all the bacteria tested were significantly higher than those of untreated CLR, particularly in the case of S. aureus. The increased potency of CLR NPs may be related to some physicochemical properties of NPs like modified surface characteristics, lower drug degradation, and increased drug adsorption and uptake.

Accession Number: WOS:000299980300010

Language: English

Document Type: Article

KeyWords Plus: POLYACRYLATE NANOPARTICLES; ANTIMICROBIAL ACTIVITY; ANTIBIOTICS; DELIVERY; DRUG; MRSA; PHARMACOKINETICS; VANCOMYCIN; POLYMERS; RELEASE

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Web of Science Category: Chemistry, Medicinal; Chemistry, Multidisciplinary; Pharmacology & Pharmacy

Subject Category: Pharmacology & Pharmacy; Chemistry

IDS Number: 888CB

ISSN: 0031-7144

29-char Source Abbrev.: PHARMAZIE

ISO Source Abbrev.: Pharmazie

Source Item Page Count: 6

Record 21 of 29

Title: Prophylactic Effect of Mycophenolate Mofetil on Early Outcomes of Living Donor Kidney Transplantation

Author(s): Samadzadeh, B (Samadzadeh, Bahram); Alemi, M (Alemi, Mohsen); Heidarnejadiyan, J (Heidarnejadiyan, Jafar); Torkamanasadi, F (Torkamanasadi, Fatemeh)

Source: IRANIAN JOURNAL OF KIDNEY DISEASES **Volume:** 6 **Issue:** 1 **Pages:** 63-68 **Published:** JAN 2012

Times Cited in Web of Science: 0

Total Times Cited: 0

Cited Reference Count: 29

Abstract: Introduction. Living donor transplantation allows a priori scheduling and the recipient can receive immunosuppressive prophylaxis several days before surgery, which is preoperative induction therapy with oral agents. We evaluated the impact of preoperative mycophenolate mofetil on the outcomes of living donor kidney transplantations.
Materials and Methods. In a randomized controlled trial was from November 2008 to November 2010, 99 patients receiving their first living donor kidney transplantation were divided into the mycophenolate mofetil (500 mg) and placebo groups, and received 2 tablets per day for 5 days before transplantation.
Results. Forty-nine patients received mycophenolate mofetil and 48 received placebo. The mean serum creatinine on discharge day and hospitalization period were significantly less with mycophenolate mofetil compared to placebo (1.62 +/- 1.00 mg/dL versus 1.22 +/- 0.24 mg/dL, P = 0.03 and 20.8 +/- 11.2 days versus 13.5 +/- 4.4 days, P < .001, respectively). No delayed graft function was observed. Slow graft function was 2-fold higher in the placebo group (14.6% versus 8.2%, P = .32). Acute rejection was seen in 12.2% of the patients with mycophenolate mofetil and in 29.2% of the controls (P = .04). Serum creatinine levels at discharge were significantly lower in the mycophenolate mofetil group compared with that in the placebo group (P = .03).
Conclusions. Prophylactic administration of mycophenolate mofetil before living donor kidney transplantation reduced hospitalization period, improved early graft function, and decreased the risk of acute rejection in the first month posttransplant.

Accession Number: WOS:000299934900012

Language: English

Document Type: Article

Author Keywords: kidney transplantation; prophylaxis; acute allograft rejection

KeyWords Plus: DELAYED GRAFT FUNCTION; RENAL-ALLOGRAFT RECIPIENTS; ACUTE REJECTION; RANDOMIZED-TRIAL; RISK-FACTORS; PREVENTION; CYCLOSPORINE; IMPACT; SLOW; AZATHIOPRINE

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Web of Science Category: Urology & Nephrology

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IDS Number: 887NN

ISSN: 1735-8582

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Source Item Page Count: 6

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Nephrology-Urology Research Center of Kermanshah University of Medical Sciences	

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Record 22 of 29

Title: The effects of acupressure on severity of primary dysmenorrhea

Author(s): Gharloghi, S (Gharloghi, Shahla); Torkzahrani, S (Torkzahrani, Shahnaz); Akbarzadeh, AR (Akbarzadeh, Ali Reza); Heshmat, R (Heshmat, Reza)

