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;
- Attended 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, Editor

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
21st Century Initiative Students Have Presented at or Attended These Academic Conferences
2009-2013
These sessions are extraordinary.

The career development workshop worked wonders for me.

I love being able to learn new things with this program.

I enjoyed every session and benefited personally from each. I think they are an asset for the students who participated.

I hope the program is extended after the 6th year term.

Each workshop was great. I have gained valuable facts and information on each one.

Each workshop was great. I have gained valuable facts and information on each one.

The workshops help [me] shape my life.
A Word From The Dean

As our fourth grant year draws to an end, Chicago State University's Master in Public Black Institutions (MPBI) program (titled: The 21st Century Graduate and Professional Students' Academic Studies Initiative or simply The Initiative), has chosen to make a few observations about the program, our efforts and goals, and the students who make up the Initiative:

The Initiative Students

This program year Initiative students:
- Received over $100,000 in scholarships
- Made 35 academic presentations at local and national academic conferences
- Received laboratory supplies and research tools
- Had the opportunity to attend workshops

The students at Chicago State University, who make up this program, are future biologists, geographers (GIS), occupational therapists, and mathematicians. Everything we do within the Initiative—every workshop conducted, every ad-hoc counseling session held—is designed to enhance our student's educational experience. That being said we cannot disregard their hard work and passion for their respective disciplines. We have been fortunate to work with many brilliant students as: mentors and a financial support network.

Workshops

Strengthened by the practical reality of a synergistic and analytic approach to the complex problems plaguing modern society, we rejected the notion that authentic and comprehensive ideas could be developed by working solely with faculty and students within any one particular discipline. Conscious of these realities as we began conducting our work, the Initiative found it necessary to establish as its primary principle, an inter-disciplinary approach to problem solving. We have been able to accomplish this multi-disciplinary objective of the project by providing our students with an assortment of diverse workshop based learning experiences. As a result all of our workshops were designed and integrated into the work-plan to emphasize an integrated discipline strategy aimed at breaking the barrier of subject singularity and adding comprehensive value to the Initiative graduate student learning experience.

Thirteen workshops were presented last academic year (2012-2013). Topics ranged from “The Benefits of Reading” to “The Importance of Maintaining Good Physical Health”.

In order to help with students’ state of mind and mental health as a result of the constant academic and societal pressures facing them; we organized a workshop with Chicago State University’s Counseling Department titled, “How to Maintain Psychological Well-Being.”

To promote a synergy in our students between scholarly achievements and obligations outside of academics, to their communities, to their nation, and to the world, we developed and conducted workshops on “The Sociology of Authenticity” and “International Development.”

The two workshops required by the U.S. Department of Education, addressing financial literacy and career development were of course, also conducted. The average number of attendees per workshop was about 26 people.
Student/Faculty Relationships
We've encouraged our students to develop collegial relationships with their instructors and the staff within their respective departments. These necessary interactions are nurtured and re-enforced every time students and faculty collaborate on conducting research or attend research conferences together.

Through the success of the Initiative we have been able to send students to local, national, and international conferences including: The Annual Meeting of the American Association of Immunologists, The Annual Biomedical Research Conference for Minority Students, The ERN meeting for Emerging Researchers National Conference in STEM, the Annual AOTA (American Occupational Therapy Association) Meeting, the Annual Meeting of the Illinois GIS Association, and more.

Mentorship
Many of the workshop facilitators have become mentors and have made themselves available to Initiative students throughout the academic year. The Initiative staff has developed into a coaching and support network for the students. Though we are not mentors in the traditional sense we actively support our students’ efforts and encourage them to set high goals including pursing doctorates degrees.

In the closing years of this grant we hope to provide more students with the opportunity to enhance their graduate experience, utilizing the funds provided by the Department of Education, to provide Minority students in the sciences with a foundation for life-long learning and thus help foster scientific excellence and productive professional citizens.

Dr. Justin Akujieze
Principal Investigator for the 21st Century Initiative
There are many salient things that can be said about the graduate and professional students in the Twenty-First Century Initiative. I am of the opinion, after four years of working with these students that their most outstanding characteristics are their resilience and perseverance. This cannot be understated and should not be trivialized.

The vast majority of our students work full-time jobs; many are heads of household and primary care givers; like us all they too have bills, but their bills have to be balanced with classroom assignments and exams and then, of course they too are confronted, as are we all, again, with the “slings and arrows of outrageous fortunes,” not the Shakespearian variety, but the 21st century urban strain.

Some cry aloud, some privately and look dispirited and stymied but in short order they’re able to adjust to the rigors of modern life and the exactitude required of their academic studies; and they continue forward.

While the Initiative cannot take credit for manifesting this toughness, as it’s more resultant of their cultural experiences, we do want to harness and buttress this natural strength to enrich our students’ lives.

