17th Annual

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Emporia State University

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CROSS-GENRE POETRY AND THE

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Arvind Damodara Kannan BENEFICIAL RECOVERY OF AMMONIA

FROM SWINE WASTEWATER FOR REUSE AS TARGETED SLOW RELEASE FERTILIZER

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DISCRIMINATION AND QUANTIFICATION

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Sakshi Bhati MEDICAL TOURISM PATIENT MORTALITY:

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University of Kansas

Amilee Turner DEVELOPING SUSTAINABLE CITIES IN

KANSAS: A FRAMEWORK AND

METHODOLOGY FOR THE SUCCESSFUL

REDUCTION OF GREENHOUSE GAS

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Andrea M. Garcia ESTABLISHING INTEGRATED CARE FOR

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WOMEN WITH OPIOD USE

Beth Rankin TEACHING AMIDST TRAUMA: IDENTIFYING

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Andrea Coover ASSESSING KNOWLEDGE AND ATTITUDES

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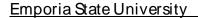
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Wichita State University



Michael Rott

INTRUSION DETECTION FOR 3D-PRINTERS: AN ELECTRICAL POWER ANALYSIS APPROACH





BUILDING A HOUSE OF JOY: THE CRAFT OF CROSS-GENRE POETRY AND THE PUBLISHER'S ROLE IN CONTEMPORARY KANSAS

Linzi Garcia and Kevin Rabas

Department of English, Modern Languages and Journalism, Emporia State University

Comparing and contrasting my poetry collection, *House of Joy*, to other current works published d{"tcf kkqpcn'cpf "kpf gr gpf gpv'Mcpucu"r tguugu."uwej "cu"Nqtk'Dtcentu"*Museum Made of Breath*, Mgxkp'Tcdcuø' ."cpf "Twrk'Mcwtøt'*milk and honey*, shows the way in which finding the extraordinary in the ordinary is a trend in contemporary Kansas poetry. I also utilize these books and others like them to analyze how place and characters are crafted. The critical portion of this project explores what the voices of Kansas are; the responsibility of the author as narrator in cross-genre poetry; the relationship between the author, the poetry, the presses, and the readers; and how my research and poetry adds to the discourse concerning cross-genre poetry and the future of Kansas publishing.

SILICONE-BASED, COST EFFECTIVE, ALTERNATIVES TO TRADITIONAL CASTING MATERIAL FOR LARGE-SCALE IMPRESSIONS

Ashley Haas¹, Mousa Al-Zubi¹, Ryan Rezzelle², and Melissa M. Bailey¹

¹Department of Biological Sciences, Emporia State University

²Public Safety Group, Leica Geosystems

Traditional casting materials such as AccuTRANSÎ and MicrosilÎ hav0.00sezel.342tBed(such)-2coe



RNA INTERFERENCE OF GENES WITHIN THE UNFOLDED PROTEIN RESPONSE OF THE PEA APHID (ACYRTHOSIPHON PISUM)

Paul Hess and Spencer McCue

Department of Biology Sciences, Fort Hays State University; Department of Chemistry, Fort Hays State University

Pea aphids (Acyrthosiphon pisum+"ctg"r guru"y cv'ecwug"dkrikqpu"qh'f qmctug'y qty "qh'etqr "f co ci g" each year. Control of these pests using RNA interference (RNAi) methods would be an incredible step forward in increasing the yield and financial gain from crop harvesting. RNAi allows us to vcti gv"cpf "kpce-kxcvg"ur gekhle" vcpuetkr w"qh"cp"qti cpkno øu"r tqvgqo g"wukpi "egmwct"o cej kpgt {" ubiquitous in all living organisms. The Unfolded Protein Response (UPR) stands out as a promising suite of targets for gene knockdown. The UPR is an adaptive and interconnected set of signaling pathways within all cells that activates in response to physiological changes caused by misfolding or aggregation of proteins. Upon activation, the UPR pathways use complementary mechanisms to propel the cell towards either survival or death, also known as cellular apoptosis. We will be examining the results of using RNAi on six genes (PDIA6, VCP, DNAJC3, PFD2, TRAF2, and ATF-6) associated with the UPR. We hypothesize that we will see a decrease in pea aphid survivability and fecundity upon knockdown of these genes.

