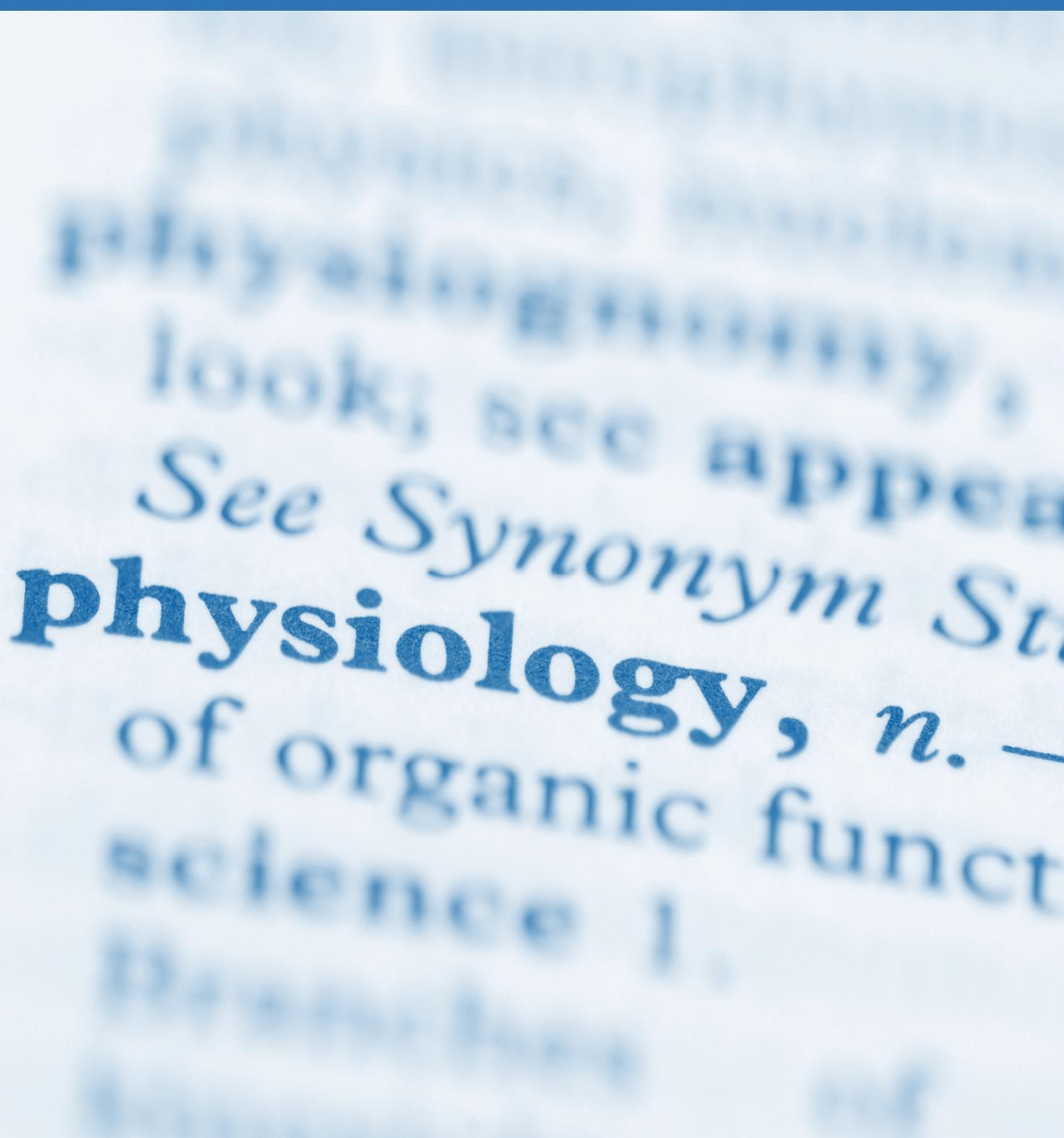


Molecular & Integrative

PHYSIOLOGY



A Message From Our Chair



Dear Friends, The legacy of our Physiology Department continues with 132 years and counting. This is the standard line that I like to start this column with to remind me of the amazing tradition of our department and the legacy it has established in the physiology field. I wish to take this opportunity to highlight some of our milestones in education, research and celebratory activities, and recruitments that have taken place during the past year. In terms

of recruitment, we are very fortunate to have recruited Dr. Amy Oakley from the University of Washington in Seattle as a Lecturer. Amy has deep Michigan roots, having been a graduate student with Fred Karsch, and she will be working closely with Beth Rust and Tim Houchin in the MS Program in addition to other teaching activities and teaching program development (see the MS program write-up on page 10). Amy was recruited to fill the position vacated by Dr. Thomas Michael Ferrari who joined the faculty at Oakland University William Beaumont School of Medicine. Thomas played a critical role, together with Dr. Rust, to jump start our MS program in physiology so we wish him well and he will remain a good friend of our department.

From within the UM Medical School, we are also excited that Drs. Ernesto Bernal-Mizrachi, Sharlene Day and Y Eugene Chen have joined us as joint faculty. Ernesto is presently associate professor of medicine (division of metabolism, endocrinology and diabetes), with a research focus on molecular mechanisms that regulate islet beta cells. Sharlene is associate professor of internal medicine/cardiovascular medicine, with a research focus of understanding the dysregulation that occurs in cardiomyopathies, particularly the hypertrophic type. Eugene is associate chair for research for cardiovascular medicine and professor of internal medicine, with a large research program involving understanding the molecular basis of obesity and diabetes associated cardiovascular diseases and developing novel therapies. Two adjunct professors have also joined our department, Drs. Shengzhong Duan and Marcelo Rubinstein; and several past trainees have joined us as junior faculty including Drs Christi Gendron, Myungjin Kim, Raymond Kwan, Pilhwa Lee, Elisa Na and Ranjan Pradhan. Please join me in welcoming them!

