

From the Associate Dean for Research Education

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Greetings! I am delighted to welcome the 2018 class to the OSU College of Medicine. I have enjoyed meeting many of you at Second Look day, Medical School Orientation, LSI Research Careers session and the recent Medical Student Research Opportunities Session. As you will see by looking through the many exciting stories about OSU medical students pursuing research, there is a lot of enthusiasm for many areas of biomedical research! **Lauren Mamer** had an interest and a masters level experience in neuroscience research when she entered medical school. During a research leave of absence to pursue more in depth neuroscience research she decided to pursue a PhD. **Juan Santiago-Torres'** translational research project focuses on mesenchymal stem cell-mediated gene delivery which is the subject of his masters thesis concurrently pursued during medical school. **Ayo Adesanya** is pursuing cardiovascular research and has taken time between his Med 3 and Med 4 year to pursue a PhD in the COM Biomedical Sciences Graduate Program. Any one of the students featured in these stories would be happy to share their experiences and/or give you advice as you consider your research options. Those of you who attended the COM Student Activities Fair or the Honors Consortium meeting know that the Landacre Honor Society and Landacre Interest Group (<http://go.osu.edu/Landacre>) are available to provide you with advice and assistance as well! Please take a moment to review all of the resources that are available to you on the Medical Student Research program (MDSR) website <http://medicine.osu.edu/go/mdsr> and to pencil in the upcoming Landacre Research Opportunities Fair on Tuesday October 21st, 2014 and the COM MDSR Scholarship application deadlines (Phase I: Dec 5, 2014; Phase II: Jan 10, 2015).

Finally, a special thank you to all of the faculty who serve as medical student research mentors, assist in reviewing research scholarship applications and participate in MDSR program events throughout the year to give students tips and advice for an outstanding research experience!

Sincerely,



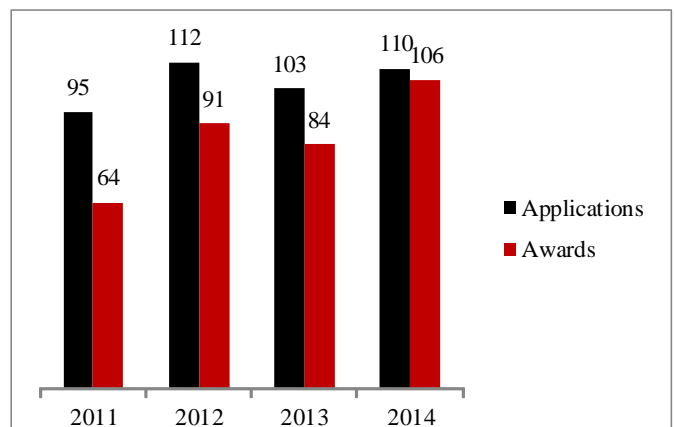
Ginny L. Bumgardner MD PhD FACS
Associate Dean for Research Education



OSU College of Medicine, Medical Student Research Scholarships

Applications for last year's OSU COM Medical Student Research Scholarship opened on Oct. 14, 2013. Phase I documents were due Dec. 6, 2013; Phase II documents were due Jan. 10, 2014. The MDSR program received 110 phase 2 applications for the 2014 academic year and funded 106 applicants, including three students taking a yearlong LOA for research. Applications for the 2015 OSU COM Medical Student Research Scholarship will open on October 6, 2014. Phase I documents are due December 5, 2014; Phase II documents are due January 9, 2015.

To find out more about the application process, contact our office by email at Research.Education@osumc.edu or visit our website: <http://medicine.osu.edu/go/mdsr> Statistics to the right represent MDSR College of Medicine scholarship-supported research.



Why Research?

Research as part of the medical student training incorporates discovery through critical thinking, innovation and experimentation. Medical student researchers learn how to communicate new knowledge and how to apply discoveries to enhance patient care. Our students' participation in research gives them firsthand experience and skills in biomedical discovery, increases the depth of understanding of medicine and prepares them to directly influence the future course of medicine.



Lauren Mamer grew up in Los Angeles and attended Stanford University, graduating with a Bachelors of Science in Biology. She was very interested in neuroscience during her undergraduate studies, and she pursued this interest in neuroscience further after graduation, obtaining her master's degree from the International Graduate Program Medical Neurosciences in Berlin, Germany. During her master's she became interested in the mechanisms controlling release probability of synapses in the brain.