What we seek above all else to inculcate within the Biology, Occupational Therapy, Mathematics, and Geography students who spends time with us within the 21st Century Initiative is the fact that that they will become marvelous professionals. What the world needs most is serious, trained, educated, and well prepared global leaders who understand that her/his responsibility must be to change the world from what it is, with wars and poverty and illiteracy, to what it needs to be. This is the challenge that the 21st Century Initiative openly and purposefully assumes.

We know that our students are intelligent and we assert that with our aid their academic preparation will be enhanced.

Mr. Robert Warner
Co-Principal Investigator for the 21st Century Initiative
MPP 21st CENTURY INITIATIVE WORKSHOP SERIES PRESENTS:

PREPARING TO WRITE YOUR THESIS

PRESENTER:
Dr. Ivy Dunn

DATE:
Sat. September 15, 2012

TIME:
10:30am-1pm

LOCATION:
Conference Room A in the Student Union Building

Breakfast Will Be Served

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

MPP 21st Century Graduate and Professional Students’ Academic Studies Initiative

9501 S. King Drive Chicago, IL 60628
JDC Suite 201
PHONE: (773) 995-5044 or 5068
FAX: (773) 995-3590
HTTP://WWW.CSU.EDU/CENTURYINITIATIVE/INDEX.HTM

Chicago State University
Talking Points: The Top 10 Tips for Tackling Your Thesis
21st Century Initiative Workshop (9/15/12)
Facilitated by Ivy Dunn, PhD.

Tip #10: Avoid informal language.
- Contractions
- Humor
- Slang & Texting Abbreviations.

Tip #9: Don’t lie with statistics.
Types of data misrepresentation:
- Discarding unfavorable information
- Biased samples
- Data dredging
- Data manipulation
- Misleading graphs and charts

Tip #8: Write with style!

Format consistently.

In Special cases refer to a style manual:
- Online books and articles
- Online articles taken from printed work
- Secondary sources
- Abstracts as original sources
- Multi-volume works
- Government reports

Tip #7: Clarify the methods.
Also describe:
- Apparatus and instruments
- Research design and analysis
- Experimental manipulations and interventions

Tip #6: Construct a hypothesis.
- A statement; not a question.
- Reflects theory from relevant literature.
- Is testable.
- Clear association between variables.

Tip #5: Reveal the results.
- Summarize the data and the analysis that support your conclusions.

Tip #4: Stimulate discussion.
- Interpretation
- Integration (results and theory)
- Limitations
- Alternative explanations
- Future studies

Tip #3: Create the setting.
The Introduction contains:
- A Review of previous related research.
(Do not include references that you have not read)!
- The Problem and purpose.
- The Hypotheses.

Tip #2: Grab attention.
An abstract is:
- A comprehensive summary of the paper.
- The first thing read.
- May be the only thing read!
- 100-120 words.
- One or two sentences summarize each section of the paper.
- Written in third person.
- Active rather than passive voice.
- Include searchable keywords.

Tip #1: Stay encouraged.
MPBI 21st Century Initiative Workshop Series Presents:

A Workshop on Leadership

PRESENTER: Dr. Nicole Ford
DATE: Sat. September 29, 2012
TIME: 10:30am-1pm
LOCATION: The Sun Room 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 Predominantly Black institutions).

MPBI 21st Century Graduate and Professional Students’ Academic Studies Initiative
9501 S. King Drive Chicago, IL 60628 JDC Suite 201
PHONE: (773) 995-5044 or 5066  FAX: (773) 995-3530
WEBSITE: HTTP://WWW.CSU.EDU/CENTURYINITIATIVE/INDEX.HTM
Let’s Rap About Leadership (synopsis)

21st Century Initiative Workshop (9/29/12)
Facilitated by: Nicole Ford, PhD.

Many people have tried to define leadership, but it’s hard to do.

Leadership isn’t defined by personality, title, or position; rather, leadership defines each of these things within the individual. This program addressed student leadership development. Students were introduced to the idea of cultivating themselves and the importance of making the inward journey to bring forth their leadership skills. Rap lyrics were utilized to express educational themes about being authentic, communication, mindfulness, and the power of now. For example, "keeping it 100" is one of the newer rap terminologies. It means giving it your all, doing your best. That should be the goal of any student leader. In order to realize their full potential, leaders must give assignments or those individuals/organizations their full attention. Experiential activities were used to engage students to sharpen and deepen both leadership and followership skills through increased confidence, will power, as well as better decision making.

Dr. Ford explaining the rules of a group activity to the workshop attendees.
Dr. Ford explains the rules for an activity called “Minefield”

Initiative student Mr. Darnell Windom participating in the Minefield exercise.
The 21st Century Initiative Workshop Series Presents:
Maintaining Good Physical Health
With Dr. Thomas Britt
October 13, 2012


Sponsored By:

THE 21ST CENTURY INITIATIVE IS SPONSORED BY AN MPBI GRANT FROM THE US DEPARTMENT OF EDUCATION.

