

RESULTS & DISCUSSION

Editors-in-Chief: Marilyn E. Holt, Laura Daniel, Ph.D., Kendra Oliver, Ph.D.

Faculty Advisor: Ashley E. Brady, Ph.D.

Welcome to the fifth issue of Results and Discussion, a newsletter sponsored by the Biomedical Research Education and Training (BRET) office, which is devoted to highlighting the research accomplishments and activities of our Ph.D. graduate students and postdoctoral fellows.

The 25th anniversary of the Interdisciplinary Graduate Program (IGP) is right around the corner. On June 1-2, 2017, the BRET Office of Career Development will welcome back to campus former trainees who graduated from our Ph.D. programs over the years or did postdoctoral training here. The reunion event will be a wonderful opportunity for our alumni to reconnect with former classmates, learn about new discoveries in the labs, visit with former mentors and colleagues, tour the campus, see how Nashville has evolved over the years, and meet and inspire current trainees at Vanderbilt.

We will hold the reunion in conjunction with the 2017 Annual Career Symposium which will feature over 16 of our alumni and highlight their varied career paths since leaving Vanderbilt. More information can be found in the advertisement on page 9 of this issue.

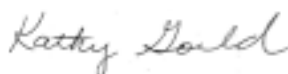
Please let us know if you would like to become more involved with our students and postdoctoral fellows, or with programs at Vanderbilt University. There are many ways you can support us in our efforts to prepare the next generation of scientists. We would love to hear your ideas and find a way to engage you in our educational and research missions.

For more information, please visit our website or feel free to reach out to us directly.

Sincerely,



Roger Chalkley, Ph.D.
Sr. Associate Dean for Biomedical
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Kathy L. Gould, Ph.D.
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Visit us at our website for more information:
<https://medschool.vanderbilt.edu/bret/>

Molecular Motors: Moving Things into Place

By **Mahesh Rao, Ph.D.**, Postdoctoral Research Fellow

While many will argue about what kinds of food we should eat and how we should eat them, everyone can agree that food is a critical source of energy for the body. However, in order to get any energy from the food that we eat, the nutrients must first be absorbed by the intestine. Recent discoveries by graduate student Meredith Weck shed a new light on this fundamental process.

For Weck, going into biomedical research was almost inevitable. Growing up outside of Philadelphia, she was surrounded by scientists, as her father holds a Ph.D. in Microbiology and Immunology, her mother received a Masters in Chemistry, and her sister is a nurse. "I grew up talking science... so it was natural for me to have an affinity for it."

After obtaining a bachelor's degree from the University of Richmond and completing her Masters in Microbiology and Immunology at Virginia Commonwealth University, Weck ultimately elected to pursue a Ph.D. at Vanderbilt University. There, she joined the group of Matthew Tyska, Ph.D., Professor of Cell and Developmental Biology.

In the Tyska lab, Weck uses cell culture to study the epithelial cells that line the intestine and, specifically,

