A Message From Our Chair

Being part of the now 126 year history and legacy of physiology at the University of Michigan is an incredible honor for me, particularly when one considers that the department has had only eight Chairs since its inception in 1882. It is especially gratifying and humbling for me to pick up the baton from John Williams, given his contributions to the Department over the years and the fact that he has been the Chair with the third longest tenure (1987-2008) in the history of the department after Horace Davenport (1954-1977) and Robert Gesell (1923-1954). Dr. Williams’ contributions to the Department are immeasurable and include the recruitment of nearly 75% of our current faculty. He will continue as one of our most distinguished faculty and as an Interim Director of our Center for Integrative Genomics. I am indebted to John, as he has helped make my transition seamless, and his guidance and knowledge have been priceless.

I joined the Department of Molecular & Integrative Physiology (MIP) in early August of this year and it has been such a pleasure to meet and work with the primary and joint faculty, students and postdoctoral trainees and the administrative team. Everyone has welcomed me with open arms and the hospitality has been amazing. I now realize that this is the Michigan way of doing things and is also a byproduct of the stability and wonderful work environment that has carried on over the years. Prior to joining the Michigan family, my past 19 years were at Stanford University where I started my first academic faculty position and thought I would never leave. However, having many friends at the University of Michigan before I joined the department, including John Williams and several other faculty members, and the draw I felt during my visits from California (even during last year’s harsh winter) made joining Michigan’s MIP a fait accompli.

I am very excited to provide leadership for the department through the next period of growth and revitalization, and I am committed to continuing the excellence in teaching and research that we are known for. We have institutional support from Dean James O. Woolliscroft to purchase needed new equipment; to continue with our renovations of existing space, nearly half of which was already completed in February 2008; and to recruit additional faculty. We also plan to establish a Systems Biology Division, within the Department, that will work closely with the Center for Computational Medicine and Biology (headed by Dr. Gilbert S. Omenn). Other areas of focus will be to evaluate our current graduate course portfolio; build collaborations with other departments within the Medical School and across the University; and build on our fund-raising efforts to increase support for the graduate program (via the newly established Graduate Education Fund) and to endow the John A. Williams Professorship and the David F. Bohr Professorship. Such endowments provide an eternal symbol of our gratitude to Dr. Williams and Dr. Bohr. We are indeed very sad to report that Dr. Bohr passed away on November 4, 2008. A memorial service will be held in Dr. Bohr’s honor on January 31, 2009, noon to 4 pm, at the Michigan League (a tribute to Dr. Bohr is included in this Newsletter). Information regarding philanthropy opportunities is also enclosed.

We hope that this Newsletter will give you a current flavor of the Department of Molecular & Integrative Physiology. We plan to continue with these newsletters on an annual basis. Please visit our website, www.physiology.med.umich.edu, for additional information. We have also enclosed a return stamped envelope should you wish to update us on your doings or contact us for any other reason. It is a privilege for me to be part of the rich history of physiology at the University of Michigan. We have an outstanding group of faculty, students, trainees and administrative team, all of whom work tirelessly and selflessly for the betterment of the department. Should you wish to visit the department and meet any of our faculty, please do not hesitate to contact me at mbishr@umich.edu or 734-764-4376.

With very best wishes,
Bisho Omary
Santiago Schnell, Ph.D.

Research Assistant Professor
Dr. Schnell received his Ph.D. in mathematical Biology from the University of Oxford (UK) in 2003, then joined as in 2008 as an Associate Professor, with a joint appointment in the Center for Computational Medicine and Biology. His research focuses on multiscale modeling techniques that link behavior in a mathematically defined manner across multiple scales of biological organization—from genes to cells, tissues, organs and organ-systems.

New Faculty

Xuequen Chen, Ph.D.
Research Assistant Professor
Dr. Chen completed his postdoctoral research at Michigan with Dr. Phillip Andrews (National Resource for Proteomics and Pathways Center), then was appointed Research Assistant Professor in 2007. Dr. Chen’s research focuses on the cell physiology of secretion and combines high throughput proteomics and cell biological techniques.

