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ETSU SCHOOL OF GRADUATE STUDIES SUMMER 2013

Illuminated Magazine

GRADUATE STUDENT RESEARCH MAGAZINE VOL 2 (III)



Illuminated Magazine

FROM THE SCHOOL OF GRADUATE STUDIES

The East Tennessee State University School of Graduate Studies is proud to present ILLUMINATED, a magazine that showcases the excellent work of our graduate students and their faculty advisors.

There are over 2200 students enrolled in graduate programs at ETSU. ILLUMINATED presents some of our students' research and creative works that make meaningful contributions to various disciplines, and contribute to our strong graduate programs. ILLUMINATED features research and creative projects that are currently happening on campus, and provides updates on alumni of ETSU graduate programs.

ENJOY!

Celia McIntosh, Ph.D.
Dean

Karin Bartoszuk, Ph.D.
Associate Dean

Brian Maxson, Ph.D.
Assistant Dean



Are you excited about your research and would like to share your hypotheses or findings?

YOU MIGHT BE A PERFECT FIT FOR **Illuminated**. THERE IS MORE THAN ONE WAY TO GET INVOLVED!

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Are you or one of your graduate students working on a culminating experience (e.g., thesis, dissertation, capstone)? Your research could receive additional exposure through *Illuminated Magazine* and help educate the rest of the campus about your department and program. This is a unique opportunity to get your work recognized!

➔ **For current graduate students and their advisors:**

Did you or one of your students get accepted into an excellent doctoral program or received an excellent career opportunity? We want to hear about it! Share your story in the "Where Are They Going?" section.

➔ **For former graduate students and their advisors:**

Do you know an outstanding student who graduated from ETSU more than a year ago? We want to hear from them! The "Where Are They Now?" section features former ETSU graduate students who are now professionals in positions across the country.

Form available: http://www.etsu.edu/gradstud/pdf/Illuminated_Magazines/Illuminated_Nomination_Form.pdf

For more information on nominating students or getting featured in *Illuminated*, please contact:
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➔ Nutrition and Dentistry, p. 14.

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SUPER PLANTS

Discovering how to generate stress tolerant plants and improve crop productivity.



→ Graduate Student, Richard Sante

Richard Sante, Graduate Student
Aruna Kilaru, Ph.D., Faculty Advisor

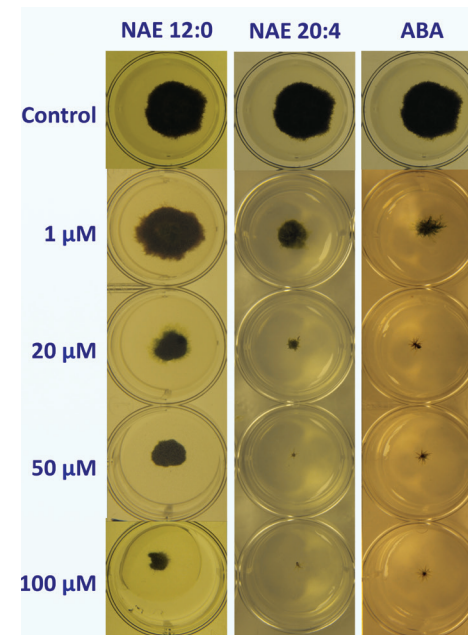


→ Left, Dr. Kilaru. Right, Richard Sante

by Jordan Powers

A passion for plants and a desire to improve crop growth drives Richard Sante, a graduate student in the Biological Sciences Department, to study the composition of moss. Richard's love of biology is what brought him to ETSU. "It's my passion," he stated. "[Biology] is everything about me, the reason why I come to school."

Richard is currently involved in one of two groups led by Dr. Aruna Kilaru, an Assistant Professor in the Biological Sciences Department. This group examines how lipids influence plant growth. Richard's research focuses on how lipids are involved in providing plants the ability to tolerate stressors such as drought and severe cold.



Effect of NAEs and ABA on Moss Growth

Lipids have a variety of functions in living organisms. They help structure cell membranes, store energy, and transmit information within cells. Richard is mainly interested in how lipids work in signaling processes. His main focus is studying the role of signaling lipids in mediating stress responses in moss, since it is shown that the moss plant can tolerate high levels of metabolic stress.

Mosses are an intermediate group of plants in the evolutionary cycle, which may

genome contains all the genetic material contained within an organism. Once an organism's genome is sequenced, researchers can examine the genetic information found in the organism's DNA. A researcher always has a model system to work with in laboratory conditions. Because the genome for this moss has been sequenced, it is much easier for them to study particular genes that encode for proteins that are involved in the lipid signaling pathways that mediate stress mechanisms.

