ABOUT THE INITIATIVE PROGRAM

Since its inception in 2009, the 21st Century Graduate and Professional Student’s Academic Studies Initiative (commonly known as The Initiative) has strived to enhance the graduate student experience at Chicago State University. Funded by the United States Department of Education with one of only five federal MPBI grants in the nation (Masters Degree Programs at Predominantly Black Institutions), the Initiative has supported students in four disciplines: Biology, Geographic Information Systems, Mathematics/Computer Science, and Occupational Therapy.

Through the program, Initiative Students have:

- Traveled to and presented at local and national conferences;
- Received financial support and tuition assistance;
- Received laboratory, research, and other school supplies;
- Visited the Library of Congress and access rare and unique sources of information for their research;
- Attend a series of academic and life-training workshops and
- Received financial literacy training.

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Justin K. Akujieze, PhD., Principal Investigator for the Initiative
Robert Warner, M.A., Assistant Principal Investigator
Barbara Burke, Office Manager
Alfred Ogbonnaya

Visit Us Online at:
www.csu.edu/centuryinitiative/

Questions, Comments, Submissions?
Contact us:
Chicago State University
Jacoby Dickens Center Suite 201
Phone: (773) 995-5044 or 5066
Fax: (773) 995-3530
Email: aogbonna@csu.edu

“Only the Educated Are Free”
As the end of our 2013-2014 fiscal year approaches, the Masters in Public Black Institutions (MPBI) Program at Chicago State University, named the 21st Century Graduate and Professional Students’ Academic Studies Initiative, or simply The Initiative, is pleased for this opportunity to highlight our successes toward achieving our goal of enhancing the academic experience of a selective grouping of graduate and professional students.

The students who participate within the Initiative come from the departments of Biology, Occupational Therapy, Mathematics and Computer Science, and Geography (The geographical Information System (GIS) students, specifically.

The academic year’s Saturday Morning Breakfast Seminar Series was, again, outstanding. The twelve workshops conducted included the following topics: the Benefits of reading, Writing Your Thesis, Leadership, and How to dig Like a Historian. In addition, of course, the workshops in Financial Literacy and Career Development were conducted. The workshop facilitators were faculty and staff here at the University as well as professionals from within the community.

The Initiative's workshop schedule is as varied and distinctive as it was because we want our students to become scholarly, well-read, well-rounded people. We want their completing their masters' degree program here at Chicago State University to be just a beginning. If they are to become the professional global leaders that we think they can be, in-fact need to be, our requirements of them are both audacious and expectant. Students over the five years, to-date, of the Initiative have received approaching a half a million dollars in scholarships. In the academic year August, 2013 to May, 2014, $105,932.00 was disbursed among a total of twenty-two (22) students. Additionally, we will pay educational costs for Initiative students who are enrolled as summer semester students.

The spring semester Initiative sponsored conference held in May, 2014 featured presentations by thirteen (13) students. Topics discussed by our students included: Why is ‘X’ the Unknown Variable, Decreasing Toxicity in CHO Cells with Tau by Strain Treatment Implications for Alzheimer's Disease, Spastin and Its Role in Stabilizing Microtubule Filaments, Poverty and Crime in the USA, Why are Inner City Boys Lagging Behind in Mathematical Achievement, Poverty and Sustainability: A Geographic Analysis of Poverty and Green Technology in Urban Chicago, and The Effects of Acute Alcohol Intoxication and Trauma on the Livers of Mice to reference only a sampling of talks. Our guest presenter was a Dr. Dennis Garrett, MD of the Chicago Area Health and Medical Careers Program housed at the Illinois Institute of Technology in Chicago.

In conclusion, a total of seven (7) Initiative students graduated this academic year, August, 2013 through May, 2014.

Dr. Justin K. Akujieze, PhD
Principal Investigator for the Initiative
Chicago State University
2013 MPBI 21st Century Initiative Workshop Series Presents:

Writing Your Thesis

Preparer: Dr. Ivy Dunn
Date: Sat. September 7, 2013
Time: 10:30 am-1 pm
Location: Conference Rooms B&C in the Student Union Building
Breakfast Will Be Served

This program is funded by the U.S. Department of Education under the MPBI grant (Master's Degree Programs at Predominantly Black Institutions).