For more information contact:
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Barriers to Healthcare

POVERTY

Education
- compromises student achievement
- compromises teacher performance
- Gainful Employment
- Suitable Housing
- Adequate Nutrition
- Sedentary Lifestyle
- Available & Accessible Healthcare
- Negative Outlook on Life

POVERTY AND LIVING STATUS

If you are living alone or a single parent household, your poverty risk is much higher than persons living in married families
- Single Parent Household ........... 26.6%
- Living Alone.......................... 19.1%
- Married.................................. 5.8%

POVERTY'S ADVERSE CYCLIC IMPACT

- If you are poor, you live in a poor neighborhood
- You go to a poor school and get a poor education
- You get a poor job if you can find one
- You earn poor wages, which confines you to a poor neighborhood with poor housing
- Your children grow-up poor
- Your family invariably lives in a Food Desert
- You consume inadequate nutrition
- You have inadequate access & availability to healthcare
- Poverty results in poor health outcomes

CORRELATION BETWEEN EDUCATION & MEDIAN HOUSEHOLD INCOME

<table>
<thead>
<tr>
<th>Level of Education</th>
<th>Household Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>9th Grade</td>
<td>$20,805</td>
</tr>
<tr>
<td>12th Grade</td>
<td>40,456</td>
</tr>
<tr>
<td>Baccalaureate Degree</td>
<td>77,605</td>
</tr>
<tr>
<td>Professional Degree</td>
<td>&gt;100,000</td>
</tr>
</tbody>
</table>

LIFESTYLE MODIFICATION

- Improve Nutrition
- Increase Physical Activity
- Screening for common Chronic Diseases

ADEQUATE NUTRITION SHOULD FOLLOW THE A, B, C, M & V PRINCIPLES

- Adequate amount of essential nutrients, fiber, and energy
- Balance between nutrients
- Caloric control: Intake equal to expenditure
- Moderation: no excess in fat, salt, or sugar
- Variety of various food group
The 21st Century Initiative Workshop Series Presents:

A Workshop on Psychological well-being

With Dr. Tonya Hall

Saturday, October 27th 2012

JOIN THE INITIATIVE AT 10:30 AM ON SATURDAY OCTOBER 27TH, 2012 IN COUGAR COVE ON THE SECOND FLOOR OF THE STUDENT UNION BUILDING FOR A PRESENTATION BY DR. TONYA HALL.

BREAKFAST WILL BE SERVED

For more information contact: MPBI 21st Century Graduate and Professional Students' Academic Studies Initiative
9501 S. King Drive Chicago, IL 60628 JDC Suite 201
PHONE: (773) 995-5044 or 5066 FAX: (773) 995-3530
WEBSITE: HTTP://WWW.CSU.EDU/21STCENTURY/INDEX.HTM
Enhancing Psychological Wellness

According to Health Campus 2010, a key priority for university and college campuses is to focus on promoting healthy behaviors among students (American College Health Association, 2004).

Enhancing Psychological Wellness
A holistic view of wellness includes people taking care of their physical, mental, and social well-being including spiritual and emotional health (Myers, Sweeney, & Witmer, 2006).

What is psychological wellness?
Psychological Wellness is a state of balance between health and fitness physically, mentally, emotionally and spiritually.

Enhancing Psychological Wellness
Administer the Psychological Wellness assessment
Discuss strengths and weaknesses
Set goals for one year span

Another way to increase your psychological wellness is to actively manage your stress

What is stress?
In what ways have you tried to manage your stress lately
Administer the Perceived Stress Scale

WHAT IS STRESS?
Stress is your mind and body's response or reaction to a real or imagined threat, event or change. The threat, event or changes are commonly called stressors.
Stressors can be internal (thoughts,
beliefs, attitudes) or external (loss, tragedy, change).

**LEVELS OF STRESS**

**Eustress v. Distress**

Eustress or positive stress occurs when your level of stress is high enough to motivate you to move into action to get things accomplished.

**Distress**

Distress or negative stress occurs when your level of stress is either too high or too low and your body and/or mind begin to respond negatively to the stressors.

- **Alarm Stage**
- **Resistance Stage**
- **Exhaustion Stage**

**ALARM STAGE**

As you begin to experience a stressful event or perceive something to be stressful psychological changes occur in your body. This experience or perception disrupts your body’s normal balance and immediately your body begins to respond to the stressor(s) as effectively as possible.

**EXAMPLES**

- Cardiac - increased heart rate
- Respiratory - increased respiration
- Skin - decreased temperature
- Hormonal - increased stimulation of adrenal genes which produce an adrenal rush.

**RESISTANCE STAGE**

During this stage your body tries to cope or adapt to the stressors by beginning a process of repairing any damage the stressor has caused. Your friends, family or co-workers may notice changes in you before you do so it is important to examine their feedback to make sure you do not reach overload.

