

บทความที่น่าสนใจประจำเดือน กันยายน 2559

สาขาวิทยาศาสตร์สุขภาพ

Title :	Toward an antifibrotic therapy for inflammatory bowel disease
Author :	Florian Rieder
Journal :	United European Gastroenterology Journal: August 2016 vol. 4 no. 4 493-495
Abstract :	Fibrosis in inflammatory bowel disease (IBD) is a largely unresolved clinical problem. Despite recent advances in anti-inflammatory therapies over the last few decades, the occurrence of intestinal strictures in Crohn's disease patients has not significantly changed. No antifibrotic therapies are available. This journal supplement will address novel mechanisms of intestinal fibrosis, biomarker and imaging techniques and is intended to provide a roadmap toward antifibrotic therapies in IBD.
Database :	Sage Journal

Title :	The Impact of Marijuana Legalization on Adolescent Use, Consequences, and Perceived Risk
Author :	Ashley C. Estoup, Claudine Moise-Campbell, Malini Varma & David G. Stewart
Journal :	Substance Use & Misuse: Page 1-7 DOI: 10.1080/10826084.2016.1200623, Published online: 09 Sep 2016,
Abstract :	Background: Currently, only four states have legalized recreational marijuana use for adults over 21 years of age. Therefore, little is known about the influence that legalization will have on adolescent marijuana use. Objectives: This study examines how marijuana legalization has impacted the frequency and consequences of adolescent use in a sample of participants in a school-based, substance use intervention. We hypothesized that adolescents enrolled in the intervention in years after marijuana legalization would present with more problematic use compared to those enrolled prior, and that changes in the perceived risk of marijuana would be a mechanism of problematic use.

	<p>Methods: Participants were 262 students enrolled in a school-based substance use intervention in 2010 to 2015. The Customary Drinking and Drug Use Record, Alcohol and Drug Use Consequences Questionnaire, and a decisional balance matrix were used to assess marijuana frequency, negative consequences, and perceived risk of use. A mediation model was used to test the degree to which marijuana legalization may lead to increased frequency and consequences of use through perceived risk.</p> <p>Results: Findings indicated a significantly positive correlation between marijuana-related consequences and perceived risk post legalization. Despite relatively equal use between both groups, adolescents in the legalization group experienced higher levels of perceived risk and increased negative consequences.</p> <p>Conclusions/Importance: Due to the rising legalization status of marijuana in the United States, it is imperative that psychoeducation is provided to adults and adolescents about the consequences of underage marijuana use.</p>
Database :	Taylor & Francis Online Journals

Title :	Impact of Acute Psychological Stress on Cardiovascular Risk Factors in Face of Insulin Resistance
Author :	Kristian T. Jones, Richard C. Shelton, Jun Wan & Li Li
Journal :	Stress: Page 1-24 DOI: 10.1080/10253890.2016.1231804, Published online: 02 Sep 2016
Abstract :	<p>Individuals with insulin resistance (IR) are at greater risk for cardiovascular disease (CVD). Psychological stress may contribute to develop CVD in IR although mechanisms are poorly understood. Our aim was to test the hypothesis that individuals with IR have enhanced emotional and physiological responses to acute psychological stress, leading to increased CVD risk. Sixty participants were enrolled into the study, and classified into IR group (n = 31) and insulin sensitive group (n = 29) according to the Quantitative insulin sensitivity check index, which was calculated based on an oral glucose tolerance test. The Trier social stress test, a standardized experimental stress paradigm, was performed on each participant, and emotional and physiological responses were examined. Blood was collected from each subject for insulin, cytokines and cortisol measurements. Compared with insulin sensitive group, individuals with IR had significantly lower ratings of energy</p>

	<p>and calm, but higher fatigue levels in response to acute stressors. Individuals with IR also showed blunted heart rate reactivity following stress. In addition, the IR status was worsened by acute psychological stress as demonstrated by further increased insulin secretion. Furthermore, individuals with IR showed significantly increased levels of leptin and interleukin-6, but decreased levels of adiponectin, at baseline, stress test and post-stress period. Our findings in individuals with IR under acute stress would allow a better understanding of the risks for developing CVD and to tailor the interventions for better outcomes.</p>
Database :	Taylor & Francis Online Journals