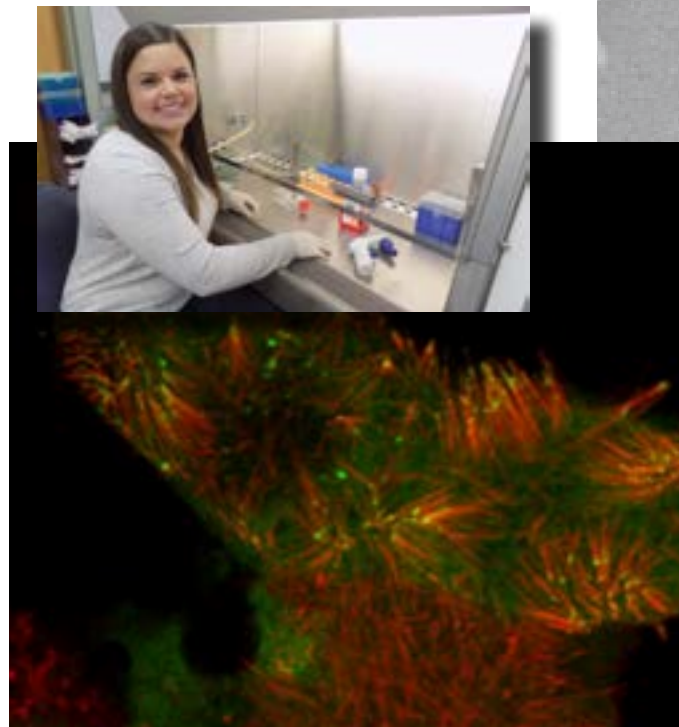


If we can understand better what is happening, then maybe we can help cells in distress build a better brush border.

Meredith Weck
Graduate Student

how the critical motor protein Myosin 7b influences their function. The primary function of these cells is to absorb nutrients from what a person eats or drinks. To help with that, the cells form tiny finger-like projections. Together, these projections form the specialized microscopic lining of the intestine, called the brush border, that allows it to absorb the required nutrients and protect the body from harmful microbes.

In a recent publication in the journal *Current Biology*, Weck discusses her new insight into the function of these projections. "The main takeaway point of the paper is that there is a motor protein that physically transports a complex of proteins to



Meredith Weck, graduate student, and an image taken demonstrating that myosin 7b influences the function of the epithelial brush border. (Photo credit: Kendra Oliver, Ph.D.)

the tips of these protrusions to enable their proper function." Ultimately, they found that transporting this protein complex to the tips of the projections is an important step in forming the brush border.

Weck plans to continue studying how the brush border functions in the context of a whole organism. According to Weck, "If we can understand better what is happening, then maybe we can help cells in distress build a better brush border." This could be a useful approach to treat individuals with intestinal diseases and change how intestinal diseases are identified.

After graduate school, Weck hopes to pursue a teaching career at University of Richmond. She states "I would like to go to a small liberal arts [school] where the professors are expected to do a lot of teaching, but also do some research as well."

DNA Repair: A New Player in the Replicative Process

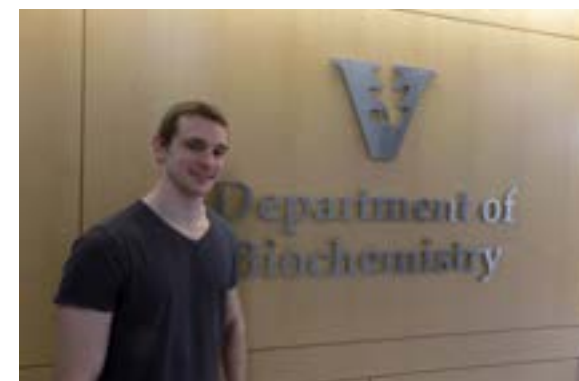
By **Leslie Sedgeman**, Graduate Student

When asked what initially attracted him to science and research, graduate student Thomas Bass says "I enjoy being on the fringe of knowledge and figuring out things no one has figured out before." Recently described in the journal *Nature Cell Biology*, Bass and colleagues accomplished this by discovering a new facet of DNA damage repair.

Bass discovered his love for science during his undergraduate years at the University of North Carolina at Chapel Hill. Despite his plans to study chemistry, he quickly realized he passionate about biochemistry and dove into undergraduate research. Through this experience, he realized he could combine his creativity and analytical skills to answer scientific questions.

In 2013, Bass came to Vanderbilt as a student in the Interdisciplinary Graduate Program and joined the laboratory of David Cortez, Ph.D., Professor of Biochemistry. The Cortez lab studies the processes that ensure our genetic code remains free from errors. These processes are critical during cell division, when a human cell replicates approximately 3 billion base pairs of DNA with few errors. This impressive feat drew Bass to join the lab and research this topic further.