She began medical school at Ohio State in 2011, and pursued a yearlong leave of absence between Med 2 and Med 3 year, sponsored by the nationally competitive Carolyn L. Kuckein AOA Student Research Fellowship. During this leave, she returned to her master's thesis lab in Berlin to follow up on some of the work she had performed during her thesis research. During this year, her career goals crystallized around academic medicine, and she decided to pursue her PhD in the research group of Prof. Rosenmund before returning to Ohio State to finish her medical studies. Her current project studies the role of endocytic proteins in regulating release probability at the synapse. The results from her research may demonstrate a novel regulatory mechanism for release probability in neurons and establish a molecular connection between exocytosis and endocytosis. She hopes that a better understanding of the function of neurons at a basic level will help us better treat neurologic and neuropsychiatric diseases in the future. Her ultimate career goal is to practice medicine at an academic center and to have her own research group in which she investigates basic research questions with clinical applications.



Juan Santiago-Torres grew up in Adjuntas, Puerto Rico, and attended the University of Puerto Rico, graduating *Summa cum Laude* with a B.S. in Chemical Engineering. He entered medical school in 2012 after completing one year of graduate school in the Comparative and Veterinary Medicine Graduate Program at OSU. He has been working on his master's program along with his first two years in medical school and will be graduating this summer with a thesis on mesenchymal stem cell-mediated transient gene delivery of bone morphogenic protein-2 and bone regeneration. His graduate research under the mentorship of Alicia Bertone, DVM, PhD, has resulted in lead authorship of a manuscript currently under review.

Since he began medical school, Juan has also been passionate about addressing healthcare disparities. He joined the LINKED group to facilitate the linkage of patients with diabetes from free clinics to primary care homes. LINKED is both a student group and a research effort to address the impact of said linkage on diabetic health, which began as a service-learning project within the novel *Lead.Serve.Inspire.* curriculum at the OSU COM. Juan is currently doing his Advanced Competency Alternate Experience in Research with LINKED under the guidance of Diane Habash, PhD, RD, and in collaboration with fellow medical students.

Now a third year medical student, Juan is also mentored by Julie Bishop, MD. His ongoing research addresses the association between smoking and shoulder pathology. He is the lead author of a systematic review on the effect of smoking on rotator cuff and glenoid labrum surgery published in the top-rated orthopedic journal, *The American Journal of Sports Medicine*. Their findings support advocating smoking cessation before and after soft tissue shoulder surgery. Juan's career goal is to become an orthopedic surgeon while integrating both basic and clinical research into his career.

MDs and PhDs

Ayo Adesanya grew up in Dallas and Greenville, Illinois, and attended The University of Chicago, graduating with a B.S. in Biological Chemistry. Ayo has always been passionate about biomedical research and has participated in numerous summer and academic-year research programs during his high school and undergraduate education. From a gene expression and promoter analysis project in Dr. Robi Mitra's laboratory at Washington University School of Medicine in Saint Louis to studying the biological roles of the vitamin D receptor protein in Dr. Murray Favus's laboratory at The University of Chicago, Ayo was exposed to a diverse array of wet-lab methods, animal models, and research environments. Working alongside several physician-scientists in laboratories adjacent to major hospital facilities, Ayo grew a strong desire to not only touch lives through medicine but to further explore unknown realms of disease and treatment.

Ayo entered medical school in 2009 and received the William J. von Liebig Summer Research Fellowship in Vascular Surgery at Harvard Medical School, training in the laboratory of Dr. Christiane Ferran during the summer between Med I and Med II year. During his Med III year, his clinical experiences motivated him to devote time to pursue his dream of becoming a physician-scientist, and he joined OSU College of Medicine's Biomedical Sciences Graduate Program between Med III and Med IV.



Now a sixth-year Ayo is mentored in the Division of Cardiac Surgery by Dr. Jianjie Ma. His current project involves investigating MG53, an essential cell membrane repair protein, in the context of heart valve biology. The results from their research may be important in targeting valvular cells for treatment of tissue injuries associated with valvular heart disease. Ayo plans to continue to integrate research as a cornerstone of his career in medicine.

Landacre Gives Back to the Community

Although the Landacre Research Honor Society's main goal is to promote and support biomedical research among medical students, each year they host a fundraiser to raise money for a well-deserving program in the community, The Boys and Girls Clubs of Columbus. Over the past two years, through holiday bake sales, Landacre was able to raise almost \$500 to donate to the local chapter.

Boys & Girls Clubs of Columbus offers recreational and educational programs to youth ages 6 to 18, ensuring that Columbus kids have a productive and positive outlet for their free time. Designed to help members reach their full potential as productive, caring, and responsible citizens, the Club provides access to comprehensive after-school and summer programs.

Landacre president Maarten Galantowicz and Interest Group president Juan Santiago-Torres delivered the check in person this year and toured the facility with some of the students and The Resource and Development Coordinator Benjamin Leland (pictured left).



2014 Landacre Research Honor Society Annual Induction Ceremony and Banquet

The Landacre Honor Society is the medical student research society at OSU COM, founded in 1956 in honor of Dr. Francis Leroy Landacre, professor and first chair of the Department of Anatomy.