Richard's research focuses on how lipids are involved in providing plants the ability to tolerate stressors such as drought and severe cold.

explain why they are tolerant to stress. "The plants before moss were living in water and the plants after were living on land, so mosses evolved means to adapt," said Dr. Kilaru.

Richard is looking specifically at one type of moss, *Physcomitrella patens* (*P. patens*). This type of moss was selected because its genome has already been sequenced. A

Richard is currently testing his hypothesis that acylethanolamines (NAEs) occur in moss and that they play a significant role in its development. NAEs are small, bioactive lipid molecules that play a role in physiological processes such as seed germination, seedling development, and mediating stress responses in some plants.

Richard has found two results thus far in his research. The first aspect he investigated was whether the lipid molecules [NAEs] were present in moss. While examining the moss for NAEs, Richard discovered a unique lipid profile that contains a lipid that is also found in mammalian systems.

This lipid, anandamide, plays an important role in regulation of feeding behaviors and neural stimulations of feelings such as motivation and pleasure. Richard found that anandamide is present in this moss, but it has not yet been reported in other plants. This finding leads to the question: why is it present in this moss? Dr. Kilaru noted that “this is the first time we were able to identify that moss plants actually synthesize anandamide and that gets us interested in what exactly it does in moss.” This finding leads them to the question of whether it enables the moss to have higher tolerance for stress and if so, how?

Richard hopes to go back to Cameroon, his home country, and grow crops that are more tolerant to harsh conditions.

Dr. Kilaru and Richard think it is possible that moss has a cannabinoid receptor to which the anandamide binds, forming a signaling mechanism that allows it to tolerate drought. Once plants made the transition and settled on land they may not have required the same harsh adaptation that moss required. “Mosses have had unique ways to adapt to harsh environments that may have been lost in higher plants,” Dr. Kilaru explained. “If you want to develop plants that are cold resistant or drought resistant it is required to look back at the plants that were able to tolerate or had the mechanisms to beat these harsh conditions.”

The second finding in Richard’s research is the identification of genes likely involved in the NAE metabolic pathway, which appears to be highly similar among plants and animals. He is currently studying the effects of NAE on drought tolerance in order to better understand how it could be replicated in plants such as corn and other crops.

Richard’s research earned him first place in the oral presentation competition at the Appalachian Student Research Forum. He also recently received a travel grant which allowed him to travel to Rhode Island and present his research at the annual meeting of the American Society for Plant Biologists.

Dr. Kilaru is proud that Richard has been able to receive these very competitive awards and honors. “I am happy, he will have exposure and meet national plant biologists.” She also believes it will be a good chance for Richard to meet possible mentors for a doctoral program.

Richard’s future plans are to continue his education and receive his doctoral degree in Biology. “My greatest goal would be to get into a good Ph.D. program.” Although furthering his education is one of his goals, his dream is to be able to return to Cameroon. “He has ideas of going back and changing his country and growing crops that are more tolerant to harsh conditions,” stated Dr. Kilaru.

WHERE ARE THEY NOW?



NEAL CALVIN PETERSON

Degree: Master of Arts
Program/Department: New Media Studio
Year of graduation: 2013

- ➔ Where do you work or go to school?
I am currently a full-time artist in Minneapolis, MN.
- ➔ What is your job/research about?
I am in the process of releasing and promoting a conceptual album that merges art and music.
- ➔ What’s your favorite part about the research?
Creating something new out of two things that have never previously been connected.
- ➔ How has your master’s degree helped you?
Graduate education is most beneficial for helping a person really focus on a particular topic, while contributing something new to the greater knowledge.
- ➔ What advice would you give to current graduate students?
If you find your true passion, success will follow and the idea of “work” will not exist.
- ➔ Anything else you’d like to share?
www.nealcalvinpeterson.com

FINANCIAL AID

Margaret Miller, Director of Financial Aid
Lisa Bell, Assistant Director of Financial Aid



NAVIGATING THROUGH *Financial Aid*

A STEP-BY-STEP GUIDE

by Jordan Powers

The financial aid process includes numerous steps and important guidelines. For graduate students this process can present new questions about how the financial aid process will work for them. “There are unique considerations for financial aid for graduate students as far as what the regulations will allow,” said Margaret Miller, Director of Financial Aid. It is important that graduate students know how the process works so they can make informed decisions and transition through the process quickly and efficiently.

1 HOW DO I APPLY FOR AID?

The Free Application for Federal Student Aid (FAFSA) is the first step to receiving federal financial aid. This application is completely free and becomes available after January 1st of each year. The earlier a student correctly completes a FAFSA, follows up, and completes the student requirements, the more successful he/she may be in securing

funds and meeting important deadlines. If the FAFSA and student requirements are completed late, the funds might not be processed before the fall semester begins.

