

บทความที่น่าสนใจประจำเดือน มิถุนายน 2557

Title :	Evaluation of Atazanavir and Darunavir Interactions with Lipids for Developing pH-Responsive Anti-HIV Drug Combination Nanoparticles
Author :	Jinghua Duan, Jennifer P. Freeling, Josefin Koehn, Cuiling Shu and Rodney J. Y. Ho
Journal :	Journal of Pharmaceutical Sciences - - Article first published online: 19 JUN 2014 DOI: 10.1002/jps.24046
Abstract :	<p>We evaluated two human immunodeficiency virus (HIV) protease inhibitors, atazanavir (ATV) and darunavir (DRV), for pH-dependent solubility, lipid binding, and drug release from lipid nanoparticles (LNPs). Both ATV and DRV incorporated into LNPs composed of pegylated and non-pegylated phospholipids with nearly 100% efficiency, but only ATV-LNPs formed stable lipid–drug particles and exhibited pH-dependent drug release. DRV-LNPs were unstable and formed mixed micelles at low drug–lipid concentrations, and thus are not suitable for lipid–drug particle development. When ATV-LNPs were prepared with ritonavir (RTV), a metabolic and cellular membrane exporter inhibitor, and tenofovir (TFV), an HIV reverse-transcriptase inhibitor, stable, scalable, and reproducible anti-HIV drug combination LNPs were produced. Drug incorporation efficiencies of 85.5 ± 8.2, 85.1 ± 7.1, and $6.1 \pm 0.8\%$ for ATV, RTV, and TFV, respectively, were achieved. Preliminary primate pharmacokinetic studies with these pH-responsive anti-HIV drug combination LNPs administered subcutaneously produced detectable plasma concentrations that lasted for 7 days for all three drugs. These anti-HIV LNPs could be developed as a long-acting targeted antiretroviral therapy.</p>
Database :	Wiley Online Library

Title :	Pharmaceutical care of older people: what do older people want from community pharmacy?
Author :	Kathryn Wood, Fiona Gibson, Andrew Radley and Brian Williams
Journal :	International Journal of Pharmacy Practice - - Article first published online: 6 JUN 2014 DOI: 10.1111/ijpp.12127
Abstract :	<p>Objectives To explore older people's opinions of current community pharmacy provision and identify potential areas for improvement.</p> <p>Methods A pilot focus group was conducted to finalise the topic areas for discussion. Three focus groups and three small group interviews were held with a total of 25 people aged over 65 years. A purposive sampling approach was used to maximise variation in likely responses. All focus group discussions were transcribed and analysed for emerging themes. Data collection continued until saturation was reached. Finally, the themes were taken to a further five community groups to discuss and confirm the findings.</p> <p>Key findings Two main interlinked themes emerged around 'personal and relational factors' and 'service factors'. The participants valued continuity of personalised pharmaceutical care and described receiving this care in small community pharmacies. The ability to build a trusting relationship over time was important to the people in this study.</p>

	<p>There was a lack of awareness of services already available from community pharmacies. Ongoing disruption in the supply of medicines caused problems for this client group, and the complexity of prescription ordering, collection and delivery systems presented challenges for participants. Good communication from the community pharmacy helped to improve the experience.</p> <p>Conclusion This study contributes some qualitative data on the opinions of older people about community pharmacies. There may be planning implications for the size of future community pharmacies and the range of services provided. Community pharmacies may need to take a more proactive role in promoting innovative services to older people who may benefit from these services.</p>
Database :	Wiley Online Library

Title :	Obesity, Liberty, and Public Health Emergencies
Author :	Jonathan Herington, Angus Dawson and Heather Draper
Journal :	Hastings Center Report - - Article first published online: 11 JUN 2014 DOI: 10.1002/hast.350
Abstract :	<p>There have been a raft of proposals to combat the challenge of obesity, including restrictions on the nature of food advertising, the content of prepared meals, and the size of sodas; taxes on saturated fat and on calories; and mandated "healthy-options" on the menus of even privately run restaurants. These interventions have had varying degrees of success, but many seem to have a greater impact on rates of obesity than simply providing information about health risks and healthier lifestyles. The more interventionist policy options have, however, been implemented only slowly, in large part because of criticisms that they are unjustified infringements on the liberty of consumers. Food industry groups, free-market think tanks, and the popular press regard measures that incentivize or penalize particular food and lifestyle choices as unjustifiable state regulation of purely self-regarding behavior. Some even deny that obesity should be viewed as a public health problem at all.</p> <p>To counteract the liberty-oriented position, those who favor a more interventionist role for the state have recently argued for labeling obesity as a public health emergency. Policy-makers could then override concerns about individual liberty in order to pursue more interventionist policies designed to guide consumer choices toward healthier lifestyles. In this paper, we argue that, contrary to initial appearances, obesity possesses some of the morally relevant features of public health emergencies, though we do not argue that it actually constitutes one.</p>
Database :	Wiley Online Library