Dr. Landacre's exceptionally high standards in both academic achievement and research guide the society's promotion and support of medical student research activities.

In addition to providing students with a variety of information about research opportunities at Ohio State, Landacre also holds research seminars, hosts speakers, participates in the organization of the annual OSUWMC Trainee Research Day and recognizes faculty members who have demonstrated a strong commitment to medical student research with the Landacre Faculty Award. Students inducted into the society have demonstrated exceptional achievement in research.

Membership is open to all medical students in the OSU COM who have demonstrated excellence in medical research and fulfilled membership criteria by successfully completing an application and essay. Students interested in joining Landacre can see a full list of requirements at <http://go.osu.edu/Landacre>.

Each year, new inductees are welcomed into the society at the Annual Induction Ceremony and Awards Banquet. This year's event was held on May 5 at the Blackwell Inn.

The 2014 Board was led by: Maarten Galantowicz – President; Brad Schnedl, – Vice President; Samer Salamek – Treasurer; Kathleen Matic – Secretary; Eric Fichtenbaum – Officer; John Vaughn – Officer; Zachary Hing – MSTP Officer; Sankalp Malhotra – MSTP Officer; and Lauren Sall – Immediate Past President. The 2014 Interest Group was led by Juan Santiago-Torres – President; Volodymyr Manko – Vice President; Greg Metzger – Treasurer; Alexander Stuber – Secretary; Kathleen Puttmann – Officer; and Colin Ryan – Officer.

The 2014 keynote address was given by **Quinn Capers, IV, MD** Associate Dean for Admissions and Assistant Professor of Medicine, Division of Cardiovascular Medicine. The 2014 Landacre Research Mentor of the year award was given to **Kyle Perry, MD** assistant professor of Surgery, and **Christopher Breuer, MD** director of Tissue Engineering Vascular Grafts and professor of Surgery at Nationwide Children's Hospital, was selected as the 2014 recipient of the Landacre Distinguished Researcher of the Year Award.



Dr. Ginny Bumgardner and the 2014 Inductees



Pictured above: (left to right) Executive Board Members: Juan Santiago-Torres, Maarten Galantowicz, Colin Ryan, Lauren Sall, Brad Schnedl, Kathleen Matic, Samer Salamekh, Zachary Hing, and Greg Metzger



Pictured right top: Dr. Quinn Capers, IV, pictured right Dr. Gabbe enjoying the evening with Landacre inductees.

The 2014 Trainee Research Day

The 13th Annual Trainee Research Day took place on April 9 and 10 in the Biomedical Research Tower and Davis Heart and Lung Research Institute. Research Day provides an opportunity for research trainees at the OSU Wexner Medical Center to present their biomedical research in a public forum and to compete for travel awards given to the top scores from each trainee group. The trainee groups include graduate, undergraduate, medical and MD/PhD students, as well as postdoctoral researchers and fellows and clinical residents and fellows.

Research Day also presents an opportunity for colleagues and visitors to learn about research occurring at Ohio State. More than 420 trainees presented their posters, representing a wide array of research topics, throughout the day on April 10. Each of the 236 faculty members who volunteered to judge posters were asked to review at least four poster presentations and assign numeric values based on the trainee's presentation of their poster project.

Research Day kicked off with an informational session on Research Advocacy in the James Cancer Research Center. Guest speakers included **Jennifer Carlson**, assistant vice president of the OSUWMC Office of Governmental Affairs, and **Caroline C. Whitacre, PhD**, vice president for Research. This session also included a question and answer session to allow researchers to inquire how best to advocate for continued funding of biomedical research. Numerous representatives from various state and federal offices also attended the poster session.

Research Day also featured a keynote address by **Jeffrey Whitsett, MD** (photo left). Dr. Whitsett is chief of the Section of Neonatology, Perinatal and Pulmonary Biology at Cincinnati Children's Hospital Medical Center. The event also included state-of-the-art faculty lectures given by Carlo Croce, MD, professor and department chair of Molecular Virology, Immunology and Medical Genetics in the College of Medicine, and **Steven Goodman, PhD**, a principal investigator in the Center for Microbial Pathogenesis at The Research Institute at Nationwide Children's Hospital.

This year, 35 trainees, including 12 medical students, received travel awards to present their poster at another conference; each travel award is \$1000. Medical students made up almost 32% of the trainee representation this year. This year's medical student representative for the Allan Yates Distinguished Research Scholars Panel was



James Duncan, who discussed his research project titled "Cerebral Oxygenation and Processed EEG Response in Patients during Carotid Endarterectomy under General Anesthesia." Research Day wrapped up with an awards ceremony recognizing the outstanding research and mentorship at OSU COM. The 2014 Mentor of the Year award was given to **Balveen Kaur, PhD**, professor and vice chair of Neuro-Oncology Research.