2 HOW DO I KNOW THE OFFICE OF FINANCIAL AID HAS RECEIVED MY FAFSA?

GoldLink and GoldMail are essential to tracking your financial aid progress! GoldLink will alert you to any additional information needed as well as indicate whether your aid has been processed. Your FAFSA may be selected for verification and require you to bring in additional documentation. The best way to find out is to check GoldLink frequently to see if any additional requirements are needed to process your aid. If additional information is needed, your aid will not be processed until these requirements are met. If you have not been selected for verification, you may still need to complete forms or submit further documentation. It is important to keep a continuous check on your financial aid status within GoldLink throughout the year.



→ Lisa Bell, Assistant Director of Financial Aid.

The Office of Financial Aid also communicates with students through GoldMail. Anytime you receive an email from financial aid open it immediately! “Every student needs to do this,” said Lisa Bell, Assistant Director of Financial Aid. “Even after you graduate or quit attending school, you need to check it because we send things out about repayment.” Emails from financial aid will be detailed and provide the necessary information to complete all requirements.

3 IS AID DIFFERENT FOR GRADUATE STUDENTS?

Yes, the types of grants and loans for graduate students differ from the ones undergraduates receive. Graduate students cannot receive Federal Pell Grants. Graduate students can only get Federal Direct Unsubsidized Loans, which means the interest will begin to accumulate as soon as the student takes out the loan. You can choose not to pay the interest as it accrues, but it will still be added to the total amount to be repaid. Ms. Miller also explained that being a graduate student alone automatically makes you an independent student, which increases your cost of attendance and could qualify you for more aid than the undergraduate level.

4 WHAT TYPES OF AID AM I ELIGIBLE FOR?

The Office of Financial Aid at ETSU provides a broad spectrum of programs to assist students in financing their college education. The university is committed to providing students with access to a variety of resources that may include:

1. GRANTS

1.1. Teacher Education Assistance for College and Higher Education Grant

Graduate students who are completing (or plan to complete) coursework to begin a career in teaching are eligible for up to \$4000 per year. Unlike other grants, this grant will turn into a loan if certain course and job requirements are not met.

2. LOANS

2.1 The William D. Ford Federal Direct Loan Program

These are unsubsidized loans that allow students to borrow up to \$20,500 per academic year. This is the main type of loan that the Office of Financial Aid handles and is recommended by Ms. Miller because of its flexible repayment options. “It allows students to pay back the money contingent on their income,” she said. “They can start

with lower payments and increase the amount as their income increases.” The interest rates on these loans can change based on government decisions.

2.2. Direct Plus Loans

This loan allows students to get the difference between the cost of their education and what they are receiving from all other aid sources. This loan requires that a credit check be performed, and has a higher interest rate than direct loans. When a student takes out a plus loan, they are saying that the money from unsubsidized direct loans is not going to be enough to cover educational expenses.

2.3. Federal Perkins Loan Program

Perkins Loans are not as large in amount as federal direct loans and have advantages for a student who does not need a lot of money. Funds are not always available, so if you want to receive this loan be sure to complete a FAFSA on time. Funds are usually distributed in April during the first round of awards. \$6000 is the maximum amount of money a student can receive each academic year. Perkins loans allow nine months before repayment begins and interest does not start accruing until you start repayment. These loans have a very consistent interest rate of 5 percent.

2.4. Private Loans

For a private loan, students go to a bank of their choosing and take out a loan for their educational expenses. Ms. Miller recommends taking federal loans first because they are going to be more considerate of the student than a private loan. If you are planning to take out a private loan, look for a bank that offers a program for students. Interest rates and repayment options for these loans will vary according to what financial institution the student chooses.

3. REPAYMENT

Students may be eligible for large amounts of money but they may not need the whole amount. When deciding how much money to borrow take into account your future career plans, and think about how much money you will actually need. Make sure you read all the terms of the loan you choose and learn about all possible repayment options. Some loans may offer deferment of payment or periods of leniency. The Public Service Loan Forgiveness program offers partial and whole loan forgiveness for work in certain public service fields.

4. WORK-STUDY PROGRAMS

Graduate Students are also eligible for Federal Work-Study. The Federal Work-Study program provides students with part-time jobs to help with educational expenses. Open positions can be found on the Office of Financial Aid’s website under “student work positions.”

4.1 Graduate Assistantships

Graduate Assistantships are decided by the department in which the student will work. Students first sign a contract with a department. The department then notifies the School of Graduate Studies who then notifies the Office of Financial Aid. The funds are then applied to the student’s account by the Bursar. Graduate assistantships cover tuition and pay a stipend. There are four types of graduate assistantships: Teaching Assistants, Teaching Associates, Research Assistants, and Administrative Assistants. Frequently asked questions about Graduate Assistantships and Tuition Scholarships can be viewed on the School of Graduate Studies Website.

