



TEXAS SOUTHERN
UNIVERSITY

RESEARCH WEEK 2014

APRIL 1 -7, 2014



Research Matters:
"TSU CELEBRATING THE
PROCESS AND THE PROMISE"

A Program Sponsored By the Office of Research
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RESEARCH WEEK 2014

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TSU RESEARCH WEEK 2014

ACTIVITY SCHEDULE

"Research Matters: TSU Celebrating the Process and the Promise"

April 1, 2014 - Tuesday

Continental Breakfast and Registration	Rod Paige College of Education Atruim	9:30 am-10:30 am
General Session	Rod Paige College of Education Auditorium	10:30 am-12:00 pm
Student, Staff and Faculty Poster Presentations	c (3rd Floor)	1:00 pm-4:00 pm
Research and Outreach Center Exhibits	Sterling Student Life Center (3rd Floor)	1:00 pm-4:00 pm

April 2, 2014 - Wednesday

Faculty Oral Presentations	Rod Paige Education Building #318	9:00 am-12:30 pm
Staff/ Student Oral Presentations	Rod Paige Education Building #318	1:30 pm -5:00 pm

April 3, 2014- Thursday

College/School Discipline Specific Sessions

Thurgood Marshall School of Law	Law School Dean's Conference Room #227	9:00 am-11:00 am
JHJ School of Business	JHJ Conference Room #127	10:00 am-12:00 pm
BJ-ML School of Public Affairs	Public Affairs Building Room #114	10:00 am-3:00 pm
College of Science and Technology	Science Building Room #158	10:00 am-12:00 pm
Thomas F. Freeman Honors College	Honors College Auditorium	11:00 am-1:00 pm
College of Pharmacy and Health Sciences	Gray Hall Lecture Hall #100	11:00 am-1:00 pm
College of Liberal Arts and Behavioral Sciences	Sterling Student Life Center Room # 307	1:00 pm-3:00 pm
School of Communication	MLK Building Room # 114	2:00 pm-4:00 pm
College of Education	Rod Paige Education Building #318	5:00 pm- 6:30 pm

TSU's Northwest Campus Sessions

Guest Lecturer	Northwest Campus #111/115	5:30 pm-6:30 pm
Awards and Acknowledgements	Northwest Campus #111/115	6:30 pm-6:45 pm

April 7, 2014- Monday

Awards Program/ Luncheon	Sterling Student Life Center Tiger Room (3rd Floor)	11:00 am-1:00 pm
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LETTER OF ENDORSEMENT

PRESIDENT OF TEXAS SOUTHERN UNIVERSITY



Dr. John M. Rudley
President

March 24, 2014



Dear Texas Southern University Community:

I am pleased to offer my endorsement of Texas Southern University's Research Week 2014, "*Research Matters: TSU Celebrating the Process and the Promise*". Annually, Texas Southern's Research Week serves as an assembly for the nation's most creative minds to share their work and facilitate future intra- and interdisciplinary collaborations fully aware that research is the lifeblood of innovation. Moreover, Research Week provides an avenue for promoting national and local awareness of the exciting research and outreach activities transpiring at our institution.

At present, countries around the globe are expanding their influence in higher education- particularly in the area of research. According to a report from the Organization for Economic Cooperation and Development, about 40 percent of young postsecondary degree-holders in leading countries will come from China and India by 2020- two nations fighting for the position of global leader in research. In comparison, the United States and some European Union countries will produce about 25 percent of young college graduates. Hence, if this nation is to stay competitive into the 21st century, it is critical that institutions and individuals remain committed to investing in research. "*TSU Celebrating the Process and the Promise*" will go a long way in making this happen by providing the greatest return on research dollars invested.

Together we can pioneer new discoveries that will help shape the world of today and tomorrow. Hence, quality research has become an even more precious commodity, and even more dependent upon faculty, students and universities actively utilizing research partners.

Research Week 2014, which will take place April 1-7, provides the kind of boundary-pushing environment capable of creating multiple pathways for increased support for cutting-edge research that will help Texas Southern University become one of the nation's leading urban serving institutions. To ensure the success of this endeavor Texas Southern University recently unveiled the Leonard H.O. Spearman Technology building, investing \$31 million into research laboratories. Annually, Research Week successfully creates an atmosphere of excellence that is exhibited through oral and poster presentations from visiting scientists, faculty, research staff and students, along with panel discussions, plenary sessions and the culminating awards program.

By showcasing Texas Southern University's growing research acumen, Research Week 2014 allows members of the Texas Southern community to garner the benefits of a University culture that serves as an epicenter for ground-breaking research. I am pleased to offer my support and urge students, faculty and staff to participate in and celebrate Texas Southern's Research Week 2014.

Sincerely,

A handwritten signature in cursive script that reads "John M. Rudley".

John M. Rudley
President

LETTER OF ENDORSEMENT

PROVOST, VICE PRESIDENT FOR ACADEMIC AFFAIRS AND VICE PRESIDENT FOR RESEARCH



April 1, 2014

Dear Texas Southern University Family:

Research Week at Texas Southern University (TSU) is an annual event designed to highlight and showcase the research activities and quality education of our undergraduate students, graduate students, and faculty. Research Week presents an opportunity for faculty and students to display research/scholarly works that could be of interest to colleagues from other educational enterprises, research laboratories, corporations and governmental agencies at large. TSU sponsors Research Week as a part of meeting and keeping its vision and mission of *"Excellence in Achievement"* through this year's Research Week theme, *"Research Matters: TSU Celebrating the Process and the Promise."*



Our University is classified by the Carnegie Commission as a "Research Intensive" university and by the state of Texas as a "Doctoral" level university. Clearly, Research Week is very beneficial to TSU's reputation, growth and development as an emerging research institution. I seize this opportunity to commend the efforts of faculty and students who will showcase their research/scholarly activities during Research Week. Your contributions will definitely add value to the overall research productivity of the University.

I strongly encourage you to attend as many presentations as possible. Your support is critical to the success of Research Week.

Sincerely,

A handwritten signature in blue ink, appearing to be "Sunny E. Ohia".

Sunny E. Ohia, Ph.D., FARVO
Provost
Vice President for Academic Affairs
Vice President for Research

LETTER OF ENDORSEMENT

ASSOCIATE PROVOST ASSOCIATE VICE PRESIDENT FOR RESEARCH



Dear Texas Southern University Community:

With another year on us comes another Research Week. This year, Texas Southern University (TSU) faculty, staff, and students have yet another opportunity to show case the research gravitas of TSU in her march towards attaining greater heights in research enterprise. This year's Research Week promises to demonstrate that TSU, like every other institution is committed to conveying knowledge to new generations and to lead in the creation of new basic and applied knowledge through research and scholarship.

The activities planned for this week promise to live up to TSU's goal of promoting Excellence in Achievement. This year's theme, "*Research Matters: TSU Celebrating the Process and the Promise*" aptly captures the essence of the research enterprise on campus and the need to synergize among the various entities for more effective gains. In order to enrich research culture and enterprise on campus, faculty acquisition of extramural funding remains a top priority through internal collaborative research between faculty and staff in different colleges and schools at TSU. Increased efforts have also been made to promote collaborative research with outside institutions, notably, the University of Houston. The efforts have the potential for paying big dividends over the coming years. In recognition of the need to generate future thinkers, our students have not been left behind as the Undergraduate Research Program has continued to see increased number of students who sign up each year.

All in all, the University's programmatic activities designed to boost research are paying off as attested to by the dramatic increase in the number of abstracts submitted for Research Week 2014—up 5% overall, 10% for students and 20% for faculty over last year's numbers.

With the current efforts, the research enterprise at TSU is moving in the right direction and I enjoin all members of the TSU community to avail themselves of the wonderful opportunities.

My best wishes for a fruitful Research Week.

Sincerely

Adebayo Oyekan

Associate Provost/Associate Vice President for Research

RESEARCH WEEK 2013 REPORT

Research Week (RW) 2013 marked the ninth annual RW program of Texas Southern University. The event which is designed to highlight scholarly research and outreach activities at TSU was held on April 2-5, 2013. Each year Research Week creates an atmosphere of excellence through oral and poster presentations from faculty, staff and students as well as visiting scientists. Once again this year's program was truly a historic event with a 21% overall increase in the number abstracts submitted for presentation.

This year's theme, "Creating a Collaborative Research Culture" reflects the Office of Research's continued efforts to encourage and embrace greater research interactions among researchers as was also exhibited in the efforts to continue the Interdisciplinary Research Seminars and with the sponsoring of the 2013 Research Retreat. Similarly, efforts were made to include more diverse research projects with the common thread of creative thinking and innovation in this year's plenary sessions.

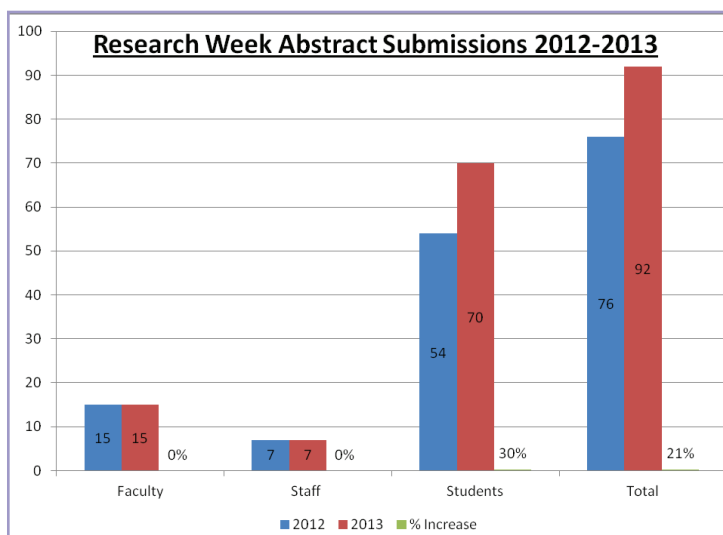
The opening session featured Chris C. Ulasi, Ph.D., Interim Chair and Associate Professor, Radio, Television and Film School of Communications, Texas Southern University, who presented "The Digital Age and the Democratization of Narrative Filmmaking". Additionally, Cleverick D. Johnson, M.S., D.D.S., Department of Restorative Dentistry and Biomaterials, The University of Texas Health Science Center at Houston Dental Branch, presented "An Evaluation of the ASA Status of Emergency Dental Patients". Finally, the culminating Awards Program Luncheon featured Josua T. Swan, PharmD., BCPS, Assistant Professor, Pharmacy Practice, TSU, who presented "Effects of Antiseptic Bathing on Hospital Acquired Infections in the Intensive Care Unit and Terence Hicks, Ph.D., E.D., Interim Dean, College of Education, Prairie View A&M University, who presented "Research Studies in Higher Education: Educating Multicultural College Students.

The Office of Research thanks all RW13 College / School Research Coordinators, participants and presenters. We also give thanks to the panel of judges, Ms. Cecilia, Mr. Darnell Johnson III, Drs. Sammie Robinson, Kamala Raghavan, Mayur Desai, Karma Sharif, Nathaniel Shelton, Renard Thomas, David Owerbach, Constance Fain, Walter Champion, Elisha Newton, Yoruba Mutakabbir and Linda Gardiner.

Congratulations to the faculty, staff and student oral and poster presentation winners!

Research Week 2013 Winners

- **1st Place Faculty Oral:** Germaine Gray, Professor, Management; Carlton Perkins, Ph.D., Professor and Ladelle Hyman, Ph.D., Professor, Accounting and Finance
- **2nd Place Faculty Oral:** J. Kenyatta Cavil M.B.A., Ed.D. Assistant Professor, Health and Kinesiology and Charles F. McClelland, Jr., M.B.A., Ph.D., Director of Athletics



- **3rd Place Faculty Oral:** Dr. Delonia Cooley, Ph.D., Associate Professor, Marketing ; Rochelle Parks-Yancy Ph.D., Associate Professor, Management

- **1st Place Faculty Poster:** Sarmistha Majumdar, Ph.D., Assistant Professor, Political Science

- **2nd Place Faculty Poster:** Mark C. Harvey, Ph.D., Assistant Professor, Physics

- **3rd Place Faculty Poster:** Krystal T. Cook, Ph.D., Visiting Assistant Professor, Psychology,

- **1st Place Staff Oral:** Dr. Poonam Sarkar, Research Associate, Pharmaceutical Sciences

- **2nd Place Staff Oral:** Omana P. Mathew, Ph.D. Research Associate, Pharmaceutical Sciences

- **3rd Place Staff Oral:** Latissha V. Clark, M.S., Research Assistant, Center for Transportation Training and Research

- **1st Place Staff Poster:** Minerva Carter, B.S., Project Coordinator I, ITRI, Transportation Planning and Management

- **2nd Place Staff Poster:** Qing Li and Xiaobing Wang, Grad. Research Assistants, Transportation Planning and Management

- **3rd Place Staff Poster:** Jinghui Wang, Graduate Research Assistant, Transportation Planning and Management

- **1st Place Student Oral:** Jenaye Robinson Undergraduate, Biology

- **2nd Place Student Oral:** Chelsea T. Brown, Undergraduate, Health Administration

- **3rd Place Student Oral:** Njekeh Franklin Caspa, M.S. , Ph.D. Candidate, Environmental Toxicology

- **1st Place Student Poster:** Shere' Paris, B. S., Ph.D. Candidate, Pharmaceutical Sciences,

- **2nd Place Student Poster:** Meng Swen See, Pharm.D. Candidate, Pharmacy

- **3rd Place Student Poster:** Shaunte' Hulett-Abdin, M.S., Ph.D. Candidate, Environmental Toxicology

RESEARCH WEEK 2013 PICTURES



Dr. Chris Ulasi, Associate Professor, Communications speaking during Research Week 2013 General Session.



Dr. Rasoul Saneifard presenting during Research Week 2013 Faculty Oral Presentations.



Shauntè Hulett-Abdin, Ph.D. Candidate, Environmental Toxicology presenting during Research Week 2013 Poster Session.



From l to r: Dr. Adebayo Oyekan, Interim Associate Provost/Associate Vice President for Research, Dr. Joshua Swan, Dr. Terence Hicks (PVAMU), Provost, Vice President for Academic Affairs, Vice President for Research. Dr. Sunny Ohia posing with the Research Week 2013 Award Luncheon presenters.



Some of the Research Week 2013 Oral, Poster, Centers for Research Winners and Presenters.

From l to r back row: Vincent Hassell (ITRI). Minerva Carter, Latisha Clark, Dr. Amruthesh Shivachar, Dr. J. K. Cavil, Dr. Terrance Hicks, (PVAMU)

From l to r frontrow: Shauntè Hulett-Abdin, Dr. Poonam Sarkar, Dr. Omana Mathew, Chelsea Brown, Jenaye Robinson, and Dr. Joshua Swan

GENERAL SESSION

TUESDAY, APRIL 1, 2014

GENERAL SESSION

ROD PAIGE COLLEGE OF EDUCATION AUDITORIUM

10:30 AM – 12:00 PM

Facilitator *Linda M. Gardiner, Ph.D.*
Director, Research Enhancement and Regulatory Services

Greetings *Sunny E. Ohia, Ph.D.*
Provost, Vice President for Academic Affairs, Vice President for Research

Opening Remarks *Adebayo O. Oyekan, Ph.D.*
Associate Provost and Associate Vice President for Research

Introduction of Speaker

10:40AM

“Competitive Conflicting Communities: Responses to the Growing Presence of Heroin in Tanzania”



Cheryl McCurdy, Ph.D.

Associate Professor, Division of Health Promotion and Behavioral Sciences
Center for Health Promotion and Prevention Research
The University of Texas Health Science Center Houston

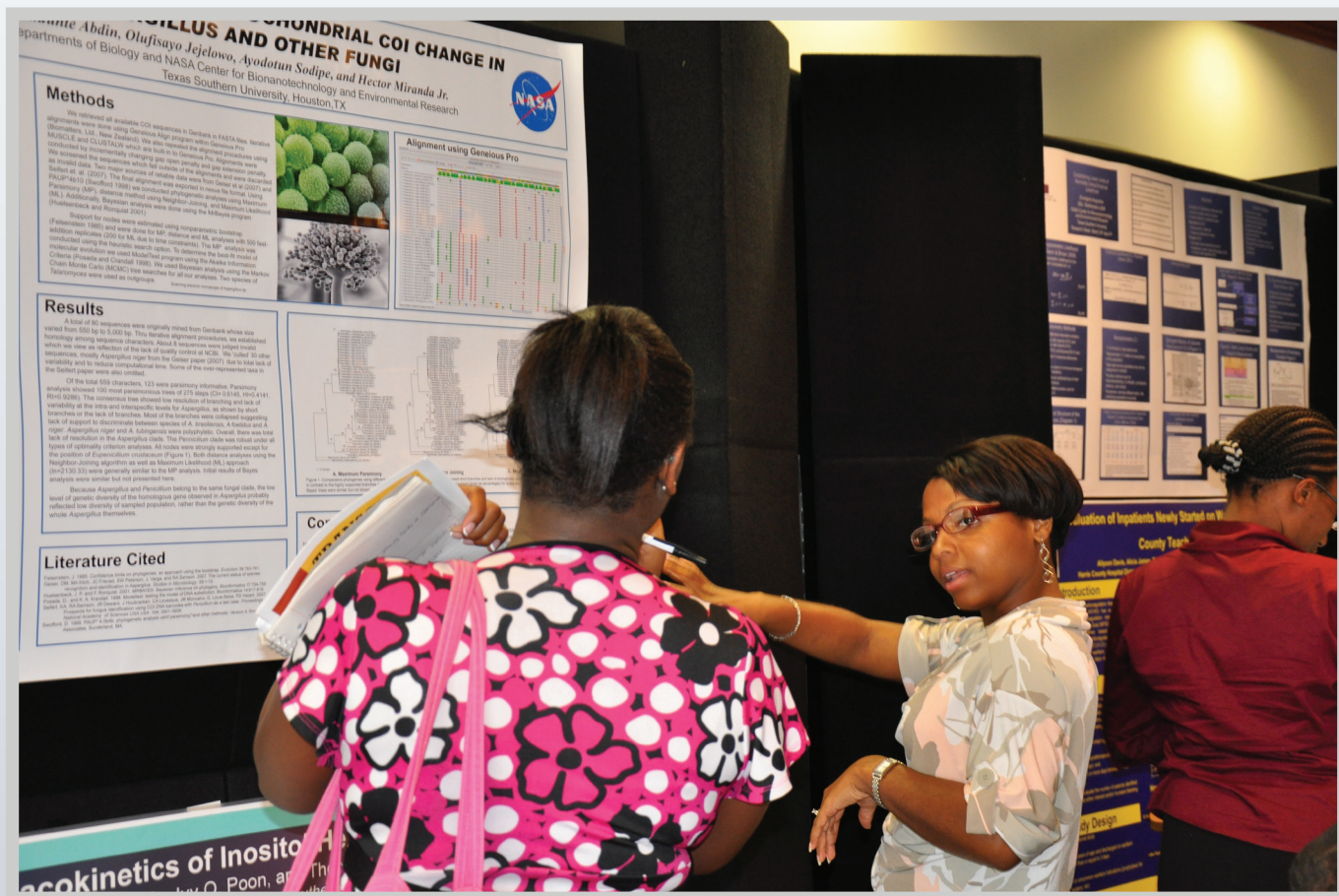
11:40

Questions and Answers

11:55

Closing Remarks

FACULTY, STAFF, AND STUDENT



POSTER PRESENTATION

FACULTY POSTER PRESENTATION

TUESDAY, APRIL 1, 2014 FACULTY, STAFF, AND STUDENT POSTER PRESENTATIONS

FACULTY, STAFF, AND STUDENT POSTER PRESENTATIONS	STERLING STUDENT LIFE CENTER (3RD FLOOR)	1:00 PM – 4:00 PM
RESEARCH AND OUTREACH CENTER EXHIBITS	STERLING STUDENT LIFE CENTER (3RD FLOOR)	1:00 PM – 4:00 PM



Impacts Of Wireless Communication System On Traffic Safety And Air Quality

Dr. Fengxiang Qiao (Abstract 001)

Associate Professor, Transportation Studies

Collaborator(s): Dr. Lei Yu and Dr. Qing Li

Successful countermeasures to reduce crashes along roadway system include the use of Intelligent Transportation System (ITS) technologies, such as the Radio Frequency Identification (RFID) technique, smart speed controls, spot warning, etc. This research further exams the impacts of wireless communication system in work zones and intersections on safety and air quality. The entire wireless communication system is composed by a vehicle-to-vehicle (V2V) sub-system and a Vehicle-to-

Infrastructure (V2I) sub-system. Field tests around Texas Southern University and lab tests in the full-motion DriveSafety DS-600c driving simulator are conducted. Factors like lane change behaviors, deceleration rates and locations, stop distances, and human factors are carefully analyzed. Meanwhile, relevant vehicle emissions are estimated in a benchmark vehicle using the Environmental Protection Agency (EPA) model MOVES. Posterior surveys are carried out right after all tests. Results demonstrate that all subjects support this kind of communication system, and the impacts to safety and air quality are both positive. It is envisioned that the proposed system is able to improve safety in work zones and at intersections, and the entire operations of traffic will be more efficient in environment friendly ways.

Antiproliferative Effect of Butyrate Involves Modulation of Inflammatory Response via Antioxidant Effect in Vascular Smooth Muscle Cells (VSMC)

Dr. Kasturi Ranganna (Abstract 002)

Associate Professor, Pharmaceutical Sciences

Collaborator(s): Dr. Omana P. Mathew and Dr. Shirlette G. Milton

Epigenetic mechanisms by altering the expression and in turn, functions of target genes, without changing their primary structure have potential to modify cellular processes that are characteristics of atherosclerosis such as inflammation, proliferation, migration and apoptosis/cell death. Butyrate, a natural epigenetic modifier and a histone deacetylase inhibitor (HDACi), is an inhibitor of VSMC proliferation, a critical event in the pathogenesis of atherosclerosis, and alters cellular ROS and glutathione levels suggesting involvement of redox-component in antiproliferation effect of butyrate.

Here the goal is to explore whether the antioxidant effect of butyrate contributes to antiproliferation action on VSMC via modulation of inflammatory response by using western blotting and immunostaining methods. The results show treatment of VSMC with butyrate not only upregulates glutathione peroxidase (GPx) 3 and GPx4, but also increases overall catalytic activity of GPx further supporting antioxidant effect of butyrate in proliferation arrested VSMC. Moreover, analysis of NF-kB transcription factor system, the target of GPx, reveals butyrate treatment of VSMC causes downregulation of p65NF-kB, Ikb α , IKK α and IKK β expression and inhibits phosphorylation of p65NF-kB resulting in downregulation of NF-kB target inflammatory genes such as inducible nitric oxide synthase, vascular cell adhesion molecule and cyclooxygenase-2. Overall these observations suggest a link between antioxidant effect and antiinflammatory response in butyrate arrested VSMC proliferation and emphasize the atheroprotective and therapeutic potential of natural products such as butyrate in vascular proliferative diseases. Support: G12RR0345 and C06RR012537-01 grants from National Institutes of Health

STAFF POSTER PRESENTATIONS



Operational Impacts of Auxiliary Lanes at Freeway Weaving Segments Dr. Yubian Wang (*Abstract 003*)

Postdoctoral Research Associate, Transportation Studies

College of Science and Technology

Collaborator(s): Dr. Yi Qi, Dr. Ruey Long Cheu, and Dr. Xiaoming Chen

A two-part study was conducted to assess the operational impacts of auxiliary lanes at freeway weaving segments. The first part of the study evaluated the improvements in traffic density and level of service at freeway weaving segments before and after the addition of an auxiliary lane. The second part of the study developed recommendations on when to add auxiliary lanes at FWSs. The analyses were performed with the 2010 Edition of the Highway Capacity Software, which follows the procedure prescribed in Chapter 12 of the 2010 Edition of the Highway Capacity Manual. The 2010 Edition of the Highway Capacity Software, was validated with field data collected at three freeway weaving segments in El Paso, Texas, prior to the analysis. The results show that adding an auxiliary lane at a freeway weaving segment reduces the traffic density in a range from 1.6 to 19.5 pc/mi/ln, or 4% to 50%, with the level service stays the same or improved. Higher improvements are obtained with shorter segment lengths combined with higher weaving volumes. This research has also developed charts which contain recommendations on when to include auxiliary lanes at freeway weaving segments under different combinations of freeway volume, weaving volume and weaving segment length.

STUDENT POSTER PRESENTATION

HAART to Heart: Decreasing Cardiovascular Disease Risk in HIV Infected Individuals

Ngozi Agu (*Abstract 004*)

Pharm. D. Candidate, Pharmacy

Faculty Advisor: Dr. Adebayo Oyekan

College of Pharmacy and Health Sciences

Collaborator(s): Melvin J. Roberts Jr., Stephanie Walker, Dominique Guinn

Background: Studies have shown a higher risk for cardiovascular diseases (CVDs) in HIV-infected individuals due to long term exposure to the virus and/or to Highly Active Antiretroviral Therapy (HAART). These manifest as dyslipidemia, glucose Intolerance, atherosclerosis, kidney failure, and chronic inflammation. Hypothesis/Aims: Interventions involving dietary, exercise, and motivation building will reduce cardiovascular risk in HIV-infected populations. Methods: The study involved 73 Individuals (18 to 65 years old) of both sexes who were randomly assigned to Individual Health Coaching (IHC [N=23]) or Group Health Coaching (GHC; N=50). All participated in a 12-week intervention study with recommendations for diet (Mediterranean), exercise (pedometers) and motivation through lectures and coaching. Questionnaires on knowledge of CVDs were given and anthropometric measures were evaluated pre and post intervention. Results: Baseline values were not similar in some of the measures between both groups. In the IHC group, there were no pre/post intervention changes in BMI, waist circumference, systolic blood pressure (SBP), diastolic blood pressure (DBP), A1C, and HDL. However, blood glucose (BG), total cholesterol (TC) and LDL showed a tendency to increase while triglyceride (TG) showed a tendency to decrease. In the GHC group, there were no pre/post intervention changes in BMI, waist circumference, SBP, DBP, BG, LDL and TG. However, A1C, TC and HDL showed a tendency to increase. Conclusion: There were no remarkable differences in anthropometric measures between GHC and IHC. However, there was a marked change in knowledge about CVD risks post intervention.

STUDENT POSTER PRESENTATION

Effectiveness Of The Oromucosal Mouth Spray Nabiximols (Sativex®) In The Symptomatic Treatment Of Multiple Sclerosis-Related Muscle Spasticity

Amaka Okafor-Orieh (Abstract 005)

Pharm. D. Candidate, Pharmacy Practice
College of Pharmacy and Health Sciences

Collaborator(s): Munder Zagaar

Approximately 2.3 million people are affected by Multiple Sclerosis (MS) worldwide. One of the most debilitating symptoms of MS is muscle spasticity, which is often severe enough to chronically affect quality of life. Spasticity may be as mild as the feeling of muscle tightness or severe enough to cause painful, spasms of extremities. Standard therapy consists of antispasticity agents that not only have limited effectiveness but significant tolerability issues as well. Cannabis has been investigated as a possible treatment option for MS-related spasticity but has limited use due to its psychoactive properties and undesirable toxicity profile. However, cannabinoids such as cannabis-based medicinal extracts may represent a safer alternative and are of interest in the treatment of spasticity associated with MS. To this extent, a number of studies have confirmed the clinical efficacy of cannabinoids for the treatment of spasticity in patients with MS. Based on these data, Nabiximols (Sativex®), a 1:1 mix of Δ -9-tetrahydrocannabinol and cannabidiol extracted from cannabis sativa extract has received approval for treating MS-related spasticity in various countries and is being evaluated by the FDA in the United States. The purpose of our project was to systematically review the current literature available on Cochrane, Pubmed and Medline databases to analyze the efficacy of cannabinoids specifically Nabiximols as a symptomatic treatment option for addressing poorly controlled spasticity in patients with MS. Briefly, our review of the literature showed that Nabiximols is not only an effective treatment in controlling spasticity but has shown minimal safety concerns



Hematopoietic Stem Cell Transplant (HSCT) versus Hydroxyurea in the management and treatment of Sickle Cell Disease

Abiola Alabi (Abstract 006)

Pharm. D. Candidate, Pharmacy

Faculty Advisor: Dr. Angie Eaton

College of Pharmacy and Health Sciences

Collaborator(s): Ahouti Avi, Charles Asonye, Bisola Ogunbanwo, Beatrice Tembo-Jackson

Background: Sickle Cell Anemia is a debilitating disease that presents as a huge health burden with no cure available. Hydroxyurea is FDA approved for the treatment of adults with hemoglobin sickle cell (HbSS) and frequent episodes of severe sickle cell attack.

On the other hand, HSCT is one of the latest options explored for the treatment of SCD.