The next Trainee Research Day is scheduled for April 15 & 16!



Pictured above: Balveen Kaur, PhD, 2014 Mentor of the year



Pictured left: 2014 Travel awards winners at the awards ceremony with Dr. John Davis and Dr. Joanna Groden

2014 MDSR Research Scholarship Kickoff Event

Each year, the Medical Student Research Program (MDSR) holds an orientation for all medical students and mentors who have been awarded a College of Medicine Scholarship, funded through the **Roessler, Bennett, and Barnes** Research Scholarships. This year's event was held on May 19 in the Ross Heart Hospital auditorium. The goal of this event is to orient each medical student and mentor to scholarship requirements, further funding opportunities, resources available to them and future opportunities in research.



The event included a faculty panel attended by **Larry Schlesinger, MD** chair of the Department of Microbial Infection and Immunity, director of the Center for Microbial Interface Biology and director of the Medical Scientist Training Program, who covered tips on achieving a rewarding summer research experience, foundation for future research opportunities and career development; **Joanna Groden, PhD** vice dean for Research, who touched on the exciting things being done in biomedical discovery at

OSU; and **Daniel Clinchot, MD** vice dean for Medical Education for the College of Medicine and associate professor of Physical Medicine and Rehabilitation who discussed the opportunity for LSI Research Advanced Competency (photo right). A panel of students in their second, third and fourth year of medical school also discussed how to take full advantage of the unique opportunity and how to incorporate research in the medical school curriculum (photo above).



MDSR Program Contact Information

Medical Student Research Program Websites:

<http://medicine.osu.edu/go/mdsr>

[MDSR Newsletter and Events](http://go.osu.edu/MDSRevents) - <http://go.osu.edu/MDSRevents>

[Research Opportunities](http://go.osu.edu/MDSRresearchopportunities) - <http://go.osu.edu/MDSRresearchopportunities>

Attention research mentors: you can advertise your research opportunities on the MDSR website by completing a [Faculty Research Announcement Request](#).

This provides medical students with an array of research opportunities in one easy location!

We want to hear from you!
To submit an item for the newsletter
or to highlight medical student research
accomplishments, email:
research.education@osumc.edu



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Mark Your Calendar! Upcoming Events

Date	Event	Location
Tuesday, Aug. 5 10:30 AM	COM Medical Student Orientation "Research Opportunities"	160 Meiling Hall
Thursday Aug. 21, 11:00 - 12:30 PM	Research Careers	160 Meiling Hall
Wednesday Aug. 27 9:30-10:30 AM	Evidence Based Inquiry & Research Learning Objectives	160 Meiling Hall
Thursday, Sept. 25 11:30 AM-1 PM	Introduction to Medical Student Research Opportunities & Identifying a Research Mentor Information Session	160 Meiling Hall
Monday, Oct. 6	COM Medical Student Research Scholarship Application Process Opens, 9 AM	http://medicine.osu.edu/go/ mdsr
Tuesday Oct. 7 6-8:00 PM	Student Achievement Celebration Dinner (Presentation of Awards to Medical Students Recognized for Research Accomplishments)	115 BRT
Tuesday, Oct. 21 12-1:30 PM	Competitive Extramural/Intramural Medical Student Research Funding Opportunities Information Session	115 BRT
Tuesday, Oct. 21 5-6:30 PM	Landacre Research Opportunities Fair Meet faculty from OSU COM and NWCH	115 BRT
Tuesday, Nov. 4 12-1:30 PM	1 Year Leave of Absence Research Funding Opportunities Information Session	105 BRT
Friday, Nov. 21	Extramural Research Applications due- <i>Internal Review Process</i>	Email: Research.Education@osumc.edu
Friday, Dec. 5	COM Medical Student Research Scholarship Phase I Documents Due, 5 PM	http://medicine.osu.edu/go/ mdsr
Week of January 5, 2015	2015 Extramural Research Applications Deadlines (HHMI, Sarnoff...)	Various websites
Friday, Jan. 9, 2015	COM Medical Student Research Scholarship Phase II Documents Due, 5 PM	http://medicine.osu.edu/go/ mdsr
Jan. 23, 2015 – Feb. 6, 2015	Landacre Research Honor Society Application Process	http://go.osu.edu/ LANDACRE
Friday Feb. 6, 2015	Trainee Research Day – Abstracts Submission Deadline 5 PM	Research Day Website http://researchday.osu.edu/
Wednesday & Thursday April 15 & 16, 2015	OSUWMC Trainee Research Day	BRT& DHLRI
May 2015	Landacre Honor Society Induction Ceremony	Blackwell Inn
Monday May 19, 2015 2:30-5 PM	Medical Student Summer Research Kickoff (Mandatory of all MDSR Scholarship Recipients)	115 BRT