Isabelle Gerin, Ph.D.
Research Investigator
Dr. Gerin joined MIP as a postdoctoral research fellow in 2001 with Dr. MacDougald and was appointed Research Investigator in 2008. Dr. Gerin investigates the role of transcription factors (e.g., LXR, Foxc2) and more recently of microRNAs in adipose differentiation and metabolism.

Todd Herron, Ph.D.
Research Assistant Professor
Dr. Herron joined MIP in 2004 as a postdoctoral research fellow with Dr. Metzger and was appointed Research Assistant Professor in 2007. His research focuses on studying myosin isoforms in muscle contraction, cardiac arrhythmias and heart failure.

Ken Inoki, M.D., Ph.D.
Assistant Professor
Dr. Inoki joined the University of Michigan in 2001 as a postdoctoral fellow with Dr. Kun-Liang Guan (Bioschemistry Dept.) and was appointed Assistant Professor in 2008. Dr. Inoki’s research is directed at how isoforms in muscle contraction, cardiac differentiation and metabolism.

Andrews (National Resource for Proteomics and Pathways Center), then was appointed Research Assistant Professor in 2007. Dr. Chen’s research focuses on the cell physiology of secretion and combines high throughput proteomics and cell biological techniques.

When I came to Michigan as Chair almost 21 years ago, I saw myself as a spokesperson for the Department. I planned to lead by example, to facilitate a structure for faculty and students to be successful, and to help move Physiology into the modern era. I quickly learned that creating a shared vision would take a while. I not only had to, with the help of the faculty, create a vision, but then I had to obtain “buy-in” by everyone else. Much of this we did by having a series of retreats on research, teaching, and the future of the department. In retrospect, we should have had more retreats. They led, among other things, to the creation of the Center for Integrative Genomics, and changing the name of the Department from Physiology to Molecular & Integrative Physiology. Along the way I learned the importance of having clear policies, distributing duties, listening to others and not just talking, and the importance of developing a sense of community. We did the latter, in part, through parties and food. I even made an appearance one year as Santa Claus and distributed academic gifts to faculty.

Recruiting required a lot of work and I learned that personal touches helped. I used to pick faculty candidates up at the airport and give tours of the campus. Helping faculty develop their careers became the most rewarding part of my job. This involved recognition, promoting, networking, and sometimes letting them go on to other challenges. I had five faculty leave to become Chairs or Directors of their own units and I hope I contributed in a small way to their success. I also enjoyed providing an environment, facilities and financial support for graduate student education.

In the second half of my tenure, I enjoyed and felt more time for teaching and research. I hope to continue as a Professor with others but we kept a number of restaurants in business. I also feel I have spent the last three years preparing for this transition. I keep telling Dean Lichter that we need to renovate the department to have a nice lab to recruit my successor. Finally, he had the idea, “John, I have some extra money. We should renovate the Physiology Department. I said, “Great idea boss”. Then a few weeks later he called to say they didn’t have as much money as he thought so could we do half? We worked with architects and facilities and now have greatly improved laboratory facilities. Subsequently we, and I mean the entire department, worked with the search committee and eventually found the ideal person, Dr. Omary. I have enjoyed working with you and want to thank all of you and there are far too many to name individually. One of the great things about this Medical School is we are all part of a team (most of the time). Deans – I served under five. Dean’s Staff - Katrina Ward Hope, Camille Mrozowski, and Connie Bridges. Dept Staff Past and Present – The department administrators, Gisela Hean, Larry Wylie and Francine Boman, and especially the two staff here whom I came, Linda Basha and Dan Clark. The Basic Science Chairs – The Brethren. Some of our meetings were more like Group Therapy sessions. Physiology Faculty – Currently numbering about 60 with a great Esprit de Corps. Students and Fellows in the department. And my own Research Laboratory.

In conclusion, I want to say I am not retiring. I am looking forward to continuing as a Professor with more time for teaching and research. I hope to develop new interests and to spend more time with my family. On the subject of family, I want to thank all of you and there are far too many to name.