Our PhD and MS programs continue to flourish. The baton for overseeing the PhD graduate program was recently passed from Dr. Scott Pletcher to Dr. Sue Moenter (see their comments on page 6). Our department owes a special debt of gratitude to Scott for his terrific leadership, service, devotion, and hard work in overseeing the PhD program, as he now rotates off after three years of service. Sue will be assisted by Dr. Dan Michele, who will serve as associate director of the PhD Grad Program. The Moenter-Michele team will shortly begin the recruiting season for the new class of PhD students and are now busy making sure that all our current second year students complete their preliminary exams in flying colors. It is absolutely wonderful to see how well our PhD students are doing (see page 7 for PhD student awards and our 2013-2014 PhD graduating class). The MS program is now in its fourth year and, despite its young age, it has been incredibly

successful in placing students in medical and dental schools as many of our MS students aimed to achieve. We were very fortunate that Dr. Jeffery Altshuler and his wife Nancy have generously pledged \$100,000 to establish a scholarship and educational fund. Returns from this endowment have allowed us to award two scholarships to students in our third matriculating class, Brian Bazzell and Katherine Kelley, and our hope is to grow this pot of funds so we can provide additional scholarships to the many deserving and outstanding students who are enrolled in the program. Dr. Rust and her selection committee will be naming two students from Class IV as Altshuler scholarship awardees.

Another cornerstone of our educational and research missions is postdoctoral training. While MS and PhD training is foundational, postdoctoral training is the bridge to a real job so this training is critical for deciding about independent positions. It is our hope to provide as many opportunities as possible for our postdoctoral trainees and we hope to be able to engage our alumni in this effort. You can learn more about our postdoc society in the nice write-up provided by its current president Dr. Sebastian Parlee who has been doing a great job in organizing the monthly meetings of MIP's Postdoctoral Society (see Sebastian's write-up on page 8 together with a listing of the postdoc awards and honors).

I also wish to highlight some of the other important events and benchmarks for MIP. The NIH rankings were recently released and our department ranked 3rd nationally in NIH dollars for physiology departments which, to my knowledge, is the highest ranking we have received. While such ranking is nice and we hope to continue on this trajectory, the department's first and foremost priority is to provide a supportive and nurturing environment to all its students, trainees, faculty and staff. Other featured highlights in the Newsletter are the naming of Dan Beard as the first Carl Wiggers Professor (see page 3) and the naming of Lou D'Alecy as the recipient of the 2014 Life Time Achievement Award in Medical Education (see page 8; and page 4 for additional faculty honors). Two other important events held this Fall were the fifth annual symposium with our friends at Trinity College in Dublin (special thanks to Ed Stuenkel for organizing this symposium, see page 8) and the Fred Karsch dinner to help with the fund-raising effort for this professorship (see page 4).

To our alumni and former co-workers and colleagues, I hope you will stay in touch and visit us or browse our website, www.medicine.umich.edu/dept/molecular-integrative-physiology. It is an honor and privilege for me to be part of the Department of Molecular and Integrative Physiology at the University. In closing, I am very thankful to Sarah Lawson for her hard work in assembling this Newsletter and to all those who have contributed to its sections.

With very best wishes for the holiday season and a healthy, happy and fulfilling New Year,

Bishr Omary

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Daniel Beard: Recipient of the Carl Wiggers Collegiate Professorship

On October 14, 2014, Dr. Dan Beard was installed as the first recipient of the Carl J. Wiggers Collegiate Professorship in Cardiovascular Physiology. The celebratory ceremony was held at the D. Dan and Betty Khan auditorium. It was very exciting that family members were able to join in, including Dan's wife Dr. Katherine (Katie) Delaney, and Dan's and Katie's parents. In addition, Dr. James Bassingthwaight, Dan's PhD mentor and a member of the National Academy of Engineering and an icon in the field of modeling in human biology and disease traveled from the University of Washington, Seattle to speak (and give a nice roast of Dan) at the ceremony.

Dr. Carl Wiggers had an illustrious cardiovascular-centered research career. He received his medical degree from the University of Michigan in 1906 then stayed on at the University of Michigan as an instructor of physiology from 1906-1918. After a stopover as a faculty member at Cornell University (1911-1918) he moved to Western Reserve University (which became known later as Case Western Reserve University) to chair their department of physiology. Among his many accomplishments, he was the first editor of *Circulation Research* which became and still is the premier scholarly journal in the cardiology field. He also authored seven books and more than 300 articles and his contributions were recognized by his reception of the highly prestigious Albert Lasker Award that many consider a gateway to the Nobel Prize.

It is very fitting to name Dan Beard as the first recipient of this honor. Dan was recruited from the Medical College of Wisconsin where he was a tenured Professor in the Department of Physiology. He is an international authority in the areas of systems biology and computational bioengineering as related to cardiac and metabolic function modeling. Dan is presently Professor of Molecular & Integrative Physiology, and holds joint appointments as Professor of Internal Medicine, Professor of Biomedical Engineering, and Professor of Emergency Medicine. He is an outstanding mentor and teacher and is currently President of the Cardiac Physiome Society, associate editor of *PLoS Computational Biology* and serves on the editorial boards

of several additional prestigious journals. His stature in the field of systems biology is also supported by his outstanding NIH funding portfolio (with U, P and R grants). We were indeed very fortunate to recruit Dan and his family to the University of Michigan.

We in physiology are grateful to the team effort by the Department of Medicine and the Cardiovascular Center, particularly Drs. John Carethers and David Pinsky and our Medical School Dean, Dr. James Woolliscroft, for helping us establish this endowed chair. Bringing Dan to Michigan was also a team effort that included, aside from the Cardiovascular Center and the Department of Medicine, the Department of Biomedical Engineering and its chair at the time, Doug Noll, who helped with Dan's recruitment to the University of Michigan; and the Department of Emergency Medicine and its chair Bob Neumar, who helped provide space that Dan could not refuse which also allowed Dan to be in close proximity to Emergency Medicine investigators.

