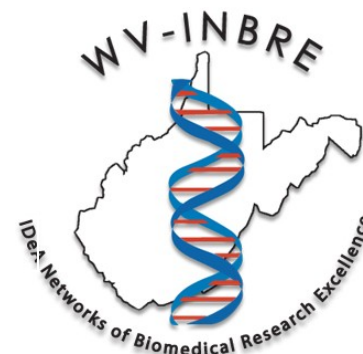


WV-INBRE NEWSLETTER

Volume 10

Fall 2007



Chancellor Noland creates West Virginia IDeA Research Council



Dr. Brian Noland, Chancellor, WV-HEPC, speaks at COBRE/INBRE Conference

West Virginia IDeA Network for Biomedical Research Excellence (WV-INBRE), marks the achievements of biomedical research in West Virginia through funding provided by the Institutional Development Award (IDeA)

The 3rd Annual West Virginia COBRE/INBRE Conference was held recently at the Embassy Suites in Charleston, WV on November 1-2, 2007. This conference, hosted by the

program of the National Center for Research Resources (NCRR) of NIH.

In his keynote speech, presented on Thursday evening, November 1st, Dr. Brian Noland, Chancellor of the West Virginia Higher Education Policy Commission (WV-HEPC), announced he was creating the West Virginia IDeA Research Council, to be chaired by Dr. Paul Hill, Vice Chancellor for Science and Research of the WV-HEPC.

The West Virginia IDeA Research Council will help to increase the state funding levels for biomedical research, as stated by Dr. Noland, by providing “a more direct line of communication and advice between researchers and state-level policymakers.” Dr. Noland further emphasized that “the creation of this research council will ensure that biomedical research will continue to play an increasingly important role in West Virginia.

Continued on next page

Inside this issue:

COBRE/INBRE Conference	1 - 2
WV-INBRE Summer Symposium	2 - 3
Dr. Tew - EAC Member	3
COBRE/INBRE Poster Presentations	4
Message from PI - Gary Rankin, PhD	5
Summer Students Working in the Labs	6 - 9
Summer Symposium Poster Presentations	10-11
Sarah Morgan Presents Poster	11



Left to right: Tony Beck, NCRR/NIH, Fred Butcher, WVU/HSC, Paul Hill, WV-EPSCoR, and Brian Noland, Chancellor WV-HEPC

Institutions of the WV-INBRE

Lead Universities

Marshall University
West Virginia University

Network Research Institutions (NRIs)

Alderson-Broaddus College
Fairmont State University
West Liberty State College
West Virginia State University
Wheeling Jesuit University

Network Outreach Institutions (NOIs)

Bethany College
Bluefield State College
Concord University
Davis & Elkins College
Shepherd University
University of Charleston
West Virginia Wesleyan College

Extended Outreach Institutions (EOIs)

Glenville State College
Mountain State University
Salem International University

The major focus of the 3rd Annual West Virginia COBRE/INBRE Conference was the role of mentoring in the three West Virginia COBRE programs and the WV-INBRE program to further biomedical research development in the state. Dr. Krishan Arora (NCRR; NIH) addressed the importance of mentoring in the development of biomedical research from the perspective of the NCRR IDeA program officials.

Dr. George Spirou (WVU-HSC) addressed the role of mentoring from his perspective as principal investigator of the COBRE in Sensory Neuroscience. Dr Gary Rankin (MUSOM) addressed the impact of mentoring as a mentor for junior faculty within the COBRE for Transcription Factors in Cancer. Dr. Rankin, principal investigator of WV-INBRE, also addressed how mentoring has enhanced the development of research faculty at the state's undergraduate institutions. Dr Dan Flynn (WVU-HSC), principal investigator for the COBRE for Signal Transduction and Cancer, related how his role as mentor for the WV-INBRE project investigator Dr. Robert Shurina (Wheeling Jesuit University) has become transformed from a relationship initially centered on mentoring to one currently viewed as a collaboration.

In addition to examining how mentoring promotes biomedical research within these NCRR IDeA-funded COBRE and INBRE programs in West Vir

ginia, Dr. Tony Beck (NCRR; NIH) and Dr. Ann Chester (WVU-HSC) offered unique insights into how other NCRR-funded programs, primarily through the Science Education Partnership Award (SEPA) program, can provide a regional model for how biomedical research can reach students at the high school level. The focus of their talks was how the West Virginia Health Science Technology Academy (HSTA) program, directed by Dr. Chester, has begun working with the WV-INBRE program to encourage and assist high school students to pursue their interest in biomedical research in their undergraduate education. In addition, Dr. Jim Sheil (WVU-HSC), program coordinator of WV-INBRE, is interested in expanding these efforts to encouraging and assisting undergraduate students involved in biomedical research to continue their education and training at the graduate education level.