WRONGFUL CONVICTIONS STEMMING FROM FALSE CONFESSIONS





EFFECTS OF PROSTATE CANCER AND EXERCISE TRAINING ON LEFT VENTRICULAR FUNCTION AND CARDIAC AND SKELETAL MUSCLE MASS

Dryden R. Baumfalk¹, Alexander B. Opoku-Acheampong¹, Jacob T. Caldwell¹, Carl J. Ade^{1,2}, Steven W. Copp¹, Timothy I. Musch^{1,3}, and Bradley J. Behnke^{1,2}

¹Department of Kinesiology, Kansas State University; ²Johnson Cancer Research Center; ³Department of Anatomy and Physiology, Kansas State University

Prostate cancer is the most common type of non-skin cancer found in men with above average incidence in Kansas. Recent evidence suggests prostate cancer independent of treatment has atrophic effects on whole heart and left ventricular (LV) mass associated with a reduced endurance exercise capacity. We tested the hypothesis that exercise training will mitigate prostate cancer-induced cardiac and skeletal muscle atrophy and improve LV function versus sedentary tumor-bearing counterparts. Copenhagen rats (n=39; ~5 mo. old) were randomized into four groups; exercise-trained tumor-bearing (EXTB) or control (EXCON) and sedentary tumor-bearing (D) or



FUNCTIONAL STARCH PROPERTIES OF EXTRUSION PRE-COOKED CHICKPEA FLOURS

Randall Martin, Mehreen Iftikhar, Yong Chen Shi, Hulya Dogan, and Sajid Alavi Department of Grain Science, Kansas State University

Chickpeas and pulses are rapidly becoming a r qr wrct" kpi tgf kgpv" kp" vqf c $\{$ gu" hqf "industry. Chickpeas provide many benefits including being nutritious and sustainable. Some drawbacks to chickpeas include a poor functionality in baked products. Extrusion processing was proposed to pre-cook the starch and remove volatile and anti-nutritional compounds. Different varieties processing conditions were tested to create



Hannah Quellhorst¹, Frank H. Arthur, and W.R. Morrison III²

¹Department of Entomology, Kansas State University; ²USDA-ARS, Stored Product Insect and Engineering Unit, Manhattan, KS

One fifth of all wheat grown in the United States is grown in Kansas. Kansas stores more wheat y cp"cp{"qyj gt"uvvg0'Mcpucuxu"hcto gtu"r tqf wegf "867"o kmlqp"dwuj gni"qhleqtp"lp"423: ."tcpmlpi "7th in the country for corn acreage planted. However, every year, 10-30% of cereal crops such as corn and wheat, are lost to insects after harvest. The most important stored products insect pests of corn and wheat are the maize weevil (Sitophilus zeamais) and the invasive larger grain borer (Prostephanus truncatus). Weight loss in corn grains due to these insects is about 10620% and 346 40%, respectively. Given the importance of these global staple crops, and their particular relevance \(\frac{1}{2}\) "Mcpucuxu"ci tkewnwtg." ki'ki'j gtghqtg" ko rgtckxg" \(\frac{1}{2}\) "gxgrqr" "cpf" "wkrk g"pgy" o cpci go gpv'\qqls to protect these commodities from post-harvest insect pests. In this study, we investigated the efficacy of a new insecticide, the insect growth regulator combined with the pyrethroid deltamethrin and the synergist piperonyl butoxide (Central Life Science), at inducing mortality and causing sublethal changes in movement for adult P. truncatus and S. zeamais exposed on a treated concrete surface for varying periods. We were able to induce significant mortality and reduced movement for





DOXORUBICIN-BASED PRODRUG AND ACTIVATABLE MR NANOPROBE FOR THE IMAGING AND TREATMENT OF CANCER

Raghunath Narayanam, Bayan Ahmad S Dous, Tuhina Banerjee and Santimukul Santra

Department of Chemistry, Pittsburg State University

Magnetic Resonance Imaging (MRI) is increasingly being used as a diagnostic tool for cancer. We rtqr qug"c"pqxgnlo qrgewrt"rtqdg."öI cf qrlpkwo -DTPA disulfide-bonded Doxorubicin (Gd-DTPA-SS-F qzq+ö"cu"cp"ce-kxcvcdrg"rtqf twi "lqt"vj g"tgcvo gpv"qh"ecpegt0"fp"cf f kkqp."vj ku"rtqf twi "y j gp" encapsul4Narayanam



EXPANDABLE GRAPHITE AS AN EFFECTIVE FLAME-RETARDANT IN BIO-BASED RIGID POLYURETHANE FOAMS



DEVELOPING SUSTAINABLE CITIES IN KANSAS: A FRAMEWORK AND METHODOLOGY FOR THE SUCCESSFUL REDUCTION OF GREENHOUSE GAS EMISSIONS

Amilee Turner

Department of Political Science, University of Kansas

The development of sustainable communities is beneficial to future of not just countries, but to states. With the negative effects stemming from globalization, including resource scarcity,