Please take a moment to congratulate Dan on this well-deserved honor!



L to R: Dean James Woolliscroft (Dean of Medical School), Daniel Beard, James Bassingthwaight (Professor, University of Washington) and Bishr Omary (MIP Chair), at the Wiggers Professorship Award Ceremony



~Carey Lumeng:

Associate Professor with tenure Pediatrics and Communicable Diseases; Associate Professor, Molecular & Integrative Physiology

~Yatrik Shah:

Associate Professor with tenure, Molecular & Integrative Physiology; Associate Professor, Internal Medicine

~Shawn Xu:

Bernard W. Agranoff Collegiate Professor in Life Sciences; Professor, Molecular & Integrative Physiology

NEW FACULTY

Primary Faculty:

•Amy Oakley, PhD

Lecturer

Joint Faculty:

•Ernesto Bernal-Mizrachi, MD

Associate Professor,
Internal Medicine

•Sharlene Day, MD

Associate Professor,
Internal Medicine

•Yuqing Eugene Chen, MD, PhD

Professor,
Internal Medicine

Research Investigators:

•Christi Gendron, PhD

•Myungjin Kim, PhD

•Raymond Kwan, PhD

•Pilhwa Lee, PhD

•Elisa Na, PhD

•Ranjan Pradhan, PhD

Adjunct Professors:

•Shengzhong Duan, PhD

•Marcelo Rubinstein, PhD

Justus Anumonwo:

2014 Heart Rhythm Society Award; Top Ranked of Six Best Manuscripts in *Heart Rhythm Journal*
 2014 Editorial Board Member, *Heart Rhythm Journal*; *Frontiers in Cardiac Electrophysiology*; *Heart Research-Open Journal* (HROJ)
 2014 NIH/Italian Ministry of Health, Study Section Member

Daniel Beard:

2014 Carl J. Wiggers Professorship, UM
 2014 UM League of Research Excellence
 2014 External Advisory Board of the National Biomedical Computation Resource

Ernesto Bernal-Mizrachi:

2014 Editorial Board Member *American Journal of Physiology Endocrinology & Metabolism*; *Molecular Endocrinology*
 2014 Associate Editor, *Islets*; *Clinical Diabetes and Endocrinology*

Eugene Chen:

2014 Elected Member of American Society for Clinical Investigation
 2014 Associate Editor for *Cardiovascular Drugs and Therapy* (CDT); *Journal of Biological Chemistry* Editorial Board
 2014 Chair, NIH NIDDK Special Emphasis Panel R13 Study Section; NIH Vascular and Hematology NIH SS ZRG1 VH-D

Louis D'Alecy:

2014 Lifetime Achievement Award in Medical Education, UM

Sharlene Day:

2014 Taubman Scholar, UM
 2014 Clinician of the Year, Hypertrophic Cardiomyopathy Association

Thomas Gardner:

2014 UM League of Research Excellence

Marc Hershenson:

2014 Chair, Lung Cellular, Molecular and Immunobiology Study Section of the NIH

José Jalife :

2014 Heart Rhythm Society Founder's Lectureship Award
 2014 University of Nebraska, A. Ross McIntyre Award
 2014 Associate Editor, *Circulation Research*; *Europace*; Section Editor, *Journal of the American College of Cardiology*
 2014 NHLBI Institutional Training Mechanism (NITM) Review Group Member

Carey Lumeng:

2014 Editorial Board, *Diabetes*
 2014 Chair, Obesity Week 2015

Christopher Mendias:

2014 Shih-Chun Wang Award, American Physiological Society
 2014 Neer Award for Basic Science, American Shoulder and Elbow Surgeons Association

Ram Menon:

2014 David Murray Cowie, M.D. Research Professor in Pediatrics & Communicable Diseases

Sue Moenter:

2014 UM League of Research Excellence

Bishr Omary:

2014 MICHR (Michigan Institute for Clinical & Health Research) Distinguished Clinical and Translational Research Mentor Award
 2014 American Gastroenterological Association, Liver and Biliary Section Mentor Award

Gina Poe:

2014 - 2019 Co-Director and Co-PI, Neuroscience Scholar Program, Society for Neuroscience and NINDS
 2014 Visiting Professor, College de France, France

Marcelo Rubinstein:

2014 The World Academy of Sciences (TWAS) Prize in Biology

Linda Samuelson:

2014 Associate Editor, APS Select
 2014 Editorial Board Member, *Cellular and Molecular Gastroenterology and Hepatology*
 2015 American Gastroenterological Association Research Foundation R. Robert & Sally D. Funderburg Award in Gastric Cancer

Santiago Schnell:

2014 President of the Society for Mathematical Biology
 2014 Visiting Professor of Excellence, University of Barcelona, Spain
 2014 Scientific Advisory Committee, Mathematical Bioscience Institute

Jessica Schwartz:

2014 Director, Office of Training Grant Support

Yatrik Shah:

2014 Young Investigator Basic Science Award; Gastroenterology Research Group and the American Gastroenterological Association

John Williams:

2014 Distinguished Achievement Award, American Gastroenterological Association

**Fred Karsch Professorship Dinner:**

MIP hosted a dinner on November 14th to raise funds for the Fred Karsch Professorship. Over 70 guests attended, enjoyed a good meal, lively fun and music. The *Stout Hearted String Band*, featuring Fred and Nora Karsch, Bill Belote and Betsy Foote, with guest performers Ormond MacDougald (bagpipes and penny whistle) and Jessica Schwartz (vocals, see picture) provided the musical entertainment. Fred's son Doug, who is a nationally-renowned sports radio personality (you can hear him on WXYT FM97.1 M-F 10a-2p) served as Master of Ceremonies and filled the room with hilarious Fred Karsch stories including fishing (maybe nonfishing), Karsch antics, and the famous popping forehead vein. The event was a great success and helped raise nearly \$50,000. All we



The Stout Hearted String band and special guests!

need now is approximately \$20,000 and we should then be able to endow the Karsch Professorship. A million thanks to everyone who has contributed including many who could not attend the dinner but still gave generously.