As a graduate student, Bass has applied his creativity and analytical skills to investigate DNA damage in the context of DNA replication. During DNA replication, the proteins that copy our DNA may encounter damaged DNA. If not repaired,



Thomas Bass, graduate student in the Cortez lab within the Department of Biochemistry. (Photo credit: Kendra Oliver, Ph.D.)



I enjoy being on the fringe of knowledge and figuring out things no one has figured out before.

Thomas Bass
Graduate Student

the damaged DNA could corrupt the genetic code. However, the cell has damage response proteins that prevent this from occurring. One of these proteins, ATR, is activated upon recognition of DNA damage and halts the cell's replication process until the DNA can be repaired.

Previously, there was only one protein known to activate ATR; however, Bass and colleagues have discovered a new ATR activator—ETAA1. In describing the experiments that led them to this conclusion, Bass says "it was really interesting; we quickly figured out that, in fact, it [ETAA1] was doing something with repair, that this protein does directly activate ATR."

ATR inhibitors are currently in development as cancer therapeutics. It is possible that a combination of DNA-damaging chemotherapeutics and ATR inhibitors, which prevent damaged DNA from being repaired, will result in accumulation of DNA damage. Essentially, this means that the ATR inhibitor

would make the cancer cells more sensitive to the chemotherapy, resulting in a more effective treatment. Because ETAA1 plays a role in ATR function, Bass is hopeful that further insight into the role of ETAA1 will reveal new targets for cancer treatment.

Bass can still be found in the Cortez lab doing experiments to further understand what types of replication stresses activate ETAA1 and ATR. Following graduation, Bass plans to pursue a post-doctoral fellowship in biochemistry exploring DNA damage beyond the arena of replication stresses, with the eventual goal of running his own research lab.

Bridging the gap between Science and Business

By **Derrick Cumberbatch**, Graduate Student

“Participating in this module helped me have a more entrepreneurial mindset, which has changed how I view my career. Seeing business as an integral part of everything we do has made me more mindful in how I choose to develop my career,” says Henry Ong, Ph.D., who was a postdoctoral fellow when he attended a short course in entrepreneurship offered by Vanderbilt’s BRET Office of Career Development. Now, as a project manager at the Vanderbilt Institute for Clinical and Translational Research (VICTR) where he helps move large institutional programs forward, he is putting into practice many of the skills he learned that summer. The employment landscape for biomedical sciences Ph.D. students has been dramatically shifting over the last several decades. Historically, biomedical graduate student training focused exclusively on preparing individuals to oversee their own research labs in a traditional tenure-track faculty position. However, it is now widely accepted that greater than 75% of these trainees will go on to an incredibly diverse array of careers outside of this traditional faculty role.

In response to the evolving needs of its trainees, Vanderbilt’s BRET Office of Career Development, directed by Kim Petrie Ph.D., developed two unique business modules targeted to scientists in collaboration with Robert Carnahan Ph.D., Associate Professor of Cancer Biology and Director, Vanderbilt Antibody and Protein Resource Facility. The first, the Summer Intensive for Entrepreneurship and Commercialization will be offered for the third- time in June and is led by



Professor Joseph Rando teaching Management and Business Principles for Scientists. (Photo credit: Kate Stuart)

John Bers, Ph.D., Adjoint Professor of Engineering Management. This short course focuses on the fundamental business principles of commercializing a scientific innovation. The second module, Management and Business Principles for Scientists, is taught by Joseph Rando, MBA, Associate Professor of the Practice of Managerial Studies. Currently in its second year, this course emphasizes key concepts and tools used in the business world to give leaders and managers a strategic advantage in evaluating situations and making effective business decisions.

“The beauty of talking to room full of scientists is that they are all trained problem solvers. I’ve really enjoyed the opportunity to work with this unique group of students because they are great logical, organized thinkers. Many of them have never taken a business course, yet the problems and challenges they encounter as scientists have many parallels to those of the business world. It has been exciting to help arm them with new tools that can help them succeed in whatever career path they choose to pursue,” said Professor Rando.