Title :	Characterization and Evaluation of Triamcinolone, Raloxifene, and Their Dual-Loaded Microspheres as Prospective Local Treatment System in Rheumatic Rat Joints
Author :	Yigit Ocal, Baris Kurum, Siyami Karahan, Aysen Tezcaner, Seza Ozen and Dilek Keskin
Journal :	Journal of Pharmaceutical Sciences - - Article first published online: 17 JUN 2014 DOI: 10.1002/jps.24058
Abstract :	In this study, injectable microspheres were developed for the local treatment of

	<p>joint degeneration in rheumatoid arthritis (RA). Microspheres loaded with triamcinolone (TA), a corticosteroid drug, and/or raloxifene (Ral), a cartilage regenerative drug, were prepared with a biodegradable and biocompatible polymer, polycaprolactone (PCL). Microspheres were optimized for particle size, structural properties, drug release, and loading properties. In vitro release of Ral was very slow because of the low solubility of the drug and hydrophobic nature of PCL. However, when coloaded with TA, both drugs were released at higher amounts compared with their single forms. Smallest particle sizes were obtained in dual drug-loaded microspheres. In vitro cytotoxicity tests showed biocompatibility of microspheres. In vivo bioefficacy of these microspheres was also examined in adjuvant-induced arthritis model in rats. In vivo histological studies of control groups showed development of RA with high median lesion score (5.0). Compared with control and intra-articular free drug injections, microsphere treatment groups showed lower lesion scores and better healing outcomes in histological evaluations. Results suggest that a controlled delivery system of TA and RAL by a single injection in inflamed joints holds promise for healing and suppressing inflammation.</p>
Database :	Wiley Online Library

Title :	Pharmacokinetics of ceftriaxone in plasma and bone of patients undergoing hip or knee surgery
Author :	Ulrich Gergs, Tobias Clauss, Dorothea Ihlefeld, Michael Weiss, Klaus Pönicke, Gunther O. Hofmann and Joachim Neumann
Journal :	Journal of Pharmacy and Pharmacology - - Article first published online: 19 JUN 2014 DOI: 10.1111/jphp.12282
Abstract :	<p>Objectives Patients undergoing hip or knee replacement therapy are routinely pretreated with antibiotics before surgery. It is controversial in which antibiotic is the treatment of choice for this purpose. One possibility is the cephalosporin ceftriaxone. Here, we wanted to know if effective tissue concentrations are reached.</p> <p>Methods We studied plasma and bone kinetics of ceftriaxone in orthopaedic patients (n = 22) treated with ceftriaxone (2 g) immediately prior operation. Plasma samples were withdrawn before and at three time points after ceftriaxone infusion. After bone replacement, extracts from cancellous bone or cortical bone were obtained, and ceftriaxone was quantified using column chromatography.</p> <p>Key findings The plasma kinetics of ceftriaxone and distribution into bone were analysed using a population approach (ADAPT 5). The population mean of the area under the curve (AUC) was 140 mg h/l. A cancellous bone to plasma concentration ratio of 1.12 ± 1.29 was achieved 5 h after start of infusion. The half-life of uptake into the cortical bone was less (8.4 h) than into cancellous bone (12.1 h, $P < 0.05$).</p> <p>Conclusions Under these experimental conditions, concentrations of ceftriaxone in cancellous and cortical bone should be adequate to protect the patients against usual ceftriaxone-sensitive nosocomial infections and are substantially lower than the plasma concentrations.</p>
Database :	Wiley Online Library

Title :	The Effect of Different Manures and Synthetic Fertilizer on Biochemical and Antimicrobial Properties of Mentha piperita L
Author :	Tugba Bayrak Ozbucak, Omer Erturk, Oktay Yildiz, Ali Bayrak, Meryem Kara, Huseyin Sahin and Mustafa Kiralan
Journal :	Journal of Food Biochemistry - - Article first published online: 16 JUN 2014 DOI: 10.1111/jfbc.12069
Abstract :	The study was designed to examine the effects of different manures (fish, pigeon and cow) and synthetic fertilizer (nitrogen) on some biochemical activities of Mentha piperita L. (mint, peppermint). Seventeen different phenolic constituents and 19 essential oils were determined in M. piperita samples. While caffeic, gallic, ferulic, protocatechuic, syringic, o-coumaric acids and rutin were detected as common phenolics; carvone, limonene and 1.8-cineol were identified as major essential oil components in all mints. Total phenolic compounds, ferric reducing antioxidant power and cupric (III) reducing capacity (CUPRAC) tests were used to evaluate antioxidant capacities of the mints. The highest total phenolic compound (4.8 mg gallic acid equivalents/100 g) and antioxidant capacity (971 mM Fe(II)/mg; 823 mM Trolox /100 g) were observed in mints fertilized with pigeon manure. Mint samples also had different antimicrobial activities against the studied microorganisms (eight bacteria and two fungi), especially Escherichia coli and Listeria monocytogenes.
Database :	Wiley Online Library

