

*“PROMOTING RESEARCH AND EDUCATION  
IN SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS (STEM)”*

*2006 CLOSING CEREMONY  
SUMMER RESEARCH APPRENTICESHIP PROGRAM AND  
RESEARCH EXPERIENCES FOR UNDERGRADUATES IN BIOTECHNOLOGY*

*FORT VALLEY STATE UNIVERSITY*

*A UNIT OF THE UNIVERSITY SYSTEM OF GEORGIA*

*TUESDAY, AUGUST 1, 2006*

*C. W. PETTIGREW FARM AND COMMUNITY LIFE CENTER*



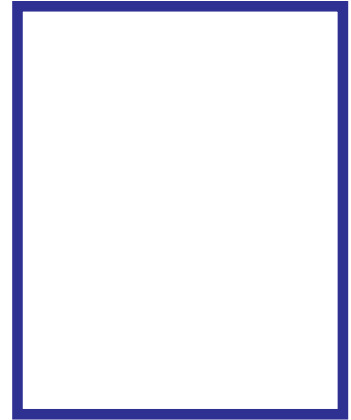
**Left to Right > Front Row:** Ciera Mudd **2nd Row:** Tanisha White, Maira Castaneda, Veronica Ortiz, Anias Santiago, Tomia Hines; **Third Row:** Brian Bell, Luis Otero, Chris Qualls, Justin Mann, Naml Shabazz, Preston Brown; **Fourth Row:** Chinakasiobi Mbata, James Inyangetor, Tiffany Campbell, Zakirah Muhammad, Brandon Bel, Jasmine Graham



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THE NATIONAL SCIENCE FOUNDATION  
(HBCU-UP AND REU-SITE PROGRAM)  
AND  
FORT VALLEY STATE UNIVERSITY



## A Message from the President



Dear SRAP and REU Program Participants:

Congratulations on completing the Summer Research Apprenticeship Program (SRAP) and Research Experiences for Undergraduates (REU) in Biotechnology Program at Fort Valley State University. We are proud of the SRAP and REU Programs, their offerings and opportunities, their faculty and staff, and we are certainly proud of you! We are glad that you took advantage of this tremendous opportunity because it indicates that you are serious about your education, your academic success and your future.

The value of hands-on experiences cannot be overemphasized. Your participation in the program provided you with hands-on experience, an intimate look at the field of biotechnology, and an opportunity to work with some of the most outstanding faculty in the sciences within the University System of Georgia. For those of you who are undergraduates in the REU program, we are sure your experiences validate your wise decision to choose FVSU as your university. And for those of you who are in high school, please know that your participation provided us with an opportunity to meet some of the brightest rising stars that education has to offer. This was a win-win situation, and we hope that you give FVSU the highest consideration when choosing your undergraduate institution.

As many of you know, education is a privilege in some parts of the world. At Fort Valley State University, we believe it is your right. We are proud that you are exercising your right to advance your education. Whether an undergraduate or in high school, we stand ready to assist you in any way that we can as you move forward educationally. We celebrate this occasion and your accomplishments with you, and we look forward to your continued success as you pursue academic excellence!

Sincere best wishes,

William H. Harris  
President

## Our Keynote Speaker



**Dr. Danielle N. Gray**  
**Princeton University, Princeton , New Jersey**

Dr. Danielle N.Gray, Assistant Dean of Academic Affairs and Diversity at Princeton University, received her bachelor's degree in mathematics at Xavier University of New Orleans, Louisiana; earned her doctorate in neuroscience with a concentration in molecular biology from Tulane University; and pursued her postdoctoral training at Harvard University and Baylor College of Medicine in genetics. Dr. Gray's educational training was fully subsidized by merit fellowships (United Negro College Fund-Merck & Co. and the Louisiana Qualifying Fund), amassing more than \$225,000 for stipend support for both her doctoral and post-doctoral training.