Congratulations!

William Cawthorn
 Chancellor's Fellow
 University of
 Edinburgh



Nancy Linford
 Scientific Writer at
 City of Hope
 Los Angeles, CA



Liliya Mancour
 Medical Writer at MMS
 Holdings, Inc.
 Ann Arbor, MI



Natasha Snider
 Assistant Professor,
 Department of Cell
 Biology and Physiology
 University of
 North Carolina

Global Engagement of Doctoral Education: Health Science Initiative

Trinity College, Ireland & University of Michigan

The Department of Molecular & Integrative Physiology hosted the Fifth Annual Global Engagement of Doctoral Education (GEDE) Initiative with Trinity College, Dublin on October 23rd, 2014 at the University of Michigan's Palmer Commons. The Symposium included five faculty and four graduate students from Trinity College, and was initiated with greetings from Paul Browne, Head, Trinity College Medical School and Victor DiRita, Associate Dean of Graduate and Postdoctoral Education, Medical School, University of Michigan. The symposium featured alternating presentations by Trinity College and Michigan Faculty along with students who had previously participated in UM/Trinity research exchanges. In addition, a 'Data Blitz' session involving 12 doctoral students from the graduate programs of Physiology, Pharmacology, Cellular and Molecular Biology and Neuroscience formed a highlight of the symposium and promoted the outstanding research being done within the respective departments and Interdepartmental Programs. Trinity College participants were led by Dr. John Gormley (Director of Postgraduate Teaching and Learning, Senior Lecturer), and included Dr. Paul Browne (Head, School of Medicine, Professor of Haematology), Dr. Veronica Campbell (Professor of Physiology), Dr. Orla Sheils (Professor of Histo-pathology), and Dr. Richard Reilly (Professor of Neuroengineering). Notably, the symposium was capped by a celebration event held that evening at the West End Grill. The event was significant in celebrating growth in our research and educational interactions with Trinity College and in establishing the GEDE as an initiative open to Ph.D. students from each of the 14 Ph.D. granting departments or programs of the Medical School. Trinity faculty and students met with faculty research groups on Friday where research programs

nically complemented the Trinity visitors and where expectations for establishment of research collaborations would happen that would also promote exchange of doctoral students and research advances. Our Trinity Guests were then treated on Saturday October 25th to pure-Michigan events including lunch at Sidetrack's in Ypsilanti, a visit to the Henry Ford Museum, dinner at the Detroit Renaissance Center and then a performance of Motown at the Fisher Theater.

This GEDE program is generously supported by the Rackham Graduate School, Medical School Administration, Program and funding from the Office of Graduate and Postdoctoral Education as well as several of the Basic Science Departments of the Medical School. Additional information about the program and a guide on how to initiate and participate in this Global Engagement of Graduate Education can be obtained at:

http://www.rackham.umich.edu/faculty_staff/awards/faculty_and_graduate_program_funding/grants_for_the_global_engagement_of_doctoral_education/

Ed Stuenkel



2014 Physiology Faculty



Front Row: (L to R) Xin Tong, Jimo Borjigin, Lei Yin, Lisa Larkin, Bishr Omary, Elizabeth Rust, Ken Inoki, Louis D'Alecy, Yatrik Shah **Second Row:** Jun Hee Lee, Christin Carter-Su, Suzanne Moenter, Susan Brooks-Herzog, Carol Elias, Jun Wu, Liangyou Rui, Jessica Schwartz, Brian Carlson **Third Row:** Pilhwah Lee, David Pinsky, Larry Argetsinger, William Rainey, Anatoli Lopatin, Daniel Beard, Linda Samuelson **Last Row:** Kalyan Vinnakota, Timothy Houchin, Ormond MacDougald, Anthony DeFazio, Santiago Schnell

Ph.D. Program



Scott Pletcher

It is with fond memories, and a tinge of pride, that I write my last update as Director of the MIP Ph.D. graduate program. Of course, the pride part is vicarious, having come from observing the remarkable success that our students have achieved, year in and year out, and again in 2014. During this year's Fall Welcome, we embraced eight new Ph.D. students with primary interests in Physiology, seven of whom come from the umbrella Program in Biomedical Sciences (PIBS) program. Six second-year students, from both PIBS and the Medical Science Training Program, officially joined the Physiology program. Five students successfully completed their preliminary examination to achieve candidacy, and six students successfully wrote and defended their Ph.D. thesis. Kristen Ruka, from Sue Moenter's laboratory, received the Horace W. Davenport award for excellence in research. Alexis Carulli was awarded the John A. Williams Service Award; Caroline Adams received the Arthur J. Vander Teaching Award; and the John Bean Award for Academic Excellence went to Keita Uchida. Students in the program experienced a remarkable level of success at the national and university levels receiving NIH-sponsored NRSA fellowships, Rackham Fellowships, and support from a variety of research foundations. They also continue to work hard and grow their endowment, the "Graduate Education Fund in Physiology," which currently boasts a balance of nearly \$600,000. Income from the endowment supports student research presentations at national and international conferences.

The fond memories part comes from having the privilege to confront the challenges of graduate education with a spirited and talented group of colleagues who care deeply about mentorship and the success of our students. I would venture to say that my tenure as Director has been marked by a coalescence of efforts to establish forward-thinking policies that support student progress and professional development in the light of significance changes in the graduate education landscape, particularly in the biomedical sciences. While achieving steady growth in enrollment, we streamlined requirements to allow students to focus on their research sooner and more completely and we worked closely with global initiatives in teaching and research to provide our trainees with important cultural experiences. Our students clearly embrace the diverse career landscape that awaits them after graduation; our faculty and training program are now doing the same.