Source: PATIENT PREFERENCE AND ADHERENCE **Volume:** 6 **Pages:** 137-142 **DOI:** 10.2147/PPA.S27127 **Published:** 2012

Times Cited in Web of Science: 0

Total Times Cited: 0

Cited Reference Count: 23

Abstract: Background: Dysmenorrhea constitutes one of the most frequent disorders in women of a fertile age. The objective of this research was to determine the effects of acupressure at Sanyinjiao (SP6) point and DiJi (SP8) point on pain severity of primary dysmenorrhea and the associated systemic symptoms.
Materials and methods: In this crossover clinical trial, 50 females aged 18-30 years old who met the study criteria and were under the care of Sarpolezahab Health Center were selected. Subjects were randomly assigned to one of two groups and evaluated during three menstrual cycles. We evaluated pain severity using the McGill pain scale and associated systemic symptoms using a verbal multidimensional scoring system. Data acquired from 42 cases were analyzed using SPSS software, with a P value of <0.05 considered significant.
Results: The findings of our study indicate that the severity of dysmenorrhea pain diminishes significantly for up to 2 hours following treatment with acupressure at the SP6 and SP8 points ($P < 0.001$). Furthermore, the severity of associated systemic symptoms reduced significantly after acupressure at the SP6 and SP8 points, except for nausea and vomiting. Comparison of the severity of systemic symptoms with acupressure at the SP6 and SP8 points revealed no significant difference except for severity of fatigue, which was reduced significantly further with SP6 point compared to SP8 point ($P = 0.004$).
Conclusion: Acupressure at the SP6 and SP8 points can reduce pain severity of dysmenorrhea for up to 2 hours after application, and these points may be used to alleviate the severity of systemic symptoms accompanying dysmenorrhea.

Accession Number: WOS:000300166300001

Language: English

Document Type: Article

Author Keywords: dysmenorrhea; systemic symptoms; acupressure; SP8 point; SP6 point

KeyWords Plus: PAIN; SYMPTOMS; TRIAL; WOMEN

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Subject Category: General & Internal Medicine
IDS Number: 890SW
ISSN: 1177-889X
29-char Source Abbrev.: PATIENT PREFER ADHER
ISO Source Abbrev.: Patient Prefer. Adherence
Source Item Page Count: 6

Record 23 of 29

Title: Thrombophilic mutations and susceptibility to preeclapmsia in Western Iran

Author(s): Malek-Khosravi, S (Malek-Khosravi, Shohreh); Rahimi, Z (Rahimi, Zohreh); Rahimi, Z (Rahimi, Ziba); Jalilvand, F (Jalilvand, Faranak); Parsian, A (Parsian, Abbas)

Source: JOURNAL OF THROMBOSIS AND THROMBOLYSIS **Volume:** 33 **Issue:** 1 **Pages:** 109-115 **DOI:** 10.1007/s11239-011-0653-y **Published:** JAN 2012

Times Cited in Web of Science: 0

Total Times Cited: 0

Cited Reference Count: 35

Abstract: The aim of the present study was to investigate the frequency and the possible association between thrombophilic mutations of factor V Leiden (FVL) and prothrombin G20210A with preeclampsia among Kurdish population of Western Iran. We studied 198 women with preeclampsia including 128 women with mild and 70 women with severe forms and 101 healthy pregnant women with uncomplicated pregnancy. Among cases there were 23 women with early onset preeclampsia and 175 cases with late-onset preeclampsia. The sample was genotyped by polymerase chain reaction-restriction fragment-length polymorphism using Mnl I and Hind III for FVL and prothrombin G20210A, respectively. The frequency of heterozygous FVL mutation was 7.6% among all preeclamptic women (8.6% in mild and 5.7% in severe preeclamptic women) and 7.9% in controls ($P > 0.05$). However, the prevalence of heterozygous FVL were 10.5 and 3.9% among severe preeclamptic women with early onset and late-onset preeclampsia, respectively ($P > 0.05$). The prevalence of prothrombin G20210A were 1.6, 2.9, and 3% among women with mild preeclamsia, severe preeclampsia and controls, respectively ($P > 0.05$). The level of serum triglycerides (TG) was significantly higher among women with preeclampsia compared to healthy pregnant women that was not associated with the two thrombophilic mutations. Our results indicate that neither FVL nor prothrombin G20210A could be a risk factor for preeclampsia in our population. However, high prevalence of FVL in preeclamptic women with early onset compared to those with late-onset preeclampsia may suggest a role for this

mutation in predisposition to early onset preeclampsia that need to be confirmed with larger sample size.

