VANDERBILT IMSD NEWS

Congratulations Summer and Fall 2016 Ph.D Graduates!

Stacey Mont, a graduate student in the Department of Cancer Biology, defended her thesis on June 9th. Her dissertation project "Accumulation of γ Ketoaldehyde-Modified Protein in Normal and fibrotic Lung , was completed in the laboratory of Michael Freeman, Professor of Radiation Oncology and Cancer Biology.

In the fall, four IMSD students completed their Ph.Ds. First up was Shellese Cannonier, who defended on Oct. 19^{th.} Her dissertation was entitled "Mechanisms Controlling Bony Invasion and Bone Destruction in Oral Squamous Cell Carcinoma. Shellese completed her dissertation in the laboratory of Julie Sterling, Asst. Professor of Cancer Biology. Shellese has accepted a position as an Analyst in Healthcare and Life Sciences at Proactive Worldwide, Inc.

Accumulation of yKetoaldehyde-modified protein in normal fibrotic lung

Stacey with her mentor, Mike Freeman

Issue 6, December 2016

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Shellese with her mentor, Julie Sterling



Above: Jeannie with her mentor, Larry Marnett, before her defense.

Below: Celestial with her mentor, Billy Hudson.





Courtney, with proud parents, after the defense.

Also in October, on the 31st, Jeannie Camarillo of the Biochemistry Dept. defended her thesis "Functional Implications of Electrophilic Protein Adducts." Jeannie completed her Ph.D in the laboratory of Larry Marnett, Dean of the Basic Sciences and University Professor of Biochemistry and Chemistry. Jeannie has moved to a postdoctoral fellowship at Northwestern University in the laboratory of Neil Kelleher, Ph.D.

On Nov. 7th, Celestial Jones-Paris completed her Ph.D in Cellular and Molecular Pathology in the laboratory of Billy Hudson, Professor of Medicine and Pathology, Microbiology and Immunology. Celestial successfully defended her thesis entitled "Dynamic Assembly of Basement Membrane Components in Tissue Development during Pregnancy."



Above: Celestial celebrates with her family, post defense.

On Dec. 17th, Courtney Copeland of the Molecular Physiology and Biophysics Dept. defended her thesis entitled "Impact of Novel Caveolin-1 Frameshift Mutants on Caveolae Assembly and Function." Courtney completed her Ph.D in the laboratory of Anne Kenworthy, Professor of Molecular Physiology and Biophysics. Courtney will be moving to a postdoctoral position in the laboratory of James West, Ph.D in the Dept. of Medicine at Vanderbilt



Courtney with her mentor, Anne Kenworthy.

First year IMSD students welcomed to Vanderbilt











































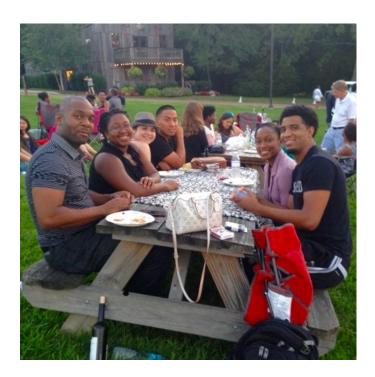




Row 1 (from left): Justin Avila, Kai Bracey, Jordan Brown, Jamal Bryant. Row 2: Manuel Castro, Melanie Hurst, Nicole Kendrick, Verra Ngwa. Row 3:Tolu Omokehinde, Luke Postoak, Alyssa Rodriguez, Holly Sucharski. Row 4. David Taylor, Shannon Townsend, Sheryl Anne Vermudez, Demond Williams. Row 5 Kellie Wilson, Geena Ildefonso, Alexandria Oviatt, Jade Williams. Row 6 Lindsay Redman, Brian Cawthorn, Devin Taylor. (Blue denotes QCB students).

Seventeen first year students in the 2016-17 Interdisciplinary Graduate Program (IGP) and four first year members of the Quantitative Chemical Biology (QCB) Program, plus Chemistry and Cell and Developmental Biology first year students were welcomed to Vanderbilt as the largest IMSD class ever.

New IMSD members were celebrated with a welcome outing to Arrington Vineyards on Saturday, August 27th. With lovely weather, beautiful vistas and local wines, the evening was a great success!









Honors and Awards

Joy Gamble George wins 2016 Levi Watkins, Jr. Student Award

Joy Gamble George, a recent IMSD graduate of the Neuroscience Program, has been awarded the 2016 Levi Watkins Jr. Student Award for outstanding contributions by a student to fostering a more diverse environment at Vanderbilt School of Medicine. The award is named for the first African American medical student at Vanderbilt, Levi Watkins, Jr., who after receiving his M.D. at Vanderbilt went on to a distinguished career at John Hopkins University. Joy is the fourth IMSD student to receive this award; Celestial Jones-Paris was the 2012 award recipient, Krystal Tsosie was the 2014 award recipient, and Adrian Cadar was the 2015 award recipient.