Objectives: Evaluation of the advantages and disadvantages of using HSCT versus hydroxyurea in the management and treatment of SCD. Design: Meta- analysis of ten different articles and clinical trials on SCD. Result: Hydroxyurea has been proven to reducing mortality and painful episodes by 50%. It also reduces frequency of hospitalizations and reported increases in fetal hemoglobin production. According to the Multicenter Study of Hydroxyurea in SCD done in USA and Canada, hydroxyurea reduced annual rate of crises (2.5 in the treatment arm vs. 4.5 in the in the placebo arm) $p < 0.001$. With new therapies such as HSCT, the idea of curing SCD becomes a possible option. HSCT has proven effective in preventing stroke and acute vascular complications commonly seen in SCD. Despite these advantages, there are still concern about the sides effect of these two treatment options. Hydroxyurea for example affect the sperms. HSCT limitations and side effects include donor availability, graft rejection, lower seizures threshold, cost, compliance, and frequent hospital visits. Conclusion: Based on our findings, there are many factors that need to be considered in determining therapy. Treatment should be individualized based on severity of the disease, cost, hospitalizations and adverse effects.

STUDENT POSTER PRESENTATION



Assessment Of Vitamin D Deficiency In Heart Failure Patients In The Ambulatory Care Setting

Anh Vu (Abstract 007)

Pharm. D. Candidate, Pharmacy

Faculty Advisor: Dr. Flora Estes

College of Pharmacy and Health Sciences

Collaborator(s): Dr. Monica Green

Purpose: Recent studies have demonstrated that vitamin D deficiency is a significant predictor of mortality and heart failure (HF) re-hospitalization. Vitamin D plays a vital role in the progression of the heart due to its cardioprotective functions. A recent systemic review by Wang et al has shown that there is a modest reduction in cardiovascular disease (CVD) with vitamin D administration. The purpose of this study is to assess and determine the prevalence of vitamin D deficiency in HF patients in the outpatient setting in a community-owned hospital system. **Methods:** The institutional review board approved this study and gave it a waiver of informed consent. This retrospective chart review is conducted at a tertiary medical center, which included patients with heart failure from August 1, 2012 to July 21, 2013. HF patients are assessed based on their serum 25-hydroxycholecalciferol [serum 25(OH)D] levels. Vitamin D levels are categorized as normal, insufficiency, and deficiency. The normal vitamin D level is defined as 30 ng/mL or greater, vitamin D insufficiency is 21 ng/mL to 29 ng/mL, and deficiency is defined as vitamin D level less than 20 ng/mL. Patients' exclusions are patients less than 18 years old, primary hyperparathyroidism, chronic granuloma-forming diseases, pregnant or lactating, fat malabsorption syndromes, and nephrotic syndromes. **Results:** Project is currently in progress.



Using Actigraphy Watches to Measure Sleep Activity in Subjects with Obstructive Sleep Apnea

Ariel Bowman (Abstract 008)

Undergraduate Student, Mathematics

Faculty Advisor: Dr. Willie Taylor

College of Science and Technology

Collaborator: Hilary Marshall, Dayanara Lebron, Dr. Jeffrey Dawson

Obstructive Sleep Apnea (OSA) is a disorder which partially obstructs the airway as a result of the narrowing in the respiratory passage during sleep, causing loud snoring, excessive daytime sleepiness, and disrupted sleep. It can be potentially fatal for overweight smokers. In this study, we are using actigraphy watches with built-in accelerometers to monitor sleep patterns over a 3-month period. Based on the "low threshold" setting, these watches provided data which allowed a measure of sleep efficiency. To date, 30 subjects with OSA and 16 healthy controls have completed the study. Approximately two weeks after the beginning of the study, OSA subjects began using CPAP devices to treat their condition. Consequently, we made comparisons between groups during the first seven days on study to measure baseline differences, and we compared sleep efficiency profiles during the final month versus baseline to assess within-group differences. We found that the OSA group did, in fact, have less efficient sleep patterns pre-treatment, and that these did not improve significantly over the course of the study. Our results suggest that the actigraphy watches may be an important tool in monitoring sleep patterns in OSA patients, including responses to treatment. The OSA study was funded by NIH grant R01 HL091917.

STUDENT POSTER PRESENTATION

Determination of Ethyl Glucuronide And Ethyl Sulphate in Urine Samples by LC-MS-MS

Aybike Dip, PhD (Abstract 009)

Post-Doctoral Fellow, Administration of Justice

Faculty Advisor: Dr. Ashraf Mozayani

Barbara Jordan-Mickey Leland School of Public Affairs

Collaborator(s): Dr. Jeffrey P. Walterscheid, Dr. Hsin-Hung Chen, Dr. Ashraf Mozayani

Ethanol is widely used in beverages and presented in most of the forensic cases. It can be determined also as a false positive result in postmortem blood samples due to postmortem decomposition. In traffic accident cases it is very important the interpretation and to differentiate the false and the real positive results. Especially for postmortem cases to decide or to confirm the alcohol consumption, different metabolites of ethanol is needed. Ethanol direct metabolites, such as ethyl glucuronide (EtG) and ethyl sulfate (EtS) gives many advantages determining the corresponding ethanol. EtG is a non-volatile, stable, polar, hydrophilic and non-oxidative metabolite of ethanol and detectable for up to 18 h in blood and up to 80 h in urine. EtS is also metabolite of ethanol that is stable and specific for alcohol consumption. The confirmation of alcohol intake for postmortem samples has great importance. Although EtS and EtS determination is essential, it is not used widely in forensic laboratories. The aim of this study is to set up and validate a method for determination EtS and EtG in urine samples by the LC-MS-MS systems and standardize for forensic toxicology laboratories. In this study, standards were injected into the LC-MS-MS to determine the MRM pairs of EtG, EtG-D5, EtS and EtS-D5. In the second part, extraction was performed by adding methanol to 100 µL urine samples and protein precipitation was done. After evaporation of the upper phase by nitrogen, the residues were reconstituted with mobile phase and injected into the LC-MS-MS system.



Perceived Impact of the Role of Pharmacist Interns

Christiane Koffi, Cui Wang, Yun Gao (Abstract 010)

Pharm. D. Candidates, Pharmacy Practice

Faculty Advisor: Dr. Aisha Moultry

College of Pharmacy and Health Sciences

Pharmacy clerkship during pharmacy school is one of the most important aspects of the pharmacist interns learning, as it not only allows the interns to get an insight into the responsibilities of a pharmacist but it also allows them to “play” more of their future role as a pharmacist under the supervision of a preceptor. The purpose of this study was to find out about the participants perceptions’ of pharmacist interns’ role in the delivery of health education in the community setting. A descriptive cross-sectional on site survey with a sample of older adults at senior living facilities was used. These patients previously participated in a Health education program. The participation in the survey was voluntary and anonymous. The survey was administered during weekly group meeting for 4 weeks. Of the patients who took the survey, 60% were female and 40% male. The majority of the participants were Asians (80%) and African American (20%). The results revealed that the pharmacist interns have positive impact on program participants. Overall, the participants reported that the presence of the pharmacist interns had a positive impact on them and even 75% of them reported “the pharmacist interns helped me more than the educator”. In conclusion, pharmacist interns do have a positive impact on the participants. These findings are important and should be factored in the training of the interns either by the pharmacy programs or by the preceptors.

STUDENT POSTER PRESENTATION



The Impact of a Pharmacist Intervention on Insulin Therapy Adherence

Christopher Amune (Abstract 011)

Pharm. D. Candidates, Pharmacy

College of Pharmacy and Health Sciences

Collaborator(s): Michael Powell, Pharm.D.

Purpose: Insulin therapy in type 2 DM is usually reserved as a last line of therapy. There are barriers associated with the use of insulin, which may include fear of weight gain, difficulty of use, fear of needles, etc. The overall objective of this survey research is to identify common barriers in the community and show the importance of a pharmacist intervention. **Methods:**

An insulin adherence survey was created by a pharmacy student and advanced pharmacy practice experience preceptor. In this survey, we asked patients if they used their insulin as prescribed, what concerns they may have with their insulin, and if they were aware that their pharmacist could assist with questions in regards to their insulin therapy. **Results:** The survey placed some patients into a group of reported adherence and the others in a group of reported non-adherence. Those that reported non-adherence were asked further questions that to identify the source of their non-adherence. These patients were then asked if they contacted their pharmacist about their concerns; and if they did no then they were asked why. Lastly, the patients were asked if they could consider contacting their pharmacist in the future with any questions regarding their insulin therapy. **Conclusion:** This survey will identify barriers to insulin therapy adherence in the community and will show the importance of the pharmacist intervention in disease state management.



Pediatric Hypertension: Who's Keeping Watch

Alecia Cook, Jacquelyn Churchill,

Jayla Bennett (Abstract 012)

Pharm. D. Candidates, Pharmacy

Faculty Advisor: Dr. Flora Estes

College of Pharmacy and Health Sciences

Purpose: Elevated blood pressure, or hypertension, among children has increased due to the rising prevalence of childhood obesity. This correlation

leads to a potentially significant rise with 2-5% of children in the United States meeting the criteria for diagnosis of hypertension. In 2006 alone there were 24,602 pediatric hypertension related hospitalizations. Are healthcare professionals providing adequate care for early detection to prevent and treat pediatric hypertension? **Method:** A prospective study was conducted between the periods of June 10, 2013 to July 19, 2013, in which a 16-question survey was administered to an adult population in Houston, Texas and surrounding areas. The survey captured 142 responses and was interpreted using a descriptive analysis. **Results:** The data obtained showed that 72% of the population were aware that children could have hypertension; 82% of those surveyed had a family history of hypertension with 13% reporting a family history of pediatric hypertension, and 30% of participants reported that their healthcare professional did not routinely check their child's blood pressure. **Conclusion:** This data has shown that the public has limited, vague knowledge regarding pediatric hypertension. In response to this data, it would be beneficial to perform a retrospective study to assess how pediatric patients are being diagnosed, planned course of therapies, and compliance with treatment. In so doing, a pediatric hypertension (cardiovascular) model could be developed that would bring awareness to the general public through education and screenings, and promote compliance with those already affected.

STUDENT POSTER PRESENTATION



The Effects Of Celebrex On Hypertension Daniel Polk, Bo Sun, Darell Matthews (*Abstract 013*)

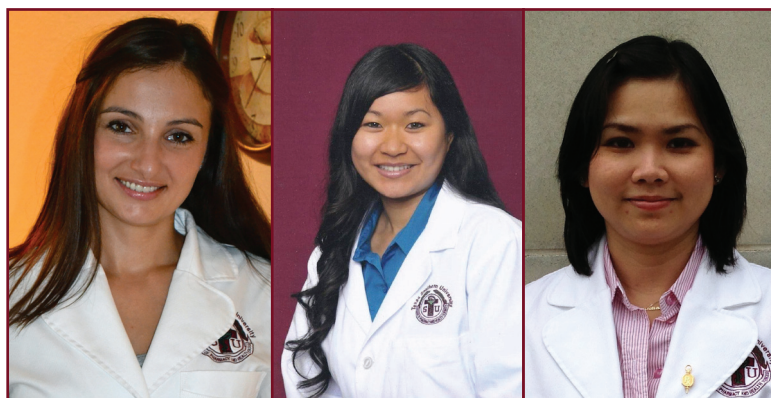
Pharm. D. Candidates, Pharmacy

Faculty Advisor: Dr. Sondip Mathur

College of Pharmacy and Health Sciences

Purpose: Hypertension is a common chronic disease affecting many people worldwide. In the retail setting, many pharmacists must assist with disease management for hypertensive patients who have incomplete or absent medical records. Hypertensive patients with comorbidities such as rheumatoid arthritis or osteoarthritis, often take non-steroidal anti-inflammatory agents (NSAID) to ease their pain. One of the major concerns for hypertensive patients using NSAIDS is that these drugs are believed to cause an elevation of blood pressure through COX-

2 inhibition(1). COX-2 molecules are believed to have effects on mediating rennin, regulating sodium, and manipulating blood flow within the renal system(2). There are only a few studies today that focus directly on the hypertensive effects of a selective COX-2 inhibitor such as celecoxib. Does Celecoxib effect the outcome of blood pressure in patients? Method: This study takes a retrospective view on the effects of blood pressure after initiating celecoxib within patients. From a pool of 570 individuals who took celecoxib, 100 were randomly selected to be in this study. Blood pressures readings were subsequently averaged before and after the initiation of celecoxib therapy. Results: The results of this study showed there was not a significant increase in blood pressure after initiating celecoxib therapy in regard of the population as a whole. Conclusion: In conclusion, pharmacists with incomplete patient medical charts that may be involved in medication therapy management should feel more comfortable recommending celecoxib for a hypertensive patient.



A Randomized Trial of Pelvic Irradiation with or without Concurrent Weekly Cisplatin in Patients with Pelvic-Only Recurrence of Carcinoma of the Uterine Corpus

Daniela Pavel, Michelle Tan, & Hue Tran
(*Abstract 014*)

Pharm. D. Candidates, Pharmacy

Faculty Advisor: Dr. Rodney Hunter

College of Pharmacy and Health Sciences

Collaborator(s): Dr. Rodney Hunter

One type of cancer treatment is the use of high-energy x-ray beams or radioactive seeds/pellets put into the tissue called radiation therapy. Radiation therapy kills or stops cancer cells from dividing by damaging their DNA. The standard treatment for recurrent endometrial cancer (limited to the pelvis and vagina) is radiation therapy alone, however, it has not been very successful in treating large tumors that come back in the lymph nodes, pelvis, or vagina. The main purpose of this randomized phase II trial is to evaluate the effectiveness of radiation therapy plus cisplatin compared to the standard therapy. This randomized phase II trial was submitted to the Institutional Review Board (IRB) for approval. Patients who have signed an approved informed consent and HIPAA authorization were enrolled. Patients must have endometrial carcinoma, undergone complete hysterectomy and bilateral salpingo-oophorectomy, and have a biopsy with histologically confirmed diagnosis of recurrent endometrial cancer confined to the pelvis and/or vagina. The collected, analyzed, and reported parameters that determine the effect of the therapies are: outcome variables, tumor characteristics, age, performance status, race, adverse effects, total dose of radiation, and number of cycles administered. The primary outcome measures the duration of progression-free survival and the duration of overall survival will be analyzed as the secondary outcome. It was determined that at least 94 failures to provide 80% statistical power when type I error is limited to 0.10 (one tail test) to detect a difference of 0.20 for the primary outcome.

STUDENT POSTER PRESENTATION

Garcinia Cambogia: A Miracle Weight Loss Product Or Just Another Fad?

Desalegn Hailu, Tserha Tekeste, & Kidu Tesfamichael (Abstract 015)

Pharm. D. Candidates, Pharmacy

Faculty Advisor: Dr. Sondip Mathur

College of Pharmacy and Health Sciences

Collaborator(s): Dr. Sondip Mathur

Background: Garcinia cambogia considered the “holy grail” weight-loss aid by many, is a fruit extract that contains an active ingredient hydroxycitric acid (HCA), which helps slow the absorption of fat, and also suppresses appetite. HCA is often claimed to promote weight-loss in animal studies, but human studies have been equivocal. Purpose: The purpose of this study is to investigate the efficacy of Garcinia cambogia in helping consumers achieve their target weight without calorie restriction. Method: Questionnaire surveys were created and given out to retail vitamin shop cashiers who in turn gave those questions to customers who purchased Garcinia cambogia extract (GCE). Family members, friends and neighbors who consumed this product were participants as well. The study initially targeted 100 individuals; only 78 participants completed the trial. 54 out of 78 had been on the regimen for over 8 weeks. The remaining 24 were first time users and had been on GCE for least 4 weeks.

Participants were divided into three groups according to the diet and exercise regimen. Group 1 was assigned to participants who were only on GCE. Group 2 was assigned to those who added physical exercise along with GCE. Those who followed the same regimen as Group 2 but with restricted daily calorie intake were assigned to group 3. Results: The majority of participants reported a reduction in body weight. 56% reported a weight loss of 4-6 lbs/month, 37% lost 2-4 lbs/month and 7% reported no change in weight. Conclusion: Findings suggest that the active ingredient of Garcinia cambogia, hydroxycitric acid, has beneficial weight loss effect.

Appropriateness of Zoledronic Acid Use

Allyse Woods and Patrick Nguyen (Abstract 016)

Pharm. D. Candidates, Pharmacy Practice

Faculty Advisor: Dr. Uche Anadu Ndefo

College of Pharmacy and Health Sciences

Collaborator(s): Ngoc-Thuy Pham

The purpose of this study is to assess the use of both Zometa and Reclast within a county health system that serves primarily indigent patients. Due to budgetary constraints; these agents have been placed in a prior authorization program. The guidelines for use were approved through a pharmacy and therapeutics committee and medical board. Utilizing inpatient and outpatient data, a retrospective review of patient medical records was conducted assessing all prescriptions filled from July 2011 through July 2012. To receive Zometa, patients were required to meet one of the following criteria: prescription written by an oncology attending physician, patient failed pamidronate in while inpatient, patient had hypercalcemia of malignancy with an albumin corrected serum calcium greater than 10.8 milligrams per deciliter, or castrate resistant metastasis cancer to bone. Criteria for Reclast use required that patients failed two oral bisphosphonates or had a documented adverse reaction to oral agents. One hundred and seventy two charts were reviewed from three different health system facilities. Forty one patients received Reclast while one hundred and thirty one patients received Zometa. Of the patients who received Reclast twenty five did not meet criteria. Among the patients who were prescribed Zometa twenty one were noncompliant to established criteria. From this study we concluded that compliance to the established criteria for Zometa was eighty four percent whereas compliance to Reclast was thirty nine percent. Therefore we recommend that the rates of noncompliance be submitted to its respective subcommittee for reevaluation of the criteria.

STUDENT POSTER PRESENTATION



The Role Of A Pharmacist In Chronic Disease State Management In The Interdisciplinary Team On Patient Outcomes

Diane Ethakkan, Sana Fatima, Sheeba Mathew, Dipti Patel, Nada Sarraj, Jincy Thankachen (Abstract 017)

Pharm. D. Candidates, Pharmacy

Faculty Advisor: Dr. Sondip Mathur

College of Pharmacy and Health Sciences

Collaborator(s): Dr. Sondip Mathur

Introduction: Although pharmacists have a wealth of knowledge about medications and their use in management of chronic disease states, they are still widely underutilized. Integration of pharmacist in clinical practice

has been proven to improve patient outcomes. **Objective:** The objective of this study is to review the effectiveness of pharmacist led interventions on chronic disease state management in the ambulatory care setting. **Methods:** A systematic review of English language randomized controlled trials cited in Pubmed. The type of studies included were based on whether or not the pharmacists worked on a regular basis in the clinic, recognized interventions and communicated them to the medical team and were present on site and easily accessible to the rest of the clinical staff. The search generated 199 articles of which 10 studies had common endpoints (blood pressure, glycosylated hemoglobin, and cholesterol). Results: Hypertension, cholesterol, and/or diabetes were the precise conditions found in the selected patients in all of our studies. The main method used by pharmacists was patient's medication review. Pharmacist clinical recommendations were found to be the most effective in improving blood pressure, glycosylated hemoglobin and cholesterol as compared to control group. **Conclusion:** Adequate chronic disease state management was achieved with the presence of an on-site pharmacist in an ambulatory care setting.



Statins For Everyone – Should Statins Become Available For Over-The-Counter Use?

Dorothy Le (Abstract 018)

Pharm. D. Candidate, Pharmacy

Faculty Advisor: Dr. Shirlette Milton

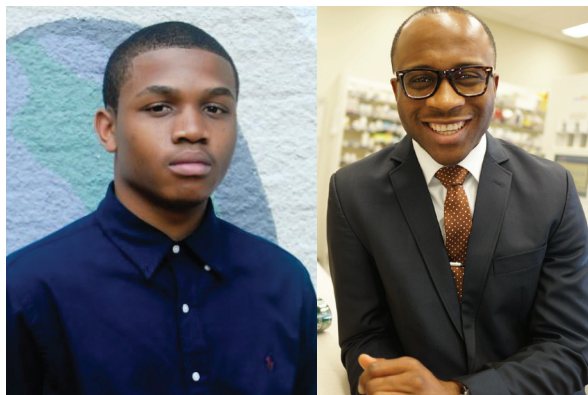
College of Pharmacy and Health Sciences

Collaborator(s): Dr. Shirlette Milton

Introduction: More than 20 million people are currently prescribed a statin drug in the United States for the treatment of serum cholesterol. New guidelines for treatment of serum cholesterol will increase the number of individuals requiring statin therapy. The purpose of this study was to determine if statin drugs should be converted from prescription only to over-the-counter (OTC) status under the new guidelines. The results will be of great significance in addressing the issue of increased prescription demand for statins. **Methods:** Retrospective analysis of the literature and the use of a

survey instrument administered to pharmacy professionals. Results: Data from articles reviewed from 1998-2014 were categorized according to factors that included comparison to previous drugs switched to OTC status in the US, previous applications to the FDA for OTC status of statins, history of OTC statin use in the United Kingdom, safety and other prescribing issues related to statin use. Results indicate that the low dose statin proposed previously for OTC use and currently available in the UK would likely be ineffective for treatment under the new guidelines in decreasing the risk of premature death, heart attack and stroke. Additionally, statins do not fulfill the criteria for drugs switched to OTC status in the US and data do not conclusively demonstrate patient ease of understanding for self-treatment. Survey results are pending. **Conclusions:** Currently, there is insufficient data to justify the conversion of statins from prescription only to OTC status under the new treatment guidelines. Data are especially lacking in the area of patient education in understanding preventive care with statin drugs.

STUDENT POSTER PRESENTATION



Insulin Glargine: An Investigation Of Twice-Daily Dosing Samuel Ubanyionwu and Emmanuel Aniemeke (Abstract 019)

Pharm. D. Candidates, Pharmacy

Faculty Advisor: Dr. Uche Anadu Ndefo

College of Pharmacy and Health Sciences

Collaborator(s): Dr. Uche Anadu Ndefo

Purpose: To understand the rationale behind twice-daily prescribing of insulin glargine as opposed to FDA approved once daily dosing. **Methods:** This study was conducted as a retrospective, patient chart review. A total of 569 patients were identified who received a twice-daily regimen of insulin glargine over one year. A comprehensive chart review was conducted to identify the rationale behind the prescribing of this regimen. **Results:** Of the 569 patients, 477 (83.8%) were prescribed a total daily dose (TDD) > 50 units. A subgroup analysis was subsequently conducted on the 122 patients whose TDD was < 50 units. When comparing the baseline A1c to the 3-6 months A1c, there was an improvement in the mean A1c from 9.6 to 8.8% ($p = 0.0275$). The baseline A1c and the 3-6 months A1c compared to the 7-12 months A1c were found to be insignificant. Preference towards twice-daily dosing occurred 79% of the time as a result of large TDD. The inferences criteria revealed that providers selected “no reason given” and hypoglycemia, 14% and 4% of the time respectively. **Conclusion:** The overall efficacy is most pronounced at the 3-6 months A1c, however it trend downwards over time. Although statistical significance was demonstrated at the 3-6 months A1c with the twice daily dosing of insulin glargine, recent pharmacotherapeutic studies have shown a clinical efficacy equivalent to that of NPH insulin. The evaluation of the progress notes revealed that hypoglycemia was not the major reason for splitting the insulin glargine dose as proposed by previous studies.



Speech Recognition System Using MATLAB Edilberto M. Mendez (Abstract 020)

Undergraduate Student, Department of Engineering Technology

Faculty Advisor: Dr. Yuhong Zhang

College of Science and Technology

There is no doubt that information technology continues improving all aspects of life in today's world. However, there are still many technological areas that need further improvement. For example, the problem of communication between humans and machines is a major concern for today's technological world. Since speech is the natural way of communication between humans, I believe that speech should also be the natural way to communicate with machines around us. However, the main form of interaction between humans and machines is still by the means of a keyboard and a screen. The main objective of this research is to design and implement a speech recognition system for a set of English digits, vowels and words based on Hidden Markov Model (HMM) using MATLAB, which is capable of recognizing and responding to speech inputs. The first step of use of this speech recognition is to convert a speech recorded by a microphone to an electrical signal. Afterwards, the system will match the signal with a prebuilt database. Finally, it will recognize the set of words and send out an output. The result of this research project will take a step further towards reaching the goal that humans are able to interact with machines in a more natural way.

STUDENT POSTER PRESENTATION



Phase 2/3, Randomized Study Of Weekly Nab-Paclitaxel In Combination With Gemcitabine Or Carboplatin, Compared To Gemcitabine/Carboplatin Treatment In Triple Negative Metastatic Breast Cancer

Elvis Achuo, DeShayla Spencer, Chisom Ekwonah, & Tiffany Warren
(Abstract 021)

Pharm. D. Candidates, Pharmacy

Faculty Advisor: Dr. Rodney Hunter

College of Pharmacy and Health Sciences

Purpose: EUESMO guidelines for Triple Negative Breast Cancer (TNBC) suggest the standard of care is a taxane-based regimen, after receiving adjuvant anthracycline-based chemotherapy. The purpose of the study is to provide treatment options to patients with

TNBC due to restrictions associated with the lack of clinical response to trastuzumab or endocrine therapy. **Methods:** This study is a multi-center, open-label, randomized trial divided into Phases 2/3 with 790 females 18 years and over. Phase 2 consist of three treatment arms. Arm A: nab-Paclitaxel 125 mg/m intravenously followed by gemcitabine 1000 mg/m on Days 1 and 8 intravenously over 30 minutes every 3 weeks. Arm B: nab-Paclitaxel 125 mg/m on Days 1 and 8 intravenously over 30 minutes, followed by carboplatin AUC 2 on Days 1 and 8 intravenously over 60 minutes every 3 weeks. Arm C: Gemcitabine 1000 mg/m on Days 1 and 8 intravenously over 30 minutes, followed by carboplatin AUC 2 on Days 1 and 8 intravenously over 60 minutes every 3 weeks. Phase 3: Arm 1 (selected Phase 2 nab-paclitaxel treatment arm) of either nab-Paclitaxel 125 mg/m intravenously, followed by gemcitabine 1000 mg/m over 30 minutes on Days 1 and 8 every 3 weeks OR nab-Paclitaxel 125 mg/m on Days 1 and 8 intravenously over 30 minutes followed by carboplatin AUC 2 on Days 1 and 8 intravenously over 60 minutes. Arm 2: Gemcitabine 1000 mg/m on Days 1 and 8 intravenously over 30 minutes, followed by carboplatin AUC 2 on Days 1 and 8 intravenously over 60 minutes.

Effectiveness Of Using Vitamin K Epoxide Reductase Complex 1 (Vkorc1) Genotyping In Warfarin Dosing Algorithms

Emmanuel Amedzrovi (Abstract 022)

Pharm. D. Candidate, Pharmacy Practice

College of Pharmacy and Health Sciences

Collaborator(s): Munder Zagaar

BACKGROUND: Vitamin K epoxide reductase complex 1 (VKORC1) is an enzyme in human and it plays a key role in the vitamin K production cycle. Dose variability of warfarin in anticoagulation therapy is attributed to a polymorphism in the VKORC1 gene. This finding has led to studies comparing the effectiveness of genotype-guided dosing with standard warfarin dosing. **OBJECTIVE:** To perform a systematic review to assess effectiveness of new genotype dosing algorithms of warfarin are in comparison to the standard algorithm. **METHODS:** Related published articles were gathered from PubMed, Medline and Cochrane databases through the Texas Medical Center library. The selected articles compared genotype dosing to standard warfarin dosing, in an effort to find effective and safe way alternative for warfarin dosing. The studies randomly assigned participants to the genotype guided group or standard dosing group. Prothrombin time and international normalized ratio (INR) was measured. **RESULTS:** Based on our findings, genotype-guided dosing showed lower percent out-of-range INR. Also, genotype-guided dosing percentage of time in the therapeutic range compared with standard dosing was shown to either be noninferior or superior in different trials. **CONCLUSIONS:** Pharmacogenetic-based dosing was associated with a higher percentage of time in the therapeutic INR range compared with standard dosing. Also, a reduction in out-of-range INR values was largely unsatisfactory for both dosing algorithms, leaving the need for more study regarding the risks and utility of these new algorithms in different populations.

STUDENT POSTER PRESENTATION



Soma for Musculoskeletal Relaxation or For Anxiety: A Combination Drug View

Erika Jackson and Minju Mathew (Abstract 023)

Pharm. D. Candidates, Pharmacy

Faculty Advisor: Dr. Sondip Mathur

College of Pharmacy and Health Sciences

Collaborator(s): Dr. Sondip Mathur

Carisprodolol (Soma) is a skeletal muscle relaxant indicated for acute musculoskeletal pain. Muscle relaxation occurs at a therapeutic level of 0.4 to 1.8 micrograms per milliliter (dose of 250-350 milligrams three times daily and at bedtime). In the human body, carisprodolol is converted into an active metabolite named, meprobamate. Meprobamate is another drug approved by the FDA for the management of anxiety. Meprobamate is dosed 400 milligrams three to four times per day yielding a therapeutic range of 6-12 micrograms per milliliter. Studies have shown that taking regularly scheduled Soma can lead to side effects similar to those of meprobamate (anti-anxiety effects). The objective of the study is to prove that taking Soma at regularly prescribed doses will not lead to an accumulation of its metabolite; thus, no anti-anxiety effects will occur. Based on research of both carisprodolol and meprobamate, a pharmacokinetic profile was calculated for both drugs. The result of the study indicated that carisprodolol taken in regular prescribed doses would not cause anti-anxiety effects by its metabolite meprobamate. Even though there is a wide range of common adverse reactions between soma and meprobamate, the therapeutic range of carisprodolol (0.4-1.8 $\mu\text{g/mL}$) is much lower than the therapeutic range of meprobamate (6-12 $\mu\text{g/mL}$). Patient can only exhibit meprobamate therapeutic effects when taking soma at a much higher dose than the one approved by the FDA.