MPBI 21st Century Graduate and Professional
9501 S. King Drive Chicago, IL 60628
Phone: (773) 995-5044 or 5066

Students' Academic Studies Initiative
JDC Suite 201
Fax: (773) 995-3530

CHICAGO STATE UNIVERSITY
Dr Ivy Dunn guides students through the thesis writing process
The 21st Century Initiative Workshop Series
Presents:

Orange, Gold, Green, Blue... Which Leader are You?

PRESENTER: Dr. Nicole Ford
LOCATION: Sun Room, fourth floor of the New Academic Library
DATE: Sat. September 21, 2013
TIME: 10:30AM

BREAKFAST WILL BE SERVED

This program is funded by the U.S. Department of Education under the MPBI grant (Master’s Degree Programs at Predominantly Black Institutions).

The Initiative
9501 S. King Drive Chicago, IL 60626
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JDO Suite 201
FAX: (773) 995-3530

HTTP://WWW.CSU.EDU/CENTURYINITIATIVE/INDEX.HTM

Chicago State University
Dr. Nicole Ford explaining activities during her leadership workshop
The 21st Century Initiative Workshop Series Presents:

A WORKSHOP ON FINANCIAL LITERACY

DATE: October 5, 2013
TIME: 10:30 A.M.
PRESENTERS: Dr. Coupet & Professor Arredondo
LOCATION: Sun Room 4th Floor of the New Academic Library

BREAKFAST WILL BE SERVED

This program is funded by the U.S. Department of Education under the MPBI Grant (Master's Degree Programs at Predominately Black Institutions)

MPBI 21st Century Initiative
9501 S. King Drive Chicago, IL 60628
PHONE: (773) 995-5044 or 5066
FAX: (773) 995 - 3530
HTTP://WWW.CSU.EDU/CENTURYINITIATIVE/INDEX.HTM
Dr. Coupet proctoring the Financial Literacy workshop.
THE 21st CENTURY INITIATIVE WORKSHOP SERIES PRESENTS:
THE BENEFITS OF MULTIDISCIPLINARY RESEARCH AND LEADERSHIP
OCTOBER 26, 2013

PRESENTER: Dr. Justin Akujieze

DATE: October 23, 2013

LOCATION: Sun Room on the 4th floor of the New Academic Library

TIME: 10:30AM
This program is funded by the U.S. Department of Education under the MPBI grant (Master’s Degree Programs at Predominately Black Institutions)

THE INITIATIVE
9501 S. King Drive Chicago, IL 60628
PHONE: (773) 995- 5044 or 5966
FAX: (773) 995-3530

HTTP://WWW.CSUS.EDU/CENTURYINITIATIVE/INDEX.HTM
Dean Akujieze leading a discussion on the benefits of interdisciplinary study
The 21st Century Initiative Workshop Series Presents:
How to Dig Like a Historian
November 9, 2013

PRESENTER: Ms. Aaisha Haykal, CSU Archivist
DATE: November 9, 2013
TIME: 10:30AM
LOCATION: Sun Room on the 4th Floor of the New Academic Library

BREAKFAST WILL BE SERVED

This program is funded by the U.S. Department of Education under the MPRES grant (Master's Degree Programs of Predominantly Black Institutions)
THE 21st CENTURY INITIATIVE WORKSHOP SERIES PRESENTS:
PREPARING YOURSELF FOR THE WORLD OF WORK/PHD
NOVEMBER 23, 2013

PRESENTED: Ms. Marsennia Wells

DATE: November 23, 2013

LOCATION: Sun Room on the 4th floor of the New Academic Library

TIME: 10:30AM

This program is funded by the U.S. Department of Education under the MPBI grant (Master’s Degree Programs at Predominately Black Institutions)

THE INITIATIVE
9501 S. King Drive Chicago, IL 60628
PHONE: (773) 995-5044 or 5066
FAX: (773) 995-3530