Title :	Cabazitaxel and indocyanine green co-delivery tumor-targeting nanoparticle for improved antitumor efficacy and minimized drug toxicity
Author :	Xiaowei Tai, Yang Wang, Li Zhang, Yuting Yang, Kairong Shi, Shaobo Ruan, Yayuan Liu, Huile Gao, Zhirong Zhang & Qin He
Journal :	Journal of Drug Targeting: Pages: 1-29 DOI: 10.1080/1061186X.2016.1233975, Published online: 09 Sep 2016
Abstract :	<p>Cabazitaxel (CBX) is an effective antineoplastic agent for the treatment of many kinds of cancers. However, the poor water solubility remains a serious deterrent to the utilization of CBX as a commercial drug. In this study, we designed a strategy that integrated CBX into albumin nanoparticles (ANs) formed with human serum albumin (HSA) to improve the water solubility and targeting ability. Meanwhile, we utilized a photothermal agent-indocyanine green (ICG) which could cooperate with CBX to enhance the antitumor effect. The obtained ANs containing ICG and CBX (AN-ICG-CBX) exhibited good mono-dispersity. In vitro cytotoxicity study showed the effectiveness of CBX and ICG, respectively, while AN-ICG-CBX with irradiation exhibited the most efficient antiproliferative ability (83.7%). In vivo safety evaluation studies demonstrated the safety of AN-ICG-CBX. Furthermore, the in vivo antitumor study indicated the AN-ICG-CBX with irradiation achieved higher tumor inhibition rate (91.3%) compared with CBX-encapsulated AN (AN-CBX) (83.3%) or ICG-encapsulated AN (AN-ICG) plus irradiation (60.1%) in 4T1 tumor-bearing mice. To sum up, a safety and effective formulation AN-ICG-CBX was developed in this study and successfully reduced the drug toxicity, improved the targeting efficiency and</p>

	enhanced the therapeutic effects, becoming a promising candidate for clinical application.
Database :	Taylor & Francis Online Journals

Title :	Canakinumab Investigated for Treating Familial Mediterranean Fever
Author :	Ruby Haviv & Philip J. Hashkes
Journal :	Expert Opinion on Biological Therapy DOI: 10.1080/14712598.2016.1233963, Published online: 07 Sep 2016
Abstract :	<p>Introduction: Familial Mediterranean fever (FMF) is the most common hereditary autoinflammatory syndrome. The treatment of choice is colchicine. However, ~40% of patients are only partial responders and 5-10% are non-responders. Advances in the understanding of the role of pyrin in the regulation of interleukin (IL)-1β activation, has led to use of anti-IL-1 agents for colchicine resistant FMF.</p> <p>Areas covered: The authors performed a literature search of anti-IL-1 treatment for FMF, particularly canakinumab, a humanized IL-1β antibody, by searching PubMed/Medline/Scopus since 2001 and proceedings of major rheumatologic conferences since 2011 for unpublished studies.</p> <p>Expert opinion: Many reports of successful treatments with anti-IL-1 agents were published since 2007. In 2011, the first case reports of successful treatment with canakinumab were reported. Successful phase II trials reported in 2014 and 2015 led to a double-blind, randomized, placebo-controlled phase III trial in patients with colchicine-resistant FMF. Significantly more canakinumab treated patients attained the very stringent primary outcome measure and secondary outcomes vs. those treated with placebo. The safety profile was similar to canakinumab trials for other indications. Canakinumab appears to be an excellent alternative for the vast majority of patients with colchicine resistant FMF with an adequate safety profile.</p>
Database :	Taylor & Francis Online Journals

Title :	MRI Findings in Patients With Leukemia and Positive CSF Cytology: A Single-Institution 5-Year Experience
Author :	Jeffrey P. Guenette, et al.