As I write this, I am reminded of my times watching the summer Olympics when I realize that passing a baton may look easy, but it's not. The key is trusting that your teammate will take it and run. I am fortunate to hand the reigns of the program to Sue Moenter, who is, simply speaking, a remarkably gifted scientist and mentor. I am certain she will make a better director than me. Together with the new Associate Director, Dan Michele, newest Graduate Committee member, Carol Elias, and the outstanding MIP faculty, I am confident they will lead us to even greater heights. Finally, I'd like to express my sincere gratitude to Michele Boggs, our program administrator, who has provided invaluable support and advice, to the faculty members of the Graduate Committee, and to the nine graduate student members of the committee who have served over the years. You have all been generous with your ideas, intellect, and time. I enthusiastically look to the future as the seeds of more than 100 years of Michigan Physiology research and training continue to flourish.

Scott Pletcher



Sue Moenter

"Tell me and I forget, teach me and I may remember, involve me and I learn."

— Benjamin Franklin

Working with Ph.D. graduate students is one of the greatest privileges and greatest pleasures in my career. The prior Graduate Program Directors, most recently Scott Pletcher, have all left impressive marks on improving the MIP PhD program; following in their footsteps is daunting. My goal is to maintain and continue to improve the resources, challenges and standards needed for each individual student to sculpt their graduate training in a way that channels their passion for science into a successful career path. This means providing a supportive atmosphere that will allow trainees to overcome obstacles and develop skills in the context of their own scientific projects. A rigorous, hypothesis-based approach must be combined with increased awareness by students and faculty alike of the broad career options open to science PhDs, as well as the hands-on experiences available to enhance the overall training experience during the doctoral years. I look forward to working with everyone to make this possible and to having Dan Michele working with me, as Associate Director, and Michele Boggs, the Program administrator.

Sue Moenter

2014-2015 Ph.D. Students



Front Row: Tova Berg, Maeran Uhm, Eden Dulka, Margo Emont, Surojit Sural, Caroline Adams, Allison Ho, Gail Gifford **Second Row:** Kris Sugg, Daniel Triner, Jacob Johnson, Kevin Swift, Jonathan Gumucio, Amy Sutton, Kristen Ruka, Fangyun Tian, Luhong Wang, Xi Chen, Francisco Alvarado **Back Row:** Keita Uchida, Matt Taylor, Andrew Schwartz, Bryan Holtz, David Bushart, Mark Bolinger, Jeff Phumsatitpong, Hao Liu, Amelia Glazier, Haocheng Lu, Zach Harvanek, Joanne Garbincius



Caroline Adams (Schnell/Moenter Lab):
 2014 Arthur J. Vander Award for Excellence in Teaching
 2014 Career Training in Reproductive Biology Training Grant

Francisco Alvarado (Valdivia Lab):
 2014 American Heart Association Fellowship

Alexis Carulli (Samuelson Lab):
 2014 John Williams Outstanding Graduate Student Service Award
 2014 PIBS Excellence in Teaching and Service

Eden Dulka (Moenter Lab):
 2014 National Science Foundation Graduate Research Fellowship

Amelia Glazier (Day Lab):
 2014 Systems and Integrative Biology Training Grant Fellow

Jonathan Gumucio (Mendias Lab):
 2014 NIH National Research Service Award
 2014 American Physiological Society Caroline Tum Suden/Francis Hellebrandt Award

Zack Harvanek (Pletcher Lab):
 2014 NIH National Research Service Award

Bryan Holtz (Williams Lab):
 2014 Basic and Translational Digestive Sciences Training Grant Fellow

Jun Young Hong (Hershenson Lab):
 2014 Rackham Predoctoral Fellowship

Jenny Ro (Pletcher Lab):
 2014 NIH National Research Service Award

Kristen Ruka (Moenter Lab):
 2014 Horace W. Davenport Research Award

Tami Stevenson (Lawrence Lab):
 2014 Japanese Society for the Promotion of Science Fellowship

Kristoffer Sugg (Mendias/Brooks Lab):
 2014 Postdoc NIH National Research Service Award
 2014 American College of Sports Medicine Outstanding Research Presentation Award

Matthew Taylor (Rainey Lab):
 2014 Systems and Integrative Biology Training Grant Fellow

Keita Uchida (Lopatin Lab):
 2014 John Bean Award for Academic Excellence
 2014 Systems and Integrative Biology Training Grant Fellow

2013-2014 Ph.D. Graduates



Amy Baek
 Mentor: David Pinsky, MD
 Thesis: "Transcriptional and Translational Regulation of the Ectoenzyme CD39 and In Vivo Thromboregulation"
 Current Position: Postdoc opportunity pending



Joel McDade
 Mentor: Daniel Michele PhD
 Thesis: "Contribution of Dysferlin-Containing Membranes to Membrane Repair in Skeletal Muscle"
 Current Position: Postdoctoral Fellow at Harvard Medical School



Alexis Carulli
 Mentor: Linda Samuelson, PhD
 Thesis: "The Dynamic Regulation of Intestinal Stem Cells by Notch Signaling"
 Current Position: Returned to third year clinical rotations at UM



Ryan O'Connell
 Mentor: Justus Anumonwo, PhD
 Thesis: "Electrical and Structural Remodeling of Cardiac Myocytes by Lipids"
 Current Position: Specialist, St. Jude Medical, AF and Cardiac Rhythm Management Division, Tampa Florida

Annual
Faculty/Student
Softball
Game!



*Faculty had no excuse this time, except for the absence of Scott Pletcher!