Accession Number: WOS:000299775700016

Language: English

Document Type: Article

Author Keywords: Preeclampsia; Factor V Leiden; Prothrombin G20210A; Western Iran

KeyWords Plus: FACTOR-V-LEIDEN; REDUCTASE GENE VARIANTS; INHERITED THROMBOPHILIAS; PREGNANCY COMPLICATIONS; SEVERE PREECLAMPSIA; POLYMORPHISM; PROTHROMBIN; ASSOCIATION; POPULATION; WOMEN

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Web of Science Category: Hematology; Peripheral Vascular Disease

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29-char Source Abbrev.: J THROMB THROMBOLYS

ISO Source Abbrev.: J. Thromb. Thrombolysis

Source Item Page Count: 7

Record 24 of 29

Title: Is Adiponectin Related to Orofacial Clefts?

Author(s): Khazaei, S (Khazaei, S.); Kazemi, S (Kazemi, Sh); Khazaei, M (Khazaei, M.)

Source: IRANIAN RED CRESCENT MEDICAL JOURNAL **Volume:** 14 **Issue:** 1 **Pages:** 51-52 **Published:** JAN 2012

Times Cited in Web of Science: 0

Total Times Cited: 0

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Accession Number: WOS:000300118000012

Language: English

Document Type: Letter

Author Keywords: Cleft lip and palate; Diabetes mellitus; Adiponectin

KeyWords Plus: INSULIN-RESISTANCE; OBESITY; METAANALYSIS; ASSOCIATION; RISK

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Web of Science Category: Medicine, General & Internal

Subject Category: General & Internal Medicine

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ISSN: 1561-4395

29-char Source Abbrev.: IRAN RED CRESCENT ME

ISO Source Abbrev.: Iran. Red Crescent Med. J.

Source Item Page Count: 2

Record 25 of 29

Title: Comparative quantitative structure-activity relationship study of some 1-aminocyclopentyl-3-carboxyamides as CCR2 inhibitors using stepwise MLR, FA-MLR, and GA-PLS

Author(s): Shahlaei, M (Shahlaei, Mohsen); Madadkar-Sobhani, A (Madadkar-Sobhani, Armin); Fassihi, A (Fassihi, Afshin); Saghaie, L (Saghaie, Lotfollah); Shamshirian, D (Shamshirian, Danial); Sakhi, H (Sakhi, Hamidreza)

Source: MEDICINAL CHEMISTRY RESEARCH **Volume:** 21 **Issue:** 1 **Pages:** 100-115 **DOI:** 10.1007/s00044-010-9501-4 **Published:** JAN 2012

Times Cited in Web of Science: 0

Total Times Cited: 0

Cited Reference Count: 32

Abstract: Multiple linear regression (MLR), factor analysis in combination with multiple linear regression (FA-MLR), and genetic algorithm subset selection partial least square (GA-PLS) regression methods were used for quantitative structure-activity relationships (QSAR) model building. These approaches were employed to investigate the correlation between pIC(50) and various physicochemical descriptors of 28 compounds of 1-aminocyclopentyl-3-carboxyamides including substituted tetrahydropyran moieties as CCR2 inhibitors. The obtained models were validated using cross-validation and external test set. The predictability and robustness of the developed models were considered by some figures of merit such as RMSEP and Y-randomization. MLR, FA-MLR, and GA-PLS have R (2) equal to 0.84, 0.69, and 0.93, respectively. Predicted variance by MLR, FA-MLR, and GA-PLS (R (2) test) is 78, 75, and 78%, respectively. Furthermore, the domain of applicability which indicates the area of reliable predictions is defined. The prediction results by models are in good agreement with the experimental value.

Accession Number: WOS:000298659700012

Language: English

Document Type: Article

Author Keywords: Quantitative structure-activity relationship; Multivariate linear regression; Factor analysis; Partial least square; CCR2 inhibitors

KeyWords Plus: MONOCYTE CHEMOATTRACTANT PROTEIN-1; DESCRIPTORS; REGRESSION; RECEPTORS; MODELS

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Web of Science Category: Chemistry, Medicinal

Subject Category: Pharmacology & Pharmacy

IDS Number: 870HK

ISSN: 1054-2523

29-char Source Abbrev.: MED CHEM RES

ISO Source Abbrev.: Med. Chem. Res.