HTTP://WWW.CSU.EDU/CENTURYINITIATIVE/INDEX.HTM
Students listening intently to Ms. Marsennia Well’s presentation on job-hunting.
The 21st Century Initiative Workshop Series Presents: YOU ARE THE BALM IN GILEAD

DATE: January 25, 2014
TIME: 10:30 A.M.
PRESENTERS: Mr. Robert Warner
LOCATION: Cougar Cove on the 2nd floor of the Student Union Building

BREAKFAST WILL BE SERVED

This program is funded by the U.S. Department of Education under the MPBI Grant (Master’s Degree Programs at Predominately Black Institutions)

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FAX: (773) 995 - 3530
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Chicago State University
The 21st Century Initiative Workshop Series Presents: ANCIENT KEMET

DATE: February 22, 2014
TIME: 10:30 A.M.
PRESENTERS: Professor De Wit Williams
LOCATION: Cougar Cove on the 2nd floor of the Student Union Building

BREAKFAST WILL BE SERVED

This program is funded by the U.S. Department of Education under the MPBI Grant (Master's Degree Programs at Predominately Black Institutions)

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FAX: (773) 995-3530
HTTP://WWW.CSU.EDU/CE NTURYINITIATIVE/INDEX.HTM

Chicago State University
The 21st Century Initiative Workshop Series Presents:
FINANCIAL LITERACY

DATE: March 8, 2014
TIME: 10:30 A.M.
PRESENTERS: Mr. Luke Nwanunu
LOCATION: Cougar Cove on the 2nd floor of the Student Union Building

BREAKFAST WILL BE SERVED

This program is funded by the U.S. Department of Education under the MPBI Grant (Master's Degree Programs at Predominately Black Institutions)

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CHICAGO STATE UNIVERSITY
Mr. Luke Nwanunu answers a question at the end of his lecture
The 21st Century Initiative Workshop Series Presents:

THE BENEFITS OF READING

DATE: March 22, 2014
TIME: 10:30 A.M.
PRESENTERS: Professor Quraysh Ali Lansana
LOCATION: Cougar Cove on the 2nd floor of the Student Union Building

BREAKFAST WILL BE SERVED

This program is funded by the U.S. Department of Education under the MPBI Grant (Master's Degree Programs at Predominately Black Institutions)

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Chicago State University
Professor Quraysh Ali Lansana speaking about reading
**Student Profiles**

**21st Century Initiative**

**Student Profile**

Ms. Kennisha Anderson

**Estimated Date of Graduation:** May 2014

**Major:** Occupational Therapy

**Reason for Picking Major:** I find working with children to be very rewarding. It's something I would do even if it didn't pay.

**21st Century Workshop that affected me most:** My favorite workshop was the one on financial management. It taught me the importance of borrowing wisely.

**Plans to utilize degree:** I would like to open my own pediatric occupational therapy clinic.
Estimated Date of Graduation: Fall 2014

Major: Mathematics

Reason for Picking Major: [There are a] disproportionate number of minority (African American) male mathematics instructors in grammar schools, high schools, and colleges.

21st Century Workshop that affected me most: Learning how to write my thesis and conducting research for my thesis. This workshop left me with invaluable benefits. I now understand how to go about researching my topic correctly. Furthermore, I now understand what it means to use data correctly [without] bias. Moreover, I now understand how to quantify a claim. I [also] understand what question(s) to ask; consequently, I now understand how to turn my hypothesis into my thesis question(s).

Pursuing doctorate: Yes, I definitely will pursue my doctorate degree. I will be pursuing it in Mathematics.

Plans to utilize degree: I plan on teaching at both the high school level as well as the college level. In addition, I plan to write several books on Mathematics.
21st Century Initiative

Student Profile

Ms. Iesha Barton

Estimated Date of Graduation: Spring 2014

Major: Occupational Therapy

Reason for Picking Major: I wanted to be in a profession that helped people getting back to their prior level of function after they have experienced a decline in their wellbeing.

21st Century Workshop that affected me most and why:

The workshop that impacted me the most was the research workshop, because it helped me as I was starting my research project within the occupational therapy department.