Post-Doc Corner

It has been a busy and successful year for the departmental postdoc society. Our decision to change things up a little and prioritize our meetings towards “soft-skills” in addition to traditional academic seminars culminated in diverse and informative discussions. We began by meeting with Dr. Michele Swanson, the Faculty Director for University of Michigan’s Postdoctoral Studies. Dr. Swanson’s summary of the services provided to postdocs along with strategies for completing a successful fellowship set up an excellent framework for the rest of our year. In February, physiology faculty members Drs. John Williams and Bishr Omary along with postdocs Drs. Dan Lam and William Cawthorn held a roundtable discussion concerning faculty interviews. This meeting must have been useful as we’ve since seen many of our postdocs transition on to faculty positions! To help with our interview skills we next invited the Michigan Toastmaster club to join us for a meeting. Their fun and interactive presentation provided many tools for clearly and concisely addressing questions during seminars and interviews.

Our program continued with presentations from Katherine Moynihan a Licensing and Market Specialist at the Office of Tech Transfer, Dr. Jeff Chamberlain, McCaw Endowed Chair in Muscular Dystrophy from the University of Washington School of Medicine, Dr. Heidi Inglay Reger Laboratory supervisor in Integrative Research in Nutrition, Fitness and Aging and Dr. Deborah Orłowski an HR specialist in conflict resolution. Their differing backgrounds and perspectives gave us all ideas to think about. For the final months of 2014 Drs. Nicole Bellefontaine, Juilee Rege, Kavaljit Chhabra and Aaron Mercer will be discussing their fellowship research. I’m sure everyone will agree how wonderful it is to hear about the excellent work going on in our own department!

It is important to note this society is not run alone. I would like to begin by sending a sincere and grateful thank you to Dr. Omary for his continued strong support and encouragement for the society and its members; my predecessor Dan Lam and vice president Raghu Thiagarajan for their help and advice; Michelle Boggs, Angie Tucker, and the rest of the staff for their excellent support; and of course all the postdocs for their enthusiastic participation. Like 2014, I have no doubt, 2015 will be another great year for the society!



Sebastian Parlee
President, MIP Postdoctoral Society

Jason Bazil (Beard Lab):

2014 Recipient of K99/R00

Kavaljit Chhabra (Low Lab):

2014 Outstanding Abstract Award, Oral Presentation, The Endocrine Society

2014 Early Career Forum Award, The Endocrine Society

2014 Joy Cappel Young Investigator Award, Rockland Immunochemicals Inc.

William Cawthorn (MacDougald Lab):

2014 Chancellor’s Fellowship, University of Edinburgh

Elise Demitrack (Samuelson Lab):

2014 MICHR Postdoctoral Translational Scholars Program Fellowship

2014 Presenter, Gordon Research Seminar on Notch Signaling, Bates College, Lewiston ME

2014 Japan & US Collaboration Conference in Gastroenterology, Tokyo, Japan

2014 Basic Science Plenary Session, Digestive Disease Week

David Garcia Galiano (Elias Lab):

2014 Lalor Foundation Postdoctoral Fellowship

Jung-Eun Lee (Pletcher Lab):

2014 Recipient of K99/R00

Yan Liu (Rui Lab):

2014 American Heart Association Fellowship

Manuel Ricu Moya (Moenter Lab):

2014 Lalor Foundation Postdoctoral Fellowship

Kazutaka Namba (Rainey Lab):

2014 American Heart Association Fellowship

Sadeesh Ramakrishnan (Shah Lab):

2014 American Heart Association Fellowship

Juilee Rege (Rainey Lab):

2014 Early Career Forum Award, The Endocrine Society

2014 Travel Award, The XVI Adrenal Cortex Conference

Erica Scheller (MacDougald Lab):

2014 Recipient of K99/R00

2014 John Haddad Young Investigator Award, American Society for Bone and Mineral Research

Xiang Xue (Shah Lab):

2014 2nd Place Abstract, UM Cancer Center Fall Symposium



Louis D’Alecy : Lifetime Achievement Award



Dr. Lou D’Alecy & Sue, his wife of 50 years!

Dr. Lou D’Alecy has been honored with the well-deserved 2014 Lifetime Achievement Award in Medical Education, bestowed by the University of Michigan Medical School. This prestigious honor recognizes Lou’s exceptional dedication as a teacher of medical students, graduate students, dental school students and undergraduate students over a span of 40 years (and counting).

No doubt you will appreciate some of the comments said about Professor D’Alecy by his students: *“It’s always great to have Dr. D’Alecy’s enthusiasm for teaching. Please don’t let him ever retire.”* and *“Always love D’Alecy, Animated, concise, no BS.”*. This award adds to Lou’s packed museum of awards that includes the Medical Student Award for Teaching Excellence in 2000, the Kaiser Permanente Award in 2001 and the Endowment for the Basic Science Teaching Award in Physiology in 2010; aside from being inducted into the University of Michigan Medical School League of Educational Excellence in 2013. In addition, Dr. D’Alecy has served as an outstanding role model for young faculty, helping develop their teaching skills and as a teaching mentor of many who have given lectures with him. Lou was honored at a medical school faculty and staff awards ceremony held on November 6, 2014. Please join me in extending a hearty congratulations to our **Grandmaster of Teaching**, Dr. Louis G. D’Alecy!

Summer Undergraduate Research in Physiology Fellowships

During the Winter of 2014, we received over 600 applications for our three undergraduate summer research programs: The Summer Undergraduate Research Fellowship program (SURF), the Short Term Educational Program (STEP) and the Summer Undergraduate Research in Physiology (SURP).

Our programs engage students in a 12-week summer research experience, with a long-term goal of getting them excited about biomedical research and hopefully recruiting some of them back to our graduate program. The laboratory hands-on research experience is complemented by a weekly noon lecture series with presentations on responsible conduct of research, several aspects of molecular and integrative physiology, how disorders of physiology lead to disease, and career advice. Students concluded their research experience by participating in the undergraduate research forum, which was held on August 2014.