4.2. Tuition Scholarships

Tuition scholarships are renewable merit-based scholarships for graduate students admitted into a graduate degree program for the first time. A tuition scholarship requires eight service hours per week within the department that provides the funding.

5 HOW DO I KNOW WHEN I HAVE RECEIVED AN AWARD?

The Office of Financial Aid begins sending out award letters after April 15th. Students can also check on GoldLink to see how much they have been awarded and accept their awards. It is important to make sure you fulfill all requirements and accept your awards by June 1st in order to ensure that funds will be available by the beginning of the fall semester.

Graduate Assistantships and Tuition Scholarships are decided on departmentally. Students will be contacted by the department when they receive either of these positions.

6 WHAT IS THE DIFFERENCE BETWEEN THE OFFICE OF FINANCIAL AID AND THE BURSAR’S OFFICE?

7 WHAT IS THE BEST WAY TO CONTACT THE OFFICE OF FINANCIAL AID?

Students can contact the Office of Financial Aid by visiting the office in Burgin Dossett Hall, by phone at (423) 439-4300, or by email. Emails sent to finaid@etsu.edu are read and replied to every business day. The office is open Monday through Friday from 8:00 a.m. – 4:30 p.m. and has special extended hours the week before classes begin.

Ms. Miller encourages students to pursue their education and states that investing in an education is still a worthwhile investment. “Whatever you have to use to get your education, it is worth it.”



→ Margaret Miller, Director of Financial Aid.

Tifani Fletcher, Graduate Student
 Andrea Clements, Ph.D., Faculty Advisor



PREGNANCY AND VIOLENCE IN APPALACHIA

Improving the detection of intimate partner violence during pregnancy

by Jordan Powers

Major healthcare organizations have recommended for all pregnant women to be screened for intimate partner violence throughout pregnancy and postpartum in order to assist patients with the help they need. The biggest problem facing doctors and nurses is figuring out how to screen for intimate partner violence, and the best assessment to use for screening. Tifani Fletcher, a doctoral student in psychology, hopes to help remedy this situation in the Appalachian region through her research.

Using data collected from the Tennessee Intervention for Pregnant Smokers (TIPS) program, Tifani hopes to recommend the best type of assessment in order to detect intimate partner violence.

“When these women go to the doctor’s office they do not have a lot of time,” said Tifani. “We cannot ask them to take a 72 item survey to figure out whether or not they are experiencing intimate partner violence.”

Tifani is completing an alternate format

dissertation. The biggest problem facing doctors is figuring out which assessment is best to use to screen for intimate partner violence. Her first journal article will focus on demographic and psychosocial predictors of intimate partner violence. The second journal article will compare the different assessments of IPV in the prenatal population and the third will look at how intimate partner violence changes throughout pregnancy.

Tifani is currently preparing to run analyses on how IPV changes throughout pregnancy for her third journal article.

The data Tifani is analyzing was collected over a five year period by the TIPS program from almost 2000 participants. The TIPS program focused mainly on smoking during pregnancy but other types of data were also obtained during the program. Tifani’s advisor, Dr. Andrea Clements, a professor of psychology, is delighted at the prospect of someone investigating the additional data. “We have all of these redundant measures of different things and we’ve been planning on going back to do some validity studies forever,” explained

Dr. Clements. “Now we have an interested student to do it.”

Tifani has been investigating her topic using mini studies in order to see what information is available for her journal articles. During the first phase of her studies, she hypothesizes that rurality will also be an indicator of intimate partner violence. Rurality deals with the rural nature of the location in which these women live. Rural locations are non-

metropolitan areas where the population is more sparsely distributed and socioeconomic status may be low. The findings of this study will help inform her first article on demographic and psychosocial predictors of IPV.

“We have access to zip codes where these women are living, along with depression measures, and self esteem measures; demographics such as age, marital status, and what their social support systems are,” said Tifani. Past research has found that rurality alone is statistically predictive of the likelihood

of smoking and the amount an individual smokes. She hypothesizes that rurality might play the same role in relation to intimate partner violence.

Tifani has also conducted a study comparing assessments of intimate partner violence for her second article. She compared the Abuse Assessment Screen, the Hurt Insult Threat Scream screen (HITS), and the Women Abuse Screening Tool to what is considered the best assessment, the Revised Conflict Tactics Scale (CTS). Tifani recently compared the abuse assessment screen to the CTS2. Her investigation found that the Abuse Assessment Screen, the most widely used screening tool for pregnant women in the United States, was not very accurate at identifying women who had experienced intimate partner violence in the Appalachian pregnant population.

The Abuse Assessment Screen only identified 2% of the women who were experiencing sexual violence compared to the CTS2 which identified 19% of the women. This discrepancy left 17% of the abused women undetected. Another interesting finding was that the CTS2 identified 80% of women in the study as having experienced some form of intimate partner violence within the last year (this includes physical, sexual, psychological, or the threat of abuse), while the Abuse Assessment Screen identified only 45%. Tifani noted that if the women cannot be identified, they cannot be helped.