The talks related to the theme of mentoring as a vital element for biomedical research development in West Virginia were complemented by a scientific program featuring biomedical research accomplishments of the three West Virginia COBRE programs and the WV-INBRE program. Most of the 75 participants attending this 3rd Annual West Virginia COBRE/INBRE Conference formally presented the highlights of their research projects in a poster session held on Thursday evening.

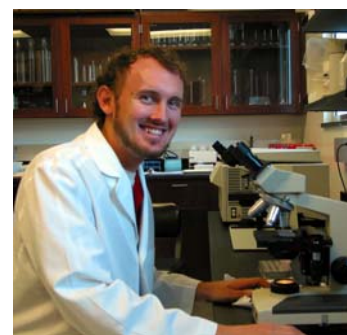
6th Annual WV-INBRE Symposium Highlights Summer Research Projects

Christopher Racine, a college student from Davis & Elkins College, had worked hard for nine weeks on a research project examining how a weed killer called propanil could damage the kidney. Now after all his work was completed and analyzed, he was ready to present his research results to fellow students and faculty from around the state at the West Virginia IDeA Network of Biomedical Research Excellence (WV-INBRE) 6th Annual Summer Research Symposium. This year the Symposium was held on August 2nd at Marshall University. "I was a little nervous about presenting my work, but it was a great experience", Racine said.

The Summer Research Symposium of WV-INBRE is funded through a \$16 million grant from the National Institutes of Health to Marshall University (MU) and shared with West Virginia University (WVU). This program allows Marshall University and West Virginia University to help the primarily undergraduate

colleges and universities throughout the state strengthen their research efforts. A portion of the award provides for a nine week summer biomedical research experience at MU or WVU for undergraduate students and faculty from the primarily undergraduate institutions around West Virginia. This year 28 undergraduate students and three faculty members participated in the summer program - ten students and one faculty member conducted their summer research at MU; and 18 students and 2 faculty did their research at WVU.

"The Summer Research Program is a wonderful experience for students and faculty and gives them a



*Christopher Racine
Davis and Elkins College*



Continued from page 2

chance to conduct cutting edge biomedical research,” said Dr. Gary Rankin, Chair of the Department of Pharmacology, Physiology & Toxicology at Marshall University and principal investigator on the WV-INBRE grant.

The Summer Symposium allows the students the chance to showcase their research findings as well as interact with students and faculty from most of West Virginia’s colleges and universities. This year more than 130 student and faculty researchers attended the event, which took place in the Don Morris Room of Marshall’s Memorial Student Center. Dr. Elsa Mangiarua of the WV-INBRE Outreach Core coordinated the event. Dr. Sidney A. McNairy Jr., Associate Director of the National Center for Research Resources and Director of the Division of Research Infrastructure



Dr. Sidney A. McNairy Jr., NCRR, and Dr. Elsa Mangiarua, WV-INBRE Symposium coordinator

of the National Institutes of Health was the keynote speaker. His talk was titled “What It Takes to Succeed in the Biomedical Sciences.” In addressing the audience, Dr. McNairy encouraged the students and faculty to work hard and

to set high goals for their future. He inspired the students to consider a career in biomedical sciences because “You are the future of America’s health discoveries!”, McNairy said.

Students and faculty participating in the Summer Research Program and in the symposium came from Bethany College, Concord University, Davis & Elkins College, University of Charleston, West Virginia State University, West Virginia Wesleyan College, Alderson-Broaddus College, Bluefield State College, Fairmont State University, Glenville State College, Shepherd University, West Liberty State College, and Wheeling Jesuit University.

This year’s symposium featured 58 presentations by students and faculty from these institutions. Seven of these researchers gave oral presentations of their work. Many different areas of biomedical research were covered in the poster and oral presentations. Some of the topics discussed included cancer treatment, obesity-associated hypertension, sleep and memory, diabetes, and toxicology.