**EXHAUSTION STAGE**

During this stage the stressor is not being managed effectively and the body and mind are not able to repair the damage.

**EXAMPLES**

- Digestive disorders, withdrawal, headaches, tension, insomnia, loss of temper.

**BARRIERS THAT INTERFERE WITH EFFECTIVELY MANAGING STRESS**

- Attempting to do too much at one time;
- Setting up unrealistic time estimates;
- Poor time management;
- Procrastinating;
- Poor listening skills;
- Trying to do it all yourself (not seeking support/resources);
- Unable to say "no;"
- Trouble letting other people do their job;
- Impulsive snap decisions (not thinking things through);

Not taking responsibility for the quality of your life.

**I'M IN CONTROL - DISTRESS RELIEF STRATEGIES**

Feeling good about yourselves can be an effective buffer against stress. Eliminate unnecessary worries. Most worries are either passed on to us by another or conjured up in our imagination.

**GET PHYSICAL**

1. Relax neck and shoulders
2. Take a stretch
3. Get a massage
4. Exercise

**GET MENTAL**

5. Count to 10
6. Control your thoughts
7. Fantasize
8. Congratulate yourself
9. Ignore the problem if appropriate, after evaluation
10. Perform self maintenance
11. Talk to a counselor

**USE YOUR BODY AND MIND TOGETHER**

12. Take a break
13. Mindfulness
14. Try progressive relaxation
15. Try yoga
16. Try aroma therapy
17. Laugh

**DEVELOP NEW SKILLS**

18. Prioritize daily tasks
19. Learn something
20. Practice a hobby

*Essentials of Stress Management* (Sobel & Ornstein, 1996)
A WORKSHOP ON CREATIVITY
WITH PROFESSOR JOYCE OWENS ANDERSON
NOVEMBER 3, 2012

JOIN THE INITIATIVE AT 10:30 AM ON SATURDAY, NOVEMBER 3RD, 2012 IN THE SUN ROOM OF THE ACADEMIC LIBRARY FOR A PRESENTATION BY PROFESSOR JOYCE OWENS ANDERSON.

BREAKFAST WILL BE SERVED
Talking Points: Creativity Workshop

21st Century Initiative Workshop (10/27/12)
Facilitated by PROFESSOR JOYCE OWENS ANDERSON

WHAT I THINK YOU CAN DO TO INCREASE YOUR CREATIVITY

1. Practice generating ideas
2. Write them down
3. Try not to worry about dumb ideas
4. Make time to try out your ideas
5. If one idea doesn’t work, try another one
6. Research your idea to see if it has been done before
7. Read about creative ideas - you don’t have to be the first of the best, just a bit different
8. Work everyday to produce your product
WHAT ARE YOU GOING TO BE?
Dream it, Name it, Claim it.

1. Daydream
2. Read
3. Plot and Plan
4. Test your ideas on Friends
5. Collaborate
6. Act
7. Never fear failing
8. If you fail, start again

Creativity Develops In Individuals Because [They] Have:

1. **Permission to be creative**
   Allow yourself to think outside the box. Take a chance on being wrong, or different. What's an example of "outside the box"?

2. **Time to be creative**
   Designate time to doodle, write free association words, make up a song and lyrics, dance with no intention, use your imagination (what if?), and make art. What other activities do you consider creative ones?

3. **Incentives to be creative**
   You want to produce something. You want a good grade. You want to make money. What do you want?

4. **Education enhances creativity**
   Can you learn to be creative? Is everyone somewhat creative? You can be taught to be creative; practicing will make you more creative.

5. **Practicing is vital to creativity**
   To learn math, you have to practice what you are taught; to learn to drive, you have to practice what you are taught. You can be taught to be creative; practicing will make you more creative.

6. **Believing that you are creative**
   “Mind over matter”; “Willpower”, “Can-do”, hard work and determination are required. Do genes determine who is creative?
A Workshop on Career Development
with Ms. Marsella

Time: 10:30 AM
Date: November 10, 2009
Location: The Sun Room, 2nd floor of the New Academic Complex

Breakfast will be served.

Be sure to come early:
THE 21st CENTURY INITIATIVE IS SPONSORED BY THE US DEPARTMENT OF EDUCATION

CHICAGO STATE UNIVERSITY
21st Century Initiative
Ms. Marsinniea Wells helping students maximize their employment potential, with resume advice.
The 21st Century Initiative Workshop Series Presents:
A Financial Literacy Workshop
Saturday, December 1, 2012

**SPEAKERS:** Professor Richard Arrendondo & Dr. Ernst Coupet, Jr.

**DATE:** Saturday, December 1st 2012.

**TIME:** 10:30 AM

**LOCATION:** The Sun Room on the fourth 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 (Masters Degree Programs at Predominantly Black Institutions).
Professor Arredondo speaking to workshop attendees about investments

Dr. Ernst Coupet elaborates on financial planning
Join the Initiative at 10:30am on Saturday, FEBRUARY 9TH, 2013 for a Writing Workshop with CSU Professor Kim L. Delaney. The workshop will be held in the Sun Room on the 4th floor of the New Academic Library.