Plans to utilize degree: [I plan to] work in a skilled nursing facility or outpatient setting.
Estimated Date of Graduation: Fall 2014

Major: Molecular biology

Reason for Picking Major: I wanted to continue my education in biology, this time with a focus on its molecular aspects.

21st Century Workshop that affected me most: The workshop on writing a thesis. It was very informative. The writing has been the most difficult aspect of finishing my program.

Pursuing doctorate: Yes, an MD.

Plans to utilize degree: I plan to apply to medical school after I complete my Master’s Degree.
Estimated Date of Graduation: Spring 2015

Major: Occupational Therapy

Reason for Picking Major: I like how they [Chicago State University] offered a combined curriculum. Additionally, I have a passion for improving one's quality of life (i.e. satisfaction with performing specific activities).

21st Century Workshop that affected me most: The workshop by Dr. Ford about identifying personality types. This workshop is helping me cope with various situations as well as improving my interaction with others.

Pursuing doctorate: Yes, I will pursue my doctorate in Occupational Therapy.

Plans to utilize degree: I want to work as an Occupational Therapist [and] consult with major companies regarding ergonomics in the workplace to prevent injuries, increase performance, and increase employee/customer satisfaction.
Estimated Date of Graduation: May 2014
Major: Masters of Science in Biology/Applied Physiology
Reason for Picking Major: I chose this major because of the courses offered under the Physiology track. I believe that this track will best prepare me for a doctoral program in Pathology.

21st Century Workshop that affected me most: I have benefited from all the workshops I attended while in the 21st Century Initiative program. However, I would have to say that the financial workshop affected me most. In this workshop, I received relative information on how to handle a number of financial issues, which arise when trying to manage housing, tuition, and my credit status with minimal income.

Pursuing doctorate (yes or no) if yes in what: Yes. Doctoral Program in Pathology
Plans to utilize degree: I would like to use my degree to do research for a commercial pharmaceutical company that supplies cancer patients with medicine.
21st Century Initiative

Student Profile

Ms. Nivea Lathan

Estimated Date of Graduation: Spring 2014

Major: Occupational Therapy

Reason for Picking Major: During my first year of college I had a difficult time selecting a major. Although I was undecided I knew I wanted to pursue a career in the healthcare field. During this time a relative of mine suffered from a diagnosis that required rehabilitation, both occupational and physical therapy. I was able to sit in on a few of the treatment sessions and witnessed the impact therapy had on my loved one. I was especially interested in occupational therapy because they engaged me in the sessions and related therapy activities to everyday life, such as dressing, bathing, and cooking. I did some research on the profession, such as education requirements and various populations and settings they work in. I wanted to choose a profession that put clients needs first and looks at them holistically.

21st Century Workshop that affected me most: The workshop led by Nicole Ford on the different types of leaders impacted me the most. This workshop helped me to identify leadership characteristics of others and identify my own. I enjoyed this workshop because not only did we discuss the importance of a leader working and communicating with team members, but we participated in an activity that demonstrated this importance.

Plans to utilize degree: Once I obtain my degree I plan on working with children within CPS or at a pediatric outpatient clinic.
21st Century Initiative

Student Profile

Mr. Eyad Massarwi

Estimated Date of Graduation: May 2013

Major: Math

Reason for Picking Major: One reason was my previous success in Math. During high school I was always at the top of my class. In fact, I got high scores in this subject because I developed [my] skills [enabling me] to solve any kind of math problem easily. Another reason was my desire to become a successful math teacher.

21st Century Workshop that affected me most: Orange, Gold, and Blue... Which Leader are you? Presented by Dr. Nicole Ford. [This workshop] will help me: understand people better, Process information differently, communicate more effectively and form successful partnerships/relationships.

Pursuing doctorate: Yes, in Math

Plans to utilize degree: I plan to teach in colleges and universities.
Estimated Date of Graduation: Spring 2014

Major: Geography

Reason for Picking Major: I am interested in studying the development of geographic systems.

21st Century Workshop that affected me most: Professional Development with Marsennia Wells and Financial Acumen with Professor Coupet.

Pursuing doctorate: Yes, in Geography.