Tifani is currently preparing to run analyses on how IPV changes throughout pregnancy for her third journal article. This will be a new learning experience for her because she will be using different predictive analytic software.

After completing her research, Tifani hopes to be able to help healthcare professionals use the best assessment to identify intimate partner violence so they can help victims of abuse. She plans to focus on working with nursing departments because they see the patients first and many patients develop good relationships with their nurses.

Tifani has travelled with Dr. Clements to present her research to the Society for Behavioral Medicine. It is an international conference made primarily of medical professionals. She has also presented at the Appalachian Student Research Forum, Midwestern Psychological Association, and will be attending a teaching conference at James Madison University over the summer. Tifani won second place at the Appalachian Student Research Forum for presenting about IPV.

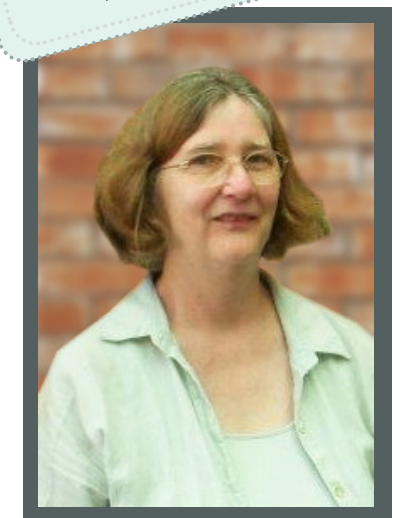
Teaching is Tifani’s first love and she currently teaches in the Psychology department. Her teaching abilities earned her a Departmental Teaching Award and the School of Graduate Studies Teaching Associate Award. Dr. Clements praised Tifani’s ability to help her independent study students complete a research project from start to finish and present their findings at the Appalachian Student Research Forum.

Working in academia and fostering an interest in research within undergraduate students is Tifani’s long-term goal. “I don’t like launching into my own big project, I like helping others with their analysis or write up and helping them prepare,” she said. “I had the opportunity to help some undergraduates do poster presentations at the Appalachian Student Research Forum and I really enjoy doing projects like that.”



Left, Tifani Fletcher, Right, Dr. Clements

WHERE ARE THEY NOW?



DR. MARGIE TUCKER

Degree(s): BS Chemistry, 1979;
 PhD Biomedical Science 1990
 Department: Biochemistry Dept. Quillen COM

Current Job: Professor, Organic Chemistry and Biochemistry; Chair, Department of Natural Science
 Current Employer: The University of Virginia’s College at Wise

- ➔ **What are your work responsibilities?**
 Mostly I teach and do administrative tasks for the department and school. I love teaching undergraduates, seeing them go on to successful careers and hearing from them years later.
- ➔ **How has your graduate degree helped you?**
 It enabled me to pursue a career I find very satisfying.
- ➔ **What advice would you give to current graduate students?**
 Work hard, but take time out for a little fun. The things I’ve done that have been most valuable and that give me the greatest sense of accomplishment are things that I did for other people, not for myself. Things you do for self-gratification or self-aggrandizement seem to have no permanent effect, or if they do the effect is seldom positive.

Nutrition & Dentistry

The benefits of building a stronger interdisciplinary relationship between dietetics and dental hygiene
by Jordan Powers



➔ Monique Richard with a patient.

Monique Richard, Graduate Student
Michelle Lee, Ph.D., Faculty Advisor



➔ Monique suctioning during the RAM clinic and assisting a dentist from New York to showcase the duality of both professions.

For most individuals, a trip to the dentist is just about the health of their teeth. But, as Monique Richard, a master's student in clinical nutrition, has discovered, it can unearth so much more. Dietetics and nutrition start in the mouth (oral cavity) so dentists can identify many nutrition related manifestations and diseases such as diabetes, eating disorders, infections, and cardiovascular disease. Collaboration between dietitians and dental hygienists might be beneficial to both the patient's dental and nutritional health. Monique describes this collaboration as "practical and phenomenal at the same time."