Proper Medical Utilization Of Botulinum Toxin In An Institutional Setting

Esther Fasanmi (Abstract 024)

Pharm. D. Candidate, Pharmacy

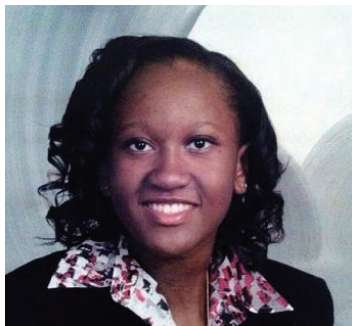
Faculty Advisor: Dr. Sondip Mathur

College of Pharmacy and Health Sciences

Collaborator(s): Dr. Uche Anadu Ndefo and Dr. Jacqueline Milton-Brown

Botulinum toxin is a neurotoxin that is produced from the bacterium *Clostridium botulinum*. This neurotoxin has been FDA approved for an array of dystonic and spastic medical disorders. The purpose of this study is to evaluate the use of botulinum toxin in an institutional setting and to identify compliance with the restriction guidelines at this institution. A retrospective analysis was conducted on 50 patients who have received botulinum toxin from June 2011 to June 2012. The following data was collected: previous medications used, documented approval, indication of use for botulinum toxin, signs of improvement on treatment, any noted adverse effects associated with the medication as well as patient demographics. A total of 46/50 (92%) patients had PAP approved conditions for botulinum toxin usage. There were five patients that received botulinum toxin for non-approved conditions including anal fissures, migraine headaches and during an esophagogastroduodenoscopy (EGD) procedure. There were 37/50 (74%) patients who failed other antispasmodic or muscle relaxer therapy before starting botulinum toxin. Adverse effects were noted in 7/50 (14%) patients. In summary, the use of botulinum toxin was in compliance with the restriction guidelines with PAP in majority of the patients. There were no patients who received treatment with this medication for any cosmetic procedures. Only in a few instances, botulinum toxin were used without PAP approval or used for non-approved indications.

STUDENT POSTER PRESENTATION



Continuous Calculus vs. Discrete Calculus

FranChell Davidson (Abstract 025)

Undergraduate Student, Mathematics

Faculty Advisor: Dr. Willie Taylor

College of Science and Technology

This project studied calculus from both the continuous and discrete points of view. While continuous functions are defined over intervals, discrete functions are sequences which are defined on inductive subsets of the integers. Various concepts from single variable calculus were studied together with their discrete analogues. Finally, methods for finding solutions of both linear differential equations and linear difference equations were investigated.



Analysis Of Urban Sprawl And Its Effect On Urban Environmental Characteristics Using Spectral Reflectance And Landsat Data

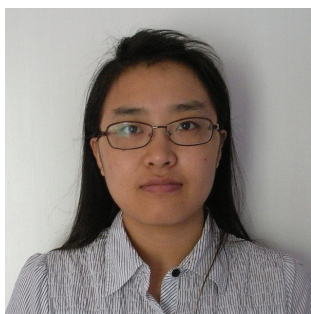
Gilbert Saah (Abstract 026)

Doctoral Student, Department of Environmental & Interdisciplinary Sciences

Faculty Advisor: Dr. Maruthi Bhaskar

College of Science and Technology

Urban landscapes are a complex combination of buildings, roads, pavements, roofs, vegetation, soil, and water, each of which exhibits unique spectral reflectance and thermal properties. To understand the interactions and impact of these heterogeneous urban landscapes on their environmental surroundings, more precise urban mapping techniques are of essential importance. Several studies have demonstrated that spectral reflectance characteristics (in the range of 350-2500 nm) of the different urban landscapes are varied and distinctly different. However the application of this spectral information to map and accurately classify the urban features at local, regional and global scales has rarely been explored. The goal of this research project is to investigate the effects of urban landscape features on the local and regional environmental quality in Houston, Texas. The specific objectives of the study are, 1) to develop a spectral library of the urban landscape features, 2) Identify and analyze the spectral characteristics of the urban features, 3) Use of multi spectral and multi temporal Landsat imagery to accurately classify and map the urban features and 4) Identify and map the effects of urban sprawl on environmental quality.



Safety Performance for Freeway Weaving Section

Jie Liu (Abstract 027)

Master's Student, Department of Transportation Studies

Faculty Advisor: Dr. Yi Qi

College of Science and Technology

Collaborator(s): Dr. Yi Qi

The intensive lane change maneuvers at weaving sections often result in safety and operational problems. Various factors, including the design of ramp roadways, use of auxiliary lanes, and continuity of lanes will have significant effects on the level of service and safety performance of the weaving sections. This study is to investigate the safety performance of freeway weaving sections and to develop a quantitative model for predicting the safety impacts of different types of geometric treatments for freeway weaving sections. The results of this study show that weaving sections with longer length will have lower crash frequency per 1000 ft, more lane changes are needed for diverge vehicles will result in more crashes in the freeway weaving section, increasing merge traffic in the weaving sections will slightly reduce the crash risk at this section, and increasing diverge traffic in the weaving sections will increase the crash risk at this section. In this study, Crash Modification Factors (CMFs) were also developed based on the developed crash prediction model for estimating the impacts of different safety treatments for the freeway weaving sections.

STUDENT POSTER PRESENTATION



Pharmacist Led Therapy Management In Heart Failure Patients: A Meta-Analysis Study

Iris D Mendoza (*Abstract 028*)

Pharm. D. Candidate, Pharmacy

Faculty Advisor: Dr. Inyang N Osemene

College of Pharmacy and Health Sciences

Objective: To perform a meta-analysis and determine the need of pharmacist led therapy management in patients with heart failure. If heart failure patients were to have a pharmacist led medication therapy management in home or outpatient there would be decrease re-hospitalizations, mortality, and associated cost due to heart failure through education. **Methods:** Perform a meta-analysis review of current studies of therapy management in patients with heart failure in home care and outpatient settings. An extensive Pub-Med search was conducted from 2000-2013 using the following terms “heart failure”, “cardiovascular”, “medication management”, “pharmacist led”, “home care”, “re-hospitalization”, “readmissions”, “outpatient”, and “community”. Of the 115 studies 7 met inclusion criteria 1) ≥ 20 patients, 2) pharmacist led management, 3) post-discharge HF, and 4) randomized control. **Results:** Seven studies were reviewed and included data on 5830 patients with heart failure. Two were home based services delivered post-discharged. One of the studies involved both pharmacist and nurse educators in outpatient clinic services. In five of the studies there were positive outcomes such as, reducing medication errors, improving quality of life, decrease in hospitalization readmission, decrease in death rates, and greater compliance from patients. Two of the studies showed no difference in reduction of hospitalizations between intervention groups and control groups. **Conclusion:** This meta-analysis demonstrated that a pharmacist led post-discharge care of HF patients reduced re-hospitalizations, mortality, and cost associated with HF. Although there are a few pharmacist led therapy management programs for patients with HF there is still an on-going need for more studies to be conducted.



Retained Symptomatic Control Following Discontinuation Of Proton Pump Inhibitors After Extended Use: A Pharmacist-Led Medication Use Evaluation

James W. Russell Jr. (*Abstract 029*)

Pharm. D. Candidate, Pharmacy Practice

Faculty Advisor: Dr. Portia Davis

College of Pharmacy and Health Sciences

Collaborator(s): Dr. Sandy Spurlock

Proton pump inhibitors (PPI) rank amongst the top ten prescription medications dispensed in the United States and top five grossing prescriptions worldwide in 2012, according to IMS Health. Over-utilization and failure to follow-up has led to improper monitoring and management. Recently, osteoporosis and bone fractures among other complication have been a growing concern associated with extended PPI usage. The purpose of this study is to determine whether patients of San Jose Clinic (SJC) successfully maintain symptom control after discontinuing PPI when clinically indicated, under evaluation of a pharmacist-led medication utilization program. This study is being conducted as a prospective, medication use evaluation (MUE). Due to the potential for indirect patient contact approval by the Institutional Review Board was required prior to the start of data collection and all data is currently being recorded without patient identifiers to maintain confidentiality. Reports were generated via the electronic medical record system and pharmacy dispensing system identifying all SJC patients prescribed and/or dispensed PPIs from 2010 – present date. Providers of patients deemed eligible to discontinue PPI agents will be consulted, and the patient will be contacted via telephone to assess their willingness to discontinue the PPI. Investigators will perform monthly patient follow-up for six months to document patient-perceived quality of life. The primary objective of the study is to determine if quality of life assessed after discontinuation of long-term PPI usage can encourage more accurate PPI prescribing (use and duration). Secondary measures include educating patients on medication safety and lifestyle modifications.

STUDENT POSTER PRESENTATION



A Community Outreach Activity with Adolescents to Increase Awareness of Health Disparities, Bioethics and the Role of Health Professionals

Jason Monroe (Abstract 030)

Pharm. D. Candidate, Pharmacy

Faculty Advisor: Dr. Shirlette G. Milton

College of Pharmacy and Health Sciences

Collaborator(s): Marian Gray, Leah Mitchell, Lyndsey White and Shirlette G. Milton

Introduction: The purpose of this study is to expose adolescents to concepts of healthcare disparities, bioethics and the role of health professionals in achieving health equity through a common reading experience of the book “The Immortal Life of Henrietta Lacks”. This pilot project tests the hypothesis that the use of a common reading experience can accomplish this objective. This project promotes the new initiative of adolescent health in Healthy People 2020. Methods: Adolescents, 12-18 years old, participated in an introductory session and were assigned to read the book. Students participated in a group readiness assessment, prior to the book discussion and an individual survey following all activities. Responses to the readiness assessment were measured by recording group scores and item analysis for each question. Responses to the individual survey were categorized as positive, negative or no impact. Results: A total of 50 teens were enrolled in the study, however only 38 teens met the inclusion criteria for participation. Results indicated that 58% of teens read the book and group scores for the readiness assessment ranged from 20%-70% (mean value 48% +/-21). Item analysis of assessment questions showed $\geq 80\%$ of students correctly answered questions from earlier segments of the book. Teens indicated a positive response on survey questions regarding increased knowledge of health disparities and bioethics, and 55% indicated increased interest in entering a health care profession as a result of this activity. Conclusions: Teens gained knowledge regarding health disparities, bioethics and the role of health professionals. Community outreach to adolescents to teach these concepts can be accomplished through a common reading experience of the referenced book. Future studies will focus on college level adults and promoting interprofessional education.



An Inquiry into the Parallel Processes of Literary Fiction Writing and Textual Encoding Using XML/XSLT

Jennifer Julien (Abstract 031)

Undergraduate Student, Department of English and Department of Computer Science

Faculty Advisor: Dr. Albertina L. Walker-Hughey

College of Liberal Arts and Behavioral Sciences/College of Science and Technology

Collaborator(s): Dr. Albertina L. Walker-Hughey

This research examines the parallel processes of textual encoding using XML/XSLT and writing literary fiction. It also explores interdisciplinary implications for teaching and learning digital humanities (DH). In addition to obvious parallels—both rely on language for their construction, both must follow set rules of syntax, etc.—findings suggest that several shared processes become interdependent in hypertext environments as vehicles for generating, retrieving, and modifying encoded fiction narratives. The theory base underlying this inquiry is informed by the current version of the Text Encoding Initiatives guidelines (TEI-P5) along with literary and narrative techniques established in the field of fiction writing. This digital humanities research project represents collaboration between the Department of English and Department of Computer Science. Jennifer Julien is a double-major in English and Computer Science. An accomplished fiction writer, she maintains a personal website using XHTML, a member of the XML family of mark-up languages shared by the programming language XSLT. On her website, Jennifer posts and discusses with readers her original works of fiction.

STUDENT POSTER PRESENTATION



Addressing Cardiovascular Disease Through Novel Targets in the GPCR Pathway

Jiju Koshy (Abstract 032)

Pharm. D. Candidate, Pharmacy
College of Pharmacy and Health Sciences
Collaborator(s): Dr. Zivar Yousefipour

Purpose : Promoting good cardiovascular health is one of the most paramount tasks that biomedical science faces in today's age. According to the Centers for Disease Control, heart attacks are responsible for nearly 1 in 4 deaths in the United States. Unfortunately, patients who survive are left saddled with a plethora of deficits due to damage to their hearts. Continued research needs to be carried out on cardiac function so that new insights

may be unveiled. **Methods:** Articles, books and websites are used to gather information about G-protein coupled receptor pathway (GPCR) signaling pathway and role of G-protein coupled receptor kinase (GRK) in cardiovascular health. **Result:** One pathway in particular that has been getting a lot of attention within the realm of cardiovascular health research is the GPCR. GPCRs are essential elements of cellular signaling. GPCR have been shown to bring out signals via interaction in conjunction with beta-arrestin as "scaffolding proteins," which are autonomous of G-protein coupling that are heterotrimeric. GPCRs play a number of important roles in cardiovascular function. An important intermediate in the GPCR signaling pathway is the GRK2. RKIP inhibits GRK2 via a tightly controlled dimerization reaction; and this dimerization reaction has been found to trigger RKIP from regulating RAF to switching over so that it can regulate GRK2. **Conclusion:** An abundance of GRK2 activity can result in impaired cardiac contractility and attenuated cardiac output. On the other hand, dysregulated RAF activity can lead to hyper cardiac contractility and cardiac hypertrophy.



Presentation Of Increased Glucose Levels In Hispanic Patients In Relation To Simvastatin At San Jose Clinic.

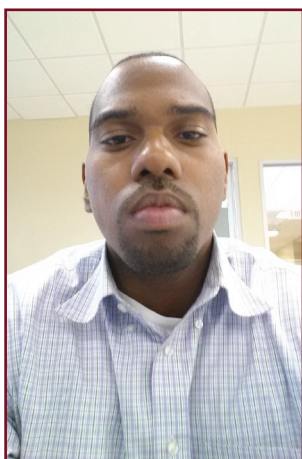
Joe Varughese (Abstract 033)

Pharm. D. Candidate, Pharmacy
Faculty Advisor: Dr. Portia Davis
College of Pharmacy and Health Sciences
Collaborator(s): Dr. Portia Davis

Purpose: Dyslipidemia is a major health concern in the United States. American College of Cardiology (ACC) and American Heart Association (AHA) recommend HMG-CoA reductase inhibitors (statins) as the first line pharmacological treatment for appropriate patients. Recently, there have been many inquiries regarding initiation of statin therapy and increased risk of patients developing diabetes due to increased C-reactive protein levels. The

primary objective of this study is to determine whether Hispanic patients at San Jose Clinic treated with simvastatin are presenting with increased glucose levels. **Methods:** This study was conducted as a retrospective, drug use evaluation and because no direct patient contact was needed in order to collect data, it was exempted by the Institutional Review Board prior to the start of data collection. All data will be recorded with respect to patient confidentiality, thus no patient identifiers will be used. An internal medication usage report was generated and included all patients who were prescribed simvastatin from 2010 to the present. One hundred Hispanic patients were randomly selected for inclusion to represent this particular SJC patient population. The following data is being collected from the SJC electronic medical record system (Sevocity): Patients ranging from ages 18-85(M/F), Concomittant drugs, LFT/ALT results, Creatine Kinase, Achievement Lipid goal, Documented ADE, Blood Glucose, CRP levels. **The primary focus:** To determine if there was a measurable change in glucose levels after the initiation of a simvastatin regimen. **Secondary measures:** Determining whether diabetic patients receiving simvastatin experienced significant changes in glycemic control subsequent to initiating simvastatin therapy.

STUDENT POSTER PRESENTATION



The Role That The NAS Played In The State Of Texas MEDICOLEGAL SYSTEM

John Williams (*Abstract 034*)

Master's Student, Administration of Justice

Faculty Advisor: Dr. Ashraf Mozayani

Barbara Jordan-Mickey Leland School of Public Affairs

Collaborator(s): Dr. Ashraf Mozayani

In 2009, The National Academy of Sciences (NAS) did a study on the field of Forensic Sciences. As a result of this study, the NAS committee reported finding numerous challenges in the field, such as non-accredited Medical Examiner and Coroner systems, lack of well trained personnel and oversight, and lack of funding and education in the field.

In discovering these challenges, the NAS made recommendations to improve the field of Forensic Science. Since these recommendations have been given, many of the institutes in the forensic community have established guidelines in their practice that have been derived from these recommendations. However, many of the institutes have not adhered to these recommendations. This paper will discuss two different topics. The topics will be: what did the NAS report stated about the medical examiner and coroner offices that are in the United States and what did the state of Texas do after the recommendations were published by the NAS? The research that is gathered in this paper will contribute to the field of forensic science in the near future.

Next Generation Sequencing Technologies

Julien Pierre (*Abstract 035*)

Undergraduate Student, Computer Science

Faculty Advisor: Dr. Lila Ghemri

College of Science and Technology

Collaborator(s): Jordan Taylor, Amit Upadhyay, and Bhanu Rekepalli

Bioinformatics is the application of computer technology to aid in the management of biological information, and is a field that encompasses different tools and techniques from separate disciplines; molecular biology, computer science, and data analysis algorithms. Through technological advances in bioinformatics we have a better understanding of how gene sequences code specific proteins from various types of data. The process of generating genome sequence data is constantly getting faster, cheaper, and more accurate. Unfortunately, assembling the data into a finished genome sequence is still a challenge despite all technological advances. While we have a variety of assembly tools, many of these tools differ in performance and final composition of an assembled sequence. Sequencing results in bioinformatics have shown the need for a benchmark in sequence assemblers. Currently, there are more than 20 different assemblers, and these assemblers have been designed to mitigate the complexity of assembling Next Generation Sequence (NGS) reads. The issue with that many different assemblers is that there is no single computational method that is accepted as the best way to find similarities between genomes of different species. This raised the concern for a computational benchmark for assemblers. In the present work, we describe a study we conducted to achieve this benchmark. We compared methods of assembling full genomes from the short segments of genetic information. The results of these studies have shown that large differences exist between the assemblers, and that there are inconsistencies when using the same assembler for different species.

STUDENT POSTER PRESENTATION



Establishing An Academic Detailing Program At A University-Based Drug Information Center

Kathryn Simmons (Abstract 036)

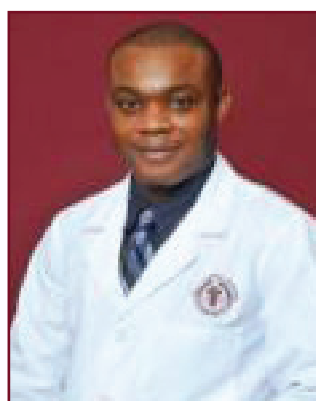
Pharm. D. Candidate, Pharmacy

Faculty Advisor: Dr. Uche Anadu Ndefo

College of Pharmacy and Health Sciences

Collaborator(s): Dr. Uche Anadu Ndefo

Background: The goal of our Texas Southern University Academic Detailing Program is to advance the health care profession by providing practitioners with high quality evidence-based, patient-focused, and cost effective therapy information. The drug information faculty will use this program as a training opportunity for doctor of pharmacy students to learn how to objectively review clinical literature in order to provide cost effective, evidence based medicine. Evidence: Institutions with academic detailing programs across the United States were identified for review. The following data were collected including program state and title, program detail and cost, and also program funding sources if available. This data included information from programs found in Texas, Maine, South Carolina, Pennsylvania, Massachusetts, Oregon, New York, Idaho, Connecticut, and Vermont. Funding opportunities were explored for the initiation of the program. The national resource center of academic detailing offers training for eligible staff at our university based drug information center. **Anticipated outcomes:** Based on the services provided through this program we expect to see an overall improvement in health care that is patient focused. Practitioners will have proper guidance based on evidence found in clinical literature. Students will have an enhanced academic experience through research opportunities offered by the academic detailing program.



Canagliflozin (Inokana) For Type-2 Diabetes: Could This Be The Miracle Drug?

Kelechi Ugwuadu, Daniel Okoro, Patricia Otuonye, Onome Owereh, Ugo Obika (Abstract 037)

Pharm. D. Candidates, Pharmacy

Faculty Advisor: Dr. Sondip Mathur

College of Pharmacy and Health Sciences

Introduction: Type-2 diabetes (T2DM) is a common disorder. Current therapies available today not only do they fail to control the disease adequately but they also cause adverse effects such as hypoglycemia, weight gain, and stomach distress. Canagliflozin is a novel agent that has a different mechanism of action from other agents for the treatment of T2DM. It blocks the sodium glucose transporter 2 in the kidney which allows glucose to be excreted in the urine. **Objective:** Our main goal of this review is to summarize the efficacy and safety of Canagliflozin as a monotherapy and in combination with other agents for the treatment of adults with T2DM. Methods: Pub med was used as a resource, 6 randomized, double-blind, phase 3 clinical trials were found. We utilized 3 clinical studies based on drug comparison, trial duration, and the results of the trials. We reviewed the data from the trials and assessed immediate outcomes such as HbA1c and adverse effects such as hypoglycemia.

Study variables: HbA1c, FPG, 2-H Plasma glucose, body weight, blood pressure, triglycerides HDL-C, LDL-C. Results: Our review included 2886 randomized adults from the 3 trials. Canagliflozin was as efficacious as other anti diabetic agents in achieving sufficient glycemic control. In addition, canagliflozin was found to be associated with weight reduction, systolic blood pressure reduction as well increase in HDL-C and LDL-C. Urinary tract and mycotic infection are the most common side effects of canagliflozin. **Conclusion:** Canagliflozin does not seem to be that miracle drug. It appears to be effective for the treatment of type-2 diabetes based on the data we examined. But its safety profile remains unclear and this can limit its use. Continue study in this area is needed to assess its benefit risk ratio.

STUDENT POSTER PRESENTATION



Impact of Restaurant Drive-Through Configurations on Vehicle Emission

Keziah Hill (Abstract 038)

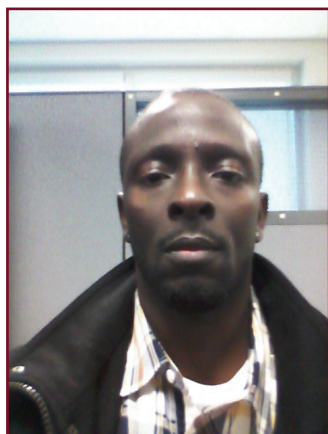
Master's Student, Department of Transportation Studies

Faculty Advisor: Dr. Mehdi Azimi

College of Science and Technology

Collaborator(s): Dr. Mehdi Azimi, Dr. Fengxiang Qiao, and Dr. Lei Yu

Drive-through at restaurant facilities has a huge impact on air quality. Users at fast food restaurants stay in their vehicle and have the engine running producing emissions that are released into the air that we breathe. Although the drive-through may seem more convenient and save time for costumers, they may have negative impacts on human health. Idling vehicles waiting in lines at drive-through facilities have a lot of negative effects that people do not recognize: it wastes gas, harms air quality, and increases greenhouse gas emissions. This study examined the emission rates at three fast food restaurants in Houston, TX, with different drive-through configurations. By driving on each drive-through facility in two different times of the day (peak hours and non-peak hours), instantaneous speed and acceleration of vehicles were collected on a second-by-second bases using Global Positioning System (GPS) devices. The GPS is used to retrieve second-by-second data, Vehicle Specific Power (VSP) value was calculated using instantaneous speed and acceleration. VSP and instantaneous speeds of the vehicles were used to obtain the operating mode distribution bins according to the standard provided by the MOfor Vehicle Emission Simulator (MOVES). The vehicle emissions were calculated based on the operating mode binning approach. Emission factors analyzed in this study are Carbon Monoxide (CO), Carbon Dioxide (CO₂), Oxides of Nitrogen (NO_x), and Hydrocarbons (HC). This study is used to identify which drive-through configuration produces more emissions, depending on the numbers of stops and lanes at the restaurants.



Testing Vehicle Emissions At Air Port Terminals For Passenger-Picking Up Vehicles

Larry Hill (Abstract 039)

Master's Student, Department of Transportation Studies

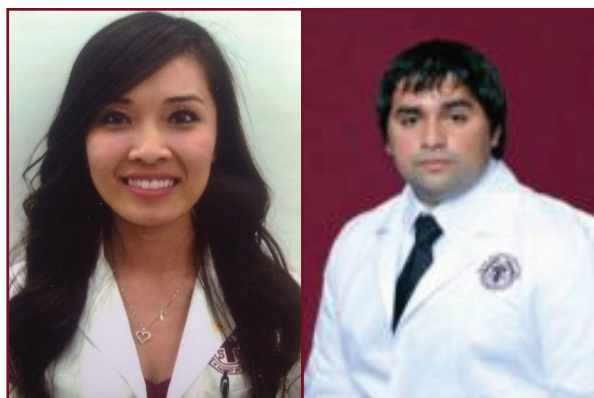
Faculty Advisor: Dr. Fengxiang Qiao

College of Science and Technology

Collaborator(s): Keziah Hill , Dr. Mehdi Azimi, Dr. Fengxiang Qiao, and Dr. Lei Yu

As we all know that the population is on a steady increasing and more people are buying vehicles, which is creating a big problem with the quality of air everywhere including airport terminals. When passengers are being picked up at these terminals, vehicles are there waiting in line with the engines on, waiting to retrieve their friends or relatives. This research is to show the amount of emissions each vehicle is releasing into the air at airport terminals daily. The goal of this research is to implement an hour of free parking policy for picking and dropping of passengers so vehicles will not be idle long periods of time. The data collection uses the floating car method and Global Positioning Systems (GPS) to record down speeds and acceleration rates of idling and cycling vehicles at terminals under different time periods and different traffic demands with different waiting time. These speeds and acceleration rates can then be synthesized into Vehicle Specific Power's (VSP) values, which will yield out corresponding VSP distribution and Operational Mode (OM) distributions at terminals. By utilizing the Environmental Protection Agency (EPA) newly released emission estimation model MOVES (Motor Vehicle Emission Simulator), the air pollutants e.g. NO_x, CO, CO₂, and HC, as well as fuel consumptions can be easily estimated. The two airports that are selected for case studies are William P. Hobby Airport and George Bush Intercontinental Airport, both located in Houston Texas.

STUDENT POSTER PRESENTATION



Reluctance to the Initiation of Insulin

Y-Uyen Nguyen & Juan N. Larralde (*Abstract 040*)

Pharm. D. Candidates, Pharmacy

Faculty Advisor: Dr. Portia N. Davis

College of Pharmacy and Health Sciences

Insulin is the most effective pharmacological therapy to manage type 2 diabetes mellitus (T2DM). However, the use of insulin is not common between physicians and patients due to either theoretical or practical reasons. Many factors that may contribute to the reluctance to initiate insulin include patients' fear of injecting themselves with daily insulin, physicians' fear of patients' non-adherence to insulin regimen, and side effects such as hypoglycemia or weight gain. If these obstacles are recognized and acknowledged early on, better therapeutic management will help improve patients' target for glucose control and obtain better outcomes. A greater effort needs to be implemented in order to elucidate the reasons why physicians and patients should initiate insulin therapy. Certified diabetes educators (CDEs) play a major role in patients with type 2 diabetics. They help broaden patients' understanding about their disease states, provide patients with diabetes self-management education (DSME), and educate them on the proper use of insulin. Educational intervention may also help increase the awareness of insulin therapy and address the importance of insulin use to physicians and patients. By providing these educational programs for physicians, it provides them with additional resources to successfully initiate insulin to patients with type 2 diabetes. Furthermore, with better knowledge and understanding of insulin therapy, physicians and patients are more likely to accept insulin as a therapeutic regimen to achieve better glucose control. The purpose of this review article is to determine the hesitancy of primary care physicians and patients on the initiation of insulin therapy.

The Misuse of "Cognitive Enhancers" to Increase Academic Performance

Tho and Brijesh (*Abstract 041*)

Pharm. D. Candidates, Pharmacy

College of Pharmacy and Health Sciences

PURPOSE: Prescription stimulants are gaining popularity among college students due to its non-medical use as "cognitive enhancers". Our primary objective is to assess the prevalence of pharmacy school students at Texas Southern University who use or know of another pharmacy student that uses a prescribed stimulant to study. **METHODS:** An anonymous online survey was posted for pharmacy students to answer questions regarding the non-medical use of prescription stimulants and their awareness of the use of prescription stimulant. **RESULTS:** 112 students were surveyed, with the age range from 20 to above 40, 69.39 % of the students were females and the remaining 30.61% were males. 15.15% of the surveyed population admitted of using stimulant drugs to help them study during high school and college years, in which Adderall was the go-to drug (34.78%). While 46.31% identified of knowing other college students using stimulants for their non-FDA indicated uses, 12.5 % of students also identified their colleagues using stimulants to help them study and 21.88 % expressed their desire to use stimulants if they had access to it. **CONCLUSIONS:** Almost half of the students are aware that college students are using prescription stimulants to study and 12.5% of the students know of a pharmacy student at TSU who uses prescription stimulants to study.