Plans to utilize degree: I want to be a geography professor.
Estimated Date of Graduation: Spring 2014

Major: Mathematics

Reason for Picking Major: My choice of picking mathematics is predicated on the following reasons: One, I have an analytical mind, and with an M.Sc. Operations Research background, the choice of mathematics was beneficial to me. Two, currently I teach mathematics in Colleges as Adjunct Instructor; so I need to advance my knowledge in the subject. Three, combining mathematics and operations research will provide me with improved opportunities for employment in different areas of the economy.

21st Century Workshop that affected me most: Preparing for job interviews and resume writing. For the first time in the past five years, I can feel confident more than ever before, after the workshop, that my resume is nearer perfection, and would demand attention of employers. It could be better though!

Plans to utilize degree: Teach in the States or abroad, or work in private or public organizations as a mathematician or operations research analyst.
21st Century Initiative

Student Profile

Estimated Date of Graduation: Spring 2014

Major: Biology

Reason for Picking Major: I picked my major because I am very interested in science and learning about the human life cycle and plants as well. I like to learn about the fundamental concepts that make up life. That’s why I chose my major. I decided to pick my major in high school when I was a sophomore, when I took an AP Biology class and I enjoyed it.

21st Century Workshop that affected me most: The financial literacy workshop with Professor Arredondo and Dr. Coupet. It’s something that we don’t normally get taught. We don’t get taught anything about finances at school or at home, so it’s very important that we had a workshop that did.

Pursuing doctorate: Yes, I plan to get a doctorate in Biomedical Research.

Plans to utilize degree: I plan to change the world.
21st Century Initiative
Student Profile

Ms. Ruth Osborne
Ms. Terry Ruffin-Murungi

Estimated Date of Graduation: Summer 2014

Major: Biology

Reason for Picking Major: I want to go to professional school this major will increase my chances of getting acceptance and will prepare me for professional school.

21st Century Workshop that affected me most: Financial literacy. I was able to make clear decision on taking unsubsidized loan to help complete my program sooner through the advice of Dr Arrendado.

Pursuing doctorate: Yes, in Dentistry.

Plans to utilize degree: Get into a DDS/PHD program or scholarship to Dental school, and open up my own dental office in the future.
21st Century Initiative

Student Profile

Ms. Ronna Sajna

Estimated Date of Graduation: Fall 2014

Major: GIS

Reason for Picking Major: I chose Geographical Information Systems because my [program] chair suggested that it would boost my career. This program comes with a lot of job opportunities I wouldn't otherwise have access to.

21st Century Workshop that affected me most: Financial literacy. I was able to make clear decision on taking unsubsidized loan to help complete my program sooner through the advice of Dr Arrendado.

Pursuing doctorate: My PhD plans include GIS, Finance or Geography; I'm still working on my options (classes).

Plans to utilize degree: As a teacher/scientist I would hope to expose African Americans to the universe. The world is a big place, but very small. African Americans would think and make better decisions with global knowledge if expose to the globe.
**21st Century Initiative**

**Student Profile**

Ms. Shindana Sales

**Estimated Date of Graduation:** Spring 2014

**Major:** Mathematics

**Reason for Picking Major:** I would like to teach math in a junior college.

**21st Century Workshop that affected me most:** The [financial literacy] workshops give good insight for future financial planning.

**Plans to utilize degree:** To be able help students success in math even if they struggled in previous math courses/classes.
**21st Century Initiative**

**Student Profile**

Ms. Amanda To

**Estimated Date of Graduation:** Spring 2014

**Major:** Mathematics

**Reason for Picking Major:** I am a Mathematics major because I have decided to make a career change into the teaching profession.

**21st Century Workshop that affected me most and why:** The 21st Century Workshop that impacted me the most is the one on Internationalism with Dr. King. It reinforced how there are other opportunities and work available that can be just as great and fulfilling outside of the US in other countries. This workshop motivated me to think outside of the box and across borders for a possible future.