Journal :	American Journal of Roentgenology Sep 9, 2016, Ahead of Print
Abstract :	<p>OBJECTIVE. The purposes of this study were to describe the spectrum of MRI findings and determine the prognostic role of MRI in adults with acute leukemia with positive CSF cytology.</p> <p>MATERIALS AND METHODS. In this retrospective study of 34 patients (19 women, 15 men; mean age, 51 years; range, 18–72 years) treated for CNS leukemia between 2006 and 2011, 31 (91%) contrast-enhanced brain and 14 (41%) spine MRI studies were reviewed by two radiologists to note patterns of enhancement. Interobserver agreement and correlation of enhancement with outcome were analyzed.</p> <p>RESULTS. MRI showed abnormal findings in 25 patients (74%). Pachymeningeal enhancement (n = 9/31, 29%), leptomeningeal enhancement (n = 6/31, 19%), cranial nerve enhancement (n = 9/31, 29%), masslike enhancement (n = 3/31, 10%), and spinal meningeal enhancement (n = 10/14, 71%) were identified. There was strong interobserver agreement (K = 0.906). Survival rates were shorter to a statistically significant degree with pachymeningeal enhancement (median, 7 months; interquartile range [IQR], 5–8 months versus median, 26 months; IQR, 15 months to not reached; p = 0.004) and two or more sites of enhancement (median, 8 months; IQR, 3–13 months versus median, 19 months; IQR, 9 months to not reached; p = 0.046).</p> <p>CONCLUSION. Brain or spine MRI examinations (or both) showed abnormal findings in nearly three-fourths of adults with acute leukemia with positive CSF cytology who were imaged for neurologic symptoms. Pachymeningeal enhancement and two or more sites of brain involvement were associated with shorter survival.</p>
Database :	American Roentgen Ray Society

Title :	Efficacy of water preloading before main meals as a strategy for weight loss in primary care patients with obesity: RCT
Author :	Helen M. Parretti, Paul Aveyard, Andrew Blannin, Susan J. Clifford, Sarah J. Coleman, Andrea Roalfe, Amanda J. Daley
Journal :	Obesity: Volume 23, Issue 9, September 2015, Pages 1785–1791

Abstract :	<p>Objective</p> <p>To investigate the efficacy of water preloading before meals as a weight loss strategy for adults with obesity.</p> <p>Methods</p> <p>A two-group randomized controlled trial was conducted in Birmingham, England. Eighty-four adults with obesity were recruited from general practices. All participants were given a face-to-face weight management consultation at baseline (30 min) and a follow-up telephone consultation at 2 weeks (10 min). At baseline, participants were randomized to either drinking 500 ml of water 30 min before their main meals or an attention control group where participants were asked to imagine their stomach was full before meals. The primary outcome was weight change at 12-week follow-up. Several measures of adherence were also used, including 24 h total urine collections.</p> <p>Results</p> <p>41 participants were randomized to the intervention group and 43 to the comparator group. The water preloading group lost -1.3 kg (95% CI -2.4 to -0.1, $P = 0.028$) more than comparators at follow up. Adjusting for ethnicity, deprivation, age, and gender resulted in the intervention group losing -1.2 kg (95% CI -2.4 to 0.07, $P = 0.063$) more than the comparator.</p> <p>Conclusions</p> <p>There is preliminary evidence that water preloading before main meals leads to a moderate weight loss at follow up. ISRCTN33238158</p>
Database :	Wiley Online Library

Title :	Hyaluronic acid nanohydrogel loaded with Quercetin alone or in combination to a macrolide derivative of rapamycin RAD001 (Everolimus) as a new treatment for hormone-responsive human breast cancer
Author :	V Quagliariello, RV Iaffaioli, E Armenia, O Clemente, M Barbarisi, G Nasti, M Berretta, A Ottaiano, A Barbarisi
Journal :	Journal of Cellular Physiology: Accepted manuscript online: 8 September, DOI: 10.1002/jcp.25587

