Title: Improving product yields on D-glucose in Escherichia coli via knockout of pgi and zwf and feeding of supplemental carbon sources.

Author: Eric Shiue, Irene M. Brockman and Kristala L. J. Prather

Journal: Biotechnology and Bioengineering. Article first published online: 24 NOV 2014 (DOI: 10.1002/bit.25470)

Abstract: The use of lignocellulosic biomass as a feedstock for microbial fermentation processes presents an opportunity for increasing the yield of bioproducts derived directly from glucose. Lignocellulosic biomass consists of several fermentable sugars, including glucose, xylose, and arabinose. In this study, we investigate the ability of an E. coli Δpgi Δzwf mutant to consume alternative carbon sources (xylose, arabinose, and glycerol) for growth while reserving glucose for product formation. Deletion of pgi and zwf was found to eliminate catabolite repression as well as the ability of E. coli to consume glucose for biomass formation. In addition, the yield from glucose of the bioproduct D-glucaric acid was significantly increased in a Δpgi Δzwf strain.

Database: Wiley Online Library

Title: Challenging biopower: “Liquid cuffs” and the “Junkie” habitus

Author: Camila Gelpi-Acosta


Abstract: Background: Methadone maintenance treatment program (MMTP) is associated with improved quality of life amongst many heroin users. Still, program adherence problems remain a fact.

Aim: To improve our understanding of MMTP “adherence problems”.

Methods: Using snowball sampling, two subgroups were recruited: MMTP enrollees and non-enrollees. A semi-structured questionnaire guided all in-depth interviews.
Interviews were recorded, transcribed, hand-coded and analyzed using a grounded theory approach.

**Findings:** Of 28 participants, 23 were male and Fifteen were in MMTP. All were NYC residents. Most were Hispanic (57%) and Caucasian (32%). The average age was 38 years. Twenty-two had a General Educational Development or less. All were poor and 64% were homeless. Many do not enroll in MMTP to quit heroin but to avoid physical withdrawals. Once enrolled, problems emerge with program regulations and methadone's pharmacology. These they refer to as “liquid cuffs”. Drawing on Michel Foucault, methadone may be considered a disciplinary biopower technology that participants challenge using specific strategies. A “Junkie” habitus, crystallized by emotional and identitarian heroin-dispositions, also challenges biopower.

**Conclusions:** The “liquid cuffs” experience along with the “Junkie” habitus effectively challenge disciplinary biopower. Loosening program regulations may improve quality of services and reduce harm.

**Database:** Informa Healthcare

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<tr>
<th><strong>Title</strong></th>
<th>Deontological and utilitarian ethics: a brief introduction in the context of disorders of consciousness</th>
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<tr>
<td><strong>Author</strong></td>
<td>Richard C. Playford, et al.</td>
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<tr>
<td><strong>Journal</strong></td>
<td>Disability and Rehabilitation. Posted online on December 8, 2014.</td>
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<td></td>
<td>(doi:10.3109/09638288.2014.989337)</td>
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**Abstract:**

**Purpose:** The aims of this paper are to discuss three different ethical frameworks; to briefly consider some of the philosophical positions concerning the nature of personhood. Clear consideration of these issues demonstrates the complexity of decision making in persisting disorders of consciousness.

**Method:** Three different ethical frameworks, Kantian deontology, act utilitarianism and rule utilitarianism, are described and three different accounts of personhood are presented and analysed.

**Results:** These result in very different approaches to the management of patients in permanent vegetative states (PVSs), making it possible to argue for withdrawal of clinically assisted nutrition and hydration in all cases, considering the issues on a case by case basis or continuing to treat all patients whatever their wishes.
Conclusions: These results explain why doctors often have different views on how to treat patients in PVS, particularly with regard to the withdrawal of clinically assisted nutrition and hydration. Understanding such issues may help clinicians articulate more clearly the reasons for their intuitions surrounding the management of patients in PVSs.

Implications for Rehabilitation

• Patients with persisting disorders of consciousness pose significant dilemmas for clinicians and family members.
• Utilitarianism is a consequentialist theory, that is, it is concerned with the outcome of our actions to determine their morality. It is the concept that the right action is the one that will result in “the greatest amount of good for the greatest number”.
• Deontological ethics suggests that there are certain sorts of acts that are wrong in themselves independent of the result of such actions.
• Personhood can be approached from a variety of perspectives including biological, relational, religious and psychological.
• Understanding different ethical frameworks, and the nature of personhood, may help clinicians articulate more clearly the reasons for their intuitions.