Breakfast Will Be Served

THE 21ST CENTURY INITIATIVE IS SPONSORED BY AN MPBI GRANT FROM THE US DEPARTMENT OF EDUCATION.
Professor Kim Dulaney leading the writing workshop
21st Century Initiative Presents:
A Workshop on Financial Literacy
Saturday, February 23rd, 2013 at 10:30AM

SPEAKER: Mr. Luke Nwanunu
LOCATION: The workshop will be held in the Sun Room on the 4th floor of the New Academic Library.

Breakfast will be served.

9501 S. KING DRIVE JDC 201  CHICAGO, IL 60628
TELEPHONE: (773) 995-5044  FAX: (773) 995-3530
Mr. Luke Nwanunu highlighting important aspects of financial planning
The 21st Century Initiative Workshop Series Presents:

A Workshop on Internationalism

Presenter: Dr. Margaret King
Date: March 9th, 2013
Time: 10:30AM
Location: The Sun Room on the 4th floor of the New Academic Library
Breakfast Will Be Served

Dr. Margaret King
Economics and Geography Faculty at CSU and International Economic Development Consultant

MPBI 21st Century Graduate and Professional Students’ Academic Studies Initiative
9501 S. King Drive Chicago, IL 60628 JDC Suite 201
PHONE: (773) 995-5044 or 5066 FAX: (773) 995-3530

THE 21ST CENTURY INITIATIVE IS SPONSORED BY AN MPBI GRANT FROM THE US DEPARTMENT OF EDUCATION.
THE 21ST CENTURY INITIATIVE WORKSHOP SERIES PRESENTS:

THE SOCIOLOGY OF AUTHENTICITY

WITH DR. BEVERLY JOHN

MARCH 23, 2013

JOIN THE INITIATIVE AT 10:30 AM ON SATURDAY MARCH 23RD, 2013 IN THE SUN ROOM OF THE NEW ACADEMIC LIBRARY FOR A PRESENTATION BY DR. BEVERLY JOHN.

BREAKFAST WILL BE SERVED

For more information contact: MPBI 21st Century Graduate and Professional Students’ Academic Studies Initiative
9501 S. King Drive Chicago, IL 60628 JDC Suite 201
PHONE: (773) 995-5044 or 5066 FAX: (773) 995-3530
WEBSITE: HTTP://WWW.CSU.EDU/CENTURYINITIATIVE/INDEX.HTM

THE 21ST CENTURY INITIATIVE IS SPONSORED BY AN MPBI GRANT FROM THE US DEPARTMENT OF EDUCATION.
Dr. Beverly Johns leading a workshop about the Sociology of Authenticity
The 21st Century Initiative Workshop Series Presents:

The Benefits of Reading
WITH Professor Quraysh Ali Lansana
April 6th, 2013

Join the Initiative at 10:30am on Saturday, April 6th, 2013 for a workshop on the importance of reading. The workshop will be held in the Sun Room on the 4th floor of the New Academic Library.

Breakfast Will Be Served

THE 21st CENTURY INITIATIVE IS SPONSORED BY AN MPBI GRANT FROM THE US DEPARTMENT OF EDUCATION.
Professor Quraysh Ali Lansana championing the benefits of lifelong reading habits to a group of Initiative Students
THE FOURTH ANNUAL 21st CENTURY INITIATIVE RESEARCH CONFERENCE:

SUPPORTING & EFFECTING HIGHER LEARNING AND IMAGINATION
APRIL 13, 2013
**Title: A-SAA CAN BE CONSIDERED A CHEMOKINE**

**Abstract**

Acute serum amyloid A (A-SAA) is a major acute-phase protein with cytokine-like properties that is expressed at sites of inflammation. A-SAA induces migration of immune cells to sites of inflammation and enhances adherence to epithelial cells. A-SAA plasma levels are 1000 times higher in patients with autoimmune diseases such rheumatoid arthritis (RA). The purpose of this study is to determine if A-SAA could be classified as a chemokine. A cytokine and a chemokine are small proteins made by cells in the immune system. Cytokines are messenger molecules, while chemokines are a distinct kind of cytokine that direct the migration of white blood cells to diseased or injured tissue. Chemokines induce chemotaxis, the movement of a cell or group of cells that follow a chemical messenger to a new location, especially leukocytes toward foreign microorganisms. Chemokines cause cells to change their shapes and adhere to epithelial walls inside vessels upon binding to receptors on their target. A new mathematical approach called the natural vector method was used for genome sequencing of all major chemokines and the protein SAA. A-SAA was clustered with two chemokines. The human receptors for these chemokines were subcloned into a mammalian expression vector. The vectors were transfected into rat basophil cells (RBL). FACS analysis has shown that these cells now express two human receptors, hCCR1 and HCLECR3, respectively. Future experiments will confirm if A-SAA is a chemokine by performing a calcium mobilization assay and map kinase activation assay when A-SAA binds to these receptors. [This study is supported by NSF grant DMS-1119612 awarded to Rong L He]
Mr. Ismael Reyna Jr.