Passing the MIP Baton

Remarks made at the Chair reception given by Dean Woolliscroft

John Williams
Physiology Faculty:

**Primary Faculty (28)**
- Lawrence Argentinger, PhD
- Jimo Borjigin, PhD
- Susan Brooks, PhD
- Christin Carter-Su, PhD
- Xuequn Chen, PhD
- Louis D’Alessio, DMD, PhD
- John Faulkner, PhD
- Isabelle Gerin, Ph.D
- Todd Herron, PhD
- Ken Inoki, PhD
- Fred Karsch, PhD
- Lisa Larkin, PhD
- Anatoli Lopatin, PhD
- Louis D’Alecy, DMD, PhD
- John Williams, MD, PhD
- Fred Karsch, PhD
- Lisa Larkin, PhD
- Anant Lopatin, PhD
- Ormond MacDougald, PhD
- Daniel Michele, PhD
- Richard Mortensen, MD, PhD
- Geoffrey Murphy, PhD
- Bishr Omary, MD, PhD
- Liangyou Rui, PhD
- Elizabeth Rust, PhD
- Linda Samuelson, PhD
- Dolors Sans Gili, PhD
- Santiago Schnell, PhD
- Michael Sutton, PhD
- John Williams, MD, PhD
- Xian-Zhong Xu, PhD

**Joint Faculty (30)**
- Christin Carter-Su, PhD
  - 2008-2010: Gordon Conference on Prolactin and Growth Hormone Vice Chair
- Ormond MacDougald, PhD
  - 2008: Editorial Board, Journal of Biological Chemistry

**Emeritus Faculty (8)**
- Landis Keyes, PhD
- Richard Malvin, PhD
- John McReynolds, MD
- Lester Rutledge, PhD
- Jurgen Schnermann, MD
- James Sherman, MD
- Arthur Vander, MD

**Adjunct Faculty (6)**
- Joan Keiser, PhD
- Tatiana Kostrominova, PhD
- Warren Lockette, MD
- Joseph Metzger, PhD
- Thomas Morrow, PhD
- Tadataka Yamada, MD

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**Metzger Departure**

On July 31, MIP held a reception for Joseph Metzger, PhD so that his friends and colleagues could wish him well as he moves to the University of Minnesota to become Chair of their Department of Integrative Biology and Physiology and the first Maurice Visscher Professor of Physiology. The reception was held in the PIBS GAP area with lots of food and beverages as is our custom. We were joined by Joe’s wife, Maria and daughters, Stefania and Natalie. A cake had been procured with a large block M for Michigan on one corner and a wimpy upside down W on the other corner for Minnesota. A number of heartfelt remarks were made after which a “Top 10 things we’ll miss about Joe”, similar to the Letterman show, was presented by Linda Samuelson with assistance from Dan Michele and Ormond MacDougald. John and Christa Williams had composed a limerick in Joe’s honor. Joe was presented with a picture of an academic chair with a Michigan seal as a gift from his colleagues. The real one will be delivered to his office.

Joe was a part of our faculty from 1991—2008. He was also the Director of the Center for Integrative Genomics from 2001—2008. Although he is leaving us, we would like to wish Joe well in his new position.

**Faculty Awards & Honors**

- **Christin Carter-Su:**
  - 2008-2010: Gordon Conference on Prolactin and Growth Hormone Vice Chair
- **Ormond MacDougald:**
  - 2008: Editorial Board, Journal of Biological Chemistry
- **Linda Samuelson:**
  - 2008: NIH IPID study section
  - 2008: Board of Consulting Editors, Journal of Clinical Investigation

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**Molecular & Integrative Physiology**
I am honored to take over the reins of the graduate program from Fred Karsch, who did an outstanding job of directing the program for the past four years. I have now met with each of our 37 graduate students and I am very impressed with the energy and rigor they are applying to their studies and research. They are publishing their work in the finest journals and obtaining university and national predoctoral fellowships. Our graduate students investigate the mechanistic underpinnings of many human diseases including obesity, diabetes, cancer, and cardiovascular diseases. Their performance reflects well on themselves and also on the department, and I look forward to seeing how their careers develop.

You can find out more about their exciting work, accomplishments and research interests by visiting the graduate student webpage: http://sitemaker.umich.edu/physgrad/home.