STUDENT POSTER PRESENTATION

Cystic Fibrosis: A Comparative Study

Md Imran Khan, Peggy Wu, Alhajie Dumbuya, Jennie Daniels, Thuha Le (*Abstract 042*)

Pharm. D. Candidates, Pharmacy

College of Pharmacy and Health Sciences

Collaborator(s): Dr. Sondip Mathur

Purpose: Cystic fibrosis (CF) is the most common lethal recessive disorder and progressive lung disease, which can be maintained by improving Forced Expiratory Volume in one Second (FEV1). However, it is unclear whether gene therapy, antibiotics or potentiator can improve clinical outcomes in CF patients.

Patients and Methods: A Meta-analysis of three publications that included 268 subjects was performed to investigate the better treatment option for CF patient in FEV1 improvements, efficacy of treatment and improved quality of life (QOL). Results: We found that there was a relative better outcomes associated with new treatment options (rhDNase, Azithromycin and Ivacaftor) compared with traditional treatment options (dornasealfa, inhaled tobramycin or hypertonic saline) in terms of FEV1 improvements, efficacy of treatment and improved QOL. One study shows daily rhDNase results in a significantly greater increase (10% from the base line) in FEV1 than hypertonic saline over 12 weeks. Another study shows adding Ivacaftor (patients with G551D-CFTR mutation) in addition to standard therapy results in relative improvement of 17.2% in FEV1 over baseline values at 24 weeks compare to placebo. In another comparable study—of Azithromycin vs. Placebo—study results shows there was a significant overall difference in change in FEV1, lung function, QOL and fewer days spent in hospital. The FEV1% predicted and FVC% predicted was less (3.62% and 5.73%) in placebo group than AZM group over three months. Conclusion: These results suggest that new treatment options such as gene therapy (rhDNase), Ivacaftor or azithromycin is relatively better treatment options for patient with cystic fibrosis.

HAART to Heart: Decreasing Cardiovascular Disease Risk in HIV Infected Individuals

Melvin J. Roberts Jr. (*Abstract 043*)

Pharm. D. Candidate, Pharmacy

Faculty Advisor: Dr. Adebayo Oyekan

College of Pharmacy and Health Sciences

Collaborator(s): Ngozi Agu, Stephanie Walker, Dominique Guinn

HIV infected individuals are 1.61 times more likely to develop some type of cardiovascular disease than their uninfected counterparts (Islam FM, et al). However, only one in four persons living with HIV/AIDS is aware of the increased risk of cardiovascular disease due to not only their medication regimens but by the infection itself. We hypothesized that the HAART to Heart intervention would not only raise awareness and knowledge level of HIV infected participants, but would also lead to a decrease in the modifiable risk factors for cardiovascular disease as well. Adults, aged from 18-65, with a documented HIV infection were divided into 2 groups, heart health education and activities within a group session or to receive motivational interviewing through individual health coaching, to receive a 12 week heart healthy intervention. The Group Session arm received heart healthy presentations, heart healthy cooking demonstrations, and heart healthy exercise demonstrations to enhance knowledge skill levels. The Health Coaching arm received personal contact on a weekly basis, based upon the motivational interviewing model, and were given heart healthy coaching tips, assisted with realistic goal setting skills, and counseled on how to meet those goals to be more heart healthy. Based upon the pre and post heart health questionnaire results, the interventions were able to increase the awareness and knowledge base with regard to the increased risk for cardiovascular disease among HIV infected individuals and how to decrease those factors for both arms. However, the significance of decreases in modifiable risk factors is pending.

STUDENT POSTER PRESENTATION

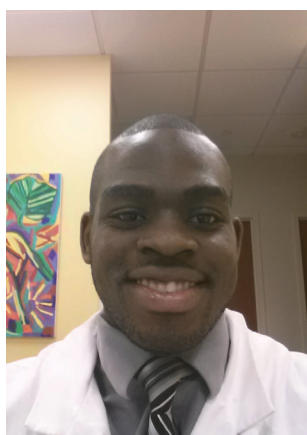


Correlation Of Admission Status With In-Hospital Mortality In The Surgical Intensive Care Unit

Nourhane Badawi, Bonnie Chen, Ngoc-Thuy Pham, Neena John, Vy Phillips (*Abstract 044*)

Pharm. D. Candidates, Pharmacy Practice
Faculty Advisor: Dr. Joshua Swan
College of Pharmacy and Health Sciences
Collaborator(s): Dr. Joshua Swan

Background: The Simplified Acute Physiology Score II predicts mortality based on physiological measurements (including admission type) obtained upon intensive care unit admission. The American Society of Anesthesiologists (ASA) classification system is used to screen patients preoperatively, correlating with perioperative mortality. The objective of this study was to evaluate the incidence of in-hospital mortality based on types of admission. Hypothesis: It was hypothesized that unscheduled surgical admissions will have a higher in-hospital mortality compared to medical or scheduled surgical admissions. Methods: A retrospective cohort study was conducted with patients previously enrolled in a randomized controlled trial from July 2012 to May 2013 in the surgical intensive care unit (SICU) of a tertiary care, academic medical center. The study was approved by the institutional review board and given waiver of consent. The primary outcome was in-hospital mortality grouped by admission type. Using an estimated mortality of 10% for medical admissions and 25% for unscheduled admissions, enrollment of 282 patients would provide 80 percent power using an alpha of 0.05. Surgical patients were classified using the ASA physical status classification system and intraoperative notes. An ASA score of 1-4 indicated non-emergent surgery, while 1E-4E, or 5 indicated emergent surgery. Intraoperative notes categorized surgeries as emergent or elective. Disagreements between ASA scores and intraoperative notes were finalized by a surgeon. Results: The proportion of patients with in-hospital mortality was higher for scheduled surgery or medical issues as compared to unscheduled surgery (42 of 250 [16.8%] versus 9 of 99 [9.1%]; $p = 0.06$).



Use of Everolimus in Patients with Advanced Hepatocellular Carcinoma

Osita Okafor, Afua Awuah-Okyere, Ester Fasanmi, Kathryn Simmons (*Abstract 045*)

Pharm. D. Candidates, Pharmacy Practice
Faculty Advisor: Dr. Rodney Hunter
College of Pharmacy and Health Sciences

Hepatocellular carcinoma (HCC) is the sixth most common cancer and the third most common cause of cancer-related mortality worldwide. The primary objective of this article is to determine everolimus as a potential agent to treat advanced HCC. Secondary objectives include characterizing the safety, tolerability, antitumor activity and efficacy profiles of everolimus along with finding the maximum tolerated dose. The first study deals with everolimus being used alone or in conjunction with paclitaxel (currently in phase II trials), an agent that works similar to paclitaxel in terms of inducing tubulin polymerization and stabilization of microtubules. Another study involved everolimus given continuously by mouth daily until disease progression, intolerable toxicity, or withdrawal of consent from the patient. The last study was designed to measure the maximum tolerated dose (MTD) of everolimus plus a fixed dose of sorafenib 400 mg twice daily in advanced HCC with a Child PUGH class A liver function and has not received systemic therapy. Overall, everolimus proved to be a viable option as monotherapy in patients with advanced HCC by displaying antitumor activity via cell apoptosis and reduction in microvessel density. However, everolimus in conjunction with sorafenib can be an option in advanced HCC patients with a poor prognosis. In addition, this combination warrants further evaluation in prospective, controlled trials to better assess efficacy and toxicity. The phosphoinositide 3-kinase/Akt/mammalian target pathway proves to be an option to investigate the use of other mTOR inhibitors for treatment of HCC.

STUDENT POSTER PRESENTATION

Provider's Attitude About Initiating Insulin In Diabetes Mellitus Type 2 Patients

Pamela Chukwuleta, Tameka Maiden, Nehbi Ngu (*Abstract 046*)

Pharm. D. Candidates, Pharmacy

Faculty Advisor: Dr. Uche Anadu Ndefo

College of Pharmacy and Health Sciences

Objective: Type 2 diabetic patients could benefit from insulin therapy after failure of oral hypoglycemic medications. According to the DAWN study, patients on insulin therapy ultimately feel better and improvements of their condition are sustained over a longer period of time. However, initiating insulin therapy is delayed due to physician's reluctance. The study found that majority of US providers held insulin until it was absolutely necessary. The objective of this research is to assess the provider's perceptions, barriers and understanding of initiating insulin therapy in type 2 diabetes mellitus patients.

Methods: The study is undergoing institutional board review for approval. The data will be collected in the form of a survey. No identifying information from the physicians or patients are included in the survey questions. To participate in the survey, physicians have to currently treat type 2 diabetes mellitus patients. The survey includes questions: who initiates insulin in their practice besides themselves, years of practice, who educates on the use of insulin, follow-up visits, and the barriers that may cause late or no initiation of insulin in a patient that should be eligible to start the therapy. The questions that assess barriers include the patient's fears, adherence history and cost of therapy. The study aims to survey at least 75 eligible physicians. The results collected from the surveys will then be evaluated to see if barriers or perceptions exist that influenced the physicians' decision to initiate insulin as the choice of therapy.



Development of Vehicle Emission Online Database System For Air Quality Analyses

Po-Hsien Kuo (*Abstract 047*)

Doctoral Student, Department of Transportation Studies

Faculty Advisor: Dr. Fengxiang Qiao

College of Science and Technology

Collaborator(s): Dr. Fengxiang Qiao and Dr. Lei Yu

Vehicle emission is always a significant issue which impacts air quality. Various complicate factors can affect vehicle emissions, and it is impossible to have one or several simple models to actually depict the relations between vehicle emissions and associated driving performances, roadway conditions, and even human behaviors. Environmental Protection Agency (EPA) has released a series of emission estimation models such as Mobile and MOVES. However these models are all based on limited vehicle emission tests in limited test beds. In this research, a dynamic vehicle emission database has been established for wider and advanced uses of this very valuable information. Vehicle emissions data were obtained by using the Portable Emission Measurement System (PEMS) in Houston metropolitan areas. The recorded information includes: vehicles' make and year, engine temperature, air pressure, GPS information, displacement, drivers' information, ambient temperature, rotation per minute (rpm), roadway types, vehicle speed, vehicle acceleration rates, measured pollutants (NO_x, CO, HC), Greenhouse Gas CO₂, fuel consumption, etc. The developed database not only manages all these collected information, but also allows users at various levels to access these data for different usages. Sample illustrations are to allow k-12 students to access for their better knowledge learning in Transportation and Environment Engineering, and even for their more interests in Science, Technology, Engineering, and Mathematics programs. Researchers from academic areas, industry, and even government will use it for better design of technology applications, decisions making, and policy proposals. With more surveillance data collected, the database could be even improved with more applicability.

STUDENT POSTER PRESENTATION



Impacts of V2I Smart Message System at Signalized Intersections with Sun Glare on Driving Behaviors

Qing Li (Abstract 048)

Master's Student, Department of Transportation Studies

Faculty Advisor: Dr. Fengxiang Qiao

College of Science and Technology

Collaborator(s): Dr. Fengxiang Qiao and Dr. Lei Yu

In accordance with transport statistics, many traffic accidents have occurred as a result of sun glare obliterating traffic lights, oncoming vehicles or pedestrians from view. Many potential factors that could affect line of sight have been studied, such as sun position, road direction, weather conditions, time of day and time of year. Meanwhile, many efforts have been made in short range wireless communication technologies to provide drivers with necessary traffic signal information, so as to reduce the possibility of crashes and minimize vehicle emissions. In this research, the promising Vehicle to Infrastructure (V2I) smart message system was tested in driving simulator. Nine scenarios were designed to cover all three types of turning movements (left, through, and right), under or without the presence of sun glare and V2I system. Thirty subjects representing demographical distribution in Houston were recruited for the test. Results show that the impacts of V2I system on driving safety and emissions are positively significant. Further testing with more complicated scenarios in driving simulators as well as on real roadway is recommended.

Regular Education Students in a GT Environment

Quinton Jones (Abstract 049)

Undergraduate Student, Department of Curriculum and Instruction

Faculty Advisor: Dr. Roscette Holmes

College of Education

Over the past several years with the emergence of Gifted and Talented grouping and courses for students who excel above and beyond the scope of the regular education classroom, debate has sparked as to how lessons, assignments, assessments, and pacing should exist in such a class. Being such, many educators of the Gifted and Talented have agreed that students who have excelled in their courses are not necessarily looking to be placed in GT just so that they are given more work, but rather they are looking to be placed so that they are given the opportunity to think on a more critical level than that of their peers. With the change in style of facilitation amongst modern contemporary educators with ideas such as the “flipped classroom”, and a complete overhaul in the technological use in the classroom the question is now, can this differed style of education work for regular education students? If this is so, how much must be altered to fit the needs of the students in order to ensure effectiveness in the classroom?



Impacts of Land Use on Vehicle Emissions

Ling Liu (Abstract 050)

Master's Student, Department of Transportation Studies

Faculty Advisor: Dr. Fengxiang Qiao

College of Science and Technology

Collaborator(s): Dr. Fengxiang Qiao and Dr. Lei Yu

Land use is closely related to many active research fields in transportation. Generally there are four elements of Land use: zoning, building density, building height and urban form. Basically, most existing literature focus on three types of land use impacts on vehicle emissions: travel mode, public transportation and congestion. But public transportation, congestion and travel mode are highly correlated to each other. This research incorporate macro-economic factors and time dimensions into the analyses of environmental impacts of land use by using rich data base from 101 cities nationwide from 1982 to 2011. The resulted conclusions and recommendations could be a reference to the decision making procedure in land use, transportation planning, and environment protection.

STUDENT POSTER PRESENTATION



Environmental Crime: A Forensic Research analysis on Environmental Criminal Acts with regards to Water pollution in Greater Houston, Texas

Richard Ishmon (Abstract 051)

Master's Student, Department of Administration of Justice

Faculty Advisor: Dr. Ashraf Mozayani

Barbara Jordan-Mickey Leland School of Public Affairs

This thesis focuses on issues related to environmental crime utilizing a Forensic Research Analysis approach as it relates to environmental criminal acts with specific attention paid to water pollution in those communities that have been marginalized in the Greater Houston, Texas area, while incorporating a Theoretical Framework or models as are associated with the Administration of Justice. Moreover, this thesis will be conducted utilizing secondary data, ideologies, and analysis in an effort to support the theories that will be contained herein, such as Durkheim's Anomie Theory, Shaw and McKay's Ecological Theory, and the Labeling. Furthermore, this thesis will examine the various policies, research methods and statistics as associated with Administration of Justice in an effort to study environmental criminal acts utilizing Forensic Research Analysis approach. Forensic Research Analysis is the scientific method of gathering and examining data and evidence. This type of research is essential in law enforcement where forensics analysis is preformed and applied in situations related to criminal and/or civil law. In this case, Forensic Research Analysis can be utilized as a method to analyze Volatile Organic Chemicals (VOC's), and Semi-Volatile Organic Chemicals found in polluted water samples in an effort to ascertain their origin. In addition, the Theoretical Framework will be utilized in this thesis to test the validity of existing theories and data in relation to specific events, issues, and phenomena associated with polluted water samples in marginalized communities.



Explication of Branched Chain Amino-Acid Transaminase 1 in Triple Negative Breast Cancer That Could Serve as a Relevant Biomarker

Richard North III (Abstract 052)

Undergraduate Student, Chemistry

Faculty Advisor: Dr. Bobby Wilson

College of Science and Technology

Collaborator(s): Dr. Audrey Player, Kayla Burrell, Carmen Gonzalez, Delon Poole

Breast cancer has proven to be one of the most common malignancies in women of the United States. As the primary tumor begins in the breast itself, it eventually becomes invasive and may progress beyond the breast to the regional lymph nodes or metastasize to other organ systems in the body, leading to low patient survival. Often, metastatic tumors are defined as triple negative (TN); these tumors are negative for estrogen receptor, progesterone receptor and ERBB2).

Objective of this study was to identify biomarkers related to TN cancers and validate their reliability. Branched chain amino-acid transaminase 1 (BCAT1) was the biomarker examined as part of this study. BCAT1 was examined using MDA 231 RNA to represent TN and MCF7 cell line RNA to represent other breast cancer types. Analysis of Polymerase Chain Reaction (PCR) products on agarose gel revealed over-expression of RNA in MDA231 TN samples compared to MCF7. Examination of protein levels was done using Immunohistochemistry (IHC) using tissue microarray (TMA) compiled using patient samples. At the protein level, BCAT1 expression could not distinguish TN and non-TN clinical samples. In conclusion, BCAT1 would not be a useful biomarker to characterize TN tumors.

STUDENT POSTER PRESENTATION



Assessing The Need For Continued Pharmacist Interventions To Increase Compliance With The Joint Commission Medication Management Standards In A Community Behavioral Health Center

Robert J Kese (*Abstract 053*)

Pharm. D. Candidate, Pharmacy Practice
Faculty Advisor: Dr. Portia Davis
College of Pharmacy and Health Sciences
Collaborator(s): Dr. Portia Davis

Purpose: Medication errors (MEs) are cited as a major point of evaluation of compliance with the 2012 National Patient Safety Goals set forth by The Joint Commission with respect to medication management standards. Continuum Behavioral Health Center provides partial hospitalization services for psychiatric patients and was designated as “compliant” by The Joint

Commission in 2011 following major practice changes implemented by a pharmacist to decrease MEs. The objective of this study is to determine whether the interventions have been upheld in this center following receipt of this designation as well as numerous staff changes. Methods: This study will be conducted as a retrospective chart review and because no direct patient contact is needed to collect data, this study was exempted from approval by the Institutional Review Board prior to the start of data collection. All information will be gathered without the use of any patient identifiers in order to maintain confidentiality. Fifty charts will be reviewed at random to determine whether pharmacist instituted interventions of system-wide utilization of standardized physician order forms and medication forms are working effectively to decrease medication errors. The following data will be collected: age, gender, measurement of vital signs at each encounter, medication reconciliation, proper utilization of standardized forms, and appropriate documentation of ADEs/MEs. The primary objective of this study is to determine if there was a continuation of pharmacist-instituted safe medication practices to decrease the number of adverse drug events. Secondary measures involve determining whether any new issues related to medications and patient safety have arisen and if new recommendations are needed to ensure continued compliance with the national regulatory standards. Results: Study is ongoing. **Conclusion:** Study is ongoing.



Vehicle To Vehicle Communication To Enhance Safety And Air Quality In Transportation System

Ruksana Rahman (*Abstract 054*)

Master's Student, Department of Transportation Studies
Faculty Advisor: Dr. Fengxiang Qiao
College of Science and Technology
Collaborator(s): Dr. Fengxiang Qiao and Dr. Lei Yu

In 2011, a total of 32,367 fatalities and 5.3 million crashes occurred in United States. The losses linked with these accidents comprise not only human related fatalities, but also the time lost in congestion, excess fuel consumption and environmental pollution. Maximum accidents are materialized due to drivers' inability to judge timely and correctly about the existing situation of roadway. To pacify the problem of incomplete information, the vehicle to vehicle communication system (V2V) can be applied to inform about the presence of another vehicle in driver collision zone. Hence, driver will take necessary steps to avert imminent collisions. In the communication system, reliable and secure

data is shared wirelessly using high speed dedicated short-range communications (DSRC). The V2V communication will help to reduce rear-end collisions by generating forward-collision warning (FCW) intended to notify the driver about the presence of slower moving vehicle ahead. Some other safety features include: blind-spot warning (BSW), electronic brake light (EBL), lane change control (LCW), do not pass warning (DNPW) etc. As this system will help to improve mobility, less carbon-die-oxide CO₂ will be emitted from vehicles. It will significantly improve the air quality. U.S DOT is conducting several collaborative safety pilot deployment tests under ITS-JPO (Intelligent Transportation Systems Joint Program Office) RITA, NHTSA (National highway traffic safety administration), Research Institutes and several automakers. This presentation will propose a plan to improve driver safety and air quality in work zones by using driving simulator tests.

STUDENT POSTER PRESENTATION



The Autonomic Nervous System: A Power Point Presentation

Sarah Bozeman and Nathaniel Ortega (*Abstract 055*)

Pharm. D. Candidates, Pharmacy

Faculty Advisor: Dr. Golda Leonard

College of Pharmacy and Health Sciences

Collaborator(s): Dr. Golda Leonard

Problem: Professional pharmacy school students do not retain fundamental concepts as they matriculate through the Doctor of Pharmacy (Pharm. D.) program. Nervous System

Pharmacology is an integral part of the professional first year (P1) curriculum. Examination scores pertaining to the Autonomic Nervous System reflect a downward trend as students advance through the program. Autonomic Nervous System content includes but is not limited to pharmacology, anatomy, drug receptor-interactions, and drug to drug interactions. **Methods:** An educational power point presentation has been created to educate the students and test their understanding of the concepts regarding the autonomic nervous system. They will watch the presentation and then participate in the interactive questions to assess their retention and understanding of the material. **Results:** Professional pharmacy school students will begin assessments utilizing the interactive tutorial lesson beginning the summer of 2014. Baseline results will be collected at the Summer Academy for the incoming class of 2018. **Discussion:** This presentation offers an overview education which is not available during class because of time constraints. It will expose students to a more in depth training on the subject so their understanding can carry over to future classes. The goal is to provide a basis of knowledge which will support concepts students will need to comprehend later in the professional pharmacy school program.

A Systematic Review of Current Technologies in Health Systems Related to Medication Use

Sarah Jenkins, Adekunle Omoyosi, Mike Hairston (*Abstract 056*)

Pharm. D. Candidates, Pharmacy

Faculty Advisor: Dr. Aisha Moultry

College of Pharmacy and Health Sciences

As time passes, technology is constantly improving to increase the ease, safety, and/or speed of healthcare, but new technology usually causes there to be an increased cost. Many types of technology are not being utilized by all health facilities due to varying issues. With all of the new types of technologies out there, we wanted to see if some of them were worth the cost and how much of an improvement in healthcare they created for the patient. We researched and analyzed the results from studies done on electronic medical records, barcode technology, and smart pumps used for intravenous drug delivery. By having electronic records, it was shown to decrease medication errors by 3% - 60% due to increased clarity, organization, and legibility. Electronic records also increased the speed and quality of communication between healthcare professionals which had a positive impact on the patient. The use of medication barcode scanning showed a 43% - 85% decrease in misfills. At one hospital smart pumps were shown to have saved \$2 million by avoiding ADE's which proves its ability to improve safety and decrease costs. Initially all of these technologies show an increase in cost and effort, but after implementation this is offset by a decrease in errors and time until patient discharge. Although new technology requires money, training, and the navigation of other barriers, it is generally accepted that technology benefits everyone in the health system. Most importantly it improves safety for the patient.

STUDENT POSTER PRESENTATION

Evaluating Community Pharmacist's Preparedness In Issues Related To Mental Health Illnesses

Sem M. Garza, Wendy D. Joyner, Dane Lucas, Zayra Parrocha, Robert Valadez (*Abstract 057*)

Pharm. D. Candidates, Pharmacy Practice

Faculty Advisor: Dr. Sondip Mathur

College of Pharmacy and Health Sciences

Purpose: The study will examine the preparedness of pharmacist confined to the Houston Metropolitan area to effectively assess, counsel and manage mental health patient medications as well as disease states. It will also provide a better insight into the pharmacist's ability to provide quality of care to the mental health population and help address/implement any necessary provisions to improve the quality and effectiveness in the delivery of mental health services such as MTM. **Method:** The inclusion criteria for the study's research group population will be set to include practicing pharmacists in the community/retail setting whom have both a computer with internet access as well as an active e-mail address. The goal is to complete 100 surveys. Recruiting will proceed through professional, work, academic relationship and networking. Participation will be absolutely voluntary and anonymous with zero incentives or compensation for participation. If the expected goal of 100 completed surveys is not met, we will continue the study, collect data and account for the small amount of participants. Furthermore, surveys will be conducted in a double blind manner where the participants won't have access to their results and the investigators won't know individuals results due to its anonymous nature. **Results:** Currently analyzing data **Conclusion:** Currently analyzing data.

Using Tylenol for Treating of Mental Pain: Its Effectiveness and Ineffectiveness

Sophia I. Flores (*Abstract 058*)

Pharm. D. Candidate, Pharmacy

Faculty Advisor: Dr. Sondip Mathur

College of Pharmacy and Health Sciences

Collaborator(s): Dr. Sondip Mathur

Tylenol (acetaminophen) is a well-known over the counter (OTC) medication for alleviating pain. Even though it's mechanism of action is not completely understood, it is commonly used to "temporarily" relieve a wide variety of painful conditions, including minor toothaches, headaches, and other physical aches and pains associated with fever. The objective of this study is to assess the potential of using acetaminophen to relieve mental pain. A related objective is to examine factors that may contribute to acetaminophen's efficacy or ineffectiveness for mental pain therapy. Literature is reviewed to systematically document the effectiveness of Tylenol in alleviating social pain and pain associated with anxiety and depression. fMRI studies are reviewed to highlight the neuronal responses in the brain common to both mental and physical pain. Next, the study examines various risk factors that may undermine acetaminophen therapy for mental pain. Study results reveal the overlap between physical and mental pain, even as the source of the trauma differ. Behavioral risk factors are presented as 'pitfalls' along the neuronal pathways that impact mental pain mitigation. Framed as a chronic disease state management (DSM) case, patient counseling guidelines are presented in support of using acetaminophen for mental pain therapy.

STUDENT POSTER PRESENTATION

Database Management Systems (DBMS) and Academic Website Management: A Primer

Stanley Azubike (*Abstract 059*)

Undergraduate Student, Department of English

Faculty Advisor: Dr. Albertina L. Walker-Hughey

College of Liberal Arts and Behavioral Sciences

This study combined an investigation of DBMS with experiential training in academic database revision to yield a protocol for non-specialists on maintaining an interactive departmental website. Moreover, the protocol can be modified for used by authorized, non-specialist website managers in other departments to efficiently revise and/or easily update such content as hyperlinks to faculty members' professional websites; links to their scholarly articles; access to .mp3 recordings; and videos of their public and/or professional lectures. By way of authorized and limited access to OmniUpdate, the web-content manager employed by the University, the study investigated current standards of Structured Query Language, or SQL. SQL is a data sublanguage that interfaces with and provides instructions to relational databases. Project outcomes include audience-specific instructions for revising website content by re-writing or translating the often complicated language of application programmers and database managers into prose narratives better appreciated by non-specialist managers and end users.

Understanding Gestational Diabetes in Pregnant and Women of Childbearing Age

Sumer Adi, Thy Doan, Andrea Williams (*Abstract 060*)

Pharm. D. Candidates, Pharmacy

Faculty Advisor: Dr. Angie Eaton

College of Pharmacy and Health Sciences

Background: Gestational diabetes is a condition in which the glucose level elevates during pregnancy for a woman who has not previously been diagnosed with diabetes. Untreated or poorly controlled gestational diabetes can harm both the baby and mother post-pregnancy. It is estimated that gestational diabetes affects 18% of pregnancies. Methods: In order to assess the general knowledge of pregnant women and women of childbearing age on gestational diabetes, we distributed 50 surveys within the Harris County community. An informational brochure we designed was utilized in the educational segment as each question was reviewed with the participants. A post-educational survey was created in order to measure understanding. Results: 31/50 (62%) of the surveyors were familiar with the term and 26/50 (52%) answered "yes" on understanding the causes of gestational diabetes. 35/50 (70%) of the surveyors had a family history and 19/50 (38%) of the surveyors recognized that it could be diagnosed without a previous history of high blood glucose levels. For the treatment plan, 5% answered medication and 100% chose diet and exercise. 85.2% had a general idea of the risk factors and 54.5% of the consequences. 32% identified the recommendation date to acquire a glucose-screening test during pregnancy. Conclusions: Findings identified a definite need for further education on gestational diabetes. With the aid of utilizing the brochures and reviewing surveys with participants, we were able to make an impact on their awareness. We concluded from the post-educational survey scores that all participants agreed the mini education session was of benefit.

STUDENT POSTER PRESENTATION



Correlation Of Richmond Agitation-Sedation Scale With The Glasgow Coma Scale In Non-Agitated Mechanically Ventilated Sicut Patients

Thuy T. Vo, Nishat Farooqui, Erika A. Taboh, Mukaram Siddiqui
(Abstract 061)

Pharm. D. Candidates, Pharmacy

Faculty Advisor: Dr. Joshua Swan

College of Pharmacy and Health Sciences

Purpose: Glasgow Coma Scale (GCS) and Richmond Agitation and Sedation Scale (RASS) are tools used to assess neurological functions. We modified GCS using only the eye and motor components and hypothesize that this will correlate more strongly with RASS than GCS. Method: This retrospective cohort study was approved by the Institutional Review Board and given a waiver of consent. We included the first consecutive paired ratings conducted by the same bedside nurse and ratings assessed within 1 hour of each other. We excluded any paired ratings where paralytics were administered within the previous 24 hours or RASS score above zero. The Spearman Rank coefficient estimated for RASS and GCS was 0.6. Assuming modified GCS would improve by 33%, approximately 51 patients were needed to provide 80% power with α of 0.05. Results: A total of 56 patients with a mean age of 60 years were analyzed. Of these 56 paired ratings, median RASS score was -2, median unmodified total GCS was 8, and median modified GCS was 7. Median GCS component scores were 4 for motor, 1 for verbal, and 3 for eye. The RASS correlated with GCS eye ($r = 0.705$, $P < 0.001$) and GCS motor ($r = 0.625$, $P < 0.001$) but did not correlate with GCS verbal ($r = 0.145$, $P = 0.286$). Conclusion: Modified GCS did not improve the correlation between RASS and GCS in this study. However, GCS verbal component was 1 for almost all observations and did not appear to add value to the assessment.