Source Item Page Count: 16

Record 26 of 29

Title: The opioid antagonist naloxone inhibits Leishmania major infection in BALB/c mice

Author(s): Karaji, AG (Karaji, Ali Gorgin); Hamzavi, Y (Hamzavi, Yazdan)

Source: EXPERIMENTAL PARASITOLOGY **Volume:** 130 **Issue:** 1 **Pages:** 73-77 **DOI:** 10.1016/j.exppara.2011.09.006 **Published:** JAN 2012

Times Cited in Web of Science: 0

Total Times Cited: 0

Cited Reference Count: 26

Abstract: BALB/c mice are susceptible to develop non-healing, progressive infection with Leishmania major (L major) due to the development of a non-protective Th2 response. Resistance to L major infection is dependent to Th1 response. Treatment of mice with the opioid antagonist naloxone can promote the activation of Th1 responses. Here we study the effect of chronic administration of various doses of naloxone on susceptibility of BALB/c mice to L. major infection. Our results showed that naloxone has dose-dependent biphasic effect on L major infection in BALB/c mice. While administration of 1 mg/kg x 2/day tends to exacerbate the local reaction to L. major infection, treatment with 10 mg/kg x 2/day of naloxone suppresses the local reaction and progress of infection. On the other hand treatment of mice with middle dose (5 mg/kg whether 1 or 2 times per day) does not have significant effect on the infection. This study demonstrates that administration of high dose of naloxone

could improve protection against L major infection in BALB/c mice, presumably by modulation in Th1/Th2 balance or by affecting macrophages through binding to Toll-like receptors.

Accession Number: WOS:000299189300012

Language: English

Document Type: Article

Author Keywords: Leishmania major; Immune modulation; IFN-gamma; IL-4; Naloxone

KeyWords Plus: BETA-ENDORPHIN CONCENTRATIONS; INTERFERON-GAMMA; MURINE LEISHMANIASIS; IMMUNE-RESPONSES; IN-VITRO; INTERLEUKIN-4; PROLIFERATION; EXPRESSION; CYTOKINES; INVIVO

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Web of Science Category: Parasitology

Subject Category: Parasitology

IDS Number: 877NN

ISSN: 0014-4894

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Record 27 of 29

Title: 9-Fluorenylmethyl chloroformate as a fluorescence-labeling reagent for derivatization of carboxylic acid moiety of sodium valproate using liquid chromatography/tandem mass spectrometry for binding characterization: A human pharmacokinetic study

Author(s): Mohammadi, B (Mohammadi, Bahareh); Majnooni, MB (Majnooni, Mohammad Bagher); Khatabi, PM (Khatabi, Pyman Malek); Jalili, R (Jalili, Ronak); Bahrami, G (Bahrami, Gholamreza)

Source: JOURNAL OF CHROMATOGRAPHY B-ANALYTICAL TECHNOLOGIES IN THE BIOMEDICAL AND LIFE SCIENCES **Volume:** 880 **Pages:** 12-18 **DOI:** 10.1016/j.jchromb.2011.11.009 **Published:** JAN 1 2012

Times Cited in Web of Science: 0

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Abstract: In High Performance Liquid Chromatographic (HPLC) determination of chemicals with acidic functions, different labeling agents are used to improve sensitivity of the assay. 9-Fluorenylmethyl chloroformate (FMOC-Cl), on the other hand, is a suitable labeling agent, which reacts with both primary and secondary amines and less readily with hydroxyl groups in alkaline conditions. However, the reagent has not been applied in labeling of chemicals with acidic function yet. In this study which is the first report on application of FMOC-Cl in derivatization and analysis of a drug with acidic function, valproic acid (VPA), one of a series of fatty carboxylic acids with anticonvulsant activity, was derivatized using the reagent and quantified in serum samples by HPLC with fluorescence detection. In addition, to document the reaction between the labeling agent and carboxylic acid moiety of the drug, we developed a liquid chromatography-tandem MS/MS (LC-MS/MS) method. Following liquid-liquid extraction, derivatization of the drug and an internal standard was achieved in alkaline medium. The elute was monitored by a fluorescence detector with respective excitation and emission wavelengths of 265 and 315 nm. The present method is more sensitive comparing with other published HPLC procedures for analysis of VPA. The assay is sensitive enough to measure drug levels obtained in human single dose studies with a limit of quantification of 0.011.1 mu g/mL. Also the method is linear over the concentrations range of 0.01-32 mu g/mL of VPA in human serum using 100 mu L serum sample and 5 mu L injection. The coefficient variation values of both inter and intra day analysis were less than 12% and the percentage error was less than 4%. The method performance was studied and the validated procedure applied in a randomized cross-over bioequivalence study of two different VPA preparations in 24 healthy volunteers. (C) 2011 Elsevier B.V. All rights reserved.