After reading an article on how interdisciplinary education and professional roles work well with dietetics and dental hygiene, Monique's interest was sparked. "I thought it was really interesting and unique because you wouldn't think about a dental hygienist and a registered dietitian working together," she said. For her thesis, Monique was interested to see whether having an interdisciplinary program between dietitians and dental hygiene would improve each field's knowledge and understanding of the other. She compared ETSU's dental hygiene and dietetics students and faculty to Baylor University's. Baylor offers an interdisciplinary approach that requires dietetic interns complete a three hour supervised practice rotation in the dental hygiene clinic. She compared and examined the differences between the two universities in nutrition knowledge, perceived roles of the

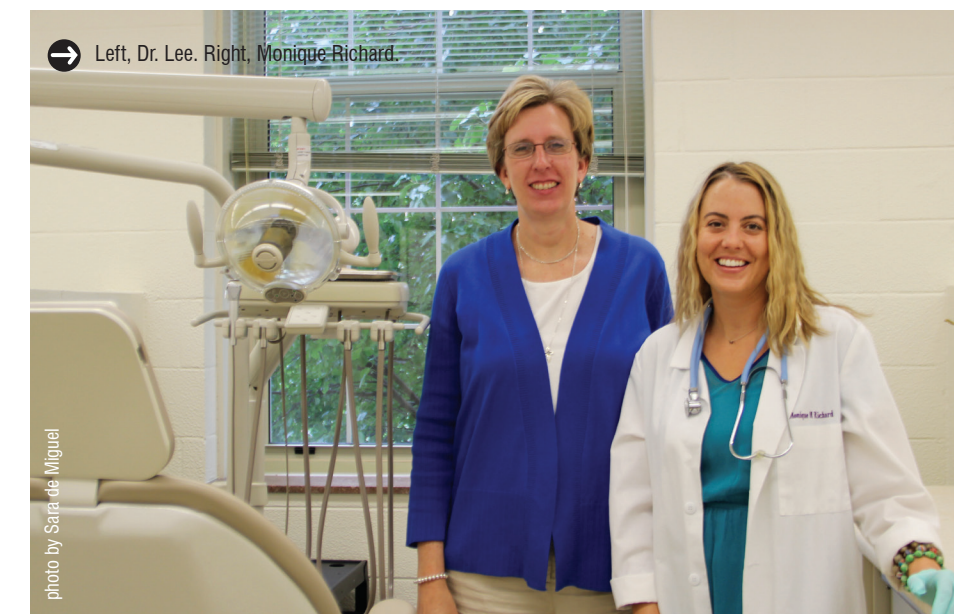
other profession, attitudes about interdisciplinary education, and the value of the other profession to their field.

With the help of her advisor, Dr. Michelle Lee, Monique developed her own survey using a framework from a variety of existing surveys dealing with similar topics. Her survey had a total of 78 questions that made up four sections and also included a qualitative component. The sections focused on nutritional knowledge, perceived roles of what a dental hygienist and a dietitian actually do, attitudes about interdisciplinary education and the value of the other profession. The qualitative section asked participants about what they would like and expect the other field to know regarding their specialty. The questions on the

survey included 54 Likert scale items, 14 true/false, 6 multiple choice, and 2 open ended qualitative questions. To ensure the questions were clear and could be easily answered by a dietetics student or a dental hygiene student, Monique had ETSU faculty and experts from other universities in dental hygiene and nutrition review the survey. After including the feedback, the survey was distributed to dietetic interns, dental hygiene seniors, and dietetic and dental faculty at Baylor and ETSU. Once the data was received the three groups were compared. The sample included 26 dietetic interns, 49 dental hygiene students, 23 dietetic faculty, and 19 dental hygiene faculty.

Monique found her results regarding interdisciplinary knowledge very interesting. She found that the dental hygiene students at ETSU who did not have the interdisciplinary experience answered 46% of the nutrition knowledge questions correctly; while students from Baylor who had exposure to both dentistry and nutrition answered 96% of the questions correctly. Therefore, dental hygiene students at Baylor may have expanded their knowledge of nutrition by working with dietetics students.

To better understand these results, Monique looked at specific nutritional questions. She found that some students who stated they were providing nutritional counseling to patients did not provide correct answers to general nutrition questions. For instance, one of the questions some of the ETSU dental hygiene students missed was a true/false question about whether a dietitian was trained to treat eating disorders. "Only 14 out of 24 stu-



➔ Left, Dr. Lee. Right, Monique Richard.

photo by Sara de Miguel

dents knew the answer to be true. This is a significant finding because it is one of the things a dietitian is trained to do. A dental hygiene student can identify an eating disorder from the erosion of the teeth but they do not know who to refer the person to,” said Monique. 24 out of the 25 dental hygiene students from Baylor answered this true/false question correctly.

The perceived roles section of the survey asked questions regarding what the participant believed the role of a registered dietitian and a dental hygienist was and how it related to oral health. A majority of participants from Baylor recognized the dietitian as being an expert on nutrition. Baylor dental hygiene students had a better understanding of their own role regarding nutrition, while some of the participants at ETSU were unsure about their role and the dietitian’s role regarding nutrition and oral health. In the sections pertaining to values and attitudes, participants were asked questions regarding how important they believed the role of a dental hygienist or a registered dietitian was, along with questions about whether they believed an interdisciplinary education was important. Students and faculty from both Baylor and ETSU indicated that interdisciplinary education was important and indicated a strong appreciation of the other profession.