New Rehabilitation Techniques vs. Modern Rehabilitation techniques in Children with Autism Ages 4-10

Tiffany Atkinson (Abstract 062)

Undergraduate Student, Health Information Management

Faculty Advisor: Dr. Fanny Hawkins

College of Pharmacy and Health Sciences

This study will evaluate a clinical intervention for different styles of rehabilitation for children with Autism between the ages of four and ten using a randomized trial design. This research effort will provide a forum for discussion and dissemination of information about the areas of rehabilitation; Physical Therapy, Occupational Therapy and Speech Therapy vs. the inclusion of Aqua Rehabilitation or Aqua Rehabilitation alone. Aquatic Therapy is one of the many types of recreational therapy that can play a primary role in enhancing the quality of life and productivity of a child with Autism.

According to the Aquatic Therapy and Rehabilitation Institute in Florida, USA, Aquatic Therapy is the “use of water & specifically designed activity by qualified personnel to aid in the restoration, extension, and maintenance of quality functions for persons.” The following are some of the ways in which Aquatic Therapy can benefit children with autism. We argue that children with Autism possess latent abilities to coordinate social interaction that only become evident with appropriate support and rehabilitation techniques.

STUDENT POSTER PRESENTATION

Novel Biomarkers For Hiv-1 Disease Progression

Tracey Taylor (Abstract 063)

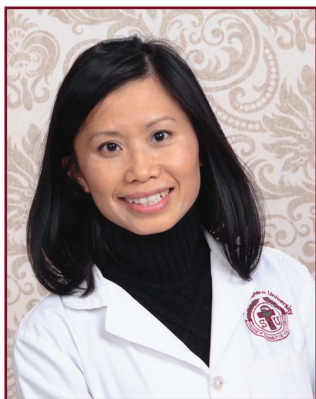
Undergraduate Student, Chemistry

Faculty Advisor: Dr. Bobby Wilson

College of Science and technology

Collaborator(s): Anjani Pandya, Kathleen Borgmann, and Anuja Ghorpade

Approximately forty million people worldwide live with the human immunodeficiency virus-1 (HIV-1), which can progress into HIV-1-associated neurocognitive disorder (HAND). Research suggests that pro-inflammatory proteins and other biomarkers may correlate with the level of neurological impairment in seropositive patients. The purpose of the study is to identify biomarkers that may correlate with neurocognitive decline in patients of varying gender, race, age, and disease progression. A cohort of HIV-1 seropositive patients is currently being recruited from the University of North Texas Health Science Center (UNTHSC) infectious disease clinic. A study visit includes a review of HIV-1 relevant patient history, a socio-demographic survey, a neurocognitive assessment, and a donation of 30-40 milliliters (ml) of blood. Plasma samples, isolated from patient blood, were analyzed by ELISAs specific to human soluble CD40 ligand (sCD40L), Interleukin (IL)-6, CCL2 or monocyte chemoattractant protein (MCP)-1 and tissue inhibitor of metalloproteinase (TIMP)-1. Biomarker levels were correlated to neurocognitive assessments, socio-demographic responses, and relevant measures of HIV-1 infection medical history. The inflammatory biomarkers, CCL2 and TIMP-1, were elevated in the HIV-1 seropositive cohort as compared to non-infected controls. Further, as the neurocognitive abilities of the patient cohort declined, levels of CCL2, IL-6, and TIMP-1 were correspondingly elevated. While sCD40L demonstrated no significant correlations between infection status, longevity, or neurocognitive score, the inflammatory protein showed consistent, positive trends. Although patient T-cell counts did not correlate significantly with inflammatory biomarkers, trends were seen that may improve upon analyzing of the entire cohort. Our data shows that inflammatory biomarkers may play an important role in predicting HIV-1 disease progression through the comparison of plasma samples within the HIV-1 seropositive population.



Antidepressant Uses in Roux-en-Y Gastric Bypass Surgery Patients

Tram Vo and Mariam Radwan (Abstract 064)

Pharm. D. Candidates, Pharmacy

Faculty Advisor: Dr. Lily K. Cheung

College of Pharmacy and Health Sciences

Collaborator(s): Vadim Sherman, M.D, FACS, FRCSC

Purpose: Antidepressants including Selective Serotonin Reuptake Inhibitor (SSRI) and Serotonin- Norepinephrine Reuptake Inhibitor (SNRI) are used in roughly 20-50% of obese patients. Some SSRI/SNRI antidepressants may cause weight gain. It is desirable that patients with severe obesity underwent Roux-en-Y gastric bypass procedure (RYGBP) do not take medications with a weight gain potential. The primary objectives of this study are three-fold: to identify patients who took SSRI/SNRI antidepressants prior

to RYGBP; to determine the appropriateness of SSRI/SNRI antidepressant dosage forms used in patients underwent RYGBP; and to determine the commonly used SSRI/SNRI antidepressants used in this patient population. Methods: This study was approved by the Institutional Review Board. It is a retrospective chart review. All patients who took SSRI/SNRI antidepressants prior to RYGBP at a tertiary teaching hospital in Houston, TX, will be included in the study. The study period will be from July 1, 2010 to June 30, 2013. Data collection involved retrieving data from electronic databases and manual chart review. The following data were collected: age, gender, ethnicity, height, weight, body mass index (BMI), marital status, the name, dosage forms, dosage regimen, and indications for the SSRI/SNRI antidepressants used before and after RYGBP, past medical history, duration of SSRI/SNRI antidepressant therapy (up to one year post RYGBP), co-morbidities and concurrent medications. A coding system was established to protect patient confidentiality. Statistical analysis including Analysis of variance (ANOVA) test and Student t-test will be applied for data analyses.

STUDENT POSTER PRESENTATION



Application of Hazmat Incident Tool to Selected Bridge Locations in the Gulf Coast Region

Vincent Hassell (Abstract 065)

Master's Student, Department of Transportation Studies

Faculty Advisor: Dr. Carol A. Lewis

College of Science and Technology

In the transport of hazardous materials, incidents often occur on our nation's roadways. Data analysis and simulations can indicate patterns of incidents by using several different variables in the transport of these chemicals. Identifying the incident frequency and characteristics enhance the pattern recognition to pinpoint potential dangerous situations. These situations could cause potential harm to the nation's critical infrastructure. The Petrochemical Incident Location System is a web based application that provides a historical reflection of hazardous material incidents throughout the United States.



Lipid Control In Hispanic Patients Receiving Simvastatin Following Dose Restrictions And Pharmacist Intervention At A Non-Profit Community Health Clinic

Vincent Kuo (Abstract 066)

Pharm. D. Candidate, Pharmacy

Faculty Advisor: Dr. Portia N. Davis

College of Pharmacy and Health Sciences

Collaborator(s): Dr. Portia N. Davis and Dr. Sandy Spurlock

Purpose: The National Cholesterol Education Program Adult Treatment Panel III recommends statins for primary prevention of cardiovascular diseases due to dyslipidemia. The objective of this study is to determine whether Hispanic patients of San Jose Clinic are achieving lipid goals despite changes to simvastatin therapy by FDA product relabeling. **Methods:** The study was a retrospective, drug-use evaluation. Of all patients receiving simvastatin from 2009 to 2013, a sample of 100 was selected to represent the patient population. Analyzed data from the EMR at SJC are: medications taken, liver function tests, lipid panels, and adverse events, all with no patient identifiers. The primary objective of this study was to find if patients were able to achieve LDL goals, despite mandatory simvastatin dose reductions. Secondary measures involve determining the efficacy of pharmacists' interventions for improving patient safety. **Results:** The information from our analysis includes: Of 23 patients on simvastatin 80 mg, 30% were at LDL goal. 11% of the sample had adverse events while on simvastatin 80 mg, and 15% had elevated liver enzymes. 73% of patients experiencing adverse events were taking simvastatin dose-restricted drugs per FDA relabeling. 29% of patients were taking excessively-dosed simvastatin with these drugs. **Conclusion:** After evaluation of this sample of the patients on simvastatin, data shows that patients could benefit from pharmacists' intervention. We recommend that pharmacists provide education for physicians at SJC regarding the current FDA dosing restrictions, and that they monitor patients receiving simvastatin by recommending dose adjustments, or discontinuing or changing medications when needed.

STUDENT POSTER PRESENTATION



A Statistical Analysis of Rail Station Suitability with Regard to Businesses and Population Density Walter B. Council, II (Abstract 067)

Doctoral Student, Urban Planning and Environmental Policy/CTTR
Barbara Jordan-Mickey Leland School of Public Affairs

The fast growing populations of the Southeastern states and their largest metropolitan areas are not recognized for impressive regional rail service. Atlanta, GA and Miami, FL are distinct in having decent size systems in the Southeast. Hence, this proposal examines the proposed light rail stations in some of the largest and fastest growing metropolitan areas of the Southeastern United States. Charlotte, NC, the North Carolina counties of Orange and Durham that make up the Triangle metropolitan area, and Virginia Beach,

VA have implemented steps to add light rail lines. The literature mentions suitability factors that make a potential site viable for a rail station, including land use along with density, urban design, and infrastructure. An exploration of the siting of rail stations and elements that surround these locations can be utilized to better optimize the decision making for the process. The main research question here is the relationship between population density and the number of businesses nearby. Methodologically, the $\frac{1}{4}$ or $\frac{1}{2}$ radius has been shown to evaluate both population density and businesses near rail stations, but separately or with other variables. Literature doesn't show as much information between these two aspects, with regards to the siting of rail stations. The research will do a quantitative assessment of the correlation between population density and number of businesses in a $\frac{1}{4}$ radius of these proposed stations in the aforementioned Southeastern metropolitan areas. A comparison between each of these urban areas and also against some currently successful rail stations will be initiated.



Incorporating Active Learning in Pharmacotherapy Courses Lina Lakhany, Elaine Nguyen, Giao Le (Abstract 068)

Pharm. D. Candidates, Pharmacy
College of Pharmacy and Health Sciences

According to the ACPE accreditation standards and guidelines of 2007, it is required that the criteria and policies for remediation be stated and readily available. The need for a consistent approach, early detection and formative assessments are greatly emphasized by ACPE. Course repetition, individualized remediation plans and a reduced course load work over a long period of time were the various programs which have been analyzed. With all these approaches there are various advantages and disadvantages, however the effectiveness and comparability among

the approaches, is yet to be studied. This study will evaluate the effectiveness of the current remediation program in Dr. Ndefo's neuro/psych class. It is a retrospective study to assess and improve the remediation process for students. Almost 90% of students felt that the remediation program helped them prepare for the final exam. Overall, this program is the first of its kind and shows promising results. More surveys are still needed to better assess the efficacy and impact of the program.



Sodium Burden from Drugs consumed by elderly increase risk of Adverse Cardiovascular Events in the Elderly

Niyme F. Moreno (Abstract 069)

Pharm. D. Candidates, Pharmacy
Faculty Advisor: Dr. Inyang Osemene
College of Pharmacy and Health Sciences

Background: Excess sodium intake is a major public health concern worldwide. According to the American Heart Association 9 out of 10 Americans consume too much Sodium. The average American consumes 3,400 milligrams of sodium daily when the recommended daily value is only 1,500 milligrams or less. Excess sodium can cause major health complications, especially cardiovascular adverse events. This is even a bigger concern in the elderly. Elderly patients in average take 8 to 13 medications a day and some of these medications probably contain large amounts of sodium. This is alarming because with age cardiac output decreases, blood pressure increases, and arteriosclerosis develops. This physiological changes paired with excess sodium intake can increase the risk of cardiovascular events in the elderly population. In addition, pharmaceutical manufacturers are not required to restrict the sodium content in their medications or to label their sodium-containing medications. The aim of this study is to investigate sodium content of commonly prescribed medications and its burden on the elderly. Method: Commonly prescribed medications in the elderly in the following four groups will be examined: cardiovascular drugs, anti-Alzheimer's drugs, anti-inflammatory, and antidepressants. Through package inserts, the U.S. pharmacopeia, and trusted websites, the amount of sodium in the daily dose of each medication will be determined. Based on these results, it will be discussed if elderly patients taking these medications are at higher risk of cardiovascular events because of excess salt intake. Results: Data collection is still ongoing. Conclusion: Data collection is still ongoing.

FACULTY, STAFF, AND STUDENT



ORAL PRESENTATION

ORAL PRESENTATION SCHEDULE

FACULTY ORAL PRESENTATION

TIME	Presenter	DEPARTMENT	FACULTY ORAL PRESENTATION TITLE
9:05 AM	Andrea Shelton, Shayna Lee, Monica Rasmus, Bernadette	Health Sciences	Perceptions of Mental Illness on the Campus of an HBCU
9:20 AM	Glenn S. Johnson	Urban Planning	The Environmental Health Impacts of Goods Movement on Fenceline Communities in Houston
9:35 AM	Joyce Finch	Counseling	The Effects of Post-Traumatic Stress on Returning Veterans and Their Families
9:50 AM	Lila Ghemri	Computer Science	Trust in Medical Websites
10:05 AM	Rocelle Parks-Yancy and Delonia Cooley	Business	Out of Our Right Minds: The Effects of Cognitive Bias on Social Problems and How Taking the Middle Road Can Help
10:20 AM	Maruthi Sridhar B. Bhaskar	Environmental and Interdisciplinary Sciences	Mercury Contamination and Bioaccumulation in Fish in East Fork Poplar Creek (EFPC) watershed
10:35 AM	Richard G. Taylor	Management Information Systems	The Outsiders Within: Information Security Risks and In-group Trust
10:50 AM	Gautam Nayer	Administration of Justice	So How Satisfied are you? Perspectives from Faith Prisoner Reentry Programs.
11:05 AM	Yu Chang	Curriculum and Instruction	Code Switching as a Strategy in Bilingual Science Classrooms
11:20 AM	Ashraf Mozayani	Administration of Justice	Determination of Synthetic Cannabinoids In Blood and Urine Samples by LC-MC-MC
11:35 AM	Kamala Raghavan	Accounting and Finance	IIRC Framework: Implications for Accounting Educators
11:50 AM	Mark Harvey	Physics	Measurement of Secondary Neutrons Produced in the (gamma, n) Reaction from the TrueBeam Linac Head
12:05 PM	Nancy Glenn	Mathematics	Some Algorithmic Aspects of Linear Quantile Mixed Models and Other Longitudinal Data
12:20 PM	S. Srinivasan	Business	Big Data Analytics Security Applications in Business
BREAK			
01:35 PM	Yi Qi	Transportation Studies	Implementation of Innovative Intersection Designs in Texas
01:50 PM	Yuanjian Deng	Chemistry	Synthesis and Characterization of New Platinum(II) Complexes Containing Thiourea

ORAL PRESENTATION SCHEDULE

STAFF ORAL PRESENTATION			
TIME	PRESENTER	DEPARTMENT	STUDENT ORAL PRESENTATION
02:05 PM	Latisha V. Clark	CTTR	Using PILS to Identify Hotspots Incidents in Environmental Justices in Texas: A Systems Using Historical Incident Integrated as an Information Awareness Tool
STUDENT ORAL PRESENTATION			
TIME	PRESENTER	DEPARTMENT	STUDENT ORAL PRESENTATION
02:20 PM	Francis Otiato	Admin. Of Justice	Re-entry Policies of Ex-Convicts In America: A Meta-Analysis
02:35 PM	Susan Delaney	Counseling	Effects of Social Media on Non-Suicidal Self-Injury in an Adolescent Urban School Population
02:50 PM	Steven C. Washington	Urban Planning	The Environmental Health Impacts of Goods Movement on Fenceline Communities in Houston
03:05 PM	Jenaye Robinson	Pharmaceutical Science	Involvement Of Katp Channels In Hydrogen Sulfide-Induced Increase In Aqueous Humor Outflow
03:20 PM	Ayzha Ward	Mathematics	Network Motif Characteristics
03:35 PM	Peijia Tang	Transportation Studies	Emission Effects on Eco-driving at Signalized Intersections
03:50 PM	Angela Offurum, Danielle Seymore, Kerrie Patterson-Brown, Felicia Sterling	Education	Challenges in the P-12 Educational Pipeline
04:05 PM	Zayne Belal	Physics	Proton and Alpha-Particle Transport in Water at the Cellular Level using Monte Carlo Simulation Techniques
04:20 PM	Manual Vera	Pharmacy	A Profile of Hispanics at TSU COPHS and the Impact on TSU's Legacy: An Untold Story
04:35 PM	Chika Obi	Pharmacy	Interprofessionalism in the Codes of Ethics of Medical and Allied Healthcare Professions

FACULTY ORAL PRESENTATION

WEDNESDAY, APRIL 2, 2014 FACULTY/STAFF ORAL PRESENTATIONS

CONTINENTAL BREAKFAST REGISTRATION
FACULTY ORAL PRESENTATIONS
STAFF/STUDENT ORAL PRESENTATIONS

EDUCATION #318
EDUCATION #318
EDUCATION #318

8:00 AM — 9:00 AM
9:00 AM — 12:30 PM
1:30 PM — 5:00 PM



Perceptions of Mental Illness on the Campus of an HBCU

Andrea Shelton PhD, Shayna Lee MD, Monica Rasmus DrPH, Bernadette Smith MS, Andrea Velox PhD (Oral 001)

Professor, Health Sciences

College of Pharmacy and Health Sciences

Mental health issues are prevalent on college campuses and can impact the academic progress

of students. Without sufficient treatment, a student who experiences a mental health challenge is more likely to earn lower grades, withdraw from college, or be unemployed

than peers who do not have a diagnosed mental health problem. As part of a mini grant project, Bring on the Health Education and Training or BHEAT, 42 resident assistants on the campus of Texas Southern University completed an 8 hour training session entitled Mental Health First Aid. The training introduced a system of assessment to be used by the resident assistants to determine whether a student residing in the campus housing unit to which they are assigned should be referred for immediate attention for signs and symptoms of mental illness. Analysis of data gathered before and after the training shows a difference in opinion on perceptions of mental illness and beliefs about the effectiveness of treatment. Data collected on the demographics of participants and results of the pre and post tests will be presented.



The Environmental Health Impacts of Goods Movement on Fenceline Communities in Houston

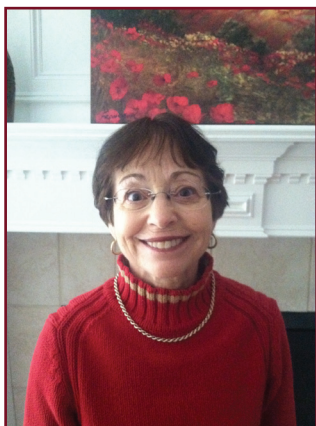
Dr. Glenn S. Johnson (Oral 002)

Associate Dean/Professor, Urban Planning and Environmental Policy/Political Science
Barbara Jordan-Mickey Leland School of Public Affairs

Houston produces a quarter of America's gasoline and about a third of all the plastics that are in our cars and cupboards. Harris County air pollution levels in the City of Houston are considered to be unacceptable by knowledgeable experts and the general public. Air pollution is a mixture of solid particles and gases in the air. Ozone, a gas, is a major part of air pollution in cities; particularly Port and fenceline communities. Communities that are most at risk of developing health effects from air toxics are those neighborhoods located within a 2-mile radius of marine terminals, rail and ship yards, refineries and hazardous waste sites. Public involvement is an essential and necessary process within transportation planning projects. Planners should create an atmosphere of trust and credibility and implement community outreach early and often throughout the planning process. It is argued by transportation practitioners, researchers, economists and environmental health advocates, that the largest single infrastructure

change to occur this decade is the expansion of the Panama Canal. This expansion to be completed in 2015 will enable containerized vessels using the canal route to carry up to three-times more cargo. This gateway will provide a new avenue for increased international trade and commerce along both gulf and east coast marine terminals. The canal expansion offers an alternative which allows direct navigation to the east coast without land transportation. It is projected that this project once complete, will reduce overland traffic congestion and enhance economic development by maintaining freight flow efficiency.

FACULTY ORAL PRESENTATION



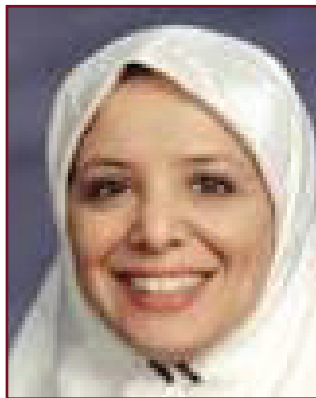
The Effects of Post-Traumatic Stress on Returning Veterans and Their Families

Dr. Joyce Finch (Oral 003)

Assistant Professor, Counseling

College of Education

Returning combat veterans from the wars in Iraq and Afghanistan are more than ever before faced with increased risks of post-traumatic stress disorder (PTSD) and traumatic brain injury (TBI). The most commonly encountered weapon in Operations Iraqi Freedom and Enduring Freedom (OIF/OEF) is the improvised explosive device (IED), which creates serious risk for physical injury or death to the head, face, and neck. Many soldiers are deployed more than once, and their combat tours last longer than in previous wars. This review of literature discusses the lack of mental health care for returning soldiers and the soldiers' and their families' adjustment to their deployment and reintegration without the necessary skills to enable them to cope and to be connected. Recommendations for mental health practitioners, such as school counselors, therapists, and social



Trust in Medical Websites

Dr. Lila Ghemri (Oral 004)

Associate Professor, Computer Science

College of Science and Technology

Collaborator(s): Haruna Kibirige

The use of the Web as a reference to locate and validate medical information has been growing. A recent report shows that more than 77% of internet users use general purpose search engines, such as Google or Bing, to look up specific diseases, treatments or procedures and that 67% of them believe that the online health information is reliable and trustworthy. However the internet has also become a worrisome source for the propagation of fake online pharmacies, sham hospitals and medical schools. We present a novel method for re-ranking webpages based on the website names in order to not only increase their precision but also their trustworthiness. Our re-ranking approach aims at capturing and returning only those websites that are consistently retrieved across search engines and takes advantage of the fact that the life span of fake websites is relatively short compared to legitimate ones. Preliminary testing of re-ranking results has shown that it yields more relevant websites to the user query than the general purpose search engines.



Out of Our Right Minds: The Effects of Cognitive Bias on Social Problems and How Taking the Middle Road Can Help

Dr. Rochelle Parks-Yancy (Oral 005)

Associate Professor, Business Administration

Jesse H. Jones School of Business

Collaborator(s): Dr. Delonia Cooley

This work analyzes students' job finding behaviors while they are in college. We provide structure to the sometimes chaotic experience of collegiate students that they can get lost in if they do not follow a clear career path. Our research helps students to better understand the "unknown" opportunities that exist right there within their college even before they graduate out into the real world. Students will gain a unique perspective of how to merge their collegiate experience with corporate knowledge that will allow them to obtain their post-college career desire sooner, instead of later.

FACULTY ORAL PRESENTATION



Mercury contamination and Bioaccumulation in fish in East Fork Poplar Creek (EFPC) watershed

Dr. Maruthi Sridhar B. Bhaskar (Oral 006)

Assistant Professor, Environmental and Interdisciplinary Sciences
College of Science and Technology

Monitoring of mercury (Hg) accumulation in fish has been conducted in East Fork Poplar Creek (EFPC) in Oak Ridge, Tennessee since 1985 under the Biological Monitoring and Abatement Program (BMAP). The bioaccumulation of Hg in EFPC fish has proven to be enigmatic over the past several years, with remedial actions at the industrial facility in the creek's headwaters successfully decreasing total Hg concentrations in water, but not resulting in commensurate decreases in fish Hg concentrations. The primary goal of this project is to develop an understanding of the spatial dynamics of Hg loading and distribution in the EFPC watershed. A comprehensive geospatial database which incorporated all the spatial and analytical data of the EFPC watershed was developed. Our spatial analysis indicated that the Hg concentrations in the fish in the lower EFPC slowly increased with time compared to the upper EFPC. Watershed scale environmental factors are being evaluated as to their influence on fish mercury trends.



The Outsiders Within: Information Security Risks and In-group Trust

Dr. Richard G. Taylor (Oral 007)

Assistant Professor, Management Information Systems
Jesse H. Jones School of Business
Collaborator(s): Sammie L. Robinson

Security threats to organizations may come from internal or external sources, and may be intentional or unintentional (Lock et al., 1992). Management's ethnocentric view of security results in a focus on protecting the organization from the external threats (out-group distrust) yet often ignores the employees within the organization (in-group trust) (Taylor & Brice 2012). In-group trust is a significant contributor to information security risks. For example, research (Dhillon 2001, Taylor, 2006; Taylor & Brice 2012) confirms that in-group trust is grossly overlooked as a factor in information security management. Ingroup-trust can result in fewer information security countermeasures and lower levels of employee monitoring (Dhillon 2001), both of which have been identified as factors in increased information security risks (Straub & Welke 1998). Organizations often deal with vendors, consultants, and contractors that have access to their systems. Understand the type of trusts given to these individuals can help organizations better understand areas of vulnerabilities, especially if these people are treated as part of the in-group. We refer to these individuals as the "outsiders within". These individuals are often granted access to the organizations' computer systems, yet are not held to the same security monitoring as other in-group members. This research involves a case study conducted at a financial institution. The author was granted access to the organization to observe employee behavior, interview employees, and review internal policies and procedures.



So How Satisfied Are You? Perspectives From Faith Prisoner Reentry Programs

Dr. Gautam Nayer (Oral 008)

Assistant Professor, Administration of Justice
Barbara Jordan-Mickey Leland School of Public Affairs

This paper will analyze the satisfaction levels of faith-based prisoner reentry programs. The link between former probationers and their personal satisfaction levels with program administrators, program participation, and program satisfaction is analyzed.

FACULTY ORAL PRESENTATION



Code Switching As A Strategy In Bilingual Science Classrooms

Dr. Yu Chang (Oral 009)

Visiting Professor, Curriculum and Instruction
College of Education / Confucius Institute

Based on audio-recorded data and two questionnaires collected from four different science classes taught by 3 instructors at Beijing Jiaotong University in China, this study investigates: the functions of instructors' code switching in bilingual science classrooms; the instructors and learners' attitude toward teachers' code switching; the effect of teachers' code switching on students' language skills and acquisition of content. This paper first describes the data from the two questionnaires and the audio-recorded classes and then explains the functions and the effects of the teachers' code switching. Specifically, the data from the questionnaires show that both the teachers and students hold a positive attitude toward teachers' code switching and confirm its positive effect. The analysis of the audio-recorded teachers-led talk indicates that the teachers' code switching serves as pedagogical functions. The paper also points out that although code switching as a pedagogical strategy in the bilingual classroom facilitates teaching, if not used properly, it has the potential to undermine the development of students' English skills and their understanding of the course content. The paper proposes three principles for effective code-switching between Chinese and English in bilingual science classroom.



Determination of Synthetic Cannabinoids In Blood and Urine Samples by LC-MC-MC

Dr. Ashraf Mozayani (Oral 010)

Professor, Administration of Justice
Barbara Jordan-Mickey Leland School of Public Affairs
Collaborator(s): Aybike Dip PhD, Munder Zagaar PhD, Hsin-Hung Chen PhD,
Jeffrey P. Walterscheid PhD

Since psychotropic synthetic cannabinoids (SCs) in illicit use were first detected in late 2008, a large number of new SCs with structural modifications have been produced by clandestine laboratories and have been freely sold on the illicit drug market. These synthetic cannabinoids have their greatest effects on the endocannabinoid system, which is comprised of two cloned G-protein-coupled seven-transmembrane receptors, named cannabinoid receptor 1 (CB1R) and 2 (CB2R). Because the detectable metabolites of many newly-synthesized SCs are unknown, evaluation of the metabolism of these compounds and the development of analytical methods for the detection of the parent drugs and their respective metabolites in biological fluids have become essential. The first step of this study was to examine SCs recently released to the illicit markets, specifically ADB-PINACA, 5-Fluoro ADBICA, AKB48 N-(5-fluoropentyl) analog, 5-Fluoro ADB-PINACA, ADBICA, AB-FUBINACA, AB-PINACA NNE, I5-fluoro-NNEI, STS-135 and AKB48. These substances were analyzed by LC-MS-MS and their MRM pairs detected and Zorbax Eclipse Plus C18 column (2.1X100mm, 3.5 mm, Agilent) was used for LC separation. The second step focused on the extraction of the drugs from aqueous matrices with buffer solutions at three different pH values (6, 9, 12), with three different solvents (Ethyl acetate, Ethyl acetate/Hexane (9:1), Ethyl acetate/Hexane (8:2)). The extraction procedure was applied to 100 μ L spiked blood and urine samples and the recovery of each SC was measured by a 5-point calibration curve with AB-PINACA-D9 and ADB-PINACA-D9 as the internal standard.

