

บทความที่น่าสนใจประจำเดือน ตุลาคม 2556

Title :	ANXIETY DISORDERS ARE INDEPENDENTLY ASSOCIATED WITH SUICIDE IDEATION AND ATTEMPTS: PROPENSITY SCORE MATCHING IN TWO EPIDEMIOLOGICAL SAMPLES
Author :	Michel A. Thibodeau, Patrick G. Welch, Jitender Sareen and Gordon J. G. Asmundson
Journal :	Depression and Anxiety October 2013, Volume 30, Issue 10, Pages 893–1053 (Article first published online: 7 OCT 2013 DOI: 10.1002/da.22203)
Abstract :	Research suggests that suicidal behavior in individuals with anxiety disorders is attributable to cooccurring risk factors, such as depression. We argue that these conclusions are founded primarily in statistical adjustments that may obscure independent associations. We explored independent associations between specific anxiety disorders and suicide attempts and ideation by means of propensity score matching, a process that simulates a case-control study by creating matched groups that differ in group status (e.g., diagnosis of a specific anxiety disorder) but that are statistically equivalent on observed covariates.
Database :	Wiley Online Library

Title :	O-xylosylation in a Recombinant Protein is Directed at a Common Motif on Glycine–Serine Linkers
Author :	David Spencer, Shabazz Novarra, Liang Zhu, Sheila Mugabe, Thomas Thisted, Manuel Baca, Roberto Depaz, Christopher Barton
Journal :	Journal of Pharmaceutical Sciences: November 2013, Volume 102, Issue 11, pages 3920–3924
Abstract :	Glycine–serine (GS) linkers are commonly used in recombinant proteins to connect domains. Here, we report the posttranslational O-glycosylation of a GS linker in a novel fusion protein. The structure of the O-glycan moiety is a xylose-based core substituted with hexose and sulfated hexauronic acid residues. The total level of O-xylosylation was approximately 30% in the material expressed in HEK-293 cell lines. There was an approximate 10-fold reduction in O-xylosylation levels when the material was expressed in Chinese hamster ovary cell lines. Similar O-glycan structures have been reported for human urinary thrombomodulin and represent the initial building block for proteoglycans such as chondroitin sulfate and heparin. The sites of attachment, determined by electron transfer dissociation mass spectrometry, were localized to serine in the linker regions of the recombinant fusion protein. This attachment could be attributed, in part, to the inherent xylosyltransferase motif present in GS linkers. Elimination of the O-glycan moiety was achieved with modified linkers containing only glycine residues. The aggregation and fragmentation behavior of the GGG construct were comparable to the GSG-linked material during thermal stress. The O-xylosylation reported has implications for the manufacturing consistency of recombinant proteins containing GS linkers. © 2013 Wiley Periodicals, Inc. and the American Pharmacists Association J Pharm Sci 102:3920–3924, 2013
Database :	Wiley Online Library

Title :	Mathematical model of liver regeneration in human live donors
Author :	V. Periwal, J. R. Gaillard, L. Needleman and C. Doria
Journal :	Journal of Cellular Physiology, Accepted manuscript online: 8 OCT 2013 DOI: 10.1002/jcp.24482
Abstract :	Liver regeneration after injury occurs in many mammals. Rat liver regenerates after partial hepatectomy over a period of two weeks while human liver regeneration takes several months. Notwithstanding this enormous difference in time-scales, with new data from five human live liver transplant donors, we show that a mathematical model of rat liver regeneration can be transferred to human, with all biochemical interactions and signaling unchanged. Only six phenomenological parameters need change, and three of these parameter changes are rescalings of rate constants by the ratio of human lifespan to rat lifespan. Data from three donor subjects with approximately equal resections were used to fit the three parameters and the data from the other two donor subjects was used to independently verify the fit. J. Cell. Physiol. © 2013 Wiley Periodicals, Inc.
Database :	Wiley Online Library

Title :	A New Brittleness Index for Compacted Tablets
Author :	Jørn M. Sonnergaard
Journal :	Journal of Pharmaceutical Sciences: Article first published online: 8 OCT 2013 DOI: 10.1002/jps.23741
Abstract :	<p>A dimensionless index that quantifies the brittle or ductile character of tablets is presented. The work of failure (WOF) of crushed or broken flat tablets is calculated by numerical integration of the force–displacement measurement in a flexure tester. The ratio between WOF and the crushing force (F) corrected for the diameter of the tablet (D) is proposed to express the brittle/ductile index (BDI).</p> $BDI = 100 \times \frac{WOF \times 2}{F \times D}$ <p>This dimensionless index quantitatively denotes the brittle/ductile character of the compacted material as the normalized deformation in percentage of a cylindrical tablet at the breaking point. For ideal brittle materials, the BDI value will be 0 and for complete plastic deformation, that is, a total compression of the tablet without fracture, BDI will be 100. The validity and discriminative power is demonstrated on mixtures of microcrystalline cellulose and lactose. The robust measure of brittleness with an acceptable accuracy is obtained with only a minor influence of the tablet diameter and the speed of platen. © 2013 Wiley Periodicals, Inc. and the American Pharmacists Association J Pharm Sci</p>
Database :	Wiley Online Library