Database: Informa Healthcare

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<tr>
<th>Title</th>
<th>Emerging mAbs for the treatment of esophagogastric cancer.</th>
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<tr>
<td>Author</td>
<td>Geoffrey Y Ku, and David H Ilson</td>
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<tr>
<td>Abstract</td>
<td><strong>Introduction:</strong> Owing to the poor prognosis for patients with esophagogastric cancers, increasing attention has focused on targeted agents. <strong>Areas covered:</strong> Targets include EGFR, VEGF, Her2 and MET. We briefly discuss preclinical data and the rationale for targeting these pathways and summarize the results of clinical trials of mAbs against these targets. <strong>Expert opinion:</strong> Trastuzumab, an anti-Her2 antibody, was approved by the US FDA in 2010 as first-line therapy in combination with chemotherapy for Her2-positive disease. More recently, two Phase III second-line trials of ramucirumab, an anti-VEGF receptor 2 antibody, as monotherapy or combined with chemotherapy showed improved survival. A prior Phase III evaluation of bevacizumab, an anti-</td>
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VEGF antibody, with first-line chemotherapy was negative. While anti-EGFR therapy has been extensively investigated, completed Phase III trials suggest that this is not a promising target. Finally, MET inhibition appears to have significant clinical potential, and Phase III testing of an anti-MET pathway mAb is under way.

**Title:** Assessing knowledge and attitudes towards addictions in medical residents of a general hospital.

**Author:** Carmen Barral, et al.


**Abstract:**

**Aims:** Addiction treatment training has been recognized to be an essential part of the curriculum in psychiatry and general medicine. Our objective in this study was to measure the knowledge and attitudes towards addictions among medical residents of a general hospital in Catalonia, Spain.

**Methods:** Within a sample of medical residents, we administered a questionnaire based on previous literature including attitudes towards patients with drug use problems, evaluation of knowledge and beliefs about harm reduction policies. Additionally, basic professional data, and personal as well as family consumption history were recorded.

**Findings:** Four dimensions were found within the beliefs of medical residents about drug treatment and training: judgement of medical treatment of addictions and harm reduction, attitudes toward patients, importance given to training and assessment of training received. When correlating these dimensions with personal characteristics, we found those residents with personal or family history of drug use to have higher positive attitudes towards patients with addictions, and also better predisposition towards harm reduction policies. Residents working with these patients tended to give more importance to training and knowledge, and to have a better perception of the training already received, compared with residents without this contact.

**Conclusions:** Although residents working often with addicted patients appear to have positive attitudes towards addiction treatment, according to our results, it seems very important to improve training policies, awareness and attitudes towards
Objective: To systematically identify factors associated with participation in social and community activities for adult wheelchair users (WCUs).

Data sources: PubMed/MEDLINE, CINAHL, PsycINFO and EMBASE. Study selection: Quantitative and qualitative peer-reviewed publications were included, which were written in English, reported original research and investigated factors associated with social and community participation in adult WCUs.

Data extraction: The Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines were used. Factors were organized using the International Classification of Functioning, Disability and Health (ICF).

Data synthesis: Thirty-five studies were selected: two of power WCUs, 10 of manual WCUs and 23 of both. Six qualitative studies, ranging in quality from 8/10 to 9/10 and 29 quantitative studies were included, ranging in quality from 4/15 to 11/15. Fifteen body function, 4 activity, 5 participation, 15 environmental and 14 personal factors were found to be associated with social and community participation.

Conclusions: Social and community participation of WCUs is associated with factors from all ICF domains. Wheelchair factors, accessibility, skills with wheelchair use, pain, finances and education are modifiable factors frequently reported to be associated with participation. Experimental research focusing on modifiable factors is needed to further our understanding of factors influencing participation among WCUs.

Implications for Rehabilitation
• Wheelchair factors, including comfort and durability, are associated with participation and may be targeted in clinical intervention.
• Wheelchair skills are clinically modifiable and have been shown to improve participation in manual wheelchair users.
Body functions (e.g. confidence, depression and fatigue) and personal factors (e.g. finances and level of education) may be considered for clinical intervention.

Title: Denial is associated with higher ambulatory blood pressure across the menstrual cycle.

Author: Gary D. James, et al.


Abstract: Background: Studies show that stress perception is associated with increased daily ambulatory blood pressure (BP) and that denying the negative effects of stress increases BP as well. Whether these effects persist over the menstrual cycle is unknown.