FACULTY ORAL PRESENTATION



IIRC framework: implications for accounting educators

Dr. Kamala Raghavan (Oral 011)

Associate Professor, Accounting and Finance

Jesse H. Jones School of Business

Integrated reporting combines information about the organization's business model, strategy, governance, performance and prospects to achieve two objectives: reveal the hidden value in traditional reporting and enhance the information content to stakeholders to encourage long term strategic thinking. By using an integrated approach managers can understand the dependencies and interconnectivity of organizational factors that can impact its long term value creation. Recognizing the need for integrated reporting, a global coalition of accounting professionals, regulators, investors, companies, standard setters, and non-governmental organizations formed the International Integrated Reporting Council (IIRC). The IIRC Pilot program participant included 100 businesses and 35 global institutional investors from 23 countries, and was designed to enable businesses and investors to share experiences and create a framework of concepts and principles to be used for preparation of future integrated reports. Based on 350 responses from participants around the globe, the framework to guide companies on their reporting to the users was released on December 8, 2013. The release of an approved framework was a key step in the development of integrated reporting to enhance the relevance and usefulness of information to capital markets. Since these frameworks are tested and driven by market forces, the probability of their acceptance by the users is almost certain, making it essential for accounting and finance educators to step up efforts to understand the framework and incorporate it into the curricula and prepare the students to adapt and succeed in the global marketplace.



Measurement of Secondary Neutrons Produced in the (γ, n) Reaction from the TrueBeam Linac Head

Dr. Mark Harvey (Oral 012)

Assistant Professor, Physics

College of Science and Technology

Collaborator(s): Julianne M. Pollard, Zhifei Wen, Song Gao

Secondary neutrons are an undesirable source of stray radiation commonly produced in high-energy x-ray radiotherapy, which potentially present a health risk for second cancers years after the primary treatment. The purpose of this study was to measure secondary neutrons produced via the (γ, n) reaction in the linac head of the Varian TrueBeam system for 10 MV and 15 MV x-ray beams, respectively. The linac was operated in flattening filter-free (FFF) mode for the 10 MV beam and flattening filter (FF) mode for the 15 MV beam with the jaws and multileaf collimators in the fully closed position. The secondary neutron dose rate was measured in triplicate using a Ludlum neutron survey meter (model 12-4) positioned at multiple locations including isocenter, longitudinal (gun-target) and lateral to the isocenter. Dose delivery rates of 600, 300 and 100 monitor units per minute (MU/min) were delivered for the 15 MV x-ray beam (FF), whereas, 2400, 1200 and 400 MU/min were delivered for the 10 MV x-ray beam (FFF). The secondary neutron dose rate was relatively constant with increasing distance away from the isocenter with standard deviations less than 1 mSv/h in most cases. However, the neutron dose rate increased linearly with increasing dose delivery rate, varying up to a factor of 7 (9) longitudinally (laterally) with increasing MU/min. Our preliminary results suggest a secondary neutron dose rate of 45 mSv/h or less for all measurements considered in this study indicating a relatively low contribution of produced secondary neutrons to the primary therapeutic beam.

FACULTY ORAL PRESENTATION



Some Algorithmic Aspects of Linear Quantile Mixed Models and Other Longitudinal Data Analysis Methods

Dr. Nancy L. Glenn (Oral 013)

Associate Professor, Mathematics
College of Science and Technology

The mission of the National Aeronautics and Space Administration's (NASA) human research program is to advance safe human spaceflight. This involves conducting experiments, collecting data, and analyzing data. The data are longitudinal and result from a relatively few number of subjects; typically 10 – 20. Standard statistical designs such as mean regression with random effects and mixed-effects regression are inadequate for such data because the population is typically not approximately normally distributed. Standard quantile regression is also inadequate because it does not include random effects. We instead employ quantile regression for longitudinal data (Geraci and Bottai, 2007) because it is a robust alternative to mean regression with random effects. Additionally, quantile regression allows estimation of an entire family of conditional quantile functions. Thus, providing a more complete statistical analysis of the stochastic relationships among random variables (Koenker, 2000).



Big Data Analytics Security Applications in Business

Dr. S. Srinivasan (Oral 014)

Distinguished Professor & Associate Dean, Business Administration
Jesse H. Jones School of Business

Big Data Analytics is used in a wide variety of disciplines such as Health Science, Engineering, High Performance Computing and Business. In each of these disciplines the nature of data gathered varies. For example, in Health Science one could analyze the genomic data and predict the likelihood of disease affliction. In Business, the primary goal is to leverage the large volume of data available to gain insight into where the business could focus its resources. This is especially true of many real-time data available through social media and location tracking. Processing such data requires timeliness. Unlike the other applications cited, business use of Big Data involves processing time-sensitive material rapidly to derive the benefit. Often it involves combining geo location information with people's Facebook profile and send suitable text with additional incentives attached. The App used should process large volumes of data from multiple sources quickly and initiate action, all in an automated manner. This application shows the potential benefit to a business in using Big Data. Having such a data processing capability also helps a business identify security risks. When network traffic data is analyzed in real-time to identify patterns, businesses could detect early on possible fraud. Thus, a business could take proactive steps to stop the fraud from occurring. In this talk we will highlight tools such as Hadoop and Tableau that are used to process Big Data and give examples of how these tools are used. We will highlight resources available from Teradata, IBM, Oracle and SAP.

FACULTY ORAL PRESENTATION



Implementation of Innovative Intersection Designs in Texas

Dr. Yi Qi (Oral 015)

Associate Professor, Transportation Studies

College of Science and Technology

Collaborator(s): Dr. Lei Yu and Dr Xiaoming Chen

Recently, several types of innovative intersections, including Michigan U, Super Streets, continuous flow intersections, have been implemented or planned in Texas to mitigate congestion problems at conventional intersections. This presentation is to introduce a study for evaluating the performance of these recently implemented innovative intersections in Texas and to provide recommendations for future implementations.



Synthesis and Characterization of New Platinum(II) Complexes Containing Thiourea and Its Derivative Ligands

Dr. Yuanjian Deng (Oral 016)

Professor, Chemistry

College of Science and Technology

Collaborator(s): Jing Fang, Xin Wei, John B. Sapp

cis-Diamminedichloroplatinum(II), known as cisplatin, is the first inorganic compound in clinical use as a chemotherapeutic agent. In almost four decades, the structure/activity relationships have been widely used as guidelines in platinum anticancer drug design. All cisplatin-like compounds possess some common features, that is, each containing a cis-PtN₂ unit and having reasonable lipophilicity. It is desirable to develop new platinum-based anticancer drugs with alternative ligand system such as sulfur-containing molecules because of the strong affinity of platinum(II) towards sulfur atom. Thiourea and its derivatives are of particular interest due to their unique anti-inflammatory, anticancer, and antiproliferative activities. To investigate the relative reactivity between platinum(II)-thiourea complexes and other sulfur-containing model molecules, we have selected trans-1,2-diaminocyclohexane (dach) as a carrier ligand that forms a chelate ring with platinum(II) and thus prevents its replacement by incoming sulfur-containing molecules. In the present work we have synthesized two types of platinum(II) complexes in the forms of cis-[Pt(dach)L₂](NO₃)₂ [where L = thiourea (tu), 1-acetyl-2-thiourea (atu), 1-ethyl-2-thiourea (etu), 2-imidazolidinethione (imt), 1,3-dimethyl-2-thiourea (dtu), and 1,1,3,3-tetramethyl-2-thiourea (tmtu)] and trans-Pt(imt)₂X₂ (X = Cl or I). Each of the complexes is characterized by elemental analysis, IR spectrometry, and NMR (¹H and ¹³C) spectroscopy. Spectroscopic measurements indicate that there are concomitant bond order changes, a decrease in C=S bond and an increase in C-N bond for all the ligands upon complexation. Two complexes, [Pt(dach)(tu)₂](NO₃)₂•H₂O and [Pt(imt)₄]I₂•DMSO•H₂O, are structurally determined by X-ray crystallography.

STAFF ORAL PRESENTATION



Using PILS to Identify Hotspots Incidents in Environmental Justices in Texas: A Systems Using Historical Incident Integrated as an Information Awareness Tool

Latissha V. Clark, MSc. (Oral 017)

Research Assistant, CTTR

College of Science and Technology

Collaborator(s): Vincent Hassell

Geographical Information System (GIS) has become widely acceptable in offer a visual mapping utility that is user friendly. Using GIS, an interoperable system was created that uses information from hazardous materials incidents reported to the US Department of Transportation's Pipeline and Hazardous Materials Safety Administration (US DOT PHMSA). The Petrochemical Incident Location System (PILS) enables industry personnel and emergency responders to conduct a twenty year assessment of locations prone to hazardous materials' occurrences. This program will provide a base analysis to identify issues that can be compared nationally. The program will evaluate these incidents in relation to environmental justice. Analysis can provide the characteristics of location, chemicals, time, date, and additional variables. When planning areas for human livability it is important to utilize tools that are efficient and adaptable to the user's needs. PILS provides an overview of those area impacted by hazardous material incidents in Environmental Justice Zones (EJZ) in Texas. When considering the population per square mile, and sensitive receptors, such as distance from schools provides analysis at the potential effects on the surrounding area involving EJZ and Hazardous Materials. This generates a Potential Affected Zone or PAZ that may be of particular interest to planners. The analysis provides information to assist policy makers, shippers of hazmat materials, emergency personnel or urban planners in improving the efficiency and security of hazardous material transportation.

STUDENT ORAL PRESENTATION



Reentry Policies Of Ex – Convicts In America: A Meta – Analysis

Francis Otiato (Oral 018)

Master's Student, Administration of Justice

Faculty Advisor: Dr. Helen Greene

Barbara Jordan-Mickey Leland School of Public Affairs

Occupational functioning is an essential factor in the progress of offenders returning to society, but there are several laws and statutes that prohibit ex-convicts from some kinds of employment thus thwarting that facet of the rehabilitation process. Other scholars such as Leroy Clark (2003) have argued that barring employment of ex-convict is an injustice by itself. When an accused (respondent) is guilty of committing an offence, the presiding officer either a magistrate or judge will always hands down a punishment of confinement, probation supervision, or both. The judge or magistrate may also direct the offender to pay a fine, court costs, or compensation (Johnson, 2001) depending on what he/she deem fit as a penalty for the offence. Hence, once they pay the fine, or served the sentence, the convict should be free from any civil disability. Most of the policies on ex-convicts have emphasized either on promoting reintegration or reducing risks to the public, this paper examines the literatures on existing reentry policies to shade light on which programs can be implemented or amended in order to serve the two competing sides of reentry policies while maintaining the principles of social Justice. A qualitative Meta-analysis of empirical study findings is used to achieve the research objectives - This method involves the use of qualitative procedures to the gathering of observational findings for the purpose of integrating, synthesizing and making sense out of them.

STUDENT ORAL PRESENTATION



Effects of Social Media on Non-Suicidal Self-Injury in an Adolescent Urban School Population

Susan L. Delaney (Oral 019)

Doctoral Student, Counseling
College of Education

Non-suicidal self-injury (NSSI) content has proliferated on social media sites over recent years. Research indicates that many adolescents who self-injure go online to both share their own experiences through images, videos, and text as well as to seek out others in similar circumstances. Though there can be benefits to peer support there are also considerable risks that can be found through sharing as well as triggers for this behavior. This presentation will define NSSI; assist with understanding the nature and scope of NSSI on the Internet; and, identify specific social media sites most visited by adolescents in search of information on NSSI.



The Environmental Health Impacts of Goods Movement on Fenceline Communities in Houston

Steven C. Washington (Oral 020)

Master's Student, Urban Planning and Environmental Policy/Political Science
Faculty Advisor: Dr. Glenn S. Johnson

Barbara Jordan-Mickey Leland School of Public Affairs

Houston produces a quarter of America's gasoline and about a third of all the plastics that are in our cars and cupboards. Harris County air pollution levels in the City of Houston are considered to be unacceptable by knowledgeable experts and the general public. Air pollution is a mixture of solid particles and gases in the air. Ozone, a gas, is a major part of air pollution in cities; particularly Port and fenceline communities. Communities that are most at risk of developing health effects from air toxics are those neighborhoods located within a 2-mile radius of marine terminals, rail and ship yards, refineries and hazardous waste sites. Public involvement is an essential and necessary process within transportation planning projects. Planners should create an atmosphere of trust and credibility and implement community outreach early and often throughout the planning process. It is argued by transportation practitioners, researchers, economists and environmental health advocates, that the largest single infrastructure change to occur this decade is the expansion of the Panama Canal. This expansion to be completed in 2015 will enable containerized vessels using the canal route to carry up to three-times more cargo. This gateway will provide a new avenue for increased international trade and commerce along both gulf and east coast marine terminals. The canal expansion offers an alternative which allows direct navigation to the east coast without land transportation. It is projected that this project once complete, will reduce overland traffic congestion and enhance economic development by maintaining freight flow efficiency.



Network Motif Characteristics

Ayzha Ward (Oral 021)

Undergraduate Student, Computer Science

Faculty Advisor: Dr. Yunjiao Wang

College of Science and Technology

Collaborator(s): Marquesha Foreman, Dr. Yunjiao Wang, Dr. Kiran Chilakamarri

A number of physical processes are modeled by systems of differential equations with some parameters and their solutions describe the dynamics of the physical processes. As the parameters change, the behavior of the physical process changes, however the change can be abrupt. Modern bifurcation theory offers a tool to study such abrupt behavior of physical processes. Here we are interested in understanding the dynamics of biochemical reaction networks from the knowledge of its sub-networks.

STUDENT ORAL PRESENTATION



Involvement of Katp channels in hydrogen sulfide-induced increase in aqueous humor outflow

Jenaye Robinson (Oral 022)

Doctoral Student, Pharmaceutical Science

Faculty Advisor: Dr. Sunny Ohia and Dr. Njie-Mbye

Collaborator(s): Chinoso Ezeudu, Leah Mitchell, Madhura Chitnis, Catherine Opere, Ya Fatou Njie-Mbye and Sunny E. Ohia

Recent studies from our laboratory provide evidence that hydrogen sulfide (H₂S) donors can increase aqueous humor (AH) outflow in porcine trabecular meshwork tissues (TM).

Purpose: To investigate the mechanism of action of H₂S donors on the dynamics of AH outflow. Methods: Porcine ocular anterior segment explants were perfused with DMEM maintained at 37°C, 5% CO₂ and constant pressure of 7.35 mmHg. Stabilized explants were administered with H₂S-donors; sodium hydrosulfide (NaHS, 100nM - 10µM), L-cysteine (1nM - 1mM) and AH outflow was monitored for 4 hours. For mechanistic studies, the KATP channel antagonist glibenclamide and H₂S biosynthetic enzyme inhibitors, aminooxyacetic acid (AOA), or propargylglycine (PAG), were administered 30 mins prior to L-cysteine or NaHS treatment. Vehicle (0.1% saline) control was run in parallel. Results: L-cysteine (1 nM - 1 µM) caused a dose-dependent increase in AH outflow, reaching a maximal effect at 100 nM [153 ± 7.2% of basal]. The stimulatory effect of L-cysteine (100 nM) on AH outflow was completely blocked by AOA (30 µM) and PAG (1 mM). Interestingly, NaHS (100 nM – 10 µM) also produced a dose-dependent increase in outflow, reaching a maximal effect at 10 µM. The increases in AH outflow caused by NaHS (10 µM) and L-cysteine (100 nM) was significantly (p<0.01) inhibited by glibenclamide (100 µM). Conclusion: H₂S generated by its donors can increase AH outflow in porcine TM, an effect that is dependent on the intramural biosynthesis of this gas. Furthermore, KATP channels are involved in the stimulatory action of H₂S on AH outflow.



Emission Effects on Eco-driving at Signalized Intersections

Peijia Tang (Oral 023)

Master's Student, Department of Transportation Studies

Faculty Advisor: Dr. Lei Yu

College of Science and Technology

Along with the speeding-up of the urbanization and motorization, transportation industry has become a main source of fuel consumption, green-house gas emission, and pollutants. For transportation industry, vehicles share a significant role in affecting fuel and emissions. In order to reduce vehicle emissions, researches on “Eco-driving”, which refers to a variety of advice and feedback communication to drivers for the purpose of minimizing tailpipe emissions and fuel consumption, have gained more attention than ever before. Owing to frequent stops and goes, intersections are the vital area to analyze environmental problems. So researches applying eco-driving into intersection has become more and more popular. However, Current studies often focused on the driving behavior that vehicles approach intersections, but paid little attention driving behaviors of stopping at or depart from intersections. While, the optimal driving behavior when approaching could not guarantee a minimum total fuel consumption and emission for the entire area. And conditions of most recent researches are too ideal, which neglected car following, queue, traffic flow, and some other factors. In this context, I plan to research on eco-driving with a more thorough consideration, which studies deceleration when approaching, stop at the stop line, and acceleration when departing. Further, I will add queue and traffic flow at signalized intersections.

STUDENT ORAL PRESENTATION



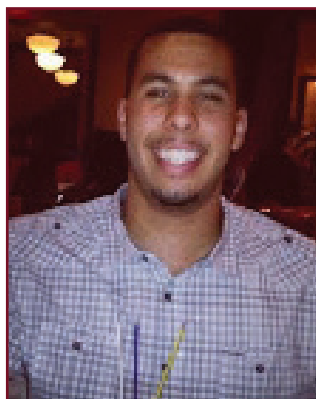
Challenges in the P-12 Educational Pipeline Angela Offurum, Danielle Seymore, Kerrie Patterson-Brown, Felicia Sterling (*Oral 024*)

Doctoral Students, Department of Educational
Administration

Faculty Advisor: Dr. Jay Cummings
College of Education

Introduction: The child's progress through the P-12 Educational Pipeline is full of challenges. This study focused on four challenges: Disciplines of programs in mathematical alignment, coaching efficacy models, expanding high-

school academic and athletic opportunities, with healthcare as essential ingredients. Methods: The P-12 Educational Pipeline was a composite survey involving three suburban school district elementary schools, a suburban middle school, students wishing to accelerate completion of the high school program, first generation college-goers, low-income students, students of color, English language learners, and a densely populated urban community in Southeast Houston, Texas. Results: Findings revealed several critical challenges in the P-12 Educational Pipeline. There is the neglect of mathematics in the elementary campuses, causing students to face struggles in numeracy skills, which may lead to needing special education services. By middle school, Co-Teaching models are introduced in the mathematics classrooms because some general education teachers do not have the tools to meet the needs of the diverse learners. Furthermore, there are noticeably rigors for students enrolling in the Early College High School program while combining it with interscholastic sports. Finally, inadequate access to affordable healthcare services to address the prevalent health issues among students, may impact their academic performance. Conclusion: The challenges discussed in this study may remain a part of the P-12 Educational Pipeline, and the educational system as a whole. Thus, principals surely have their work cut out for them as educational administrators. Recommendations: larger sample size, longer study period, more campuses, more diverse communities, and participants' lives after school.



Proton and Alpha-Particle Transport in Water at the Cellular Level using Monte Carlo Simulation Techniques

Zayne Belal (*Oral 025*)

Undergraduate Student, Physics
Faculty Advisor: Dr. Mark Harvey
College of Science and Technology
Collaborator(s): Dr. Mark Harvey

Water consists of roughly 70% of any human cell and thus, is a catalyst in many of the interactions that occur within the human body. The molecular constituents of water can breakup into ions (e.g., free radicals) when exposed to sufficiently high-energy radiations.

Some of these charged ions are highly reactive and can pose severe risks for cellular damage. The purpose of this study was to model physical processes produced in water due to light ion irradiation using the Geant4 Monte Carlo Toolkit (version 9.6). Predictions were obtained on multiple physical processes (e.g., excitation, ionization, elastic scattering, etc.) and associated particle species produced in both single proton and single alpha particle interactions within a volume of water consistent the size and shape of a red blood cell. Calculations were performed over a wide range of incident particle energies (e.g., 5 – 70 MeV). Preliminary results indicate that elastically scattered electrons were produced most frequently in the single particle interactions within the water volume. In addition, energy deposition in the cellular water volume primarily resulted from secondary and tertiary electrons. Of note is that the incident alpha particle generally produced more physical processes on average compared with the proton for a given beam energy. This can generally be attributed to the larger mass and size of the alpha particle. Further studies are underway in our computational laboratory to investigate free-radical production in water at the level of red and white blood cells, respectively.

STUDENT ORAL PRESENTATION



A Profile Of Hispanics At Tsu Cophs And The Impact On Tsu's

Legacy: An Untold Story

Manual Vera (Oral 026)

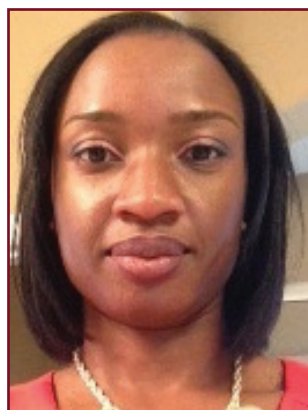
Pharm. D. Candidate, Pharmacy

Faculty Advisor: Dr. Shirlette G. Milton

College of Pharmacy and Health Sciences

Collaborator(s): Dr. Shirlette G. Milton

Introduction: Hispanics have been the largest minority group for more than a decade in Texas, and that growth is expected to continue. However, even though Hispanics are rapidly growing, educational growth within this group is among the lowest compared to other ethnic groups. This study aims to analyze Hispanic graduates from Texas Southern University College of Pharmacy and Health Sciences (TSUCOPHS) and determine their contribution to the College's legacy. **Methods:** A retrospective observational study was conducted utilizing the database from the Texas State Board of Pharmacy (1952-2012) and the American Association of Colleges of Pharmacy (2001-2012). Data retrieved included demographics, graduation dates, and current employment. **Results:** Hispanics rank third in the number of Pharmacy graduates from TSUCOPHS since 1952, accounting for 7% of total graduates compared to 69% African American and 13% Asian. A significant increase in the number of Hispanic graduates was observed between 1990 -2008. Community independent and community chain practice are dominant career fields of these graduates, with a number holding leadership positions. **Conclusions:** TSUCOPHS has experienced periods of significant growth in Hispanic pharmacy graduates. The College's legacy for Hispanic graduates lies in the number practicing in community settings, including many in the South Texas. Recent graduates have been active in state pharmacy associations and have achieved leadership positions in the pharmacy profession. These findings support the College's legacy of providing underrepresented minorities for the profession. Future studies will expand on specific roles of TSUCOPHS Hispanic graduates in leadership positions.



Interprofessionalism in the Codes of Ethics of Medical and Allied Healthcare Professions

Chika Obi (Oral 027)

Pharm. D. Candidate, Pharmacy

Faculty Advisor: Dr. Sondip Mathur

College of Pharmacy and Health Sciences

Collaborator(s): Dr. Sondip Mathur

Medical and allied health schools and colleges are expected to foster Interprofessional Education (IPE) to develop collaborative, practice-ready graduates. An IPE experience occurs when students from two or more professions learn about, from, and with each other. IPE is not a replacement for education specific to each profession. It seeks to provide students with opportunities to learn and practice skills that improve their ability to communicate and collaborate in team settings. A curricular area that lends itself to IPE initiatives is biomedical ethics. Ethical principles are universal and provide the bases for various health professions codes of conduct. The professional codes are intended to guide provider behavior. While adherence to the codes may be depend on the efficacy of education and training, the conception and content of the codes must likely have some IPE orientation. The primary purpose of the study is to assess the published codes of select healthcare professions for ethical principle overlap and IPE orientation. Included in the assessment are the "preambles" associated with the codes. The published codes of the following professions are included in the study: Physician, Nurse, Pharmacist, Respiratory Therapist, Health Informatics, Health Care Administrator, Environmental health, and Clinical laboratory Scientist. A matrix approach frames the analysis wherein ethical principles constitute the rows and corresponding codes organized in the columns. The codes and related preambles are also assessed for their interprofessional orientation. Study results systematically demonstrate the scope and extent of interprofessionalism inherent in the professional codes. Guidelines and recommendations relate to the introduction of IPE in academic settings to foster collaborative behavior across professional healthcare practice.

COLLEGE/ SCHOOL



SPECIFIC SESSIONS

COLLEGE / SCHOOL SESSIONS



THURSDAY, APRIL 3, 2014

THURGOOD MARSHALL SCHOOL OF LAW

DEAN'S CONFERENCE ROOM #227- THURGOOD MARSHALL SCHOOL OF LAW
9:00 AM - 11:00 AM

The Law School's program is entitled "Research By The Book@#TMSEL" Featured in the program are seven professors who have written books on various legal topics.

Professor

Walter Champion

Constance Fain

Marcia Johnson (co-author Emeka Duruigbo)
Thomas Kleven

Martin Levy and Craig Jackson
Lupe Salinas

Book Title

"Intellectual Property Law in the Sports and Entertainment Industries"

"Professional Conduct and the Law"

"Professional Responsibility" and "Business Associations"
"Equitable Sharing: Distributing the Benefits and Detri
ments of Democratic Society"

"Constitutional Law: Cases and Materials"

"Constitutional Law: Cases and Materials"; and Lupe
Salinas - "Latinos and Criminal Injustice"

Moderated by

Professor Shaundra Kellam Lewis

Hot Breakfast Served

COLLEGE / SCHOOL SESSIONS

THURSDAY, APRIL 3, 2014

COLLEGE OF LIBERAL ARTS AND BEHAVIORAL SCIENCES

1:00 PM — 3:00 PM

Sterling Student Life Center Room #307

“Liberal Arts, Humanities, and Fine Arts: Fresh Visions...New Contexts”

Moderator:

Daniel Adams, Professor, Department of Music

Karen Kossie-Chernyshev, Professor, Department of Music and Geography

Presentation:

With an unprecedented number of leadership of departmental leadership in 2013, the College of Liberal Arts and Behavioral Sciences is poised to introduce “fresh visions and new contexts” in the pursuit of research, scholarship, and creativity in the most academically diverse college at Texas Southern University. We have invited our new department chairs (or their designees) to share their long-range visions and goals with our faculty and students in the context of a rapidly changing TSU academic environment.

Panel Presentation:

African American English: A History, A Science, A Controversy

Presenters:

Myesha Bell, Tabitha Byars, Devion Contreras, Stephanie Curry, Rhonda Jenkins, Jennifer Julian, Joseph Mayo, Natica McHenry, Shayla Owens, and Trelisia White.

Faculty Advisor:

Albertina L. Walker-Hughey, Ph.D.

Abstract

African American English (AAE), popularly known as “Ebonics,” remains as controversial and politicized today as it was when it appeared over fifty years ago in scholarly and popular conversations on language pedagogy, standards, and students’ rights.

Featuring data from their individual research projects, undergraduate English majors present an interactive exploration of the history and theory of Black English, discuss its science (i.e., formal linguistic structures), and address some of the binary oppositions to its legitimacy as a dialect of the American English language.

COLLEGE / SCHOOL SESSIONS

THURSDAY, APRIL 3, 2014

COLLEGE OF SCIENCE AND TECHNOLOGY

11:00 AM — 1:30 PM

TSU Science Center Room #158

Theme: Big Data and Interdisciplinarity

The College of Science and Technology is organizing a one day event on Thursday April 3, on the theme of "**Big Data and Interdisciplinarity**" and is happy to host **Dr. Sriram Iyengar**, Associate Professor at School of Biomedical Informatics, UT Health Science Center at Houston.

Dr. Iyengar research spans various disciplines such as Biology, Chemistry, Computer Science, Mathematics and Physics and particularly focuses on bio-medical informatics Research & Development including mathematical/statistical modeling, algorithms, and software development across diverse areas such as biochemistry, immunohematology, endocrinology, oncology, orthopedics, neural imaging, and clinical trials.

The one day event on April 3 is scheduled as follows:

* Morning: 10 am -12 pm seminar for faculty and students on "How to establish meaningful interdisciplinary research and how that impacts funding opportunities and scientific discovery" and follow up questions/answers.

* Afternoon 2:00 pm - 4:00 pm Panel on "Technological Advances and the Job Market" with guest and panelists from industry and academia.

The program is coordinated by COST Research Committee.

THURSDAY, APRIL 3, 2014

College of Pharmacy and Health Sciences

11:00 AM—1:00 PM

LOCATION: Gray Hall 1st Floor Lecture Auditorium Room # 100

The College of Pharmacy and Health Sciences strongly encourage the involvement of our students in any aspect of research; whether basic science or clinical. The primary purpose of involving the student in a research project is to introduce the individual to the problem solving process and in so doing, develop appreciation and the necessary skills involved in a systemized and scholarly research. The College of Pharmacy and Health Sciences had over eight-six students to work independently or in groups on projects they identified of interest or by their research preceptors. Poster and oral presentations of student projects will be held during the TSU Research Week College Breakout Session

COLLEGE / SCHOOL SESSIONS

THURSDAY, APRIL 3, 2014



SCHOOL OF PUBLIC AFFAIRS

10:00 AM — 3:00 PM

SPA AUDITORIUM

PANEL ONE: ADMINISTRATION OF JUSTICE 10:10 a.m.-11:10 AM

SESSION MODERATOR

I.D. ONWUDIWE

PRESENTERS

John Williams and Dr. Ashraf Mozayani: The Role that the NAS played in the State of Texas Medicolegal System
Dr. KINGSLEY EJIUGU: A preliminary spatial exploration of crime distribution during major events in Houston, Texas.

Dr. Gautam Nayer: So how satisfied are you? Perspectives from faith prisoner reentry programs.