Title :	PKM2 Isoform-Specific Deletion Reveals a Differential Requirement for Pyruvate Kinase in Tumor Cells
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Author :	William J. Israelsen, Talya L. Dayton, Shawn M. Davidson, Brian P. Fiske, Aaron M. Hosios, Gary Bellinger, Jie Li, Yimin Yu, Mika Sasaki, James W. Horner, Laura N. Burga, Jianxin Xie, Michael J. Jurczak, Ronald A. DePinho, Clary B. Clish, Tyler Jacks, Richard G. Kibbey, Gerburg M. Wulf, Dolores Di Vizio, Gordon B. Mills, Lewis C. Cantley, Matthew G. Vander Heiden
Journal :	Cell: 10 October 2013, Volume 155, No. 2, p397
Abstract :	The pyruvate kinase M2 isoform (PKM2) is expressed in cancer and plays a role in regulating anabolic metabolism. To determine whether PKM2 is required for tumor formation or growth, we generated mice with a conditional allele that abolishes PKM2 expression without disrupting PKM1 expression. PKM2 deletion accelerated mammary tumor formation in a Brca1-loss-driven model of breast cancer. PKM2 null tumors displayed heterogeneous PKM1 expression, with PKM1 found in nonproliferating tumor cells and no detectable pyruvate kinase expression in proliferating cells. This suggests that PKM2 is not necessary for tumor cell proliferation and implies that the inactive state of PKM2 is associated with the proliferating cell population within tumors, whereas nonproliferating tumor cells require active pyruvate kinase. Consistent with these findings, variable PKM2 expression and heterozygous PKM2 mutations are found in human tumors. These data suggest that regulation of PKM2 activity supports the different metabolic requirements of proliferating and nonproliferating tumor cells.
Database :	Cell Press.

Title :	A Qualitative Exploration of Influences on the Process of Recovery from Personal Written Accounts of People with Anorexia Nervosa
Author :	Phillipa J. Hay DPhil MD & Kenneth Cho
Journal :	Women & Health: 2013, Volume 53, Issue 7, pages 730-740
Abstract :	Less than half of people with anorexia nervosa achieve full recovery. Previous qualitative research has identified a "tipping point" for change in people who have experienced recovery. The present study's goal was to explore factors that might contribute to this time in personal published accounts, an alternate source for understanding lived experience. Using the 5-stage framework approach for thematic analysis, 31 individual (29 female) accounts were explored. These were purposively sampled from autobiographical accounts (during 1999–2011). In all the accounts a "tipping point" or change in the person's attitude toward treatment and recovery did appear. We identified four main themes: desire for recovery, positive experiences in treatment, an aspect of life outside work or study, and positive and helpful experiences with new or renewed relationships. The themes were a mix of internal and external themes, as well as themes independent of a treatment experience. The findings support other research that indicates experiences, such as personal and spiritual relationships, in addition to specific psychotherapies or treatments, are important in recovery. Further research into how to facilitate and integrate these external factors with formal treatment is indicated in order to improve understanding of outcomes in anorexia nervosa.
Database :	Taylor & Francis Online Journals

Title :	Forecasting and Ethical Decision Making: What Matters?
Author :	Cheryl Stenmark
Journal :	Ethics & Behavior: 2013, Volume 23, Issue 6, pages 445-462
Abstract :	<p>This study examined how the number and types of consequences considered are related to forecasting and ethical decision making. Undergraduate participants took on the role of the key actor in several ethical problems and were asked to forecast potential outcomes and make a decision about each problem. Performance pressure was manipulated by ostensibly making rewards contingent on good problem-solving performance. The results indicated that forecast quality was associated with decision ethicality, and the identification of the critical consequences of the problem and consequences for others were associated with both higher quality forecasts and more ethical decisions. In addition, the identification of a larger number of consequences was negatively associated with ethical decision making. Performance pressure did not impact forecast quality or ethicality of decisions. Theoretical and practical implications of these findings are discussed.</p>
Database :	Taylor & Francis Online Journals

Title :	The Association Between Lifelong Learning and Psychological Well-Being Among Older Adults: Implications for Interdisciplinary Health Promotion in an Aging Society
Author :	Miya Narushima, Jian Liu & Naomi Diestelkamp
Journal :	Activities, Adaptation & Aging: 2013, Volume 37, Issue 3, pages 239-250
Abstract :	<p>This study examines the association between lifelong learning and well-being among older adults. We conducted a survey with those older than 60 (n = 699) in a public continuing-education program in Ontario, Canada. Data included learners' demographics, health, lifestyle, participation patterns, and well-being as measured by the Psychological General Well-Being Index. The results show learners' positive psychological well-being, physical and social health, and healthy lifestyles despite some risk conditions. A logistic regression analysis suggests a positive association between the duration of learning and well-being. These findings call for tactical deployment of affordable and accessible learning activities as an effective health-promotion strategy.</p>
Database :	Taylor & Francis Online Journals