The symposium represents something important for all of West Virginia, according to Mangiarua, “It contributes to establishing a network of faculty and students, to enhancing research throughout the state, and to developing a pipeline of outstanding students who are interested in entering the state’s graduate programs in biomedical research”.

As for Racine, he is headed back to Davis & Elkins College and is getting ready to apply to dental school. But, after this summer, conducting research is also part of his future plans.

Tew Named as WV-INBRE External Advisory Committee Member

The Administrative Core is pleased to announce the addition of the fifth and final member to the External Advisory Committee of WV-INBRE. Dr. Kenneth Tew is the Professor and Chair of the Department of Cell & Molecular Pharmacology & Experimental Therapeutics at the Medical University of South Carolina. Dr. Tew has expertise in biomedical research in the area of research on signaling mechanisms and the development and progression of cancer. His particular expertise in the broad areas of genomics and cell signaling will be of particular benefit to those WV-INBRE Project Investigators who have developed cancer-related research projects. Dr. Tew has a long re-

cord of NIH funding, and he currently has R01 support for his research efforts.

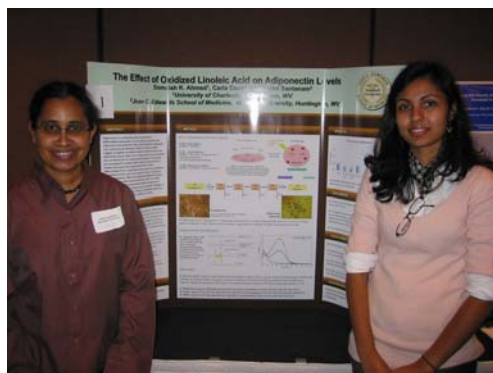
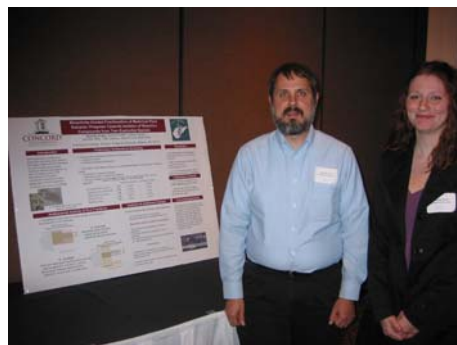
We are indeed fortunate to have Dr. Tew accept our invitation to become the most recent member of our EAC, and we look forward to his participation in WV-INBRE.



Kenneth Tew, Ph.D.

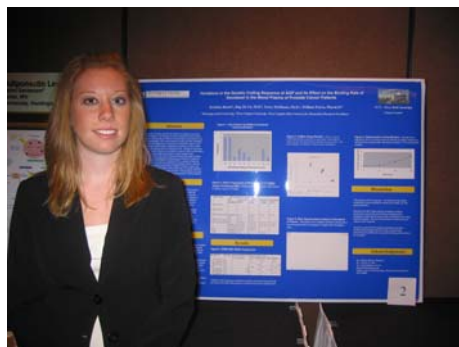
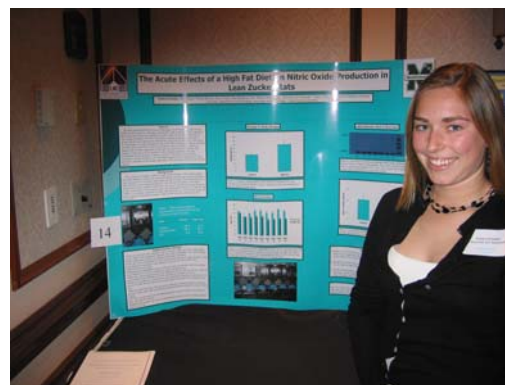
COBRE/INBRE Poster Presentations

Darrell Crick, PhD and Michelle Drake from Concord University present their poster “Bioactivity-Guided Fractionation of Medicinal Plant Extracts: Progress Towards Isolation of Bioactive Compounds from Two Euphorbia Species”



Nalini Santanam, PhD, Marshall University and a past WV-INBRE Summer Student and Somaiah K. Ahmed, University of Charleston present their poster “The Effect of Oxidized Linoleic Acid on Adiponectin Levels”

Jessica Frankel, a student from the University of Charleston and a past WV-INBRE summer student, presents her poster “The Acute Effects of a High Fat Diet on Nitric Oxide Production in Lean Zucker Rats”



Kristina Bacon, a student from Wheeling Jesuit University and a past WV-INBRE summer student, presents her poster “Variations in the Genetic Coding Sequence of AGP and its Effect on the Binding Rate of Docetaxel in the Blood Plasma of Prostate Cancer Patients”

**Message from the WV-INBRE Principal Investigator
Gary O. Rankin, Ph.D**

Perhaps one of my favorite times of the year is the fall. The beautiful colors of the West Virginia woodlands bring out the awe and wonder that our state has to give and reminds me that West Virginia is "Almost Heaven". Fall also is a time that we need to review what we have accomplished during the year and look toward where we are going and how we can improve.