TEACHING AMIDST TRAUMA: IDENTIFYING THE IMPACT THAT TRAUMATIZED STUDENTS HAVE ON K-12 TEACHERS Beth Rankin

Department of Curriculum and Instruction, University of Kansas



TARGETING BLADDER CANCER WITH CINNAMALDEHYDE AND TRANS-CINNAMIC ACID

Connor Chestnut, Dharmalingam Subramaniam, and Shrikant Anant *School of Medicine, University of Kansas Medical Center*

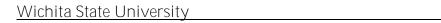
Bladder cancer is the fourth most common cancer in Kansas men and among the top ten most common in Kansas women, yet treatment options remain limited. Cinnamaldehyde is a naturally occurring compound found in cinnamon and cranberry that has shown in-vitro and in-vivo inhibition of multiple different cancers. Cinnamaldehyde is predominately excreted in the urine as cinnamic acid, which has also shown promising anticancer properties. The ability of Cinnamaldehyde and Cinnamic Acid to target bladder cancer cell growth in-vitro is the subject of this investigation. Bladder cancer cell lines 253JBV, T24, UMUC3, and normal uroepithelial were selected. Hexosaminidase assay was used to assess proliferation. 500 viable cells were seeded and incubated for 10 days evaluated for colony formation. Cell cycle analysis was performed with FACS Calibur flow cytometry. Cells were cultured and assessed for spheroid formation at 5 days. Spheroids were trypsinized and analyzed after 5 days incubation for secondary spheroid formation.



INTERFERON INDUCED TRANSMEMBRANE PROTEIN-1 PLAYS A VITAL ROLE IN TRIPLE-NEGATIVE BREAST CANCER AND CAN BE TARGETED BY THE NATURALLY DERIVED COMPOUND PARTHENOLIDE

Olivia Provance¹, Eric Geanes¹, Asona Lui¹, Anuradha Roy^{2,3}, Scott Weir^{1,3}, and Joan Lewis-Wambi^{1,3}

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RELATIONSHIP BETWEEN PSYCHOSOCIAL HEALTH AND SELF-REPORTED ORAL HEALTH AMONG SENIOR CENTER PARTICIPANTS IN WICHITA, KANSAS

Ashwini Kanade¹, Douglas Parham¹, and Amy Chesser²

¹Department of Communication Sciences and Disorders, Wichita State University;

²Department of Public Health Sciences, Wichita State University

Poor mental health days are f ghlogf "cu." To gcp"pwo dgt "qh"f c {u"lop"y g"r cu." 52"f c {u"cf wmu'tgr qtvgf" their mental health was not good Eeeqtf lop "vq"Co gtlecou"O gpvcn"J gcny "Tcpmlop u." whe poor mental health days for women above 65+ years old in Kansas is greater (4.3) when compared to men (3.0). Oral health impacts mental health and thus, affects the health of Kansas residents. The definition of health has moved past free of disease and healthy mouth is an essential component of whole-person approach to health care. The relations between oral health and overall health of an individual are explicit and crucial. Poor oral health impacts nutrition, self-image, social interactions, mental and physical health, and health-related quality of life. The purpose of this study was to assess gender differences in psycho-social consequences of oral health at senior centers in Wichita, KS. The GOHAI (Geriatric Oral Health Assessment Index) survey was conducted and socio-demographic information was collected. Results of this survey showed higher impact of oral health on women as compared to men. Psychosocial well-being is an important component of mental health and this study assists to signify the mental health problems due to oral health. According to the Kansas Department for Aging and Disability Services (KDADS) report (2019), the behavioral health system is in crisis and the behavioral health problems include psychological distress. By improving oral health related quality of life, the psychological well-being and mental health among older adults can be enhanced.

URINARY FOLLICLE STIMULATING GLYCOFORM ANALYSIS BY AUTOMATED WESTERN BLOT

Sahithi Katta and George R. Bousfield Department of Biological Sciences, Wichita State University

Follicle-stimulating hormone (FSH) is a critical hormone for fertility itical.5(s)-10v6o 612 re5eIeytpAr.



INTERNET OF THINGS BASED CYBER-PHYSICAL SYSTEM FRAMEWORK FOR REAL-TIME OPERATIONS

Vatsal Maru, Krishna Krishnan, and Saideep Nannapaneni Department of Industrial, Systems, and Manufacturing Engineering, Wichita State University

Automation on the production floor can improve production efficiency and human safety when performing hazardous tasks, particularly in Kansas where aircraft manufacturing requires handling large aerospace structures. To increase the edge in our aircraft manufacturing sector, incorporating intelligence into the robotic systems can improve their effectiveness on the production floor. Therefore, the objective of this research is to create an intelligent control system that performs operations based on object d



INTRUSION DETECTION FOR 3D-PRINTERS: AN ELECTRICAL POWER ANALYSIS APPROACH

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