Both modules are comprised of didactic lectures and project-based group learning which allows participants to put course principles into practice.

“It was a great opportunity for scientists to cross-train their problem-solving skills with the challenges of the business world,” said William (Reid) Bolus, a graduate student in the Department of Molecular Physiology and Biophysics, who participated in the module last year. In the case of the Summer Intensive for Entrepreneur-

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The beauty of talking to a room full of scientists is that they are all trained problem solvers.”

Joseph Rando, MBA
Associate Professor of the Practice of Managerial Studies

ship and Commercialization, teams work together to develop a technology commercialization proposal and investment pitch. It is ideal for trainees interested in exploring careers as innovation-focused faculty, technology entrepreneurs, strategy consultants, or executives in technology-based firms. The Management and Business Principles for Scientists module builds its team projects around solving real-world problems faced by Vanderbilt CORE Facilities. By working in consultation with a CORE Director, students and post-docs learn strategies that will help them with their own independent careers regardless of whether it is leading a team of scientists, managing a lab, or overseeing a technology start-up.

Former Management and Business Principles for Scientists module participant, Keenan Taylor, Ph.D., a post-doctoral fellow in the Department of Biochemistry who intends to manage a scientific research program in the future said, “I could not pass up an opportunity to develop such skill sets.” He further added, “I fully expect that this training will be very helpful as my career progresses and I assume a more significant leadership role.”

Graduate students and postdocs seem to be taking notice of these opportunities, as there have been nearly twice as many applicants as there are slots for the modules, which are limited to 24 participants. Trainees are not the only ones recognizing the value of these modules. In 2016, the module was awarded second place by the American Association of Medical Colleges (AAMC) for its Innovations in Research Education Award.

When asked why she is currently participating in the Management and Business Principles for Scientists module, Roxana Loperena, a graduate student in the Department of Molecular Physiology and Biophysics revealed that an academic lab is basically a small business, so Ph.D. students “need to know how to man-

“
[T]hese modules also allowed us to extend our career development network and bring together new institutional and local business partners keenly interested in educating the biomedical workforce of the future.”

Kathleen Gould, Ph.D.,
Associate Dean for Biomedical Sciences, Director of Graduate Student Support, and Professor of Cell and Developmental Biology



Rob Lavieri, Ph.D., VICTR Project Manager, discusses group projects with the class. (Photo credit: Kate Stuart)

age budgets and hire new people”. Loperena has her sights set on taking on a project management role in an industry setting and recognizes the importance of gaining management skills as part of her Ph.D. training.

The Management and Business Principles for Scientists and the Summer Intensive for Entrepreneurship and Commercialization modules were made possible with a one-year Career Guidance for Trainees grant from the Burroughs Wellcome Fund. The BRET Office of Career Development hopes to carry on offering both of these modules and is actively seeking partnerships to help support their continuation.

“By testing whether the learning objectives of each module were met, surveying participants and tracking outcomes, we can happily conclude that these two modules positively impacted the business acumen, career confidence and career trajectories of the participants” said Kathleen Gould, Ph.D., Associate Dean for Biomedical Sciences, Director of Graduate Student Support, and Professor of Cell and Developmental Biology. “The development and implementation of these modules also allowed us to extend our career development network and bring together new institutional and local business partners keenly interested in educating the biomedical workforce of the future. Indeed, the modules exemplify the spirit of cross-disciplinary training and innovation that features in the latest VU strategic plan.”