**Pursuing doctorate:** I may pursue a doctorate.

**Plans to utilize degree:** [I plan to utilize my degree] to pass [my] knowledge of math onto others in a practical and comprehensible manner as an instructor.
Mr. Darnell Windmon

Estimated Date of Graduation: Spring 2014

Major: Mathematics

Reason for Picking Major: I have an undergraduate degree in Civil Engineering, which requires a substantial amount of math training. My goal after undergraduate school has always been to continue in math education. That’s why I’m pursuing my Masters in Math at Chicago State University. I've always liked math. I believe it’s the challenge that intrigues me. Math is such an intricate part of the evolution of mankind. Math is not subjective like many disciplines. Math unites; it’s a language that transcends race, creed or color.

21st Century Workshop that affected me most: 21st Century Workshop has truly been a blessing. I've had the opportunity to meet and learn from great minds. The workshops are very informative, and the environment is one of mutual respect between the facilitators and the students. It’s a tremendous opportunity and I would recommend the initiative to any Graduate student that meets the requirements. The seminars were all informative and interesting; however the one that stood out to me was the one on leadership. Dr. Akujieze did a very good job at demonstrating why as academics it’s our charge to lead. To be leaders that spread goodness, knowing what’s good for others, “being fearless men and women of good will.” I agreed whole-heartedly with him.

Plans to utilize degree: After earning my Masters in Math I plan to teach on the college level. My goal is to help students with math anxiety. I believe my caring disposition, patience and math skill set will assist students to overcome their phobia in math. I believe that a passionate teacher can make all the difference in a student’s pursuit to learn and progress in mathematics.
THE FIFTH ANNUAL 21st CENTURY INITIATIVE GRADUATE AND PROFESSIONAL STUDENTS’ RESEARCH CONFERENCE

Saturday April 12, 2014

Keynote Speaker: Dr. John Bradley, CACHMP, IIT
Mr. Percy A. Austin

Title: Financial Literacy

Abstract:
Increasingly individuals are responsible for making their own savings decisions in order to accumulate sufficient resources to retire at the desired age and have an adequate retirement income. Individuals must decide when to start saving, how much to save, and how to invest their account balances. My research examines the role of financial education on retirement savings and illustrates several things i.e. how individuals alter their retirement goals and their savings behavior in response to improved financial literacy. Many policymakers and economists argue that financial literacy is the key to financial wellbeing. But why do many individuals remain financially illiterate despite the apparent importance of being financially informed? Two competing explanations for why consumers have trouble with financial decisions are gaining momentum. One is that people are financially illiterate since they lack understanding of simple economic concepts and cannot carry out computations such as computing compound interest, which could cause them to make suboptimal financial decisions. A second is that impatience or present-bias might explain suboptimal financial decisions. That is, some people persistently choose immediate gratification instead of taking advantage of larger long-term payoffs.
Mr. Joleki Cartman

Title: Decreasing Toxicity in CHO Cells With tau by statin Treatment: Implications for Alzheimer's Disease

Abstract
Alzheimer's disease (AD) is a neurodegenerative disease characterized by memory loss, confusion and loss of ability to perform everyday task. It affects about 12 million people worldwide. AD is characterized by the deposition of extracellular amyloid plaques and intracellular neurofibrillary tangles (NFTs). The major component of the NFTs are hyperphosphorylated and truncated tau proteins. Tau, mostly found in the central nervous system (CNS), binds to microtubules (MTs) and promotes assembly and stability. MTs are rigid hollow rods that support the architecture of cells including neuron for proper axonal transport. Currently, there is no cure for this debilitating disorder; but there are different drugs that treat just the symptoms. Recently statins have been used as therapeutic drugs for AD patients, though the results remain controversial. Some studies show that high cholesterol level is a risk factor to developing AD. Statins are drugs used to lower cholesterol (specifically the low-density lipoprotein known as LDL) level in the blood by inhibiting 3-hydroxy-3-methylglutaryl coenzyme A (HMG-CoA) reductase. HMG-CoA reductase is an enzyme that plays a major role in the synthesis of cholesterol in the liver. Our study focuses on the use of one of the statins, simvastatin, to examine its anti-toxicity and cell viability effect on Chinese Hamster Ovary (CHO) cell over-expressed with tau plasmid. The three different tau constructs to be used are four-repeat full-length tau, pseudophosphorylated tau (396/404 S->E) and truncated tau (Lys-254). This study will shed some light on how simvastatin works as a therapeutic drug for AD through its anti-NFT mechanism.