Aim: To examine the effects of measures of stress and stress denial on ambulatory work and home BP during the follicular and luteal phases of the menstrual cycle.

Subjects and methods: Seventy-one women (age = 34.9 ± 7.7 years) employed as secretaries or technicians wore an ambulatory BP monitor during the follicular (between day 7–10; Mean = 8 ± 2) and luteal (between day 19–25; Mean = 22 ± 2) phases of their cycle. During each phase, relationships between BPs averaged at work and home and various stress measures and demographic and anthropometric variables were examined using stepwise regression.

Results: Ambulatory BPs did not change from the follicular to luteal phase. Stress denial was generally associated with higher ambulatory BP (p < 0.05) over the menstrual cycle, while other parameters had varying effects in different situations (work and home) and cycle phases.

Conclusion: Stress denial has a persistent effect on BP, regardless of menstrual phase; however, shifts in the hormonal environment throughout the menstrual cycle may mediate other somatic and behavioural associations with BP.
### Title
Dependence on Prescription Benzodiazepines and Z-drugs Among Young to Middle-aged Patients in France.

### Author
Marylène Guerlais, et al.

### Journal

### Abstract
**Background:** Benzodiazepines (BZD) and nonbenzodiazepines hypnotics (z-drugs) are recognized as one of the most widely prescribed medications in the world.

**Objectives:** The purpose of the study was to assess the BZD and z-drugs dependence in young to middle-aged outpatients who were taking BZD/z-drugs on a chronic basis, and to characterize their profile.

**Methods:** This is a forward-looking cross-sectional epidemiological study. Data were collected through a semi-structured interview within a network of partner pharmacies from the Nantes area, in France. All data were obtained exclusively through patients’ declarations. 212 patients (19-64 years old) were included: they were considered dependent when they answered positively to at least three items of the DSM IV. A multivariate logistic regression and a principal component analysis (PCA) were carried out to determine their profile.

**Results:** Almost half of the patients met criteria for BZD/z-drugs dependence. The risk to develop BZD/z-drugs dependence is significantly associated with psychiatric history and with the quantity of BZD/z-drugs that is taken. A two factor concept of dependence could be identified according to the PCA: one axis with items of “tolerance” and “long term administration or higher doses”, and a second axis with “concerned by treatment” and “somatic consequences”.

**Conclusions/Importance:** Among this BZD/z-drug dependent population, the two axes identified in the PCA represent two profiles of dependence: being in positive conditioning or suffering from negative consequences. Clinicians need to know them: these two clinical profiles may have an influence in terms of decision-making, especially to manage discontinuation.

### Database
Informa Healthcare
Title: Copeptin as a stress marker prior and after a written examination – the CoEXAM Study.

Author: Sandrine A. Urwyler, et al.


Abstract: The stress hormone copeptin, which is co-secreted with arginine vasopressin, increases in seriously ill patients and can predict outcome in several organic diseases. Information about the influence of psychological stress on copeptin levels is lacking, but is important for interpretation of copeptin levels in the clinical setting. The aim of this study was to evaluate the influence of psychological stress on copeptin levels. We measured copeptin levels in 25 healthy medical students before and after a written examination. The primary endpoint was change in copeptin levels from immediately prior to examination compared to after the examination. Median copeptin levels prior to the examination were significantly higher than those after its conclusion. Similar results were found for serum cortisol and salivary cortisol. Serum cortisol prior to examination was significantly higher in students with a superior examination result, compared to those with a lower score. In conclusion, psychological stress leads to a subtle increase in copeptin level and might therefore be taken into account as a confounding factor in disorders with small diagnostic copeptin range. Higher Cortisol levels, but not copeptin, correlated with a better academic performance in this cohort of students.

Database: Informa Healthcare

Title: Warthin's Tumors and Their Relationship to Lung Cancer.

Author: Christine Klimowicz White, et al.


Abstract: Warthin's tumors (WT) are frequently encountered in clinical practice and can be easily mis-identified. To date, there has been no proven association between WT and lung cancer. A retrospective chart review was conducted of records from 2008 to 2013 in the University of Pennsylvania Health System. Nineteen percent of
patients had a diagnosis of lung cancer, compared to the general patient population, where 7.62% of males and 6.26% of females have a lifetime risk of developing lung cancer. Patients with WT are at heightened risk of lung malignancy; detection of WT may lead to earlier diagnosis of lung cancer.

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