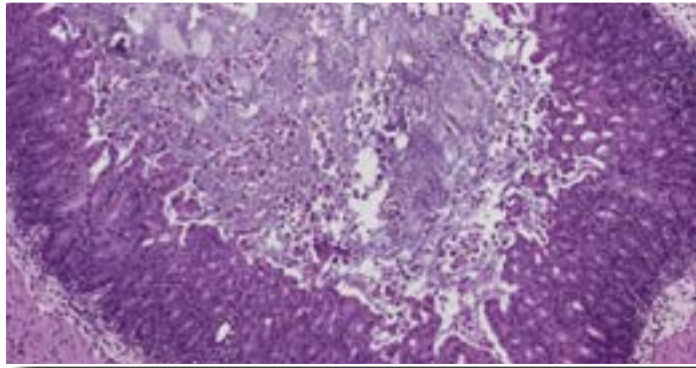


Joseph Zackular, Ph.D. (right) with Eric Skaar, Ph.D., M.P.H., (left).

Dietary Zinc:

The Devil is in the details

By Heather McCartney, Graduate Student



Histological image of *Clostridium* infection within the gut.

Clostridium difficile infection (CDI) is the number one hospital acquired infection in America and therefore it is crucial to understand the biology and pathogenesis of CDI. Although healthy adults are immune to CDI, individuals on antibiotics, the elderly, and the immunocompromised are more susceptible to this disease. In the past, CDI was thought to arise solely as a result of changes in the composition of endogenous gut bacteria, known as the microbiome. However, a groundbreaking study from postdoctoral fellow Joseph Zackular, Ph.D., in the laboratory of Eric Skaar, Ph.D., M.P.H., at Vanderbilt has shown the story to be more complicated.

A recent spike in the occurrence of community-acquired infections has spurred the Skaar lab to come up with alternative explanations for how CDI originates. In a new study from the lab, published in *Nature Medicine*, Zackular and colleagues describe a fascinating and delicate relationship between CDI and the levels of dietary zinc in mice.

In the study, mice on high zinc diets exhibited alterations in their microbiomes that increased the susceptibility to CDI. This is an important finding because alterations in the microbiome can lead to dramatic changes in the overall health of a patient. In addition to an increased susceptibility to CDI, the mice on the high zinc diet had increased severity of disease due to persistence of *Clostridium difficile* toxin A and an altered immune response. This study highlights the importance of appropriate patient diet for those at high risk of developing CDI and is a cautionary tale of megadosing supplements such as zinc.

As an obligate anaerobe that forms pesky spores, *Clostridium difficile* (*C. diff*) can be challenging to

work with in the lab. Zackular gained the necessary expertise as a graduate student working in a highly collaborative lab at the University of Michigan. During that time, he studied both *C. diff* and colon cancer. After defending his dissertation, Zackular knew he wanted to take his career in a more challenging direction for his post-doctoral studies.

While looking for a post-doctoral fellowship, he contacted Skaar with an original idea and eventually joined the lab.

Zackular says of Skaar, “the lab is amazing – it’s a large collection of people who work on diverse projects but who also have a great mix of different areas of expertise. It’s so helpful to have questions from so many different angles during our lab meetings.”

In addition to the supportive and collaborative *C. diff* group, Zackular is also thankful to work with several other labs and clinicians studying different aspects of *C. diff* biology and pathogenesis. He attributes part of the success of the study to the multidisciplinary contributions from those involved. Ultimately, Zackular hopes that more unanswered questions will be resolved by working with clinicians to develop the next stages of the project.

It’s so helpful to have questions from so many different angles during our lab meetings.

Joseph Zackular, Ph.D.
Postdoctoral Fellow

New insight on cancer-causing bacteria

By Meredith Jackson, Graduate Student



Dana Hardbower, Ph.D.
Recent Graduate Student

Life is all about balance—especially when it comes to preventing bacteria from causing gastric cancer. Graduate student Dana Hardbower recently explored this balance when she discovered the EGFR receptor signaling in macrophages contributes to chronic inflammation in *H. pylori* bacterial infections.