Title :	Risks and Benefits of Prophylactic Cyclic Parenteral Nutrition in Surgical Neonates
Author :	T. Hang Nghiem-Rao, Laura D. Cassidy, Elizabeth M. Polzin, Casey M. Calkins, Marjorie J. Arca, and Praveen S. Goday
Journal :	Nutrition in Clinical Practice: Published online before print October 9, 2013, doi: 10.1177/0884533613502813
Abstract :	<p>Background: Cyclic parenteral nutrition (PN) is used for both the treatment and prevention of parenteral nutrition-associated liver disease (PNALD). Early initiation of prophylactic cyclic PN may not be well tolerated in young neonates. Our objective was to test the hypothesis that prophylactic cyclic PN initiated prior to the onset of hyperbilirubinemia is associated with younger age at initiation, lower bilirubin levels, and similar rates of adverse events compared to therapeutic cyclic PN initiated after established cholestasis in surgical neonates. Methods: A</p>

	retrospective review of infants with gastrointestinal disorders requiring surgical intervention who received cyclic PN 2006-2011 was performed. Results: Of the 43 infants eligible for analysis, 23 received prophylactic and 20 received therapeutic cyclic PN. Infants in both groups were comparable in demographics, surgical diagnoses, and illness severity. At initiation of cyclic PN, infants with prophylactic cyclic PN were significantly younger in chronologic ($P = .003$) and postmenstrual age ($P = .029$). Prophylactic cyclic PN was associated with a significantly lower incidence of hyperbilirubinemia ($P = .001$), lower maximum conjugated bilirubin ($P < .0001$), and lower last checked conjugated bilirubin ($P = .032$) compared to the therapeutic cyclic PN. The incidence of hypoglycemia, hyperglycemia, and hypertriglyceridemia was similar for the 2 groups. Conclusions: There may be a potential benefit to initiating cyclic PN prior to the development of hyperbilirubinemia in surgical neonates. Early initiation of prophylactic cyclic PN does not appear to increase the risk for adverse events.
Database :	Sage Journals Online

Title :	Effect of inclusion of lactulose and <i>Lactobacillus plantarum</i> on the intestinal environment and performance of piglets at weaning
Author :	A.A. Guerra-Ordaz, F. Molist, R.G. Hermes, A. Gómez de Segura, R.M. La Ragione, M.J. Woodward, M.A. Tchorzewska, J.W. Collins, J.F. Pérez, S.M. Martín-Orúe
Journal :	Animal Feed Science and Technology: 25 October 2013, Volume 185, Issues 3–4, Pages 160-168
Abstract :	<p>The prebiotic lactulose, a probiotic strain of <i>Lactobacillus plantarum</i> (<i>L. plantarum</i>) and a synbiotic combination of these two agents were evaluated as growth promoters in 25–39-day old commercial weaning pigs. Ninety-six weaning pigs were allocated into 32 pens, taking initial weight into account, and distributed into four groups as follows: a control diet (CTR), the same diet supplemented daily with <i>L. plantarum</i> (109 CFU/mL sprayed on top; 20 mL/pig) (LPN); 10 g/kg lactulose (LAC) or a combination of both treatments (SYN). At day 14, eight piglets from each group were euthanized and proximal colon digesta was sampled for luminal pH, short-chain fatty acids (SCFA) and lactic acid concentrations. Deoxyribonucleic acid was extracted from colonic digesta and the microbial community was profiled by terminal restriction fragment length polymorphism analysis (T-RFLP) and qPCR. Blood urea nitrogen (BUN) and acute-phase proteins (Pig-MAP) were measured. Lactulose treatment (LAC) improved feed intake ($P < 0.05$), average daily gain ($P < 0.01$), feed:gain ratio ($P < 0.05$) and reduced BUN ($P < 0.01$). Both, LAC and LPN treatment, decreased the Enterobacteriaceae:<i>Lactobacillus</i> spp. ratio in the colonic luminal contents ($P < 0.05$). Moreover LPN treatment promoted a decrease in the percentage of branched fatty acids ($P < 0.01$) suggesting a reduction in proteolytic microbial activity. Microbial profiling of colonic luminal contents by T-RFLP revealed changes in some microbial species. Terminal restriction fragments (TRFs) compatible with <i>Bifidobacterium thermoacidophilum</i> were more frequently detected in experimental diets compared to CTR ($P < 0.05$). Pigs receiving SYN diet demonstrated the combined positive effects of individual LAC and LPN treatment although we were not able to show a specific increase in the probiotic strain with the inclusion of lactulose. Collectively, these data suggest the combination of lactulose and <i>L. plantarum</i> acts as a complementary synbiotic, but not as a synergistic combination.</p>
Database :	ScienceDirect

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