The fall semester is an exciting time to welcome our new students and celebrate the tremendous accomplishments of our existing graduate students. During our Fall Welcome Event, we introduced to the department our largest class of incoming PIBS students with an interest in Molecular and Integrative Physiology. We also presented the Williams Service Award to Eneida Villanueva, and both the Vander Teaching Award and Bean Award for Academic Excellence to Matt Barnabei. Another highlight has been the Fall Picnic hosted by the second year graduate students during which the faculty regained the honor lost last year by defeating the students at softball. Many of our graduate students play softball for "The Phizz," a team that won the summer student championship. Most, if not all, faculty agree that the fact that many of the grad student softball players had to leave the picnic early to play in their intramural league had nothing to do with the faculty victory!!!

Our most recent event was the 19th Annual Fall Research Forum. There was a vibrant poster session, as well as oral presentations from four graduate students in competition for the Davenport Research Award. The winner this year was Matt Hyman, an MSTP student in David Pinsky’s lab who presented on “Autoregulation of inflammatory cell flux by leukocyte ectonucleoside triphosphate diphosphohydrolase 1.” The keynote address by Keith Yamamoto, Executive Vice Dean at UCSF and member of the National Academy of Sciences, was entitled “Allostery and Signal Amplification: Transcriptional Regulation by Steroids,” and Dr. Yamamoto closed the forum with a student workshop on “Future Careers in Science.”

One of the biggest challenges facing the Graduate Program is to provide financial support to recruit and develop the “Leaders and Best” of the future. This year we are pleased to announce the creation of the “Graduate Education Fund in Physiology” to provide funds in perpetuity to support graduate student education, research grants, travel to scientific meetings, and stipends. The Dean of the Medical School, Dr. James Woolliscroft, has agreed to match each dollar contributed. If you are able to donate to this endowment fund before the end of the year, you can take advantage of the University of Michigan President’s Challenge, which will match every $2 donated for graduate education with an additional $1. We anticipate that this endowment will help ensure our continued excellent training of new Physiologists for many years to come.

Our New Grad Chair

Ormond MacDougald

As I step down from my role as the Grad Chair, I reflect on the tremendous personal and professional satisfaction this has brought to me. Our MIP graduate students are highly spirited, talented, motivated and community oriented. They are star performers in their research, teaching and service activities, and they have been wonderfully responsive to working together to create a family atmosphere within the Graduate Program. I take great pride in this and will miss my daily interactions with our students. But I am confident the Program is in good hands with Ormond MacDougald as the new Grad Chair.

Fred Karsch

Our New Grad Chair

Karsch Retirement

As I step down from my role as the Grad Chair, I reflect on the tremendous personal and professional satisfaction this has brought to me. Our MIP graduate students are highly spirited, talented, motivated and community oriented. They are star performers in their research, teaching and service activities, and they have been wonderfully responsive to working together to create a family atmosphere within the Graduate Program. I take great pride in this and will miss my daily interactions with our students. But I am confident the Program is in good hands with Ormond MacDougald as the new Grad Chair.

Fred Karsch

Karsch Retirement
Recent Graduates

Xiao-Wei Chen, PhD
Mentor: Alan Saltiel, PhD
Thesis: Coordination of cell signaling and transport machinery during insulin stimulated glucose transport
Current Position: Postdoctoral Fellow, University of Michigan, Dr. Saltiel

Lili Guo, PhD
Mentor: John Williams, MD, PhD
Thesis: The role of C-JUN/AP-1 in cholecystokinin-induced pancreatic acinar cell growth in vivo and vitro
Current Position: Post-doctoral fellow in the laboratory of Dr. Susan Bonner-Weir, Joslin Diabetes Center

Matthew Merrins, PhD
Mentor: Edward Stuenkel, PhD
Thesis: Rab27a and Munc18 as molecular determinants of vesicle docking, priming, and fusion in glucose regulatory tissues
Current Position: Post-doctoral fellow in the laboratory of Dr. Les Satin, University of Michigan

Amy Oakley, PhD
Mentor: Fred Karsch, PhD
Thesis: Central inhibitory effects of glucocorticoids on reproductive function: permissive role of estradiol
Current Position: Post-doctoral fellow in the laboratory of Dr. Robert Steiner, University of Washington