This summer has seen several important meetings related to our INBRE program. On June 10-11, 2007, the Southeast Region IDeA meeting was held in Charleston, South Carolina. Normally a meeting for the Principal Investigators (PIs) from the INBREs in this region, the 2007 meeting was an expansion to include COBRE PIs as well. A focus for the meeting was COBRE-INBRE interactions. On July 15-16, a special National INBRE PI's meeting was held at the National Center for Research Resources, NIH in Bethesda, Maryland. At this meeting, the INBRE PIs met to present their thoughts to NCCR administrators concerning the upcoming Request for Applications for the competing continuation of eligible INBREs, such as ours. The main themes expressed by the PIs were for more flexibility in how budgets were apportioned and the need to keep the overall program similar to the INBRE program structure that already exists.

During 2007, WV-INBRE expanded the External Advisory Committee to five members with the addition of Dr. Daniel Liebler, Vanderbilt University during the spring and Dr. Kenneth Tew, Medical University of South Carolina in the summer. Dr. Liebler was high-

lighted in the spring newsletter and Dr. Tew, who is an expert in cancer research, is being highlighted in this newsletter. Throughout 2007 NRI and NOI faculty have been active with their research projects. Our current seven NRI Project Investigators presented their research to the Steering Committee and three members of our External Advisory Committee (EAC) on August 1 at Marshall University. The EAC had favorable comments for our WV-INBRE program and specific comments to help the Project Investigators improve their studies.

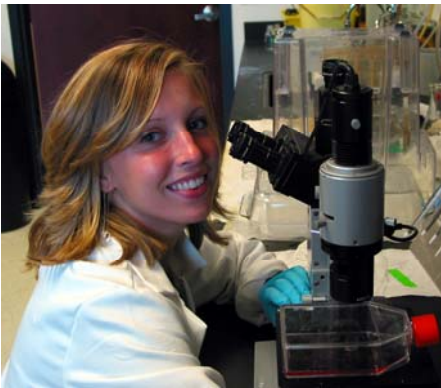
On August 2nd, the Summer Research Symposium was held at Marshall University and it was a big success, as outlined elsewhere in this issue. However, one of the highlights for all of us was having Dr. Sidney McNairy, Associate Director for Research Infrastructure and Director of the Division of Research Infrastructure, NCCR, NIH, as our keynote speaker. Dr. McNairy brought a PowerPoint presentation with 57 slides in it, but only showed the first slide as he inspired all in attendance with his vision for selecting a career in biomedical science and what the future can hold for students that choose to follow such a career path. His energy and enthusiasm for biomedical research and for making the most of your opportunities certainly enlightened and excited the meeting participants about what could lie ahead for them. I recently saw Dr. McNairy at a meeting in Bethesda, MD and he sought me out to mention again how much he enjoyed being with our group and how we need to keep working hard to develop our program.



It is very important that we all continue to work toward making our INBRE the best that it can be. Of particular importance is having all of our researchers be active in publishing the results of their work, seeking research support from external organizations (e.g. NIH, American Heart Association, etc.), encouraging students to be involved in biomedical research and supporting the summer research program. It is also important that information about your successes in publication, grant submissions and awards, presentations, honors, student activities and any other activity related to the WV-INBRE Award be documented by alerting me or the INBRE offices at Marshall University or West Virginia University. Our ability to demonstrate the success that WV-INBRE has had in our State is a key to the future of INBRE in West Virginia, and I need your help to show NIH how much we have been able to accomplish with what we have received.