“I like to think of a macrophage as pac-man, going around chewing things up and saying ‘ok you’re good...you’re not,’” said Hardbower, who just graduated from the laboratory of Keith Wilson, M.D. “but if you can’t turn [the immune system] off, you’re going to start destroying your own tissues, leading to diseases like cancer.” Hardbower’s work, recently published in the *Journal of Clinical Investigation* (JCI), revealed that EGFR is a major regulator of these macrophages, causing them to be more inflammatory during an infection by the bacterium *H. pylori*. This species is widely known to be the major cause of gastric cancer, which is the third leading cause of cancer death worldwide. Hardbower states, “*H. pylori* infection in most people just causes chronic low grade inflammation...but in some people, it progresses beyond just a moderate inflammation of our stomach and it will [lead] to cancer.”

Macrophages play a major role in this cancer-causing inflammation, but Hardbower discovered she could reduce the inflammation by turning off their EGFR signaling. Turning off these signals also increases the amount of bacteria present, yet reducing chronic inflammation

could still prevent cancer from developing. According to Hardbower, completely eliminating *H. pylori* infection is nearly impossible. Instead, “if you can find a way to reduce the inflammation, your odds of getting cancer go down.” Rather than trying to fight the uphill battle of removing all of the bacteria, Hardbower potentially found a new target for reducing cancer-causing inflammation associated with the infection. Hardbower and colleagues’ findings are also exciting because, “most people don’t think of EGFR as a receptor on macrophages.” EGFR in cancer cells has been targeted by many therapies, but Hardbower and her colleagues are some of the first to identify its role in macrophages, a finding that could have important implications for how these cancer therapies affect the immune system.

A native of Alexandria, Virginia, Hardbower became interested in pursuing a career in research after working in a microbiology lab at the College of William and Mary, her alma mater. She was drawn to Vanderbilt’s IGP program and quickly settled on the Wilson lab after a successful rotation project. It was this project that eventually led her to the research she published in JCI.

“*H. pylori* infection in most people just causes chronic low grade inflammation, but in some people, it progresses beyond just a moderate inflammation of our stomach and it will [lead] to cancer.”

Dana Hardbower, Ph.D.
Recent Graduate Student

“[Dr. Wilson] has really let me be independent, which I appreciate. He’s really pushed me,” said Hardbower. “A huge lesson I’ve learned from him is that if you can’t communicate your science, it’s not doing anybody any good.” Hardbower was excited to be able to communicate her impactful discoveries in her recent papers, and she hopes to continue to pursue her passions for cancer immunology and the innate immune system with a postdoctoral fellowship.

Alumni Feature
Laurent Audoly, Ph.D.



Dr. Laurent Audoly has seen the world over. Thanks to his degree in Pharmacology from Vanderbilt University, he has been able to balance a career in the pharmaceutical industry along with a career in teaching. Since leaving Nashville, Dr. Audoly has held positions of increasing responsibility at Pfizer, Merck and MedImmune, and holds Adjunct Professor positions at Duke-NUS Graduate Medical School in Singapore and Fudan University in Shanghai, China. Dr. Audoly currently serves as Head of R&D for the Pharmaceutical Division at Pierre Fabre and became the founder of the Pierre Fabre Fund for Innovation last spring. We joined him in Toulouse, France (virtually!) and found out what his days are like.

30 MINUTE BIKE RIDE TO WORK

LISTEN TO PODCAST OR THINK ON THE WAY

TOULOUSE, FRANCE

WAKE UP AT 5:00AM

ARRIVE AT WORK BY 8:30AM



TELL US ABOUT YOURSELF...

“ I love to get lost in beautiful places... survival course in Scotland, tour of Corsica in a kayak, carrying my own food and water, and sleeping on beaches, long open water swims. I love music. Nashville was great. Also I really love to learn new things and getting to know what makes people click.

Laurent Audoly, Ph.D.

WHAT DOES YOUR JOB CONSIST OF?