Abstract :	<p>The aim of this study is based on the evaluation of anticancer, anti-inflammatory activities and cellular uptake of hyaluronic acid nanohydrogel of quercetin tested alone and in combination to a macrolide derivative of rapamycin RAD001 (everolimus) on hormone-responsive breast cancer cell line MCF-7. Biological investigations were focused on the receptor mediated cellular internalization of the nanohydrogel and its abilities to reduce secretion of several cytokines (IL-8, IL-6, IL-19), VEGF and metalloproteases (MMP-2, MMP-9) under pro-inflammatory conditions. Nanohydrogel show a CD44 dependent endocytosis with evident time dependent cytoplasmatic accumulation with abilities to reduce secretion of all cytokines of ~60% compared to untreated cells. Combination of formulated quercetin and everolimus leads to a synergistic cytotoxic effects with a Combination Index of 0.38. These results highlights the importance of synergistic effect of the hyaluronic acid nanohydrogel of quercetin with everolimus in the regulation of human breast cancer cell proliferation and emphasize the antitumor and anti-inflammatory properties of the nanocarrier.</p>
Database :	Wiley Online Library

Title :	Isavuconazonium sulfate: a triazole prodrug for invasive fungal infections
Author :	Derek Murrell, John B. Bossaer, Ronald Carico, Sam Harirforoosh and David Cluck
Journal :	International Journal of Pharmacy Practice, Early View: 29 AUG 2016 DOI: 10.1111/ijpp.12302
Abstract :	<p>Objective</p> <p>To review the place in therapy of isavuconazole, the active metabolite of isavuconazonium sulfate, via a review of the available literature on drug chemistry, spectrum of activity, pharmacokinetic/pharmacodynamic profile and trials assessing clinical efficacy and safety.</p> <p>Methods</p> <p>Relevant data, original research articles and reviews, were gathered primarily through the use of a PubMed database search. The search was conducted without date restrictions in order to collect both historical and recent data regarding isavuconazole.</p> <p>Key findings</p>

	<p>Isavuconazole is a triazole currently approved not only for use in invasive aspergillosis and mucormycosis but also has demonstrable activity against Candida species and other common fungal pathogens. This drug has features which make it more clinically appealing compared to other azoles with similar indications. In specific, isavuconazole does not require a cyclodextrin vehicle due to its water solubility, and at present, does not require therapeutic drug monitoring. Moreover, isavuconazole has displayed improved safety and tolerability compared to voriconazole. Available data from Phase III clinical trials shows isavuconazole to be a possible therapeutic option to currently available therapies for which it is approved; however, clinical conclusions should be reserved until results have been published and more data from clinical use is reported.</p> <p>Conclusions</p> <p>Isavuconazole is a new triazole with broad-spectrum antifungal activity including invasive aspergillosis and mucormycosis.</p>
Database :	Wiley Online Library

Title :	Low-volume solubility assessment during high-concentration protein formulation development
Author :	Melanie Hofmann, Matthias Winzer, Christian Weber, Henning Gieseler
Journal :	Journal of Pharmacy and Pharmacology, Early View: 21 August 2016 DOI: 10.1111/jphp.12621
Abstract :	<p>Objective</p> <p>Solubility is often one of the limiting factors for high-concentration protein formulation (HCF) development. Determination of protein solubility is challenging and requires high amount of material. Therefore, low-volume and predictive approaches are desired.</p> <p>Methods</p> <p>This work presents a simple and material-saving approach using static light scattering to describe non-ideal solution behaviour of HCF. Non-ideality can be related to protein–protein interactions in solution. The type and strength of these interactions indicate maximum protein solubility at actual formulation compositions. Interactions of four therapeutic model proteins at multiple formulation compositions</p>

were investigated, and deduced solubility was compared to apparent solubility behaviour determined by either turbidity or content measurements.

Key findings

Protein–protein interactions and deduced solubilities matched actual solubility data for all tested formulations. Protein solubility was found to be lowest at pH values near the isoelectric point of each model protein. Buffer salts and ionic strength were also found to strongly influence protein solubility. In addition, sucrose and a combination of arginine and glycine enhanced protein solubility, whereas surfactants such as polysorbate 20 did not influence protein solubility.

Conclusions

The introduced screening procedure is a powerful tool during (early) protein formulation development. It meets several requirements of HCF development and enables reliable prediction of protein solubility based on determination of protein interactions. In addition, rare data about the influence of several common excipients on apparent solubility of therapeutic proteins were shown.

Database :

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