Brian Panama, PhD
Mentor: Anatoli Lopatin, PhD
Thesis: Inwardly rectifying Kir2 potassium channel isoforms: differential properties and contributions to channels underlying cardiac Ik1
Current Position: Post-doctoral fellow in the laboratory of Dr. Peter H. Backx, University of Toronto

Christa Van Dort, PhD
Mentor: Ralph Lydic, PhD
Thesis: Regulation of arousal by adenosine A1 and A2A receptors in the prefrontal cortical of C57BL/6J mouse
Current Position: Post-doctoral Fellow in the laboratory of Dr. Amy Brown, Harvard

Student Awards & Honors

Matthew Barnabei:
2008 Arthur J. Vander Outstanding Graduate Student Teaching Award
2008 John Bean Fellow for Academic Excellence

Katherine Campbell:
Systems and Integrative Biology Training Grant

Matthew Copeland:
Systems and Integrative Biology Training Grant

Xiao-Wei Chen:
2007 Horace W. Davenport Award for Excellence in Research

Michael Doherty:
Systems and Integrative Biology Training Grant

Jessica Gumerson:
Systems and Integrative Biology Training Grant

Matthew Hymans:
2008 Horace W. Davenport Award for Excellence in Research

Rebecca Leshan:
2007 PIHS Excellence in Teaching Award
American Heart Association Predoctoral Fellowship

Gwendolyn Louis:
Reproductive Sciences Training Grant

David Norris:
NIH NRSA Predoctoral Fellowship

Deepti Nagarkar:
2007 Arthur J. Vander Outstanding Graduate Student Teaching Award
Systems and Integrative Biology Training Grant

Jonathan Padgett:
American Heart Association Predoctoral Fellowship

John Park:
2007/08 John Bean Fellow for Academic Excellence
Center for Organogenesis Pre-Doctoral Fellowship

Kelli Van Dussen:
2007 John A. Williams Award for Outstanding Graduate Student Service
2008 PIHS Excellence in Teaching and Service Award

Elsie Villanueva:
2008 John A. Williams Award for Outstanding Graduate Student Service

Tingting Xiong:
2007/08 Rackham International Student Fellowship
We are very saddened by the recent passing away of Dr. David Bohr. His tenure at MIP is unmatched. We wish to pass on to you a wonderful write-up authored by Dr. Clinton Webb.

David F. Bohr, a professor of physiology at the University of Michigan who was an expert on hypertension, died Tuesday, November 4, 2008. He was 93 years old and lived in Ann Arbor, Michigan.

Dr. Bohr was born in Zurich, Switzerland, lived for five years as a boy in Cuba, and received most of his childhood education in southern California. In 1933, he entered the University of Michigan, matriculated in 1936 in its medical school and graduated in 1942. Bohr interned at Henry Ford Hospital for one year before being assigned by the U.S. Army to a Dutch hospital ship for three years of duty as laboratory officer and detachment commander (1943-46). Dr. Bohr trained for two years as a research fellow at the University of California in San Francisco (1946-48). Following this fellowship, he returned to the University of Michigan, and in 1957 was promoted to the rank of professor.

He was internationally known for his work on the role played by the vasculature in the development of hypertension. He was the recipient of many awards, including the 1984 Ciba Award for Hypertension Research and the Gold Heart Award from the American Heart Association. In 2007, Dr. Bohr received the Lifetime Achievement Award from the University of Michigan.

Dr. Bohr was a dedicated educator who mentored numerous scientists and students. Dr. Bohr served many scientific societies including the Council for High Blood Pressure Research of the American Heart Association. He served on the Hypertension Task Force for the National Institutes of Health from 1978-79. From 1965-68 he was a member of the Committee on Physiology of the National Board of Medical Examiners (1965-68) and he also served on the Cardiovascular Review Panel for the Space Science Board of the National Academy of Sciences (1968-72). As president of the American Physiological Society (1978-79), Dr. Bohr visited Cuban medical schools and observed Cuban health care, and promoted exchange of information between Cuban and American physiologists.

David Bohr took great pleasure in the game of tennis throughout his life. Family, friends and students enjoyed his ready sense of humor, his compassion, optimism and love of learning.