Title :	The Biochemistry of Peppers
Author :	Klaus Roth
Journal :	Chemie in Unserer Zeit 03 May 2014- - DOI: 10.1002/chemv.201400031
Abstract :	The plant genus Capsicum, ranging from bell peppers to chili peppers, bestows upon us a set of condiments now beloved the world over, and which allow one to "jazz up" dishes not only with respect to taste, but also visually. Hungarian, Mexican, Korean, and Indian cuisines are almost unthinkable without their peppery sting. But how is it that only members of the species Capsicum are able to make compounds that produce this intense effect? Here, we will try to explore the scientific background behind this sensation of "a tongue on fire" – which fades only gradually – in the hope that our readers come to enjoy spicy dishes more when they are more informed.
Database :	Publisher : Wiley-VCH

Title :	Systematic classification of tablet disintegrants by water uptake and force development kinetics
Author :	Julian Quodbach and Peter Kleinebudde
Journal :	Journal of Pharmacy and Pharmacology - - Article first published online: 19 JUN 2014 DOI: 10.1111/jphp.12276
Abstract :	Objective Water uptake and force development of disintegrating tablets provide a high

	<p>degree of information about the disintegration mechanisms and process itself. An apparatus for the simultaneous measurement of water uptake and force development of tablets is presented, and the gathered data are analysed.</p> <p>Methods Flat faced, 10 mm, dibasic calcium phosphate tablets containing 2% disintegrant are investigated with the newly constructed apparatus. The force is determined with a texture analyser, whereas the water uptake is recorded by a balance. Different measurement regimes are compared with each other. Measured curves are analysed according to their shape and fitted with a modified Hill equation.</p> <p>Key findings Known disintegration mechanisms can be confirmed with the newly constructed apparatus – swelling for sodium starch glycolate and croscarmellose sodium, and shape recovery for crospovidone disintegrants. Different brands of polacrillin potassium act by different mechanisms. All curves could be fitted successfully with a modified Hill equation. A novel classification to facilitate the appropriate disintegrant selection is presented on basis of the fit parameters.</p> <p>Conclusion The new apparatus allows the acquisition of water uptake and force data simultaneously. Parameters calculated with the modified Hill equation provide a simple way to classify disintegrants according to their behaviour.</p>
Database :	Wiley Online Library

Title :	Evaluating pharmacist prescribing for minor ailments
Author :	Kerry Mansell, Nicole Bootsman, Arlene Kuntz and Jeff Taylor
Journal :	International Journal of Pharmacy Practice - - Article first published online: 16 JUN 2014 DOI: 10.1111/ijpp.12128
Abstract :	<p>Objectives Saskatchewan is the second Canadian province to allow pharmacists to prescribe medications for minor ailments and the only province that remunerates for this activity. The aim of this project was to determine whether patients prescribed such treatment by a pharmacist symptomatically improve within a set time frame.</p> <p>Methods Pharmacists were asked to hand a study-invitation card to anyone for whom they prescribed a medication for a minor ailment during the 1-year study period. Consenting participants contacted the study researchers directly and were subsequently instructed to complete an online questionnaire at the appropriate follow-up time.</p> <p>Key findings Ninety pharmacies in Saskatchewan participated, accruing 125 participants. Cold sores were the most common minor ailment (34.4%), followed by insect bites (20%) and seasonal allergies (19.2%). Trust in pharmacists and convenience were the most common reasons for choosing a pharmacist over a physician, and 27.2% would have chosen a physician or emergency department if the minor ailment service were not available. The condition significantly/completely improved in 80.8%; only 4% experienced bothersome side effects. Satisfaction with the pharmacist and service was strong; only 5.6% felt a physician would have been more thorough.</p>

	<p>Conclusions</p> <p>Participants were very satisfied with their symptomatic improvement and with the service in general, albeit for a small number of conditions. Participants reported getting better, and side effects were not a concern. These results are encouraging for pharmacists; however, a comparison of physician care with pharmacist care and unsupported self-care is required to truly know the benefit of pharmacist prescribing.</p>
Database :	Wiley Online Library

Title :	Quantification of Natural Sugars in Baby Food
Author :	R.I. Clifford, Jeff Head, John Kinyanjui, and Mark Talbott
Journal :	Food Quality & Safety magazine, June/July 2014
Abstract :	<p>No other food products focus consumer attention as those that are prepared for consumption by children. Of current interest are the natural and added sugar contents of processed baby foods and juices.</p> <p>Identification and quantification of natural sugars was recently investigated in baby food products by mid-IR Fourier transform infrared (FTIR) spectroscopy. Using horizontal attenuated total reflectance (HATR), neat baby food samples were analyzed without need for extensive sample preparation. By use of the HATR technique it was demonstrated that high sensitivity could be easily achieved without significant effect from water content. Factor space chemometric analysis was used to establish a robust method that allowed the confident measurement of sugar concentrations in these food products.</p> <p>The method was developed using a training matrix of three naturally occurring sugars, fructose, glucose, and sucrose. It was confirmed using a verification matrix and was found to be readily applicable to the evaluation of sugar quantities occurring in commercial baby food products. Several commercial products were analyzed with this method and quantities of fructose, glucose, and sucrose were determined.</p>
Database :	Publisher : Wiley

XXXXXXXXXXXXXXXXXXXX