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Title: Groundwater pesticides residue in the southwest of Iran-Shushtar plain

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Abstract: Study area with an area of about 415 km(2) is located from 31 degrees 40' to 32 degrees 05' northern latitudes and 48 degrees 45' to 49 degrees 00' eastern longitudes 85 km to the north-east of Ahwaz city, in the north of Khuzestan province, and south west of Iran. The purpose of this study is: (1) the determination of the pesticides concentration in the groundwater of the Shushtar plain (Mian-Ab) and (2) the assessment of geology, hydrogeology and anthropogenic activities impacts the groundwater quality. Thirty-seven groundwater samples were taken from product wells based on the standard methods. A simple and efficient automated method for extraction and preconcentration was used. In this method, a pyrrole-based polymer was synthesized and applied as an efficient sorbent for micro-solid-phase extraction. After extraction, analytes were desorbed in ethyl acetate and analyzed using gas chromatography-flame. The study area is surrounded by Aghajari Formation dominated by silt and clay sediments and the Bakhtiari Formation dominated by sand andgravel. Existence of these formations affects the aquifer sediments and the hydrogeological properties. In the study area, the sediments grade from gravel and sand in the north and east into silt and clay to the south and west, respectively. The topsoil in the south of the study area contains more clay sediments. In this study, the concentration of two common herbicides, i.e., 2,4-D and clodinafop propargyl and two pesticides, i.e., permethrin and diazinon, in the groundwater of Mian-Ab aquifer was assessed. Chemical analysis results showed that the 2,4-D residue in the groundwater has the highest concentration (15 ppm). About 50% of the samples have concentration values more than the maximum contamination level based on EPA drinking standard. The pesticides concentrations decrease from the north to the south of the study area. Pesticides influx to the groundwater in the south of the area is prevented or diminished due to the specific geological situation and soil type. Distribution pattern of population centers, which increase to the north of the study area, and the role of groundwater as the main source of drinking water are two important issues that must be considered in management of pesticides use in the area.

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Title: Matrix metalloproteinas-9 functional promoter polymorphism 1562C > T increased risk of early-onset coronary artery disease

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Abstract: The Matrix metalloproteinas-9 functional promoter polymorphism 1562C > T may be considered an important genetic determinant of early-onset coronary artery disease (ECAD). In this study, association between MMP-9 1562C > T allele with plasma MMP-9 activity, homocysteine and lipid-lipoproteins level and ECAD in Iranian subjects was investigated. This case-control study consisted of 53 ECAD patients (age < 55 years) and unrelated late-onsets CAD (age > 70 years) who angiographically had at least 50% stenosis. MMP-9 1562C > T polymorphism was detected by PCRRFLP, plasma MMP-9 activity, serum lipid and homocysteine levels were determined by gelatin gel zymography, enzyme assay and by HPLC, respectively. The presence of MMP-9 1562C > T allele was found to be associated with ECAD (OR = 3.2, P = 0.001). The ECAD patients with MMP-9 1562C > T allele had higher MMP-9 activity (P = 0.001), LDL-C (P = 0.045), TC (P = 0.02) and homocysteine (P = 0.01) levels than the LCAD subjects. MMP-9 1562C > T allele is a risk factor for ECAD. The carriers of this allele have high levels of MMP-9 activity, LDL-C, TC and homocysteine (P = 0.01), thus, are more likely to develop myocardial infarction and CAD at young age (less than 55 years).

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