Ms. Tamara Freihat & Ms. Raja Alfraihat

Poverty and Crimes in the USA

We will compare the poverty rate in USA states and the crime rate, by previewing maps for different years and trying to analyze causes of high crime rates in some states.
Hereditary spastic paraplegia (HSP) is an inherited neurodegenerative disorder resulting from mutation of the microtubule severing protein spastin. Inheritance of this disorder has occurred through multiple modes and the genetic mutation has been identified on multiple chromosomes. In this disorder, affected individuals experience progressive spasticity of their lower limbs and weakness from degeneration of the descending and ascending tracts of the spinal cord. They also experience other afflictions like gait or incontinence. Why this degeneration occurs with no resultant remodeling is a major focus of research for scientists studying HSP. Remodeling (i.e. axonal regrowth) requires the proper severing of microtubules, which are the structures that form the cytoskeleton of the nerves in the spinal cord. In my research, I am studying the interaction between spastin, microtubules and three motor proteins involved in axonal regrowth. My project involves the expression of spastin (i.e. mutant and wild type) in Human Embryonic Kidney (HEK-293) cells and evaluation of its interactions and expression using Western Blot analysis, immunohistochemistry and immunostaining techniques. At this stage, I have successfully completed a transformation experiment with spastin DNA and a transfection experiment where spastin protein expression was proven using Western Blot analysis. My next step will be to observe the effect of spastin overexpression on the microtubule cytoskeleton in HEK-293 cells using Fluorescence-activated cell sorting (FACS). This experiment will provide the information for the second stage of my project.
Mr. Darius Holmes  

**Title:** A Mathematical Economics Study: The Effectiveness of Fiscal Policy during the late 2000, In the U.S.  

**Abstract**  
Fiscal policy describes two governmental actions by the government. The first is taxation. By levying taxes, the government receives revenue from the populace. Taxes come in many varieties and serve different specific purposes, but the key concept is that taxation is a transfer of assets from the people to the government. The second action is government spending. This may take the form of wages to government employees, social security benefits, smooth roads, or fancy weapons. Throughout this work, I plan to study the effectiveness of fiscal policy during times of economic hardship in the United States of America, In particular after the stock market crash of 2008. I claim that through the use of Keynesian balanced-multipliers with and without a tax rule, as well as with mathematical regression analysis that fiscal and monetary policy has not been very effective during the late 2000s U.S. economic crisis.

Mr. Fola Lala  

**Title:** The Effect of Melatonin on Plasma Markers of Inflammation and on Expression of Nuclear Factor-Kappa Beta in Acetic Acid-Induced Colitis in the Rat  

**Abstract**  
Melatonin is chemically known as N-acetyl-5-methoxytryptamine and it important in regulating circadian rhythm. It is synthesized by pineal gland during sleep and decline as we age. The basic receptors for this indolence substance (Melatonin) are three MT1, MT2 and MT3. In this research, the potential therapeutic effect of melatonin during acetic acid-induced colitis was study and the result shows that melatonin is not only effective in short term treatment of acetic acid induced colitis, but also it is highly effective in preventing acetic acid induced colitis.
Ms. Nivea Lathan

Abstract

My topic of choice is my Level 2 fieldwork experience. During this experience, I worked with adult and adolescent patients suffering from depression, anxiety, and bipolar disorder.

Mr. Eyad Massarwi

Title: Why is ‘x’ the Unknown Variable?