* * *

2007 WV-INBRE Summer Program Students Working in the Labs



Allison Teter—West Virginia Wesleyan College



Clifton Umstead—University of Charleston



Crystal Bennett (left) and Jessica Frankel (right)—University of Charleston



DoBin Choi—Wheeling Jesuit University



Dustin Buchanan—Concord University

**2007 WV-INBRE Summer Program Students Working in the Labs
(continued)**



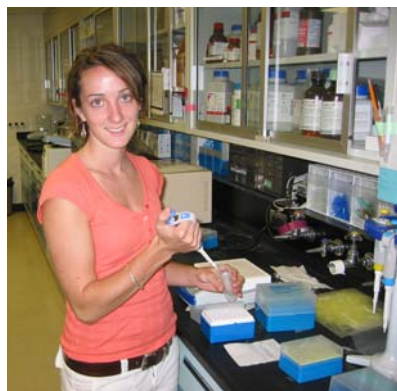
Virginia Hunter—West Virginia State University



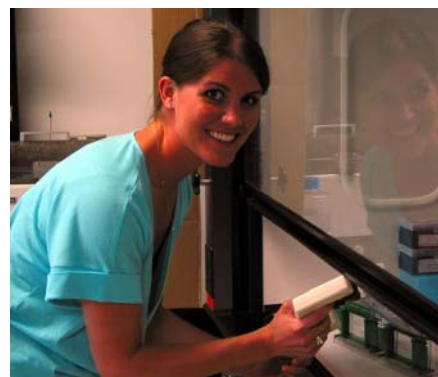
Eric Lopez—Wheeling Jesuit University



Jason McNair—Alderson-Broaddus College



Kathleen MacGregor—Davis and Elkins College



Christine Lansdale—West Virginia Wesleyan College



**2007 WV-INBRE Summer Program Students Working in the Labs
(continued)**



Somaiah Ahmed—University of Charleston



Jordan Moran—Fairmont State University



Stephanie Geer—Wheeling Jesuit University



Hiliary Miller—Shepherd University



Kelly Koral—Wheeling Jesuit University

**2007 WV-INBRE Summer Program Students Working in the Labs
(continued)**



Jonathan Proto—Wheeling Jesuit University



Stephanie Boblett—Fairmont State University



Joshua Briscoe, West Virginia Wesleyan College and Tim Nurkiewicz, PhD, West Virginia University

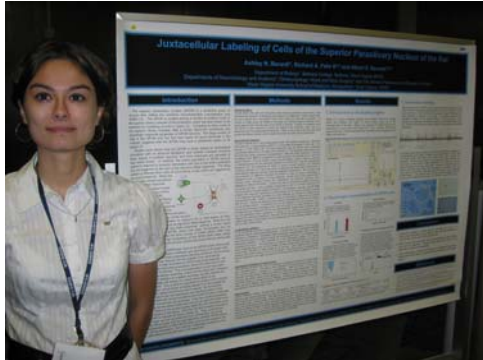


Kristina Bacon—Wheeling Jesuit University

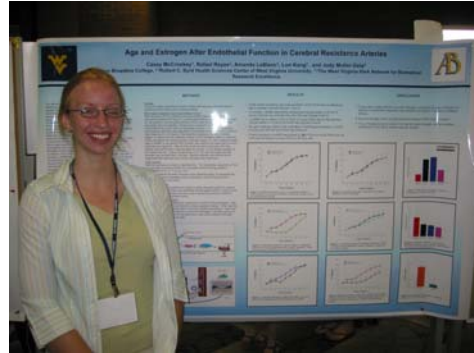


Gina Cottrill—Glenville State College

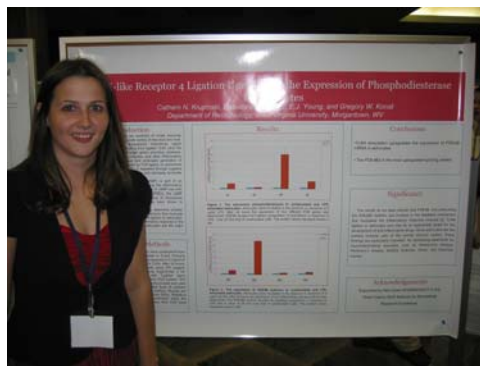
2007 WV-INBRE Summer Program Poster Presentations