Poster Presentation

Chanta Lee Howard: Changing the Policy of Juvenile Sentencing in Texas and Reforming Juvenile Corrections for First Time Offenders through Assessment, Learning Centers and Capacity Building

PANEL TWO: POLITICAL SCIENCE 11:15 – 12:25 P.M.

SESSION MODERATOR

Prof. Marva Johnson

Dr. Sarmistha Majumdar: *Individuals' Attitude Towards Public Transit In A Rural Transit District*

Dr. Antoinette Christophe: *The Impact of Compassionate Conservatism on the Response to Disasters for Minority Communities: The Hurricane Katrina Debacle*

Student Roundtable on Selected Women's Issues

Domestic Violence and Sexual Assault; Equal Pay for Equal Work; Time off from Work to Care for Family; Sexual Harassment

Mr. Fitzgerald Eze-*Domestic Violence and Sexual Assault*

Ms. KyMara Guidry-*Equal Pay for Equal Work*

Ms. Alisha Heard-*Time Off From Work to Care for Family*

Ms. Ashley Raggs-*Sexual Harassment*

PANEL THREE: URBAN PLANNING AND ENVIRONMENTAL POLICY

1:35 P.M. – 3:00pm:

SESSION MODERATOR

Prof. Jeffery Lowe

Walter Council: *Urban Passenger Rail in the Caribbean Islands: The Past, Present, Future in Cuba, Jamaica, Haiti, Dominican Republic and Puerto Rico.*

Liza Powers and Juan Sorto: *Multi-Family Developments vs. Equity in Zoning Free Houston*

Laura Solitare: *Using an environmental justice lens to explore "what is park equity"*

Dr. Sheri L. Smith and Errol Williams: *Examining Viable Options to Addressing Food Deserts: The case of Houston's Greater Third Ward.*

TSU INSTITUTES AND CENTERS FOR RESEARCH

TEXAS SOUTHERN UNIVERSITY ALLIANCE OF INSTITUTES AND CENTERS FOR RESEARCH

Institutes and Centers

INSTITUTE FOR EDUCATION AND LEGAL STUDIES

Center for Strategic Advances in Education (CSAE)

Earl Carl Institute for Legal and Social Policy (ECI)

Center on Legal Pedagogy (CLP)

Institute for International and Immigration Law (IIIL)

INSTITUTE FOR BUSINESS AND HUMAN SERVICES

Mickey Leland Center on World Hunger and Peace (Global)

Economic Development Center

JP Morgan Chase Center for Financial

INSTITUTE FOR STEM, ENVIRONMENTAL RESEARCH, AND BIOTECHNOLOGY

NASA Center for Bio-Nanotechnology and Environmental Research (C-BER)

Environmental Research and Technology Transfer Center (ERT²C)

INSTITUTE FOR BIOMEDICAL AND HEALTH DISPARITIES RESEARCH

Center for Biomedical and Translational Research

Center for Cardiovascular Diseases

Center for Health Disparities Research: Cardiovascular Diseases & HIV

INSTITUTE OF COMPUTATIONAL SCIENCE AND ENGINEERING (ICSE)

Center for Research on Complex Networks

TSU High Performance Computing Center

INSTITUTE OF TRANSPORTATION STUDIES

Center for Transportation Training and Research

National Transportation Security Center of Excellence and Petrochemical

Transportation

Aviation Research Center

Innovative Transportation Research Center

Director

Dr. Sarah Guidry

Dr. Jay R. Cummings

Professor Sarah Guidry

Professor Anthony Palasota

Prof. Fernando Colon-Navarro

Dr. Glenn Johnson

Dr. Glenn Johnson

TBA

Prof. Germaine Gray

Dr. Bobby Wilson

Dr. Adebayo Oyekan

Dr. Bobby Wilson

Dr. Barbara Hayes

Dr. Dong Liang

Dr. Adebayo Oyekan

Dr. Adebayo Oyekan

Dr. David Olowokere

Dr. Wei Wayne Li

Dr. Christopher Tymczak

Dr. Lei Yu

Dr. Carol Lewis

Dr. Carol Lewis

Dr. Charles Glass

Dr. Lei Yu

PROFILES OF RESEARCH INSTITUTES/CENTERS

UNIVERSITY INSTITUTE FOR EDUCATION AND LEGAL STUDIES/POLICY

EARL CARL INSTITUTE FOR LEGAL AND SOCIAL POLICY

INTERIM DIRECTOR: SARAH R. GUIDRY

ESTABLISHED: 1992

PHONE: 713-313-1139

FAX: 713-313-1153

WEBSITE: www.earlcarl.org

GOALS: The Earl Carl Institute (ECI) was established in 1992 as a research and writing think tank at the Thurgood Marshall School of Law. The mission of the Institute is to help solve legal and social problems facing the urban community through scholarship and advocacy. The Earl Carl Institute seeks to identify, address, and offer solutions to issues that affect traditionally urban and disenfranchised communities.

TASKS: ECI's focus is on providing research based policy advocacy through direct legal services and written materials addressing issues that have a disproportionate impact on minorities locally, statewide and nationally. ECI generally undertakes projects that are interdisciplinary in nature and have one of three outcomes (1) Student Development, (2) Public Policy Initiatives, and (3) Community Education. In addition, these projects fall into ECI's priority research areas: (1) Criminal Justice, (2) Education, (3) Family, and (4) housing. ECI's operations are primarily facilitated through its three centers: (1) Center for Civil Advocacy, (2) Center for Criminal Justice, and (3) Center for Government Law. ECI provides law students opportunities to gain experience working with clients, lawyers and courts through the Opal Mitchell Lee Property Preservation Project, the Juvenile Justice Project and the Thurgood Marshall School of Law Innocence Project. The Center for Government Law provides law students integrated academic and practical skills training in government administration and regulation. ECI also undertakes Special Projects involving interdisciplinary partnerships and collaborations. Current special projects include the ECI Interdisciplinary Journal for Legal & Social Policy, annual symposiums on juvenile justice, indigent defense, and an ECI special journal issues. ECI policy or position papers target academia, the Texas Legislature, other political actors, Texas Department of Criminal Justice, Judges, attorneys and other vested interests, including civil rights and advocacy groups, and individuals from other disciplines as well as the urban community in general.

INSTITUTE FOR INTERNATIONAL AND IMMIGRATION LAW (IIIL)

ESTABLISHED: 2002

DIRECTORS: CRAIG L. JACKSON AND FERNANDO COLON-NAVARRO

PHONE: 713-313-1918

GOALS: The Institute (IIIL) is dedicated to providing specialized academic and practical legal training for students planning a career in international or immigration law. The Institute is dedicated to encouraging scholarly research in the fields of international law and immigration law; therefore, IIIL prepares students for positions with law firms practicing international or immigration law; U.S. government agencies, foreign governments, private organizations, and foundations working to advance social and economic justice. The IIIL also provides a scholarly atmosphere for the study of international and immigration law as well as a forum to discuss problems facing those disciplines. The IIIL offers an extensive inventory of international law courses, including but not limited to: International Litigation, International Tax, International Human Rights, Comparative Law, International Law, Employment-Based Immigration, Criminal Law and Immigration, NAFTA, Family-Based Immigration, Basic Mexican Business Law, Naturalization and Citizenship, Treaty Law as well as a Civil Externship Clinic at the Consulate of Mexico, an Administrative Law Clinic: Immigration Law Concentration, and the American and Caribbean Law Initiative, which is a Consortium dedicated to study comparative law issues. The Institute also recognizes students who have demonstrated a deep interest and scholastic achievement in the areas of international law or immigration law through its Certificate Program in International and Immigration Law.

TASKS: Among the many scholarly programs of the Institute is the Genocide Prosecution Project. Under this project, the Institute is planning to sponsor two programs involving the ad hoc tribunals hearing criminal cases on episodes of genocide in the former Yugoslavia and Rwanda. The International Criminal Tribunal for the former Yugoslavia Program, pending ABA approval, is scheduled to start in the summer of 2006. Tentative plans the International Criminal Tribunal for Rwanda program are being made with that program possibly starting in the summer of 2007. Both programs will involve classroom study of international criminal law, the cases from each tribunal, and the procedures for bringing cases to the tribunals. Students will attend tribunal hearings in The Hague, Netherlands

PROFILES OF RESEARCH INSTITUTES/CENTERS

CENTER ON LEGAL PEDAGOGY
DIRECTORS: ANTHONY PALASOTA AND DANNYE HOLLEY
ESTABLISHED – 1999
PHONE: 713-313-1022 OR 713-313-7388

GOALS: Dedicated to the study of instructional design for legal education, the Center for Legal Pedagogy uses principles from the cognitive sciences about learning and discourse theory to study, implement, and evaluate law school teaching methodologies. The primary research aim of the Center is to investigate how legal knowledge becomes organized; how the cognitive processes that accompany legal knowledge develop with learning and experience; and how the acquisition of legal knowledge is measured and assessed. The Center has an inter- and multi-disciplinary focus. It recognizes that we now have many of the investigative tools needed for the advanced study of legal pedagogy. It employs computer-based technologies that have been developed to enhance educational research. And, it uses the cognitive sciences - including cognitive psychology, artificial intelligence, and linguistics - to provide the theoretical means for studying formal process theories of human cognition. Turning to recent advances in the understanding of the nature of competence and the phenomena of expertise, the Center seeks to provide a thorough analysis of the objectives of instruction and to offer a solid basis for studying the learning of law, for designing conditions for learning, and for assessing acquired competence in the law.

TASKS: The Center has developed a series of initiatives and educational programs to enhance the law school's curriculum and instruction, including pre-law programs, academic support programs, educational workshops, and collaborative teaching and instructional projects. In addition to providing educational support to deliver mentoring and advising programs to students, the Center has implemented faculty development forums to enable faculty members to share and impart teaching innovations, to encourage research, and to foster scholarship. To assist with assessment, the Center has established the Teaching and Learning Effectiveness Program (the TLE Program) – a faculty professional development initiative that presents faculty with opportunities to become acquainted with the latest research concerning matters of teaching, learning, and assessing, and to learn new instructional strategies that may be applied to their fields of expertise. Each year, the Center measures the skills and abilities of the law school's incoming students through a battery of diagnostic tests that examine learning strategies and styles, critical thinking, and writing. In addition to reporting about the data collected from these diagnostic tests and making the data available to faculty members in order to mentor and to plan teaching methodologies, the Center uses this data to advise students and to help students identify areas in which students could benefit most from educational interventions. The Center is also conducting two on-going studies: (1) A Correlation Study of the students' performance on LSAT, UGGPA, INDEX, LSI, LASSI, Watson Glaser, Writing Diagnostic, Mid-term Grades, First-Year GPA, Second-Year GPA, and Third-Year GPA, using the SPSS statistical package. (2) A Bar Passage Study of the students' performance on LSAT, UGPA, INDEX, Second and Third Year Required Course Performance, and Third-Year LSGPA as predictors of TMSL Bar Performance. Through its research studies and publications, the Center offers faculty and students pedagogical assistance with academic performance and skills by providing information about instructional design and outcomes assessment. Its publications include: (1) Law School Teaching Innovations/Tips, (2) Law School Teaching Quick Tips, (3) New Directions in Legal Education, and (4) Legal Writing Tips.

UNIVERSITY INSTITUTE FOR BUSINESS AND HUMAN SERVICES

MICKEY LELAND CENTER ON WORLD HUNGER AND PEACE
ESTABLISHED – 1989
ASSOCIATE DIRECTOR: DR. GLENN JOHNSON
PHONE: 713-313-7370

GOALS: To provide on-going opportunities for projects, programs and research by students and faculty that increase awareness and understanding, leading to innovative projects and programs that address the enduring critical problems of world hunger and peace; and to offer advanced leadership development training to TSU students to prepare them to learn and lead in while providing a means to outreach to today's diverse global community.

TASKS: The Leland Center is the custodian of the Mickey Leland Archives and is currently working to digitize the Leland Collection. Through the Texas Legislative Internship Program (TLIP) the Mickey Leland Center provides undergraduate and graduate students intensive training and unique exposure as staff members to local, state and national government and elected officials, to increase the number of graduates prepared and available to work in government and public service. The Leland Center also supports the development of International Study Abroad Programs for TSU students through the Mickey Leland International Enhancement Program (MLIEP).

PROFILES OF RESEARCH INSTITUTES/CENTERS

ECONOMIC DEVELOPMENT CENTER

ESTABLISHED – 1981

CONTACT: MS. AGNES CONNOR

PHONE: 713-313-7785

GOALS: To foster economic growth and development throughout the Houston-Galveston area by developing viable and effective community and economic development projects that provide capital resources, technical assistance and training to the small business sector, Houston's inner-community organizations, and other undeveloped sectors of the community such as the unemployed, underemployed, and the homeless.

TASKS: Projects primarily emphasize job creation, business development and expansion, entrepreneurship, higher education, career development, neighborhood revitalization, technology and community involvement. The current project provides:

- economic development in business planning and financial management;
 - revitalization of a Third Ward community daycare center;
 - technical assistance to eight (8) minority business expansion grant recipients;
 - career planning and skills development in computer technology and office administration;
 - housing for homeless women with children; and
 - GED/college preparation.
- The partnerships and collaborations included in this project are:
- TSU Jesse H. Jones School of Business faculty team;
 - Martin Luther King Jr. Community Center; and
 - Houston Community College System.

This project is funded by the U. S. Department of Housing and Urban Development.

JPMORGAN CHASE CENTER FOR FINANCIAL EDUCATION

ESTABLISHED – 2003

DIRECTOR: GERMAINE GRAY

PHONE: 713-313-6877

MISSION:

To promote lifelong financial education through teaching, research and community outreach programs

To contribute to an individual's knowledge of personal finances, money management, credit awareness and estate planning.

TASKS: The Center has developed a series of initiatives related to financial education to enhance the business curriculum and the overall understanding of personal finance content. The current programs of the Center include a semi-annual guest lecture series, an annual financial education conference along with educational workshops for students, teachers and community members. In an effort to address the personal finance knowledge gap of college students, a financial education module has been included in the freshman level business course. Stand alone seminars on personal finance are also conducted throughout the fall and spring semesters for students and community members. Another initiative focuses on facilitating teacher workshops on personal financial management and economic education. Semi-annual teacher train-the-trainer workshops on the Stock Market Game and Investing are conducted throughout the academic year.

PROFILES OF RESEARCH INSTITUTES/CENTERS

UNIVERSITY INSTITUTE FOR STEM, ENVIRONMENTAL RESEARCH AND BIOTECHNOLOGY ENVIRONMENTAL RESEARCH AND TECHNOLOGY TRANSFER CENTER (ERT²C) EST., 1991

DIRECTOR: DR. BOBBY WILSON
PHONE: 713-313-1060

The goal of the center is to address training, research problems, and technology transfer issues as they relate to the environment and to increase the number of under-represented minority graduates in science, technology, engineering and mathematics (STEM). ERT²C research projects focus on the analysis of toxic elements and compounds in a closed environment, investigation of the potential impact of environmental estrogens (EEs) in the lower Galveston Bay Watershed, novel approaches to water treatment technology using photo-catalytic carbon nanotubes (CNTs) with antimicrobial properties to combat the problems associated with infectious microorganisms in drinking water, and dependence of radiation quality on charged particle-induced early and late damage in Chromosomes. The Core Analytical Facility is an important component of the center. The Core's mission is to achieve regional, community, and national recognition as a quality environmental analytical laboratory and environmental research program. This mission is achieved through the characterization of environmental toxicants in the ambient environment (air, soil, and/or water) and the investigation of the mechanisms involved in the toxicity effect. The facility is equipped with Chromatographic Equipment: Gas Chromatography: 2-Agilent 6890 Gas Chromatographs with w/Mass Spectrometry; GC accessories: Entech 7100 Pre-concentrator for air monitoring with 32 6L Silonite Canisters, Tekmar Doorman- Velocity XPT Purge and Trap. Liquid Chromatographs: Dionex DX-600 Ion Chromatograph, Agilent 1200 High Performance Liquid Chromatography w/ Mass Spectrometry. Spectrophotometric Equipment: Agilent 7500 Inductively Coupled Plasma w/Mass Spectrometry, and Thermo Electron Nexus 470 FTIR with a 10-meter gas cell Nicolet Almega Raman Spectrometer, and Bruker Maldi-TOF Mass Spectrometer. Miscellaneous Equipment: Glove Box, Dionex Accelerated Extraction System, and Guava easyCyte flow cytometers are also available.

Collaborators: Dr. Renard Thomas, TSU, Dr. Xin Wei, TSU, Dr. Govindarajan Ramesh, Norfolk State University, Dr. Honglu Wu, NASA/JSC

C-BER: CENTER FOR BIONANOTECHNOLOGY AND ENVIRONMENTAL RESEARCH **ESTABLISHED DATE: OCTOBER 2008** **INTERIM DIRECTOR & PI: DR. ADEBAYO OYEKAN** **PHONE: 713-313-7499 FAX 713-313-7932** **WEBSITE: [HTTP://COST.TSU.EDU/WEBPAGES/NASA_URC_CB ER.HTML](http://cost.tsu.edu/webpages/nasa_urc_cber.html)**

The NASA Center for Bionanotechnology and Environmental Research (C-BER) comprises a team of faculty researchers and educators from the colleges of Science & Technology, Business, Education, Law, and Public Affairs as well as collaborating faculty from the University of Houston, University of California Santa Cruz, Norfolk State University, Jackson State University, Texas A & M University and Stanford University.

MISSION: The mission, which is closely aligned with NASA's Exploration Systems Mission Directorate is to evaluate environmental and human health concerns related to manned exploration of space. Thus, techniques for detecting, monitoring and controlling microorganisms are being developed; and the effects of microgravity, radiation and other space travel-induced stress factors on living organisms are investigated with the intent of developing countermeasures. In collaboration with NASA, the mission is to train and educate future Scientists, Engineers, Mathematicians and Technology (STEM) while integrating molecular biology, bioinformatics, bionanotechnology with chemical and biochemical analysis. In this current effort we will develop advanced technologies to enable novel solutions to the great health challenges facing humans during long-term space duration missions.

TASKS: The research of C-BER focuses on

- key environmental factors such as microgravity, radiation and other space travel-induced stress factors on living organisms.
- The effects of microgravity and radiation on the cell at the genome, proteome, cell, tissue, organ, and organism levels
- identification of biomarkers of stress factors and development of countermeasures.
- Development of bioassays and devices for microbe detection and monitoring, building upon current hardware developed at various NASA Centers.
- Biosensors for pathogen and microbe detection
- chemo-sensors of environmental stress.
- training opportunities for students, postdoctoral fellows and faculty.

Investigators:

Shishir Shishodia, Ph.D., Dept. of Biology
Fawzia Abdel-Rahman, Ph.D., Dept. of Biology
Hector C. Miranda, Jr., Ph.D., Dept. of Biology
Marguerite Butler, JD, MLIS, TMS of Law
Jason A. Rosenzweig, Ph.D., Dept. of Biology

Mahmoud A. Saleh, Ph.D., Dept. of Chemistry
Nancy L. Glenn, Ph.D., Dept. of Mathematical Sciences
Demetrio Kazakos, Ph.D., Dept. of Mathematical Sciences
Claudette Merrell Ligons, Ed.D., Curriculum and Instruction

PROFILES OF RESEARCH INSTITUTES/CENTERS

UNIVERSITY INSTITUTE FOR BIOMEDICAL & HEALTH DISPARITIES RESEARCH

CENTER FOR BIOMEDICAL AND TRANSLATIONAL RESEARCH

ESTABLISHED – 1986

DIRECTOR: DR. DONG LIANG

PHONE: 713-313-1885

The purpose of the Institute for Biomedical and Health Disparities Research grant is to provide the research infrastructure needed to increase faculty competitiveness in biomedical and behavioral research. The grant supports core facility development in molecular biology and tissue engineering; biosensor and biomarker technology; computational research; and proteomics and genomics. The grant also supports graduate student development. Recruitment of biomedical research faculty and their development is another goal of the project. The Institute is supported by a grant from the National Institutes of Health, National Institute on Minority Health and Health Disparities, Research Centers in Minority Institutions Program. The resources in the facilities are intended to aid in biomedical research and training programs that responds to current and future needs of the field. This involves continued creation of course materials for the current curriculum as well as specialized courses, training sessions and hands on-workshops. Furthermore, investigators affiliated with the facility are committed to developing and applying cutting-edge technologies that will benefit human and social endeavors.

CENTER FOR CARDIOVASCULAR DISEASES

ESTABLISHED – 1999

DIRECTOR: DR. ADEBAYO OYEKAN

PHONE: 713-313-4258

The Center for Cardiovascular Diseases (CCD) is a joint initiative of the National Heart, Lung, and Blood Institute (NHLBI) of the National Institutes of Health (NIH) and Texas Southern University with a mission to discover solutions to health and other problems that disproportionately affect urban minorities. The goal is consistent with the mission of TSU to academically prepare and develop diverse, predominately African American students to discover solutions to health and other problems that disproportionately affect urban minorities through scholarship, research, and outreach programs to the community.

GOALS: To expand and strengthen the University's biomedical research capabilities in order that significant contributions may be made to the improvement of the cardiovascular health status of all Americans, especially African Americans. The Center serves as the hub of research activities on cardiovascular diseases providing intensive laboratory training experiences for graduate and undergraduate students and serves as a site for structured and supportive faculty development.

TASKS: The CCD seeks to

- expand and strengthen TSU's biomedical research capabilities so that the University can make significant contributions to the improvement of cardiovascular health status of all Americans, especially African Americans.
- increase the quality of research and publication efforts of TSU,
- strengthen the overall biomedical research infrastructure
- provide intensive laboratory training for graduate and undergraduate students; and
- foster collegiality and collaboration among TSU faculty and local institutions.

Ongoing projects are evaluating nitric oxide/cytochrome P450 interactions in the cardiovascular system, peroxisome proliferator activated receptors (alpha and gamma) in hypertension, diabetes/obesity, and renal failure, role of humoral factors in subarachnoid hemorrhage (stroke) and diabetes mellitus.

Investigators/Collaborators

Adebayo Oyekan DVM, PhD, FAHA (Director)

Momoh Yakubu PhD (Visiting Scientist)

Weimin He MD, PhD (Research Assistant Professor/Scientist)

Choi Myung PhD Research Associate

Katsuri Rangana PhD (Collaborator)

Zivar Yousefipour MS, PhD (Collaborator)

PROFILES OF RESEARCH INSTITUTES/CENTERS

CENTER FOR HEALTH DISPARITIES RESEARCH:

CARDIOVASCULAR DISEASES AND HIV

ESTABLISHED – 2011

PRINCIPAL INVESTIGATOR: DR. ADEBAYO OYEKAN

PHONE: 713-313-7156 AND 713-313-4258

The Center for Health Disparities Research is a joint initiative of the National Heart, Lung, and Blood Institute of the National Institutes of Health and Texas Southern University (TSU) with the goal that the Center for Health Disparities Research will synergize with ongoing research activities at the Center for Cardiovascular Diseases. The center will augment and strengthen TSU's research capabilities and resources in biomedical and behavioral research.

GOALS: The goal of the Center for Health Disparities Research in Cardiovascular Disease and HIV is to reduce disparities in HIV and CVD among disparate populations in the city of Houston. In addition, the Center seeks to enhance the biomedical research capability of TSU in discovering solutions to health and other problems that disproportionately affect urban minorities. These efforts should close the gap in mortality and morbidity associated with HIV and CVD among disparate populations, including African Americans and Hispanics.

TASKS: Working collaboratively with professional and lay communities to develop cutting edge biomedical and behavioral science research, the major tasks are:

- Prevention and control of cardiovascular disease through healthy eating and physical activity
- Promotion of cardiovascular healthy living behaviors
- Professional education and community service

KEY FUNCTIONS

- Creation of new scholarly works that provide results that push the frontiers of public health science
- Research and development
- Translation and dissemination of evidence-based programs and practices
- Collaboration with community partners
- Policy development and analysis

Investigators/Collaborators

Adebayo Oyekan DVM, PhD, FAHA (Director)

Angela Meshack DrPH, Assistant Professor, Department of Health and Kinesiology

James Essien DrPH, Professor, University of Houston (Member, Advisory Board)

Mustafa Lokhandwala PhD Professor, University of Houston (Member, Advisory Board)

Ronald J. Peters, Jr., Dr.PH. Associate professor of behavioral sciences at the University of Texas School of Public Health.

PROFILES OF RESEARCH INSTITUTES/CENTERS

TSU HIGH PERFORMANCE COMPUTING CENTER
ESTABLISHED – 2008
DIRECTOR: DR. CHRISTOPHER J. TYMCZAK
PHONE: 713-313-1849 WEBSITE: <http://hpcc.tsu.edu>

Texas Southern University's High Performance Computing Center (TSU-HPCC) was established to promote research and teaching on campus through integrating leading-edge high performance computing and visualization for the faculty, staff and students of Texas Southern University. The HPCC provides consulting and assistance to campus researchers with experimental software and/or hardware needs. We also provide training in parallel and grid computing. HPCC will serve as a liaison between various teams that are engaged in research. We work to support, configure and port applications to HPCC resources. HPCC has computational resources which include two Linux clusters. Ares, installed in December 2008 has sixteen dual-slot quad-core nodes with Intel Xeon 5350 2.0 Ghz processors with 8 Gigabytes of memory connected via dual Gigabit ethernet. The full parallel cluster has a total of 128 cores and a total memory of 128 Gigabytes, with a peak speed of 0.672 Teraflops. Hades, installed on January 2010, has eight dual slot hyperthreaded quad core nodes with the Intel E5520 2.33 GHz Xeon Processor with 12 Gigabytes of Memory connected via a 10 Gigabit ethernet using an Ultra low latency Arista 7124S switch. The full parallel cluster has a total of 128 virtual cores and a total memory of 96 Gigabytes, with a peak speed of 0.783 Teraflops.

The High Performance Computing Center at TSU has been awarded a grant of \$220,000 by the National Science Foundation for expanding its research capabilities. The funding secured will allow a doubling of the present computational resources, lifting TSU to a competitive position in terms of capabilities, similar to ones offered by Rice University and surpassing University of Houston's. Directed by Dr. Tymczak (Physics), and co-directed by Dr. Vrinceanu (Physics) and Dr. Khan (Computer Science); the High Performance Computing Center's goal is to enhance learning and improve student achievement at Texas Southern University by integrating state-of-art technology into the classroom. Computational Sciences and High Performance Computing are rapidly becoming more and more relevant in many industries, and therefore TSU students have a chance to get first hand training in modern computational techniques, giving them a strategic advantage in the labor market. Our resources have been supporting a growing community of researchers who apply the intensive computational techniques to solve complex problems in Physics, Chemistry, Computer Science, Biology and Engineering. Our vision is that Texas Southern University becomes a regional leader in promoting a mobile learning environment, outside the traditional classroom, by integrating new innovative technology and advanced computational concepts.

CENTER FOR RESEARCH ON COMPLEX NETWORKS
ESTABLISHED – 2011
DIRECTOR: DR. WEI WAYNE LI
PHONE: 713-313-1871

Our goal is to conduct innovative and multidisciplinary research of national significance in the area of complex networks and expand the pool of minority and underrepresented students to pursue advanced graduate studies to meet the future needs of the nation in critical principles and technologies of network research, and to become a nationally recognized center of excellence in multidisciplinary research developing and using advanced networking methodology, integrating research with education and profoundly impacting society via the advancement of technologies by enabling transformation in science and environmental diagnostics. The tasks of the Center include (1) To perform cutting-edge research and develop a technology platform through implementation of a cross-disciplinary and synergistic infrastructure at TSU and to establish TSU as an internationally renowned center of research in the areas of wireless, computational, and urban transportation environmental networks; (2) To develop novel theoretical models and computer simulation algorithms for the study of complex networks in wireless, computational and urban networks and to use these algorithms in practical real world applications, to achieve the advancement of the knowledge of the complex networks; integration of knowledge from diverse scientific areas to focus on the understanding of complex networks, and targeted practical applications in real world complex networks; (3) To positively impact underrepresented minority (URM) undergraduate, graduate and Ph.D. students by improved and enriched Center related research and educational experiences. In this regard, the existing Ph.D. program in environmental toxicology will be enhanced and a new interdisciplinary Master's degree program in Computational Science and Engineering (CSE) will be developed toward computational environmental toxicology and monitoring and modeling of environmental issues; (4) To implement and promote diversity in STEM disciplines, through innovative and relevant educational outreach initiatives and to recruit, retain and train members of URM groups. This will create a nationwide workforce and prepare minority students for leadership positions in the fast-changing global, scientific, engineering, and government sectors.