- REVIEWING DATA
- THINKING ABOUT THE FUTURE OF PATIENT TREATMENT
- HIRING NEW TALENT
- DESIGNING STUDIES AND EXPERIMENTS
- TAKING TO PEERS AND BOSSES
- ENGAGING TEAM

LEAVES WORK BY 7:30PM

RECEIVES >100 EMAILS/DAY

SUPERVISES OVER 600 EMPLOYEES

TEACHES FORMALLY TWICE A YEAR

Mentors daily through Management

HOURS WORKED ON... NIGHTS 1.5 WEEKENDS 4.0

Join us in June!

BRET Annual Career Symposium
Alumni Career Trajectories
June 1, 2017
Student Life Center
Sponsored by the BRET Office of Career Development and the Training Grants in Biomedical Sciences
Blaze Your Own Trail.

BRET Reunion
June 1-2, 2017

The Vanderbilt University School of Medicine Biomedical Research Education and Training (BRET) office will host a reunion marking the 25th Anniversary of the Interdisciplinary Graduate Program (IGP). All biomedical PhD and postdoctoral program alumni are welcome.

Sponsored by the BRET Office and the Basic Biomedical Sciences Departments

<https://medschool.vanderbilt.edu/bret/reunion>

Engage • Connect • Discover

Faculty Spotlight:

By **Laura Daniel, Ph.D.**, Postdoctoral Fellow



David Sweatt, Ph.D., recently returned to Vanderbilt University to serve as Chair of the Department of Pharmacology, the department where he received his Ph.D. 30 years ago in the laboratory of Lee Limbird, Ph.D. Since then, he has pursued a postdoctoral fellowship at Columbia University in the laboratory of Nobel laureate, Eric Kandel, M.D., was a faculty member at Baylor College of Medicine in Houston, Texas, and spent the last 10 years as the Evelyn F. McKnight endowed Chairman of the Department of Neurobiology at University of Alabama at Birmingham (UAB) Medical School, as well as the Director of the Evelyn F. McKnight Brain Institute at UAB. Dr. Sweatt's laboratory studies the biochemical mechanisms of learning and memory. Most recently his lab has focused on the role of epigenetic mechanisms in memory formation. We had the opportunity to speak to him about his career and his recent return to Vanderbilt University.

David Sweatt, Ph.D., with his painting, "Epigenetic Regulation in Memory Formation": An interpretation of the dynamic regulation of epigenetic marking of DNA during memory formation. Acrylic on wood panel. (Photo credit: Ashley Brady, Ph.D.)

What do you love about being in academia?

For me, it was the intellectual freedom of it. The opportunity to explore any question I wanted. I always knew that I would like the academic lifestyle. I like teaching, I like training people and it turns out, I like writing.

Since returning to Vanderbilt, have you reconnected with anyone you knew as a graduate student?

Yes and it is kind of fun. Two of the senior faculty in the department, Jeff Conn, Ph.D., and Joey Barnett, Ph.D., --we all started graduate school in this same department in the early 80's and we all graduated at the same time. Jeff is one of my life-long good friends so coming back with Jeff and Joey has been great.

Have you had any eureka moments in your career?

Yes, those are the best parts about being a scientist, obviously. Probably the biggest one was when a group of postdocs in my lab discovered that epigenetic mechanisms control memory formation, which was really paradigm shifting. The dogma in the epigenetics field at that moment was when you laid down a pattern of epigenetic marks you could never change them. The postdocs in my lab discovered that is not correct, you can change epigenetic markers in the brain and those changes are necessary to make long term memory.

When did you start painting and why?

I came to painting fairly late in life. My wife and I decided to take some painting classes together for fun. For four years, we walked together to the fine arts museum in Houston and took painting and drawing classes. We both got really enthusiastic about it. It's an example that it is never too late to start something new.

I got very interested in abstract expressionist art. The work that almost all biomedical researchers do now is abstract in the sense that people aren't looking at something and describing it any longer. When you do a biochemistry experiment you have some enzymes and some substrates in a tube. You are not seeing any of that with your eye. You can see it in your mind, so it is abstract.