Abstract
This presentation will cover a summary of topics and current events relating to graduate level work and research completed at Chicago State University Master of Public Health program. The topics covered will include: major contributions of public health practitioners, the science of epidemiology, environmental health issues, biostatistical analysis for collection of data, the need for research proposals and methodologies, minority health issues, and the disparities that exist in our communities today and what we need to focus on to decrease and eliminate them.
Ms. Ruth Osborne  
Title: Histological characterization of hollow and solid-stemmed genotypes of wheat (Triticum aestivum)

Ruth Osborne1, Jamie Sherman2 Luther Talbert2 Dale R. Clark3 & Christopher Botanga1  
1Department of Biological Sciences, Williams Science Center, Room 310, Chicago State University. IL 60628  
2Department of Plant Sciences & Plant Pathology, Leon Johnson Hall  
Room 419b, Montana State University. MT 59717  
3PNW Breeder & Specialty Lead,  
WestBred, 81 Timberline Drive,  
Bozeman, MT 59718-6994

Abstract
Wheat serves as a major cash/food crop in the United States and other parts of the world. Wheat farmers suffer major yield losses due to sawfly, Cephus cinctus, a pest that causes lodging by burrowing into the stem. Some wheat cultivars have stems with solid piths, making them resistant to sawfly. Characterizing the solid-stemmed phenotypes would offer the basis for engineering the trait into desirable wheat cultivars. The aim of this project was to evaluate the histological differences between hollow- and solid-stemmed wheat genotypes. Wheat NILS, having 97% similarity in their genetic makeup (except for the solid stem locus) were grown in the greenhouse and destructively sampled at 5-, 6-, and 7-weeks. Stems were snap-frozen, cross-sectioned and evaluated under a scanning electron microscope (SEM). Structural differences between solid and hollow-stemmed wheat were observed at the 7-week growth stage. The epidermis, vascular bundles, and parenchyma cells were observed in both classes of genotypes at 100x magnification. The solid-stemmed genotypes showed thicker epidermis and larger vascular bundles than the hollow-stemmed genotypes. However, there were no obvious differences in the parenchyma cells for both classes of the genotypes. Further analysis with ImageJ showed that the distance from the pith to the epidermis of the wheat stem was greater in the solid-stemmed phenotype than the hollow-stemmed phenotype. The ImageJ data confirmed an earlier report that solid-stemmed wheat had narrower stems than the hollow-stemmed wheat genotypes. We are currently seeking answers to the molecular basis of the observed differences.
Mr. Jovan Harrison

Abstract
I'm completing a Master's Project in Mathematics at Chicago State University; my presentation will cover a briefing on my survey regarding Urban Violence. The survey will compare the perception of violence in the communities of CSU students to the mass media's perceptions of violence. I plan on correlating the CSU statistics with government agencies.
Academic Reflections:

Mr. Calvin Burns

Ms. Mattie Carter
Dr. William Ebomoyi

Professor
Department of Health Studies
College of Health Sciences
Chicago State University

Presentation Title: **Genomics Applications in Public Health Across All Populations, Environment, and Work Settings**

About Dr. Ebomoyi

Dr William Ebomoyi holds a post-doctorate certificate in epidemiological science from the National Institutes of Health and a PhD from University of Illinois at Urbana-Champaign.

He is the inaugural chair of the Department of Health Studies at Chicago State University.

He is an International Health Consultant for the American Public Health Association, a member of the World Health Organization and a member of the Expert Committee in Global Environmental Epidemiology.
Biography

Col Damon T. Arnold, M.D., M.P.H., CMT (Ret.) is the Director of the Public Health Graduate Program at Chicago State University and an Adjunct Professor at the University of Illinois College of Medicine and the School of Public Health. Dr. Arnold was appointed as the 16th Director of Public Health on October 1, 2007 for the State of Illinois where he operated an agency of 1123 employees with an annual budget of over 600 million dollars. The agency was responsible for the public health concerns of the approximately 12.5 million residents within, and millions of annual travelers to, the State of Illinois. During his four years in this position, he brought millions of dollars to the State of Illinois and was very active on the local, state, and federal levels.