Abstract

In algebra, the letter 'x' is often used to represent an unknown quantity or variable. Similarly, in English, x represents the unknown, as in X-rays, which baffled their discoverer, and Malcolm X, who chose the symbol to represent the forgotten name of his African ancestors. So, “why is x the unknown variable?
Ms. Muriel Marseille

Title: On Poverty and Sustainability: A Geographic Analysis of Poverty and Green Technology in Urban Chicago

Abstract
Green technology/poverty alleviation, as an applied theory, is designed to reinvigorate employment in a society, as it manifests as working and middle class jobs. Also, it structuralizes effective energy use and leads to lower consumption. Moreover, it empowers users by decreasing dependence on foreign entities and fortifying reliance on self. So, if this "green" energy lowers living cost and is sustainable, than can employing them, especially in low income communities improve the quality of life for the inhabitants? In "On Poverty and Sustainability: A Geographic Analysis of Poverty and Green Technology in Urban Chicago," I will examine this phenomena, argue that the marriage of development strategies and green technology fundamentally dismantles poverty, and present the results of my analysis. My study is a geographical assessment based on the urban setting of Chicago. In terms of sustainability initiatives, I will focus on three markers and their impact on poverty indicators in the selected struggling communities. They are: literacy programs that incorporate aquaponics as the pedagogical vehicle in teaching at risk urban youth, solar/wind energy as a means to make housing more affordable in challenged urban communities, and urban farming to curtail the hopelessness of food deserts and malnutrition.

Ms. Ruth Osborne

Title: Neutrophil Extracellular Traps

Abstract
Immunology is the study of how the body protects itself from infections and diseases. In most organisms, protection against infections and diseases usually occurs at the cellular level. Neutrophils are specialized cells in the body that are involved in the initial response to invasion by pathogens. These cells are capable of ingesting any pathogen they come in contact with. Neutrophil extracellular traps (NETs) are a newly discovered mechanism of self-defense. It has been recently discovered that these cells are also capable of capturing pathogens by forming (NETs).
Ms. Terry Kathure Ruffin

Title: The Effects of Acute Alcohol Intoxication and Trauma on the Livers of Mice.

Abstract
The study is aimed at looking at the effects of acute alcohol intoxication and trauma on the livers of mice. Measurements of cytokines and chemokines ELISA and Western blots to measure levels of cyclooxygenase 2 an enzyme, which is induced by injury. Isolation of RNA and CDNA to do quantitative polymerase Chain reaction measure miRNA expression in liver samples mice. This study is important in getting to understand more about binge drinking and trauma, which is prevalent in college students. Looking at the liver an organ that performs functions like digestion, metabolism immunity and storage of nutrients will help in understanding diseases like ALD alcoholic liver disease.

Ms. Falechia Turman

Title: The Road to Success

Abstract
The purpose of this research is to identify students who are at risk of taking an enormous about of pre-college level courses and give those incoming students an extra resource to prepare student for college level courses. The students were put in a program created to accelerate the pathway to college-level courses. The goal of this research is to start more students with fewer remedial courses and more college level courses. The final phase involves students re-testing to see if they will test into college level courses after the 4-week program. This will allow more students to enroll in college level courses instead of remedial courses.
Mr. Darnell M. Windmon

Title: African American Inner City Education: Why Are Inner City Boys Lagging Behind in Mathematical Achievement? What are Some Solutions?

Abstract

Math is an essential tool that humans have used over the centuries to shape and define the world that we live in. Significant research indicates mathematics can be traced back to ancient Africa, mainly Egypt dating back to at least 3000BC. This was a period in time where the foundation of mathematics was laid so that subsequent thinkers could advance in the field of study to the heights that exist today. Even though arguably, the art of mathematics originated in a region where a darker hue of people were able to maintain a highly civilized and innovative society for millennia; statistics in the United States predominately in inner cities, suggest that today’s descendants from Africa, specifically young males tend to lie at the bottom percentile in the mathematical achievement department compared to their counterparts.

The mathematics achievement gap, between black inner-city students and their white counterparts has been well documented with numerical facts. As mathematics education researchers attempt to develop theories and practices that assist in eradicating the gap, they would serve mathematics education well if they expanded the sphere of their research into the socio-cultural, economical and psychological arena. My research was guided by the thought: African American Inner City Education; Why are Inner City boys lagging behind in Mathematical Achievement? What are Some Solutions?

To assist in expanding the sphere, my research presents a review of key historical and current theoretical perspectives regarding the schooling experiences of African American inner city boys and their challenges to achieve on a high mathematical level.