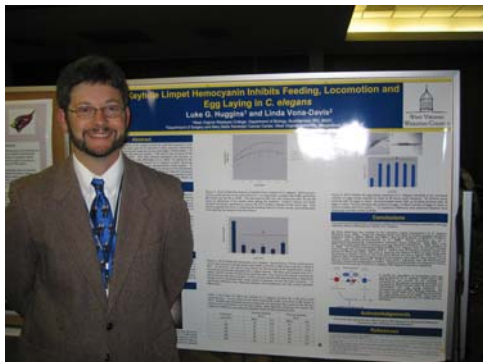
Ashley Berardi—Bethany College



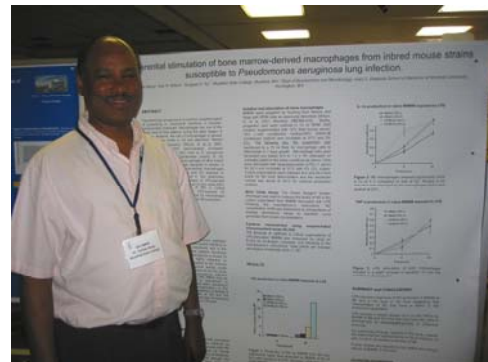
Casey McCrosky—Alderson-Broaddus College



Catherine Krupinski —Wheeling Jesuit University

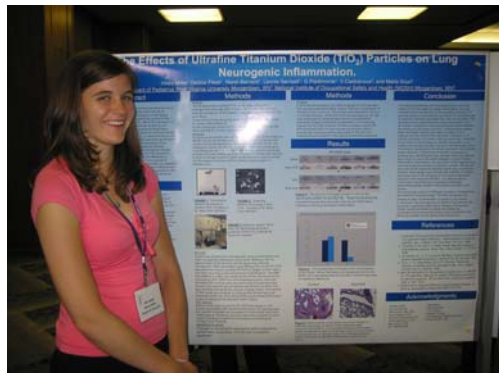


Luke Huggins, PhD— West Virginia Wesleyan College

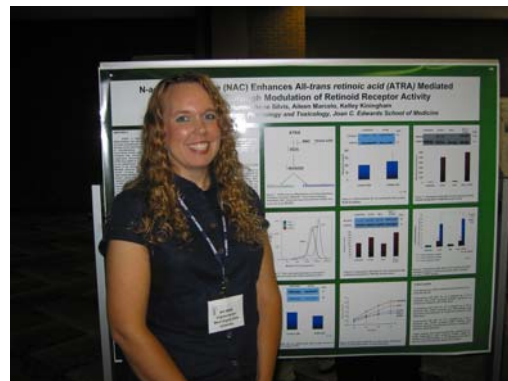


Tesfaye Belay, PhD—Bluefield State College

2007 WV-INBRE Summer Program Poster Presentations Continued



Hiliary Miller—Shepherd University



Virginia Hunter—West Virginia State University

WV-INBRE Summer Student Presents Poster at International Meeting



Sarah Morgan, a student from Shepherd University and a past WV-INBRE summer program student, has presented a poster at an international meeting. The reference for her poster is S.M. Morgan, L.S. Kang, A.L. Sindler, S.J. Kim, and JM Muller-Delp., "Voltage-gated potassium channel regulation of myogenic activity increases with age in soleus muscle arterioles". *Microcirculation* 14: 547, 2007.

Sarah presented her paper at the Eighth World Congress for Microcirculation meeting that was held in Milwaukee, WI August 15-19, 2007. She attended the meeting along with a graduate student, a post-doc, and Dr. Delp, PhD, Center for Interdisciplinary Research in Cardiovascular Sciences at West Virginia University. Ms. Morgan presented her work as a poster in a session titled, "Vascular Regulation and Control of Blood Flow." The meeting was an international meeting intended to bring together the British, European, Japanese, and American Microcirculatory Societies every 4 years. The work Sarah presented was a continuation of a project that she had been working on since joining Dr. Delp's lab as a student worker in the fall of 2006. Her project fo-

cused on the importance of potassium channels in age-related changes in the microcirculation of skeletal muscle. In the summer of 2006, Sarah was an INBRE student in Dr. Hileman's laboratory, and she performed some of her assays in Dr. Delp's lab. She wanted to continue to work on a research project during the regular academic year, so she joined Dr. Delp's lab as a student worker (she had transferred from Shepherd to WVU that semester). Ms. Morgan is now a full-time student at WVU with a double major in nursing and biology. Ms. Morgan hopes to be accepted into an MD/PhD program when she completes her undergraduate degrees.

* * *



Supported by:



TEL: 304-293-0775

FAX: 304-293-4426

WV-INBRE
West Virginia University
Health Sciences Center North
Room 2113
PO Box 9177
Morgantown, WV 26506-9177