Joy was an outstanding graduate student and role model for URM students. She was awarded not one, but two, predoctoral fellowships, a Southern Regional Education Board Fellowship and a UNCF/Merck Fellowship. Among her more notable honors while at Vanderbilt was attending the 64th Lindau Nobel Laureate (Physiology or Medicine) meeting in Lindau, Germany in 2014 where she met with Nobel Laureates to discuss emerging research opportunities. Joy was instrumental in launching the first IMSD high school summer outreach program, "Discover Biomedical Research" helping to write the curriculum and develop recruiting materials. Joy is currently a postdoctoral fellow at the University of Florida.



Left: Joy with the Levi Watkins, Jr. award, presented by Adrian Cadar, last year's award recipient.





Congratulations!

The following students have passed their qualifying exam.

Jenny Aguilar

Rafael Perez

Bianca Flores

Rhonda Caston

Jaccica Ahnar

Cherie' Scurrah

Diana Contreras

Frica Tross

Oakleigh Folkes

Hubaida Fusein

Matthew Ken

We now have an IMSD LinkedIn Group! https://www.linkedin.com/groups/12012219

or search for "Vanderbilt Initiative for Maximizing Student Diversity Trainees and Alumni"

This group is for Vanderbilt IMSD members and alumni. As the number of IMSD alumni grow, so does your professional network. Hopefully this group will help you connect with and stay connected with IMSD graduates across the globe.



Gnecco's Research Awarded Bill and Melinda Gates Grant

4th year IMSD student Juan Gnecco's dissertation research project, "Development of a Novel Organ-On-Chip of the Endometrium was awarded a Bill and Melinda Gates Foundation Grand Challenges Exploration Grant to mentor Kevin Osteen, Professor of Obstetrics and Gynecology this fall.

Juan also attended the 5th conference on Prenatal Programming and Toxicity in Kitakyushu, Japan and was awarded best poster for his poster entitled "Exposure of Human Fetal Membranes to Dioxin Ex Vivo is Associated with a Hyperinflammatory Response: Potential Relevance to Preterm Birth". Congratulations, Juan!

Buenrostro to attend St. Judes Symposium

Denise Buenrostro, a 5th year IMSD student in the laboratory of Julie Sterling in Cancer Biology, has been selected to participate in the 2017 St. Jude National Graduate Student Symposium. Of 1500 graduate students who applied. Denise was one of 42 students selected by the review committee. Congratulations, Denise!



Jones-Paris to chair Gordon Research Seminar

Fall 2016 IMSD Ph.D graduate Celestial Jones-Paris will be chairing the 2017 Gordon Research Seminar on "Collagen" Biochemistry to Physiology: Relevance to Living Tissues and Exploitation in Medical Technologies." Her co-chair is Richard L. Williams. The meeting will be held in July at Colby-Sawyer College. Congratulations Celestial for this outstanding leadership position!

Alvarado to Intern at Genentech

Gabriela Alvarado, a 4th year IMSD student in Pathology, Microbiology and Immunology has been selected for the highly regarded summer internship program at Genentech in South San Francisco, CA. Gabby is completing her dissertation research in the laboratory of James Crowe, Professor of Pediatrics and Professor of Pathology, Microbiology and Immunology.

Congratulations, Gabby, on this great opportunity!



25 New IMSD publications July 2016 - December 2016

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González-Rivera C, Campbell AM, Rutherford SA, Pyburn TM, Foegeding NJ, Barke TL, Spiller BW, McClain MS, Ohi MD, Lacy DB, Cover TL. A Nonoligomerizing Mutant Form of Helicobacter pylori VacA Allows Structural Analysis of the p33 Domain. Infect. Immun. 2016 Sep; 84(9): 2662-70. PMID: 27382020; PMCID: PMC4995914.

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Jones-Paris CR, Paria S, Berg T, Saus J, Bhave G, Paria BC, Hudson BG. Embryo implantation triggers dynamic spatiotemporal expression of the basement membrane toolkit during uterine reprogramming. Matrix Biol. 2016 Sep 10. PMID: 27619726; PMCID: Pending.

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Cannonier SA, Gonzales CB, Ely K, Guelcher SA, Sterling JA. Hedgehog and TGFβ signaling converge on Gli2 to control bony invasion and bone destruction in oral squamous cell carcinoma. Oncotarget. 2016 Oct 12. PMID: 27738315; PMCID: pending.