For 26 years, Dr. Arnold served in the Army National Guard as the Commander of the Joint Medical Command and State Surgeon General for years. He completed 17 over-seas missions to include locations in Africa, Central America, South America, Europe, the Middle East, and Asia. He was awarded the highly coveted Military Legion of Merit Medal from President Barack Obama for his achievements. Dr. Arnold was also awarded three Army Commendation Medals for his war-time deployments to Iraq and Kuwait where he served as the Officer in Charge of battlefield medical operations. During these deployments, he functioned as a mechanized infantry Combat Medic as well as a qualified Flight Surgeon on over 80 field operations. In addition, he received two National Defense Service Medals as well as awards upon the battle field.

Dr. Arnold obtained his undergraduate degree from Howard University in Washington, D.C. and both his M.D. and M.P.H. Degrees from the University of Illinois in Chicago, Illinois. He completed his Residency in Internal Medicine at Cook County Hospital, followed by a Residency in Occupational Medicine. In addition, he has completed formal training in Holistic Medicine for therapeutic massage therapy and acupuncture.

Dr. Arnold presently serves as a member of the Harvard University L.A.M.P.S. Committee, Institute of Medicine in Washington, D.C., Association of State and Territorial Health Officials, and several federal-based organizations. He has published many articles and contributed to books over the years.

(Information taken from: http://www.uic.edu/sph/minority-health-conference-2012/Damon-Arnold)
CONFERENCE: DTRA/NSF/NGA Algorithm Workshop 2012

LOCATION: San Diego, CA

DATE: November 26-29, 2012

PRESENTERS: Ms. Linda Omer (BIO) Dr. Rong He

ABSTRACT TITLE: A-SAA CAN BE CONSIDERED A CHEMOKINE

Abstract
Acute serum amyloid A (A-SAA) is a major acute-phase protein with cytokine-like properties that is expressed at sites of inflammation. A-SAA induces migration of immune cells to sites of inflammation and enhances adherence to epithelial cells. A-SAA plasma levels are 1000 times higher in patients with autoimmune diseases such as rheumatoid arthritis (RA). The purpose of this study is to determine if A-SAA could be classified as a chemokine. A cytokine and a chemokine are small proteins made by cells in the immune system. Cytokines are messenger molecules, while chemokines are a distinct kind of cytokine that direct the migration of white blood cells to diseased or injured tissue. Chemokines induce chemotaxis, the movement of a cell or group of cells that follow a chemical messenger to a new location, especially leukocytes toward foreign microorganisms. Chemokines cause cells to change their shapes and adhere to epithelial walls inside vessels upon binding to receptors on their target. A new mathematical approach called the natural vector method was used for genome sequencing of all major chemokines and the protein SAA. A-SAA was clustered with two chemokines. The human receptors for these chemokines were subcloned into a mammalian expression vector. The vectors were transfected into rat basophil cells (RBL). FACS analysis has shown that these cells now express two human receptors, hCCR1 and HCXCR3, respectively. Future experiments will confirm if A-SAA is a chemokine by performing a calcium mobilization assay and map kinase activation assay when A-SAA binds to these receptors. [This study is supported by NSF grant DMS-1119612 awarded to Rong L He].

Ms. Omer’s Reflections on the Conference:

“The DTRA/NSF/NGA Algorithm Workshop was a conference to present algorithms for threat detection. So most of the people attending were creating and using these algorithms to provide new defense theories.

Basically they were asking how can we provide new ideas to help the government with threat detection? The reason I got to go was not only are we [Dr. Rong L He's lab] funded by the NSF (National Science Foundation), but because we used a novel algorithm in our research called the Natural Vector Method.

This new method of genomic sequencing was recently founded and published by a group of researchers including Dr. He. There are people who can use it [Natural Vector Method] to sequence bacteria and viruses to prevent bioterrorism. The equation for this genomic sequencing helped provide me with further information needed to advance my research. So, attending the conference allowed me to witness how algorithms can not only help in the world of threat detection, but in the field of biology.

My work is based on previous research on a protein called acute-phase serum amyloid A (A-SAA) that been known to cause auto-inflammatory diseases, such as rheumatoid arthritis.

My research focuses on providing evidence that A-SAA should be considered a chemokine. My work uses molecular and cell biology to provide evidence that A-SAA is a chemokine.

I presented at the S.T.E.M conference last year in February with undergraduate and graduate biology, chemistry, math, and physics students. This is the first [conference] I've attended with primarily PhDs, teachers, post docs, and students already in a PhD program.
I was one of the few masters’ students there. They loved that my work involved biology and lab work since most of the people were statisticians and never worked in a lab. It was great to be in the spotlight. It was an amazing opportunity to attend and present and have the Initiative help provide me with the money to go to this conference. I was able to see how biology works with other disciplines like mathematics. It was amazing and I wouldn’t have been able to do it without them [the Initiative].”