Although Dr. Gray's launched her career as an academic and administrator not more than six years ago, her career has been marked by a number of outstanding accomplishments, especially with regards to increasing access to the professoriate for underrepresented groups in the STEM fields. Most notably, Dr. Gray served as the Sr. Associate Director for one of the National Science Foundation Science and Technology Centers, the Center for Behavioral Neuroscience at Emory University, where she also served as a faculty in the Neuroscience and Behavioral Biology Program. During her tenure at Emory, Dr. Gray secured more than \$30 million in extramural funding from the National Science Foundation and the National Institutes of Health. These funds were used to design and implement the BRAIN (Behavioral Research Advancements program, a 10-week summer research initiative; PROMISE (Postbaccalaureate Research Opportunities for Minorities in the Sciences and Engineering) program, a post-baccalaureate program in the biological sciences; and the Emory-GaTech AGEP (Alliance for Graduate Education and the Professoriate) and Neuroengineering program. Collectively, these programs have provided more than 500 students the opportunity to experience firsthand the rigors of research and graduate study.

**Tuesday, August 1, 2006**  
**Room 110, C.W. Pettigrew Farm and Life Center**  
**Fort Valley State University**

**PROGRAM**

**Session I**

**Presiding: Ms. Kiofa Clark, 2006 FVSU Biology Graduate**

**8:15 a.m.** Welcome and Program Purpose  
**Dr. Mack C Nelson,**  
Dean, College of Agriculture, Home Economics & Allied Programs

**8:20 a.m.** Recognition of parents and guests

**8:30 - 10:20 a.m.** Presentations by SRAP participants

**- Presentations -**

**8:30 a.m.** **Brandon Bell and Brain Bell**, Incoming Freshman, Fort Valley State University  
The Effectiveness of Tahitian Noni Juice as a Nutritional Supplement for Horses  
Mentor: Dr. Curtis Borne

**8:50 a.m.** **Preston Brown**, Senior, Shiloh High School, Lithonia, Ga  
DNA Fingerprinting using Gel Electrophoresis  
Mentor: Ms. Kaye Knowles/ Dr. Sarwan Dhir

**9:00 a.m.** **Tiffany Campbell**, Incoming Freshman, Fort Valley State University  
A Case Study of Socio-Economic Aspects of Food Insecurity in the U. S.:  
Emphasis on PL107-188  
Mentor: Dr. Nathaniel Brown

**9:10 a.m.** **Jasmine Graham**, Incoming Freshman, Fort Valley State University  
Control of Escherichia Coli 0157:H7 on Beef Surface using Electric Pulse and Thin-Film Electrolyte Solution  
Mentor: Dr. Chau Nguyen

**9:20 a.m.** **Tomia Hines**, Incoming Freshman, Fort Valley State University,  
The Quality of Goat Milk as Evaluated by Somatic Cell Counts  
And Bacteria Cell Identification  
Mentors: Dr. Young Park/ Mrs. Xiaoling Ma/ Mr. Schauston

**9:30 a.m.** **Chinakaslobi Mbata**, Senior, Westside High School, Macon, Ga  
Encapsulation of Valeria Embryos  
Mentor: Mrs. Seema Dhir

**9:40 a.m.** **Blanton McGhee**, Senior, Peach County High School, Fort Valley, Ga  
The healthrisk on humans from infected Indoor Air Quality caused by pollutants.  
Mentor: Dr. George Keihany



- 9:50 a.m.     **Zakirah Muhammad**, Incoming Freshman, Fort Valley State University  
Effect of Breed on Meat Quality Characteristics in Goats  
Mentor: Dr. Govind Kannan
- 10:00 a.m.     **Luis Otero**, Incoming Freshman, Fort Valley State University  
Peach County Water Investigation  
Mentor: Dr. Melinda Davis
- 10:10 a.m.     **Christopher Qualls**, Incoming Freshman, Fort Valley State University  
The Life and Study of the Japanese Quail  
Mentor: Dr. Kashmiri Arora

- Break -

- 10:30 - 11.40 a.m.   **Presentations by REU program participants**
- Presiding: Ms. Arrisia Sims, Senior, Plant Science Biotechnology Major  
Fort Valley State University**