I like to try to use abstract expressionist painting techniques to convey ideas that are derived from modern biomedical research. That is what I like to try and paint. All the paintings I make are inspired by experiments going on in my lab.

What advice do you have for current graduate students and postdocs?

Ask the question, "for you, what is the most interesting topic?" Because you can basically work on anything, so pick out the most interesting thing and go work on that. If you are getting trained in one of the labs here, you will have a huge range of opportunities that will present themselves to you. Take that opportunity that Vanderbilt is presenting you and make the most of it.

Ask the question, 'for you, what is the most interesting topic?' Because you can basically work on anything, so pick out the most interesting thing and go work on that.

David Sweatt, Ph.D.
Chair and Professor of Pharmacology

NIH BEST A trainee's Perspective

By **Lorena Infante Lara**, Graduate Student

When I first considered applying to graduate school, I envisioned that my career path after graduating was to become a professor or to work in the pharmaceutical industry as a scientist in R&D. After I got to Vanderbilt, I realized that there were many other careers available for Ph.D.s, and that these "alternative careers" are actually the norm. I considered the BRET Office of Career Development and the ASPIRE program incredible and unique resources, and considered myself lucky to have them available to me.

I later found out that Vanderbilt is part of the vanguard that seeks to open the horizons to all trainees in biomedical research as a member of the BEST Consortium (Broadening Experiences in Scientific Training). The BEST Consortium is a group of 17 different institutions that receive NIH funding to develop and implement resources for trainees so that they understand the different career paths that are available to them. Each year, representatives from the BEST institutions come together to discuss their progress, challenges, and insights. This past October, I joined them as one of ten trainees invited to provide the trainee perspective on the is-

ues of career development. While there, I learned about the BEST grant itself and about the different approaches that programs across the nation are taking to spread the word about "alternative careers".

I was struck by the level of dedication and passion that every attendee had, each one was equally vehement in their desire to see the programs and – most importantly – their mission succeed. Every item on the meeting agenda focused on tackling the different issues that the BEST Consortium and the field of biomedical sciences faced. Highlights of the discussions included changing the culture in academia to one that values a broader training; maintaining the sustainability of the programs, (as the BEST grant is a 5-year, non-renewable grant); expanding the programs to institutions outside of the BEST Consortium; listening to ideas, concerns, suggestions, and feedback from the trainees in attendance; and developing metrics and baselines to determine the progress and effectiveness of the programs.

Attending the BEST Meeting allowed me to understand the depths of the effort being made to ensure that I am getting the best out of my Ph.D. So if you are a trainee, take advantage of the offerings afforded to us by the BRET Office and the ASPIRE program. Go learn about careers you have never heard about. Talk to speakers about the career paths they took. Take a module and learn about business, writing, or clinical research. Find out what you are good at, even if it is not necessarily something that you thought you'd be good at, and discover new skills that complement your scientific training. Look up and around you, and you will see the world is a broader place than you might have ever thought.

While there, I learned about the BEST grant itself and about the different approaches that programs across the nation are taking to spread the word about "alternative careers".

Lorena Infante Lara
Graduate Student



Lorena Infante Lara, graduate student, (far left, seated), representing Vanderbilt on the BEST Trainees Panel at the 2016 Annual BEST Conference in Bethesda, MD. (Photo credit: Ashley Brady, Ph.D.)

IMPORTANT DATES 2017

March 3

ASPIRE to
Connect

March 6

4th rotation
begins

April 19

PDA Shared
Resources
Symposium

April 24

1st year students
select labs

May 12

Commencement

May 15

Annual RCR
Training

June 1

Annual Career
Symposium "Alumni
Career Trajectories"

June 1-2

BRET 25th
Reunion

Sept 1

Simple
Beginnings
Ceremony

RESULTS AND DISCUSSION

BRET Newsletter
Issue 5, Spring 2017

340 Light Hall
Nashville, TN 37232-0301