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Stocks BT, Thomas AB, Elizer SK, Zhu Y, Marshall AF, Wilson CS, Moore DJ. Hematopoietic Stem Cell Mobilization is Necessary but not Sufficient for Tolerance in Islet Transplantation. Diabetes. 2016 Oct 26 [Epub ahead of print] PMID: 27797908;

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Simmons AJ, Banerjee A, McKinley ET, Scurrah CR, Herring CA, Gewin LS, Masuzaki R, Karp SJ, Franklin JL, Gerdes MJ, Irish JM, Coffey RJ, Lau KS. Cytometry-based single-cell analysis of intact epithelial signaling reveals MAPK activation divergent from TNF-α-induced apoptosis in vivo. Mol Syst Biol. 2016 Aug 29;12(8):881. PMID: 27574014. PMCID: Pending.

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Inaugural Discover Biomedical Research Program a Success!

From July 11th to 22nd, 2016, the Vanderbilt IMSD held its first ever *Discover Biomedical Research* program. The summer program offered rising high school sophomores and juniors a 2 week immersion experience in the world of biomedical research at a top tier research-intensive academic medical center. The program was designed and implemented by six IMSD students, Adrian Cadar, Dept. of Molecular Physiology and Biophysics; Shellese Cannonier, Dept of Cancer Biology; Joy Gamble-George, Neuroscience Program; Jeannie Camarillo and Lorena Infante-Lara, Dept. of Biochemistry; and Diana Tafoya. Dept. of Biological Sciences.



Left: Layla and her Mom in the lab at parent's Open House Day.



Right: Jared's Mom travelled from Grenada, Mississippi to join him for parent's Open House Day.



Over the course of *Discover Biomedical Research*, IMSD students taught basic biomedical research skills to the high school students in a hands-on lab experience. The skills covered included microscopy, cell culture, and DNA, RNA and protein isolation and analysis. The high school students also shadowed the graduate students in their research laboratories, and on the last day learned about the college application process along with their parents in a meeting led by Vanderbilt Undergraduate Admissions. High School participants were Rosalyn Baxter, Orlando Pender, Sophia Taylor, and Layla Ahmed all from Nashville, Tennessee, Jared Barnes from Grenada, Mississippi, and Gerald Moore from Huntsville, Alabama. The program was very well received by the high school students - in fact one described it as a "life changing experience". Thanks to Jeannie, Adrian, Shellese, Joy, Lorena, and Diana for all your time and hard work to pioneer this program! 2017 dates are July 10th –21st. The program is open to all post-qualifying IMSD students.



Diverse: Issues In Higher
Education has ranked Vanderbilt
University No. 1 in the United
States for the number of doctoral degrees
awarded to African Americans in the biological
and biomedical sciences for 2014-15!!

As reported in news.vanderbilt.edu, Monday, Dec. 12, 2016:

Vanderbilt also earned top 10 rankings for graduate-level degrees in the physical sciences, education and nursing.

For several years, the magazine has ranked the top 100 institutions that confer the most degrees to minority students. The 2016 report, released in early December, also includes rankings according to the total number of degrees awarded to minority students across all disciplines as well as in specific disciplines. The rankings are based on the magazine's analysis of U.S. Department of Education reports submitted by institutions.

SAVE THE DATE

The Vanderbilt IMSD will be hosting Stephanie Correa, Assistant Professor of Integrative Biology and Physiology at UCLA on **Thursday, April 13^{th,} 2017**. Stephanie recently joined the faculty at UCLA where her research aims to define the neuronal populations that drive hormone-responsive and sex-specific changes in body weight. Stephanie's lab uses molecular profiling, neuronal manipulation and genetically engineered mice to define the neurons and genes critical for maintaining energy homeostasis.



Stephanie earned her B.A. in Biology at Pomona College prior to completing her Ph.D in Neurobiology and Behavior at Cornell University. She did postdoctoral work at UCSF in the laboratory of Holly Ingraham. Stephanie will be sharing her career path with the IMSD at an informal lunch at noon on April 13th. Her research seminar at 4pm that same day will be part of the new Discovery Science Emerging Scholars seminar series. The IMSD looks forward to welcoming Stephanie to Vanderbilt.



Fall IMSD Events

Left: Vanderbilt IMSD students headed out in October for a hike in Short Springs State Natural Area Park, home to one of the most beautiful waterfalls in Tennessee – Machine Falls.

Below: IMSDers staying in town gathered for Thanksgiving Day dinner at Monells.



There is always ice in Tennessee – indoors that is - and IMSD students started off the month of December with an outing to nearby Centennial Sportsplex for open skate.

IMSD Celebrates the Holidays

With food, games, andthe official IMSD piñata





Happy 2017 from the IMSD!