- Presentations -

## Session II

### Presentations by REU program participants

- 10:30 a.m.     **Maira Castaneda**, Sophomore, Metropolitan University, San Juan, Puerto Rico  
Optimization of *Agrobacterium* Transformation Parameter for *Lycopersicon  
esulentum* using GFP as a Reporter Systems  
Mentor: Mrs. Seema Dhir
- 10:40 a.m.     **Veronica Ortiz**, Senior, Interamerican University, San Juan, Puerto Rico  
Plant Regeneration of Valeria using Leaf Derived Callus  
Mentor: Ms. Kaye Knowles/ Dr. Sarwan Dhir
- 10:50 a.m.     **Tanisha White**, Senior, Fort Valley State University, Fort Valley, GA  
Effects of Plant Growth Regulators on Somatic Embryogenesis of Alfalfa  
Mentor: Dr. Hari Singh
- 11:00 a.m.     **Naml Shabazz**, Junior, Bainbridge College, Bainbridge, GA  
The Effects of Tap and Distilled Water on The Haemonchous contortus  
Mentor: Dr. Thomas Terrill
- 11:10 a.m.     **Anias Santiago**, Junior, Interamerican University, San Juan, Puerto Rico  
Electroporation Mediated GeneTransfer in *Stevia rebaudiana* Protoplasts  
Mentor: Dr. Sarwan Dhir



- 11:20 a.m.            **James Inyangetor**, Junior, Allen University, Columbia, South Carolina  
Assessment of Techniques for Isolation of Isolation of Genomic DNA  
Mentor: Dr. Hari Singh
- 11:30 a.m.            **Justin Mann**, Junior, Howard University, Washington, D.C.  
Transformation of Embryogenic Cultures of *Arundo donax* via Particle  
Bombardment  
Mentor: Dr. Sarwan Dhir
- 11:40 a.m.            **Sophia Ciera Mudd**, Junior, Fort Valley State University, Fort Valley, GA  
Use of GUS as a Marker Gene in *Agrobacterium* Transformation of Cherry  
Tomato  
Mentor : Mrs. Seema Dhir

### Session III

**Presiding: Mrs. Angela Askew Hite,  
Coordinator, HBCU-UP and REU- Site Programs**

**11:45-12:45 p.m.      Lunch  
Room 103/104, Pettigrew Farm and Community Life Center**

**Introduction of speaker      Ms. Thelma Madizma, 2004 Plant Science Biotech Graduate at FVSU,  
MS/ Ph.d Student at University of Florida, Gainesville, Fl.**

**Speaker                      Dr. Danielle Gray  
Assistant Dean of Academic Affairs  
Princeton University, Princeton, New Jersey,**

**12:45 p.m.                Dr. Larry E. Rivers  
President, Fort Valley State University**

**1:00 p.m.                Presentation of Certificates**

**1:15 p.m.                Comments on behalf of participants/parents**

**1:20 p.m.                Closing Remarks  
Dr. Sarwan Dhir, Associate Professor, Biotechnology  
Director, NSF HBCU-UP and REU-Site Programs**



## 2006 SRAP Programs Participants



**Brian Bell**

Graduate, Westover High School

His goals are to help make more fertile soil which will lead to a greater healthier outlook in plants. His interests are learning new things and playing sports, and working outdoors



**Brandon Bell**

Graduate, Westover High School

Brandon will be an incoming freshman at Fort Valley State University in the fall majoring in Biology. After he completes his four years at FVSU, he plans to attend graduate school and major in Marine Biology.



**Tiffany Campbell**

Graduate, Camden County High School

Tiffany's future plans are to attend FVSU this fall and major in accounting. Throughout her high school career, Tiffany participated in basketball, student council, and Future Business Leaders of America (F.B.L.A).



**Christopher Qualls**

Graduate, Camden County High School

In the fall he plans on majoring in Veterinary Medicine at Fort Valley State University. During the summer, he volunteered with KingsBay Veterinary Clinic.



**Zakirah Muhammed**

Graduate, Northeast High School

Zakirah was apart of the Science Club, Beta Club, and an editor for two years on the Salmagundi Staff (Northeast High School literary magazine). She would not only like to work with pets farm animals, but also with wild animals as well.



**Preston Brown**

Senior, Shiloh High School

Preston is an upcoming senior at Shiloh High School in Atlanta, Georgia. In the future he plans on majoring in both History and Biotechnology. His hobbies include cross country running and reading.