Dietetics and nutrition start in the oral cavity so dentists can identify many nutrition related manifestations and diseases.

The two qualitative questions asked each group (dental hygienist and dietitian) what they would like and expect the other to know. The results of these questions were similar and focused on the importance of team collaboration, communication, and learning in order to enhance patient care.

Monique’s results support her hypothesis and indicate that a nutritional component may be beneficial to both dental hygiene and dietetic students. “Faculty at ETSU are examining a way to have dental hygiene and dietetic students in the classroom working on case studies together and teaching each other what they do, so there will be more understanding and interprofessional experience,” said Dr. Lee.

During her time at ETSU, Monique served as the Vice President of the first interdisciplinary organization at ETSU, called the Association of Interdisciplinary Healthcare Students (AIHS). This organization was formed in conjunction with ETSU’s inaugural interdisciplinary curriculum pilot program, and hopes to meld six major colleges together in order to reverse “compartmentalized” teaching and to recognize ETSU as an interprofessional education institution (IPE).

Monique will be presenting her research this fall in Houston, Texas at the Academy of Nutrition and Dietetics national meeting. Monique and Dr. Lee are also currently working on a manuscript for submission. Dr. Lee described Monique as inspirational and full of great ideas. “She really took off with this and she made the contacts with Baylor and initiated the whole process.”

Monique has been accepted into George Washington University for a second master’s degree, and she hopes to later receive her doctoral degree in public health. Her future plans include a continued focus on public health and relaying important information to the public. When asked about her dream job, Monique replied she wanted to be known as “a problem solver, a change agent that inspires others to live to their fullest potential.”

WHERE ARE THEY NOW?



MEYLIN MEJIA

Degree: Master of Arts in Professional Communication
 Department: Department of Communication
 Emphasis: Public Relations
 Year of graduation: May 2013

- ➔ **Where do you work?**
 Currently, I work at Eastman Chemical Company in Kingsport, TN
- ➔ **What is your job?**
 I work assisting a qualitative marketing research project with the Perennial Wood team at Eastman. I code written insights that we gain through different forms of interactions with our clients.
- ➔ **What’s your favorite part about the research?**
 It keeps my brain working all the time, and it allows me to learn something new every day.
- ➔ **How has your master’s degree helped you?**
 Graduate school opened my eyes to see the value of research. I learned a lot not only inside the classrooms but also seeing how my professors were such passionate investigators. Also, because most graduate classes are writing intensive, my writing skills improved enormously. Graduate school helped me to become a more efficient and competitive communication professional.
- ➔ **What advice would you give to current graduate students?**
 Take advantage of all the resources that the university makes available for you. It will make your life as a student a lot easier.



photo by x1klima

PROFESSIONAL COMMUNICATION, M.A.

Mariam Ayad, Graduate Student
 Andrew Dunn, Ph.D., Faculty Advisor

WHAT ARE YOU LOOKING AT?

How advertisements affect perception

by Jordan Powers

During the 2012 election, political ads were rampant and filled the open spaces of newspapers and online news sources. Stories dealing with all types of subjects filled the spaces around those ads, leading curious individuals like Mariam Ayad, a graduate student in the communication department, to question their impact. With the help of Dr. Andrew Dunn, Assistant Professor in the Department of Communication, Mariam focused her thesis research on discovering whether political ads, and the reader’s political affiliation, impact perceptions of news credibility. After investigating the job market, Mariam decided to pursue her master’s degree in Professional Communication. Mariam arrived

at ETSU with her undergraduate degree in journalism but was not sure what she intended to research. “When I first came into the program I wasn’t particularly interested in the research part and Dr. Dunn was very helpful in introducing me to different ideas based on what I was interested in.” With Mariam’s background in journalism and Dr. Dunn’s expertise in journalism and mass communication, a search for the perfect topic commenced. After reviewing previous research, an idea for her research topic was discovered. Mariam found a study about how humorous and serious ads can affect what people think of “hard news” versus “soft news”. An idea was then sparked. Mariam’s research used conservative, liberal and non-affiliated ads within an article about the Electoral College. “I wanted to see

if a political ad next to a news article affected how people evaluated the bias and credibility of the article,” she explained. “I also wanted to know if a news reader’s own political affiliation played a role.” Mariam conducted her experiment using the ETSU Psychology department’s research online survey system, SONA, to distribute her surveys. She had three different types of ads which created three different conditions. Each condition contained the same article, the difference was that one had liberal ads, one had conservative ads and one had non-affiliated ads. Mariam embedded three rectangular-shaped graphics, called banner ads, throughout the article to create the liberal, conservative and non-affiliated conditions. Participants were given three options when they elected to take the survey. The op-

tion they chose entered them into one of the three conditions. Once they chose a condition they were instructed to read the article and complete the survey.