Dr. Bohr was preceded in death by his wife Kathleen (Karie) earlier this year. They were married in 1940 and were friends as teenagers. Dr. Bohr is survived by a son, John Nicholas Bohr, theoretical mathematician and database consultant of Ann Arbor; two daughters, Ann (Barbara) Bohr Benner, non-profit administrator and social worker, of Charlottesville, Virginia and Louise Ann Bohr, Professor of Literacy Education at Northeastern Illinois University, Chicago. Grandchildren are Thomas Bohr Benner of Brooklyn, New York and Jack Allen Benner, of Charlottesville.

A memorial service, titled David Francis Bohr, M.D., Gentleman Scientist, will be held on Saturday January 31, 2009 in Ann Arbor at the Michigan League, League Ballroom (www.umich.edu/~league) from noon to 4:00PM. In lieu of flowers, contributions should be made to the David F. Bohr Quasi Endowment, Department of Molecular and Integrative Physiology, University of Michigan, 1301 E. Catherine, Ann Arbor, Michigan 48109 (www.physiology.med.umich.edu).

Written by: Clinton Webb
(Chair, Dept. of Physiology, Medical College of Georgia)
MIP celebrates 125 years of Physiology at the Medical School

It’s hard to believe it’s been a year since the Department celebrated its 125th anniversary at the Medical School. The event was a great success as we sponsored a scientific symposium on September 27, 2007, showcasing our prestigious visiting speakers: Dr. Kevin Campbell from the University of Iowa, Dr. Benita Katzenellenbogen from the University of Illinois, Dr. Andrew Marks from Columbia University and Dr. Joseph Takahashi from Northwestern University. That evening, over 150 department faculty and staff members, alumni and guests dined at the Michigan League Ballroom. Dr. Joel Howell provided a wonderful perspective on the history of the department. The Department received a special plaque from the American Physiological Society and a letter of congratulations from the Governor, Jennifer Granholm in commemoration of the event.

Dr. Williams gave an inspirational speech about the Department starting with an exuberant “It’s a Great Day to be a Physiologist”!

Congratulations to:

Lisa Larkin: Promoted to Research Associate Professor
Anatoli Lopatin: Promoted to Associate Professor
Richard Mortensen: Promoted to Professor
Liangyou Rui: Promoted to Associate Professor
Margaret Westfall: Promoted to Associate Professor

WE WOULD LOVE TO HEAR FROM YOU!
Please take a moment to complete the card below and return it to us. Please give us the address you prefer to receive mailings from us. For your convenience, you can also update us via our website, http://www.physiology.med.umich.edu. We look forward to hearing from you and sending you future updates about the department, faculty and alumni.

Name

U of M degree, year received & mentor (or prior affiliation with Physiology at Michigan)

Address

City, State & Zip

Telephone & Email

News to share: What have you been up to? Please include any information about research projects, awards, etc., that you would like to share.

Kudos to Sarah Lawson for designing and compiling the Newsletter
Gift Opportunities

**David F. Bohr Quasi Endowment**

This endowment was established in honor of Dr. David Bohr and the more than six decades of enormous contributions to our department and the field of physiology at large. We are hoping to use this fund and other department resources to ultimately establish the David E Bohr Chair of Physiology.

**Graduate Education Endowment Fund**

The Graduate Education Fund was established in the Fall of 2008. Donations will be matched by the Medical School Dean’s Office up to a total of $500,000. The income from this endowment will be used exclusively to support graduate education in the department.

**John A. Williams Collegiate Professorship in Gastrointestinal Physiology**

The John A. Williams Collegiate Professorship in Gastrointestinal Physiology was established in the Fall of 2008. Funds raised by the department will be matched by the Medical School Dean’s Office up to $250,000 for a total endowment of $500,000. Once the value of the endowment reaches $500,000 the Professorship will be conferred. This will honor the 21 year service that John Williams gave to the department as its chair.

If you would like to make a contribution, please enclose a check in the envelope provided. Please make checks payable to the University of Michigan and place in the notes section which fund you would like to contribute to. If you would rather contribute by credit card, you may visit www.medicin.umich.edu and this site will allow you to choose one of these funds to donate to.

The funds constitute a gift for endowment, and distribution from the funds will be made in accordance with the University’s then existing endowment distribution policy.

University of Michigan
Department of Molecular & Integrative Physiology
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