PROFILES OF RESEARCH CENTERS

UNIVERSITY INSTITUTE FOR TRANSPORTATION STUDIES

AVIATION S. T. E. M. RESEARCH CENTER

ESTABLISHED – 2010

DIRECTOR: DR. CHARLES GLASS

PHONE: 713-313-1847 OR 713-385-4028

The Aviation S.T.E.M. Research Center combines virtual laboratory airport simulation and a rigorous academic curriculum in a unique, fun, and educational experience. Our goal is to stimulate student interest in S.T.E.M. (science, technology, engineering, and mathematics) related careers and create avenues that attract diverse populations to our campus. Additionally, educators, industry professionals, and students examine current and new applications of transportation concepts. The Research Center provides a platform to establish new partnerships and nourish new ideas between the academic and professional communities. Students explore job opportunities such as airport management, flight, air traffic control, and homeland security through the use of our state-of-the-art virtual simulation labs, field excursions to aviation facilities, classroom interaction, and guest speakers. This approach to aviation education gives the student added value over traditional flight training programs by focusing on interactive hands-on activities in a virtual airport environment. This environment supports the development of management, communication, planning, problem solving, team work, and flight operations skills. Furthermore, the Center prepares students for their chosen S.T.E.M. career, while building confidence and discipline in the workforce of tomorrow.

INNOVATIVE TRANSPORTATION RESEARCH INSTITUTE

ESTABLISHED – 2000

DIRECTOR: DR. LEI YU PHONE: 713-313-7282

CO-DIRECTOR: DR. FENGXIANG QIAO PHONE: 713-313-1915

PROJECT COORDINATOR: MINERVA CARTER PHONE: 713-313-7927

<http://itri.tsu.edu/ITRI/ITRI.htm>

GOALS: The Innovative Transportation Research Institute (ITRI) at TSU was developed in the fall of 2006 by expanding the former Urban Traffic and Air Quality Lab (UTAQL), which was first established in 2000. Recently, ITRI received funding as a member of five-institution consortium Trans-LIVE (Transportation for Livability by Integrating Vehicles and the Environment), a Tier One National University Transportation Center (UTC) funded by U.S. Department of Transportation, which also includes University of Idaho, Virginia Tech, Old Dominion University, and Syracuse University. The goals of ITRI are to develop, evaluate, optimize, and recommend comprehensive strategies for traffic congestion mitigation, mobile source emission reduction, fuel consumption saving, urban transportation planning, and ITS development, through the smart utilization of advanced technologies, large scale computer simulation methods, complex modeling systems, and state-of-the-art lab equipments.

TASKS: ITRI conducts research and outreach through five designated efforts: (1) transportation modeling and simulation, (2) vehicle emission testing and air quality analysis, (3) Intelligent Transportation System (ITS) technology applications, (4) driving behavior studies, and (5) education, training, and technology transfers. ITRI is equipped with state-of-the-art lab facilities such as: mobile traffic van, full-motion driving simulator, MiniTranStar (real-time traffic surveillance system through Houston TranStar), and portable emission measurement systems. ITRI has conducted research projects for Federal Highway Administration (FHWA), National Science Foundation (NSF), National Institute of Standards and Technologies (NIST), Air Force Research Laboratory (AFRL), Texas Department of Transportation (TxDOT), Houston Advanced Research Center (HARC), Southwest Region University Transportation Center (SWUTC), and other public and private entities. Beginning 2012, ITRI cosponsors a Joint Maritime and Trans-LIVE Summer Transportation Academy (STA) program for high school junior and senior students to promote their interests in transportation studies. In 2013, ITRI has launched a K-12th grade educational outreach by implementing a transportation and environmental curriculum for primary and secondary schools.

OTHER RESEARCH CENTERS

CENTER ON THE FAMILY

ESTABLISHED – 1990

INTERIM DIRECTOR: DR. NAJLA NAJIEB

PHONE: 713-313-7870

GOALS: To offer opportunities for advancing and implementing multi- and interdisciplinary studies and research on family life issues and to become the University's vehicle for building public support and advocacy through direct service provisions and comprehensive planning for crisis intervention. **TASKS:** Research and service efforts focus on life challenges of children, youth, and the elderly.

THE MINNIE T. METTERS WRITING CLINIC

Established – 1986

DIRECTOR: LANA REESE

PHONE: 713-313-7981

GOALS: The Writing Clinic, provides Computer-Assisted Instruction (CAI) and Traditional Instruction (TI) in writing skills—sentence structure, grammar, usage, mechanics, and basic organization and development of compositions. The Clinic's primary objective is to assist students in becoming responsible writers who can organize and correct their own errors and apply composition principles and concepts to their writing assignments. The Clinic is developing a databank of information on student performance. The Writing Clinic is NOT a proofreading, editing, correcting, quick-fix service and does not assist in preparation of specific class assignments on which the student will receive grades. When students have questions or concerns about specific class assignments, they are encouraged to arrange a conference with their classroom instructors. Students can call the Grammar Hotline (713-313-7981), if they have a question concerning grammar and composition. In addition to CAI and TI, students may view videos or CDs or listen to audio cassettes on both composition and literature. **TASKS:** Measuring Student Progress in Compositional Essay Writing. Web-based learning.

UNIVERSITY COUNSELING CENTER

ESTABLISHED: 2003

DIRECTOR DR. SHAYNA LEE, M. D.

PHONE 713-313-7817

Our Mission University Counseling Center (UCC) exists to help students enhance their academic and personal well-being. The UCC seeks to provide counseling and support services, crisis intervention, outreach, accommodations and support for students with disabilities, support services for alcohol and drug related issues, and referral services for TSU students. We also offer consultation, education, training, and prevention strategies to faculty, staff, and the university community. We seek to promote an environment of inclusion, personal development to positively impact student retention. Our Vision It is our vision to be of significant value to the TSU community, nationally recognized as a leader among University Counseling Centers and to provide effective resources to enhance students' progress towards the fulfillment of their personal development and academic goals. In striving to expand the roles of helping professionals, our staff will be proactive and responsive to the changing needs of the growing and diverse student population resulting in student retention and graduation. The University Counseling Center is committed to the continual development of services and training programs, which represent the highest standards of excellence. Our Motto "Real People. Real Problems. Real Solutions!" Our Goals To provide a safe and therapeutic environment that is comfortable, aesthetically pleasing, and accessible to all enrolled students.

PROFILES OF COLLEGES/SCHOOLS



COLLEGE OF SCIENCE AND TECHNOLOGY

The College of Science and Technology (COST) is dedicated to integrating sciences and contemporary technologies, through education, scholarly activities, and community service; meeting the needs of a diverse graduate and undergraduate student population while addressing critical urban issues within a global economy.

The College offers 10 B.S. degrees, 5 M.S. degrees, and one interdisciplinary Ph.D. degree through 10 academic departments, Aviation Science and Technology, Biology, Chemistry, Computer Science, Engineering Technology, Environmental Science and Technology, Industrial Technology, Mathematics, Physics, and Transportation Studies.

The College is engaged in several areas of basic and applied research. Research activities in the college revolve around a number of Research Centers. These include the NASA Research Center for Biotechnology and Environmental Health (NASA/URC), the Center for Research on Complex Networks (CRCN), the Center for Transportation Training and Research (CTTR), the National Transportation Security Center of Excellence for Petro-Chemical Transportation (NTSCE-P), the Innovative Transportation Research Center (ITRC), the High Performance Computing Center (HPCC), and the Environmental Research and Technology Transfer Center (ERTTC). There also exist many stand alone research programs managed by individual faculty members.

The College has developed numerous laboratory facilities that support the faculty and students in their research endeavor, including Cell Signaling Research Lab, Enhanced Core Analytical Lab, MiniTranStar Lab, Full-Motion Driving Simulation Lab, Mobile Traffic Lab, Portable Emission Measurement System Lab, Full-Motion Flight Simulation Lab, Virtual and Remote Accessible Lab, Advanced Networking Lab, and IPTV and Multimedia Networking Lab. Some of the major equipment available on campus to our researchers and collaborators include a Preconcentrator System 7100 and Canister equipment, Agilent 6890 with MSD GC, Agilent 7500A ICP/MSD, Agilent Series 1100 HPLC/MSD, Dionex DX-600 Ion Chromatograph, FTIR Spectrometer, Centrifuges, Scintillation Counter, Differential Scanning Calorimeter, Tensile Strength Analyzer, Thermal gravimetric Analyzer, SEM as well as others too numerous to list.

COLLEGE OF EDUCATION



The mission of the College of Education at Texas Southern University is “to provide competent career professionals for effective service in urban schools, utilizing research, collaboration, and application in seeking solutions to teaching, learning, and behavioral challenges facing urban populations”. The College provides courses of study leading to academic degrees in four instructional departments.

The Department of Counselor Education prepares counselors, who value equity and equality, to meet the demands of a culturally and linguistically diverse clientele. Graduates are prepared for a wide range of positions, such as community/school counselors, counselor educators, advocates, consultants, and administrators.

The Mission of the Department of Curriculum and Instruction is to provide an education for pre-service teachers, post-baccalaureate teachers, educators and specialists that will enable them to assure a developmentally appropriate and equitable education for students from diverse populations. The Master of Education and Doctor of Education degree programs offer advanced studies for experienced educators.

The Department of Educational Administration & Foundations offers Masters’ and Doctoral degrees in Educational Administration. The mission is to prepare individuals who are competent and capable, and who possess a strong awareness of their responsibility to organize, lead and manage efficient and effective educational institutions.

The Department of Health and Kinesiology prepares majors in both Health and Human Performance and serves the general needs of fitness and skill development for the general student body. The department’s mission is to prepare students as competent teachers, leaders, researchers, behavioral scientists and health administrators who are able to serve urban and non-urban populations.

Three broad categories frame the research activity in the College of Education. These include Student Achievement, Professional Development and Leadership. Specific research areas include adult learning styles, homeless students, retention and graduation patterns, especially in STEM fields, significance of HBCUs, critical race theory, licensure examination passage rates, American Muslims at HBCUs, reducing HIV stigma, and exercise programs for seniors.

atograph, FTIR Spectrometer, Centrifuges, Scintillation Counter, Differential Scanning Calorimeter, Tensile Strength Analyzer, Thermal gravimetric Analyzer, SEM as well as others too numerous to list.

PROFILES OF COLLEGES/SCHOOLS



THURGOOD MARSHALL SCHOOL OF LAW

The mission of the Thurgood Marshall School of Law is to expand opportunities for the underserved in the legal profession; prepare a diverse group of students for leadership roles in the legal profession, business and government; and offer leadership in teaching, research, and service. Since 1947, Thurgood Marshall School of Law has been a catalyst for initiating courageous conversations and a progenitor of equality, diversity, and opportunity. As a community of change agents, our law school community has empowered the disenfranchised and underserved by preparing lawyers to practice law and to shape social policy. With this empowered heritage, our highly diverse law school faculty is a community of internationally and nationally recognized scholars whose legal scholarship enriches, embraces, and celebrates an array of legal issues in energy, legal pedagogy, health care, and the U.S. Constitution, among others. Thurgood Marshall School of Law's primary degree offering is the Juris Doctor (J.D.). The law school's Immigration and International Law Institute also offers a certification in International and Immigration Law. Moreover, the law school's Earl Carl Institute for Urban and Social Policy provides students the opportunity to research various social policies in conjunction with their law studies. TMSL also offers a joint J.D.-M.B.A. degree in conjunction with TSU's Jesse H. Jones School of Business as well as a joint J.D.-M.P.A. degree from the university's Jordan-Leland School of Public Affairs.



BARBARA JORDAN - MICKEY LELAND SCHOOL OF PUBLIC AFFAIRS

The Barbara Jordan - Mickey Leland School of Public Affairs (BJ-ML SOPA) was originally established in 1974 and reestablished in 2002 as a cornerstone to fulfilling Texas Southern University's special purpose mission as an institution of higher education for urban programming. The school offers degrees in Administration of Justice, Public Affairs/Public Administration, Political Science, and Urban Planning and Environmental Policy. The mission of the Barbara Jordan-Mickey Leland School of Public Affairs is to educate a new generation of global change agents committed to addressing and offering solutions to the global urban challenges of the 21st century. To fulfill this mission the faculty of BJ-ML SOPA is actively engaged in theoretical and practical research in our degree granting areas. To support this research the school has established the Barbara Jordan Institute (BJI) which assist its faculty and other scholars efforts to create, enhance, and expand intellectual capital in America and globally. An academic journal will be published by BJ-ML SOPA through the BJI as a part of its commitment to academic achievement and the intellectual pursuit of knowledge. The first volume of this journal will be published in the 2014 academic session.

THE SCHOOL OF COMMUNICATIONS

"Believe in the dream and create the opportunity"

The mission of the School of Communication, which includes the Center for Professional Media Studies, is to educate professionals to a high level of excellence in the disciplines of mass and human communication. Ranging from human communicative interaction to digitally driven mass communication. The unique and rich history of Texas Southern University, and the individual and collective perspectives of its students, allows the school to prepare and position its graduates for leadership in communications industries throughout the state, nation and world. The Center for Professional Media Studies is home to the 35 year -old plus radio station KTSU-FM, a state-of-the-art radio station. The School of Communication also houses a multi-million dollar cable television production and broadcast facility, production and laboratory facilities for print media. The School is committed to an interdisciplinary academic experience dedicated to the development of leaders and skilled practitioners in the several disciplines of human and mass communication. The vision of the School is to foster a collegial community of faculty, staff and students who collectively and individually strive for leadership in the fields of communication, scholarship, education, and information services. We work to develop and evaluate programs that foster students' ethical, social, professional, and intellectual development in the communications fields. While nurturing students' capacities to think skillfully, and critically, we also strive to deepen their commitment to social values such as kindness, helpfulness, personal responsibility, and respect for others. We believe these qualities are essential to leading humane and productive lives in a democratic society.

PROFILES OF COLLEGES/SCHOOLS

COLLEGE OF PHARMACY AND HEALTH SCIENCES

The TSU College of Pharmacy and Health Sciences (COPHS) plays an integral role in providing the health profession industry manpower for the city of Houston, the State of Texas and the nation. The mission of the COPHS is to produce quality health care professionals, especially African-Americans and other ethnic minorities, who are competent in health care delivery, including the provision of patient-centered care and other health care services and programs.

The School of Pharmacy was established in 1949 and graduated its first class consisting of 13 students in 1952. For over 60 years, the College has distinguished itself by graduating 27% of the Black pharmacists practicing nationwide and 55% of Black pharmacists currently practicing in Texas. The college has also produced an impressive list of graduates from diverse racial and ethnic backgrounds. TSU through the College of Pharmacy and Health Sciences is the 42nd member institution of the Texas Medical Center (TMC) and has expanded its programs to a 30,000 square foot facility located on the TMC John P. McGovern campus, only eight minutes from the TSU main campus.

The mission of the COPHS is to produce quality health care professionals, especially African-Americans and other ethnic minorities, who are competent in health care delivery, including the provision of patient-centered care and other health care services and programs. In fulfilling its purpose, the College is committed to providing an innovative, productive and receptive learning environment for research and scholarly activities and services; and developing cross disciplinary programs to reduce health disparities among minority and other disadvantaged populations

In Fall Semester 2009, the College had an enrollment of over 1,500 pre-professional and professional students. Notably, the COPHS is the only academic college in the state to offer the doctor of pharmacy (PharmD) degree and five health sciences programs leading to bachelor of science degrees in environmental health, health administration, health information management, clinical laboratory sciences and respiratory therapy. Currently, the TSU environmental health program is the only National Environmental Health Science and Protection Accreditation Council (EHAC) accredited program in Texas. The college also offers graduate programs leading to a MS degree in health care administration and MS and PhD degrees in pharmaceutical sciences.

The instructional and research objectives for the COPHS are achieved by 48 full-time and 14 part-time faculty. The COPHS also benefits from the instructional efforts of a large cadre of voluntary faculty and preceptors.

The research programs in the College are anchored by the RCMI Institute for Biomedical and Health Disparities Research; the NHLBI Center for Cardiovascular Diseases and the NCMHD Center of Excellence in Health Disparities Research-Community Cardiovascular Disease and Stroke. Areas of research of particular interest to the college include asthma, atherosclerosis, cancer, hypertension, neurotoxicology, novel drug delivery systems, pharmacokinetics, renal disease and stroke.

The following is a list of academic program accreditations and a certification: BS Clinical Laboratory Science (National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)) ☒ BS Environmental Health (National Environmental Health Science and Protection Accreditation Council (EHAC)) ☒ BS Health Information Management (Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM))

JESSE H. JONES SCHOOL OF BUSINESS

“Believe in the dream and create the opportunity”

Half a century following its establishment, the Jesse H. Jones School of Business (JHJ) at Texas Southern University (TSU) continues to make history as the first Historically Black College and University business school to receive accreditation in 1967, and the fastest-growing school within TSU with approximately 1,900 students. Since its inception, JHJ has produced leaders and learners who have helped shape communities, cities, states, and nations around the world.

In recognizing the demands that leadership imposes on managers and the special challenges that face our students, the School of Business emphasizes the development of self-confidence, poise, and communication skills. Our commitment is not just jobs for our graduates, but providing them a foundation for life-long leadership.

That foundation begins with our building, which is the showpiece of the Texas Southern University campus. The 78,000 square foot building on three floors, features 23 classrooms, as well as complete facilities for the Department of Business Administration, Department of Accounting, Gerald B. Smith Center for Entrepreneurship and Executive Development, Economic Development Center, Center for Economic Education, Business Student Services, Career Services Center, and an Administrative Suite. All classrooms are state-of-the-art, including the latest in multimedia, and networked to allow links to a vast number of capabilities such as distance learning.

The building is a learning teaching environment that simulates the corporate environment. In addition, this facility enhances the community by having space such as the 75-seat Lecture Hall that is utilized for community functions. The building strongly reinforces the mission of the Jesse H. Jones School of Business, which is “to provide the professional education essential to those who aspire to positions of responsibility in business, government and community service”.

The concept of the building as a first-class facility is carried through all areas, from the 200-seat auditorium with its cherry wood paneling, to the two Executive Classrooms designed to meet the needs of Houston’s business community or the busy executive pursuing an MBA. The Jesse H. Jones School of Business projects a business ambiance, combined with the capability to implement current and emerging technologies.

PROFILES OF COLLEGES/SCHOOLS



THOMAS F. FREEMAN HONORS COLLEGE

The program in the Thomas F. Freeman Honors College includes elements that ensure that scholars develop and apply research perspectives and skills that prepare them for their lives as citizens and leaders in their local, national and world communities in the age of the global. At the center of that preparation is a background in the liberal arts and sciences that students need to develop in order to understand the universe. They secure that background in their general education (university core) courses, courses on the three major themes in the College (the Interdisciplinary, Ethics/Aesthetics/Philosophy, and Local/National/Global, themes), and a computer skills course. In HON 101, Multidimensional Phenomena and Interdisciplinary Studies, students clarify aspects of, and examine imperatives in, their majors. In HON 202, Ethics, Aesthetics and Philosophy in the Age of the Global, they study ideals that guide understanding, judgment and practice in the imperatives. In HON 203, Relationships Among the Local, National and Global, they place the imperatives within such contexts as local, national and global communities. In HON 207, Computer Use in Research, Presentations and Multimedia, they develop the skills applicable in conducting research, preparing reports and presentations, and preparing and publishing electronic portfolios. In at least two courses in general education, two upper-level courses within their majors, and one approved upper-level course outside their majors, students apply the themes, and if possible, the skills. They ideally would do so in ways that enhance their understandings of the imperatives. Students also must complete a terminating course in which they apply their education. This course may be an internship, or a research or creative or professional project, in which they focus on one of the imperatives they will have studied in earlier courses. They will receive guidance from faculty members (for the projects) or from faculty members and site supervisors (for the internships). One result of this course will be a special document that follows the conventions of the research report. In addressing the imperative in the internship or project and the related document, students will meet the following requirements: they will identify its local or proximate, regional or national, and global, aspects; they will apply qualitative and quantitative methods; they will integrate insights from at least three disciplines; they will apply at least one ethical, aesthetic or philosophical principle in clarifying the objective(s), describing the methodology, and discussing the implications. Thus they will apply the range of insights and research skills they will have acquired in the College and University. During their programs of study, students in the Honors College will make presentations to College, University and external audiences, who will offer them feedback on their work on the imperatives. The College plans to give special awards to students who produce exemplary internship reports or research/creative/professional project reports. The College also plans to compile these reports into special collections, and to publish their highlights. Through the terminating course, students will develop insights and skills they will use as they pursue further education and as they develop and implement new ideas in the work place. In addition, in the Honors College program that culminates in the terminating course, students will develop the habit of acquiring sound knowledge over extended periods in preparation for making critical differences as members of their local, national or global communities.

COLLEGE OF LIBERAL ARTS AND BEHAVIORAL SCIENCES

The Barbara Jordan - Mickey Leland School of Public Affairs (BJ-ML SOPA) was originally established in 1974 and reestablished in 2002 as a cornerstone to fulfilling Texas Southern University's special purpose mission as an institution of higher education for urban programming. The school offers degrees in Administration of Justice, Public Affairs/Public Administration, Political Science, and Urban Planning and Environmental Policy. The mission of the Barbara Jordan-Mickey Leland School of Public Affairs is to educate a new generation of global change agents committed to addressing and offering solutions to the global urban challenges of the 21st century. To fulfill this mission the faculty of BJ-ML SOPA is actively engaged in theoretical and practical research in our degree granting areas. To support this research the school has established the Barbara Jordan Institute (BJI) which assist its faculty and other scholars efforts to create, enhance, and expand intellectual capital in America and globally. An academic journal will be published by BJ-ML SOPA through the BJI as a part of its commitment to academic achievement and the intellectual pursuit of knowledge. The first volume of this journal will be published in the 2014 academic session.

RESEARCH SEED AND TRAVEL GRANTS

RESEARCH SEED GRANT AWARD RECIPIENTS 2013-2014

Primary	Title of Research Topic	Award
College of Liberal Arts and Behavioral Sciences		
Albertina Hughey	Digital Humanities and the Interdisciplinary Composition of	\$4,000.00
School of Public Affairs		
Jeffrey Lowe	Community Land Trust Viability in the Third Ward	\$4,000.00
Sarmistha Majumdar	The Scope of the Social Media as a Tool for the Public Involvement in Transportation Projects: A Case Study	\$3,000.00
Ashraf Mozayani	A Study of the Metabolism and Pharmacology of Selected Unusual Synthetic Cannabinoids	\$8,500.00
Anthony Rodriguez	The Social Aspect of Urban Forestry and Wildlife Preservation at the Institutional Level: A Case for a Change in Standing	\$4,000.00
Sheri Smith	Short changed: An in Depth Analysis of the Life of the Disadvantaged Living in America's Food Deserts and the Potential Impact of the City's Re-storing Policies	\$3,500.00
Earthea Nance	Evaluating the Impacts of Flood Risk Policy Reform on Vulnerable Communities	\$5,500.00
College of Science and Technology		
Maruthi Sridhar Bhaskar	Geospatial Models to Map Mercury Dynamics at Watershed Scale	\$7,500.00
Nancy Glenn	Some Algorithmic Aspects of Linear Quantile Mixed Models and Other Longitudinal Data Analysis Methods	\$4,000.00
Mario Hollomon	Assessment of the Impact of Autophagy Inhibition and Anticancer Drug Treatment on Ras Driven Cancer Cells	\$10,000.00
Yachi Wanyan	An Expert System to Rationally Select Appropriate Artificial Intelligence Tools for Civil Engineering Problems	\$8,000.00
College of Pharmacy and Health Sciences		
Flora Estes	Pediatric Hypertension: Who's Keeping Watch	\$4,500.00
Sondip Mathur	Initiating Scholarship in Inter-Professional Education (IPE) at the TSU College of Pharmacy and Health Sciences	\$4,500.00
Kasturi Ranganna	Epigenetic Mechanism as an Approach to Target Atherosclerosis	\$9,000.00
Renard Thomas	Non-Invasive VOC Biomarkers of the Heart Transplant Rejection	\$8,500.00
Munder Zagaar	Cognitive and Developmental Effects of Periadolescent Synthetic Cannabinoid Use	\$8,000.00
Thomas Freeman Honors College		
Candy Ratliff	Analysis of the Criminal Justice Response to Victims of Sexual Violence in Harris County	\$4,000.00
College of Education		
Saswati Nina Saha	Help Me Help My Child Learn: Parent Perspective on the Role of the Public School Systems in Educating Their Children with Autism	\$5,500.00
Total		\$106,000.00

RESEARCH SEED AND TRAVEL GRANTS

RESEARCH TRAVEL GRANT AWARD RECIPIENTS 2013-2014		
Recipient	Title of Research Topic	Award Amount
Collette Bloom	Re-Examining Factors that Influence Persistence of African American High School Enrollment in Science and Mathematics College Preparation Courses (2) A Path-Model to Determine Performance-Based Funding for Public and Private Historically Black Colleges and Universities (HBCUs)	\$1,350.00
Alexis Brooks de Vita	Annual Conference of the College Language Association	\$1,150.00
Rockel Brown	Representin' the Ladies: A Negotiated Response to Tyler Perry's Portrayals of African American Female Characters	\$486.66
Ashraf Mozayani	A Study of the Metabolism and Pharmacology of Selected Unusual Synthetic Cannabinoids	\$1,050.00
Robert Mupier	Institutionalized Police Corruption: A Threat to Counter-Terrorism In African countries; (2) Victims, Offenders, International Law, Jurisdiction, Jihad and Hostage/Barricade Situations	\$1,103.00
Emiel Owens Jr.	Re-Examining Factors that Influence Persistence of African American High School Enrollment in Science and Mathematics College Preparation Courses (2) A Path-Model to Determine Performance-Based Funding for Public and Private Historically Black Colleges and Universities (HBCUs)	\$1,350.00
Qisheng Pan	The Effects of Urban Heat Islands on Racial and Income Distribution: A case Study in Houston	\$1,300.00
TOTAL		\$7,789.66

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AWARD / LUNCHEON PROGRAM

MONDAY, APRIL 8, 2014

AWARD / LUNCHEON PROGRAM

STERLING STUDENT LIFE CENTER, TIGER ROOM, 3RD FLOOR

11:00 AM – 1:00 PM

Facilitator *Linda M. Gardiner, Ph.D.*
Director, Research Enhancement and Regulatory Services

Greetings *Sunny E. Ohia, Ph.D.*
Provost, Vice President for Academic Affairs, Vice President for Research

Opening Remarks *Adebayo O. Oyekan, Ph.D.*
Associate Provost and Associate Vice President for Research

Introduction of Speaker

11:10AM

“Therapeutic Plants”



Shishir Shishodia, Ph.D.

Associate Professor, Department of Biology
College of Science and Technology
Texas Southern University

~Lunch Served~

12:00PM

Award Presentations

12:35PM

Faculty Oral Presentation
Staff Oral Presentation
Student Poster Presentation
Faculty Poster Presentation
Staff Poster Presentation
Student Oral Presentation

Closing Remarks

12:55

PRESENTER'S PROFILE



Cheryl McCurdy, Ph.D.

Dr. McCurdy is an associate professor at the University of Texas Houston Health Science Center. She has conducted Social Science Research Council/American Council of Learned Societies and National Institute on Drug Abuse funded research and CDC HIV Prevention programming in Dar es Salaam, Tanzania for over 25 years. During the last ten years her work has focused on HIV prevention among heroin users in Dar es Salaam. During the last five years she has worked on the ethical, social, and legal implications (ELSI) of issues related to the human microbiome. She was recently awarded funding for an H3Africa project examining ELSI issues surrounding the conduct of genomic and sickle cell disease research in Cameroon, Ghana, and Tanzania.

Her publications are in public health, medicine, and African Studies journals and books. She is co-editor and contributor to *'Wicked' Women and the Reconfiguration of Gender in Africa*, on the board of the African Studies Association, and lead author of the Addiction article cited in the New York Times examining the now declining practice of flashblood among Tanzanian heroin injectors who shared their blood as an act of kindness to lessen their friend's withdrawal pain. During the 2012-13 academic year she was a fellow in the Rice University Seminar, "Human Trafficking - Past and Present, Crossing Boundaries, Crossing Disciplines" focusing on the crosscutting discourse on drug trafficking and human trafficking in East Africa.

Drawing on her deep and long-term research in Tanzania over the last 25 years, Dr. McCurdy will discuss the ways she developed partnerships with hard-to-reach populations, members of civil society, and Tanzanian researchers and how together they worked to transform research to policy. In her HIV prevention work this led to harm reduction interventions that include outreach and a methadone clinic.



Shishir Shishodia, Ph.D.

Shishir Shishodia, Ph.D. is an Associate Professor of Biology at Texas Southern University. He earned his Ph.D. in Biotechnology from Banaras Hindu University, Varanasi, India, and did his postdoctoral fellowship at the University of Texas M.D. Anderson Cancer Center. His research interests include cytokine signaling, the role of transcription factors in tumorigenesis, and modulation of transcription by natural products. He has identified several natural compounds that exhibit anticancer properties and has published over 60 peer-reviewed papers, 10 book chapters, and co-edited the books *Resveratrol in Health and Disease* and *the Molecular Targets and Therapeutic Uses of Curcumin in Health and Disease*. Dr. Shishodia is a recipient of the BHU Medal for securing highest grades in MS Zoology Program at Banaras Hindu University, India. He received the Theodore N. Law Odyssey Special Fellow Award for outstanding scientific achievements at the University of Texas MD Anderson Cancer Center, Houston, Texas and the Texas Southern University Scholarly Research/Creative Activities Excellence Award. At The College of Science and Technology, Texas Southern University, he was awarded the Distinguished Research Award, Distinguished Service Award and multiple Dean's Leadership Awards.