Pre-tests were run on the non-affiliated news article to ensure it was not biased. Dr. Dunn was instrumental in helping Mariam complete the data gathering and interpretation process. "I hadn't had a quantitative research class yet and he helped guide me through how to lay out the paper and what statistics to use and how to interpret them," stated Mariam.

Mariam focused her thesis research on discovering whether political ads and the reader's political affiliation impact perceptions of news credibility.

Under Dr. Dunn's guidance Mariam learned the necessary skills she needed to conduct her study. "I think Mariam did a great job taking on an ambitious project with not a lot of prep," said Dr. Dunn. "She had to do a lot of on the job training."

After running the data gathered from the three conditions, the results were surprising. No significant effect for the type of ad, reader's political affiliation, and the perceptions of credibility and bias were found. The study did, however, reveal other interesting results.

Gender of the participant played a role in what type of bias was perceived. Mariam's study found a difference between males and females in terms of liberal bias. Male participants found more liberal bias than female participants did in the conservative, liberal and non-affiliated conditions.

Another difference was found in the way participants viewed the value of the news. Male participants found the article to have more news value than female participants. These results could be explained by the

gender of the article's writer. "The writer was male and research shows that the writer in some cases cues the reader on what to think of the article," explained Mariam. She also noted that past research shows that male and female reporters emphasize different news values in articles, which may also play a role in sex differences.

Mariam also had a significant finding among participants who already consume political news. "We found that people who already read political news found the article to have more news value across the board in all conditions."

Although Mariam did not find what she was looking for, her research brings up questions for further studies. "The findings could mean one of two things; either people don't notice banner ads anymore because those are the ads I used (one above the article and 2 embedded in the article) or they do not affect what people think of articles, so news organizations should not be as worried about ads," said Mariam.

"I think this is enriching research we could take somewhere else and use in a different scenario," stated Dunn. He also noted the importance in the trends they found. "Within the project itself there were some things that weren't significant but there were some trends, and if we had even more participants and the ability to use different populations, they may have been even stronger."

Mariam presented her research at the Appalachian Student Research Forum. She also received the Outstanding Contribution by a Graduate Student award from the Department of Communication for her work producing a TV show through the department's RTVF Division.

Over the summer, Mariam will be moving to Wichita Falls, Texas and plans to use her degree to find a freelance writing job. "My time in this program has given me better critical thinking skills, which helps me to ask better questions as I am interviewing," she said.



Left, Dr. Dunn. Right, Mariam Ayad.

photo by Sara de Miguel

RESEARCH GRANT AWARDS

2013-2014

The ETSU School of Graduate Studies

was proud to present the following students with grants worth up to \$800 to aid their research. Each year, graduate students are selected for the award by members of the Graduate Council and graduate faculty.

Rachael Allen
Sociology

Title: The Rise of Complementary and Alternative Medicine: Prevalence Among Individuals with Mental Health Disorders
Advisor: Dr. Kelly Foster, Committee Chair

Justin Beach
Biomedical Sciences

Title: An Examination of the Inhibitory Effects of Antibiotic Combinations on Ribosome Biosynthesis in *Staphylococcus Aureus*
Advisor: Dr. W. Scott Champney, Committee Chair

Katherine Block
Art

Title: Research of the Arab Spring through Paint
Advisor: Mira Gerard, Committee Chair

Regenia Phillips Campbell
Biomedical Sciences

Title: Unmasking Treatment Failure in a Murine Model of Chlamydal Persistence
Advisor: Dr. Robert Schoberg

Danielle Sevigny
Art

Title: Abstracts & Patterns: Studies in Acrylic & Polymers
Advisor: Mira Gerard

Allison Hilbun
Biomedical Sciences

Title: Stability and Resilience of Chaotic Systems of Coupled Oscillators
Advisor: Dr. Istvan Karsai, Committee Chair

Nicole Litwin
Clinical Nutrition

Title: Assessment of Red Blood Cell Membrane Fatty Acid Composition in Relation to Dietary Intake in Patients Undergoing Cardiac Catheterization
Advisor: Dr. W. Andrew Clark, Committee Chair

Brianna Sheppard
Psychology

Title: Role of Ventral Tegmental Area and Ventral Tegmental Area Nicotinic Acetylcholine Receptors in the Incentive Amplifying Effects of Nicotine
Advisor: Dr. Matthew I. Palmatier

Ha-Jung Grace Sung
Biology

Title: Identification of Key Genes Associated with Triacylglycerol Biosynthesis in Avocado Fruit
Advisor: Dr. Aruna Kilaru

Joe Wu
Biomedical Sciences

Title: Induction of a Novel Cardioprotective Metabolic Pathway by HIF1 α
Advisor: Dr. Gary Wright



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