The SURF program is the longest running program for undergraduate education in our department. It supports students primarily from Physiology faculty members' own grants. This year we supported nine undergraduate students. The STEP program is funded by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). It is specifically targeted to encourage student from quantitative backgrounds to apply their training to research relevant to digestive and metabolic diseases. This year the STEP program supported eight undergraduate students, and opened the door to a student sponsored by University of Texas Pan American RISE program. The SURP Program is supported by the Nation-

al Heart, Lung and Blood Institute (NHLBI). Its goal is to attract students from underrepresented groups to pursue research in heart, lung and blood diseases. We supported 11 students through the SURP program this year.

Our summer programs show our department's commitment to encourage and foster the success of students from all backgrounds to attain advanced degrees, research careers, and positions of leadership in physiology and biomedical sciences. This year we received three times more applications than previous years. We believe that the increase in the number of applicants is not accidental: it has been made possible by the success of our programs and word of mouth advertising which is steering more students to apply. We were able to increase the proportion of underrepresented undergraduate students participating in the SURF and STEP programs thanks to the generous support of the University of Michigan Rackham Faculty Allies for Diversity in Graduate Education.

As well as looking forward to the future of physiology, we would like to increase the number of students participating in our summer program. With your support we can help to sponsor more undergraduate students. If you like to support our summer programs, please consider making a year-end, tax-deductible donation to help us advance our summer program.

Jimo Borjigin & Santiago Schnell

For more information about these programs, please visit: <http://medicine.umich.edu/dept/molecular-integrative-physiology/education/undergraduate-opportunities>

Spotlight on Alumni



Christina Consolino, Ph.D.
Adjunct Faculty, Biology Department
Sinclair Community College

Christina Consolino studied in the Muscle Mechanics Laboratory under the direction of Susan Brooks Herzog. Following graduation in 2003, she taught a graduate course in kinesiology at U-M and developed a cardiovascular physiology seminar for Terumo Cardiovascular Systems. Since early 2004, Christina has served as adjunct faculty in the Biology Department at Sinclair Community College, in Dayton, Ohio, where she teaches anatomy and physiology to pre-nursing students. Much like in graduate school, muscle and nerve remain her favorite subjects. Just as important as her teaching career is Christina's writing. She is the co-author of *Historic Photos of University of Michigan* (Turner Publishing, 2007), has published several short stories, and is the author of two (as yet) unpublished novels, one of which features a character with ALS. She also serves as a Profiles Editor and Fiction Editorial assistant for the online magazine, [Literary Mama](#). In her spare time, Christina can be found volunteering in the Kettering City Schools, or with her husband, four children, and several pets, all of whom play a central role in her blog, [Heptadecagon](#).



Geoff Dahl, Ph.D.
Chair of the Department of Animal Sciences
University of Florida

Geoff Dahl was a postdoctoral fellow with Fred Karsch from 1991 to 1994. Geoff left Ann Arbor for a faculty position in the Department of Animal Science at the University of Maryland, College Park, where he developed a program focused on environmental physiology and lactation. Following a stint on the faculty at the University of Illinois (2000 to 2006), Geoff moved to his current position as Chair of the Department of Animal Sciences at the University of Florida. He continues to research the impact of external environment on animal physiology & performance, mostly with the cow as a model and heat stress as the insult. Geoff and his wife Linda spend much of their free time with their four children, Kellie (24), Zoë (21), Caleb (18) and Tesslyn (11), and live in Gainesville, FL.

Master's Program

The Class of 2014 in the Master of Science in Physiology program recently graduated, with twenty-one coursework track students finishing in June 2014 and four research track students finishing by August. The third annual Graduation dinner was held at Palmer Commons on June 21st to share the gift of good food, good drink, and very short speechifying by the Program Directors. We also said farewell to Co-Director Thomas Michael Ferrari, Ph.D. who moved in August, 2014 to Oakland University William Beaumont School of Medicine as an Assistant Professor of Physiology and Neuroscience. His contributions to the start-up and success of the program in its first three years cannot be understated. We wish him all the best in his new position. A national search was conducted for a new faculty member to fill the role of Associate Director of the M.S. Program. We are excited to announce the return of Amy Oakley, Ph.D. to our Michigan family. She graduated from MIP in 2008 with her Ph.D., having completed her dissertation, "Central inhibitory effects of glucocorticoids on reproductive function: permissive role of estradiol" in Fred Karsch's laboratory. She moved to the University of Washington as a post-doctoral fellow studying the role of kisspeptin in female reproduction and since 2013 has been a Lecturer in the Department of Biology at the University of Washington. Amy will join the faculty and M.S. program in January, 2015.

The primary objective of the M.S. program is to enhance students' preparedness and credentials to successfully compete for positions in (1) academic, pharmaceutical or other research positions, (2) basic science doctoral programs, (3) medical school or dental school or (4) other health related professional programs. So how are our students doing? The average incoming GPA of students is

3.39/4.0 and the average MS program GPA is 3.69/4.0. Success is defined as a student having entered a student or job position in the field of their choice. The success rates are as follows: class of 2012 = 86.7% success with two graduates applying for 2015 matriculation; class of 2013 = 73.9% success with 5 applying for 2015 matriculation and 1 student not responding; class of 2014 = 32% already matriculated into their programs Fall of 2014 and 65% applying for 2015 matriculation. Two members of the class of 2014 (Andrew Schwartz and Allison Ho) matriculated into the MIP Ph.D. graduate program this Fall! The class of 2015 consists of 30 total students, 22 in coursework track and 8 in research track. Research students are in the following labs: Rainey, Omary (2), Borjigin, Day, Inoki, Larkin and Xu.