Abstract

Serum Amyloid A is a protein produced by the liver during the acute phase reaction initiated by tissue injury. Serum amyloid A is normally present in plasma in only trace amounts. Once the acute phase reaction begins the SAA plasma concentration elevates nearly 1000-fold. SAA may also be produced at the local site of inflammation by macrophages. For example, SAA has been found in high concentrations in the arthritic joints of rheumatoid arthritis patients. Rheumatoid Arthritis, an inflammatory autoimmune disease, is characterized by a high degree of the differentiated T-cell subset Helper T-cell type 1 (TH1). TH1 cells function by releasing interferon gamma upon activation. Interferon gamma acts to recruit macrophages to the site of inflammation and enhances macrophage cytocidal activity. An elevated level of TH1 cells correlates with high interferon gamma production. In the case of RA, heightened interferon gamma production increases macrophage activation and prolongs the inflammatory response leading to chronic inflammation. Previous research using murine T cells has concluded that SAA is able to cause differentiation of naive T cells into TH1 cells. We suggest that SAA also has the ability to stimulate proliferation of TH1 cells at the local site of inflammation. Indeed, with the utilization of cell proliferation assay kits we were able to observe an heightened degree of proliferation of SAA stimulated murine T cells in comparison to IL-12 (control) as measured by optical density. Proliferation of TH1 cells is achieved through the production of IL-2 in an autocrine fashion. ELISA analysis of SAA-stimulated cells showed elevated levels of IL-2 secretion. Correspondingly, Western blot analysis showed SAA-induced activation of the MAPK pathway leading to IL-2 production. Based on these data, we indicate acute phase SAA as having proliferative effects of TH1 cells in murine T cells.
master’s thesis project that mapped public restrooms in downtown Chicago from 2011-2012, and interpreted their locations based on public space use and access. Restrooms were examined based on capacity (e.g. number of stalls, baby changing stations) and functionality (working order, gender specifics). Locations were examined first hand with male and female researchers. The presentation will describe current issues with public restrooms, and show restroom locations using static and interactive maps.

CONFERENCE: Allen Cognitive Network Conference
LOCATION: San Diego, CA
DATE: October 31-November 5, 2012
PRESENTERS: Melanie Plews OT with Faulty Advisor Dr. Sarah Austin
Abstract Title:
Suitability Analysis of Wind Energy Development on Brownfield, Landfill and Industrial Sites in Chicago Metropolitan Area
Part of the Paper Session:
Recycling Landscapes of Traditional Energies (energy transitions, renewables, brownfields, and environmental restoration)
scheduled on Wednesday, 4/10/2013 at 12:40 PM.

Author(s):
Valeryia Fyodorova* - Chicago State University

Abstract:
Wind energy is known not only for being a clean and renewable type of energy but also the development of the wind energy can increase the number of jobs and decrease the dependence on foreign oil. In 2011 renewable energy generated only about 5% of total U.S. electricity and 3% came from wind power. U.S. Energy Information Administration anticipates that by 2030 the potential of the U.S. to generate wind power will rise up to 20%.

According to wind power experts such as Paul Gipe, the installation of large scale wind turbines within city limits makes far more economic and environmental sense. The advantage of having large-scale wind turbines in a built environment is that it would minimize transmission loss, reduce cabling costs, simplify road access and lower impact on biodiversity. The purpose of this research is to evaluate the potential of wind energy development on brownfields, landfills and abandoned industrial sites in the Chicago Metropolitan area.

Research of wind power in urban areas was completed using Weighted Linear Combination method. This method helped to define the weight of relative importance for each selected site that carries wind energy potential. Next, the map layers were combined to obtain an overall suitability score that would further identify the most and the least suitable areas for wind energy development. Results of this investigation will be presented with focus on evaluating physical, human, and environmental impacts each selected site may have on the surroundings.
Abstract:
The City of Chicago has automated many municipal services increasing their accessibility to citizens via the city's website, resulting in greater efficiency and financial savings. Chicago is also considered one of the most digital citizen friendly cities in the United States for the comprehensive way in which open data has been made accessible through its data portal. A robust developer community is utilizing the city's free application programming interfaces (api's) to build free and commercially viable applications for wide range of uses from tracking arrivals of city buses and trains to projecting when your street gets snowplowed.

For statistical purposes, Chicago is divided into 77 Community Areas that for years have provided insights into differences and disparities for a city once labeled "the most residentially segregated large city in America." The city's demographics today are remarkably similar to those of 30 years ago and though Chicago has computer training initiatives and digital infrastructure build out plans to accelerate digital literacy throughout the city, the question of averting a digital divide along familiar lines of class and race separation remains an open one.

This study examines the geographic distribution of access to city's data on those services with user location components, maps that data across the 77 community areas and considers the implications of areas engaged or disengaged with Chicago's digital services. Also considered is the impact of volunteers building applications that crowd source neighborhood organizing.