Dr. Tim Houchin continues to run the Physiology 404 Laboratory class and took on the Physiology 502 course director role beginning Fall of 2014. Dr. Beth Rust has been sole Director of the program this Fall, advising all 30 students and running Physiology 605 (Fall and Winter). During the Winter term, she will also be course director for Physiol 600- Pathophysiology and acting course director for Physiol 592- Integrative Neurobiology while Dr. Geoff Murphy is on sabbatical. Dr. Oakley will run Physiology 610- Translational Physiology and assist with advising as she gets to know the students and the program during the Winter term. The class of 2015 is well on its way to great success and we look forward to another outstanding application cycle this Spring for the class of 2016!

Elizabeth Rust



Elizabeth Rust
Director



Timothy Houchin
Lecturer



Amy Oakley
Lecturer



Angie Tucker
Program Coordinator

PHYSIOLOGY GOES TO AFRICA



Eden Dulka teaching in Ethiopia.

During the current academic year the University initiated EM-PACE, Ethiopia Michigan Platform to Advance Collaborative Engagement which was funded by the University's Third Century Initiative. As part of this program, two MIP graduate students, **Eden Dulka** and **Surojit Sural**, along with 10 other Bio Med graduate students spent a month in Ethiopia in one of three new Medical Schools teaching basic sciences such as physiology, biochemistry and immunology. **John Williams**, Professor of Physiology was one of the faculty providing teaching materials and assistance. The twelve new medical schools were started by the Ministry of Health in Ethiopia three years ago to address the countries physician shortage. **Eden** was located at Aksum, a historic city in the north of the country, **Surojit** in Yrgalem in the south in the heart of the coffee growing region, while **John** spent his time in Addis Ababa visiting medical schools and the Ministry of Health. A meeting is planned for January in Addis Ababa to plan the next five years

around the theme of Healthy Cities. The overall EM-PACE program involves students and faculty from the Schools of Engineering, Natural Resources, Public Health and Business as well as Medicine. It is headed by Associate Dean Joe Kolars and Professor Senait Fisseha of the Dept of OB-GYN who is from Ethiopia. In the next interim year the program plans to send more Bio Med graduate students to Ethiopia and John indicates that if the program is further funded we may have Ethiopian faculty visiting here to complete PhD thesis research or learn about teaching.

2013-2014 Physiology Donors

09/2013-08/2014

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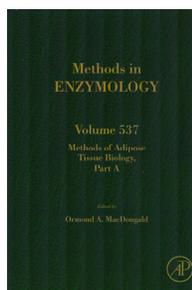
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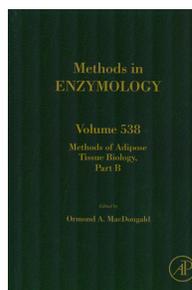
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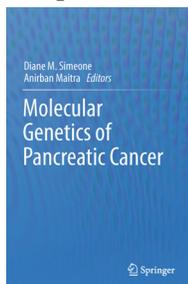
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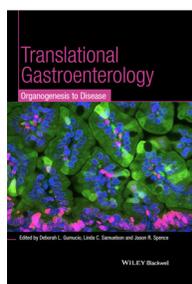
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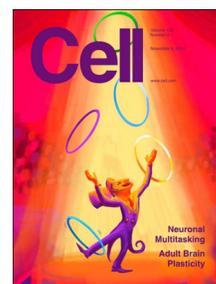
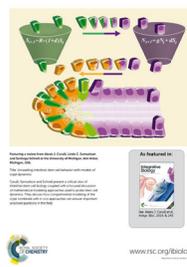
Santiago Schnell



Diane Simeone



Linda Samuelson



Shawn Xu

Gift Opportunities

John and Margaret Faulkner Lectureship & Education Fund

This fund will go towards supplementing the Graduate Education Fund as well as establishing an annual lectureship whereby a prominent invited speaker will be selected by students and faculty in honor of John and Margaret Faulkner. Currently this fund has \$38,000 of our goal of \$100,000.

Graduate Education Endowment Fund

The Graduate Education Fund was established in the Fall of 2008 to support PhD education and research. This fund will provide financial support in perpetuity for graduate education in Molecular & Integrative Physiology and will be used to propel the development of future generations of biomedical researchers. Your donations have been instrumental during the past six years to create the endowment. Your donations are matched 1:1 by the Dean of the Medical School up to \$500,000 to allow us to reach our ultimate goal of a \$1,000,000 endowment. The return on this endowment is now being used to help subsidize attendance by our PhD students at scientific meetings. The current balance of \$593,000 includes \$247,000 in matching funds.

Fred J. Karsch Collegiate Professorship in Physiology

Established in 2011 to honor Dr. Karsch's career as a preeminent scholar, scientist, teacher and beloved mentor. The campaign effort is to raise \$250,000, which will be matched by Medical School Funds. With pledges from Fred and Nora Karsch of \$80,000, Dr. Bob Goodman of \$20,000, and generous donations from you, our current campaign goal is to raise an additional \$25,000 in order to endow the chair.

David F. Bohr Collegiate Professorship in Physiology

This endowment was established in honor of Dr. David F. Bohr and his many decades of contributions to our department and the field of physiology. The Physiology Department will match donations to reach the necessary \$500,000 required to establish the David F. Bohr Collegiate Chair of Physiology. To date, we have raised \$235,000. Another \$15,000 in donations is needed before we can provide the matching funds and establish the chair.

If you would like to make a contribution, you please visit medicine.umich.edu/dept/molecular-integrative-physiology. Click on the Giving link in the menu on the left hand side. From there click on the "Give Online" button to go to the development site and choose one of these funds to donate to. If you prefer to write a check, please make it payable to the University of Michigan and indicate which fund you would like to contribute to. If sending a check, please address to Anne Many, Dept. of Physiology, 1137 E. Catherine St., 7744 MS II, Ann Arbor, MI 48109-5622. If you have any questions regarding the above funds, please contact the Director of Development, The Endowment for Basic Sciences, Greg Witbeck, at germaine@med.umich.edu or Bishr Omary at mbishr@umich.edu. We thank you for your generous support!