

# Medical Scientist

April, 2007

Volume 8, Issue 2

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## Calendar

Thursday, April 12  
COM Arts Day

Monday, April 16, 5:30 pm  
Dinner Seminar

Thursday, April 19, 7:00 pm  
Soiree

Wednesday, April 25, Noon  
Grand Rounds II

Thursday, May 10, 5:00 pm  
Graduation Dinner Seminar  
Reza's Restaurant

Friday, May 11, 2:00 pm  
COM Graduation

May 22 or 23, 4:00 pm  
Grand Rounds III

Wednesday, June 27, Noon  
Grand Rounds IV

Sunday August 12 and  
Monday, August 13  
Annual Retreat, Illinois  
Beach Resort and  
Conference Center

University of Illinois at Chicago (312)996-7473

## Congratulations 2007 Graduates



### Michael Broman

BS, Biochemistry, University of Iowa, 1999

PhD: Department of Pharmacology; Advisor:  
Asrar Malik, PhD;

Thesis: "The Role of CDC42 in the  
Maintenance and Recovery of Endothelial  
Adherens Junctions"

Residency: Internal Medicine-Medical  
Scientist, University of Chicago



### Michelle Muza-Moons

BA, Biochemistry, Ohio Wesleyan University,  
1999

PhD: Department of Microbiology &  
Immunology; Advisor: Gail Hecht, MD

Thesis "Mechanism of Intestinal Epithelial  
Tight Junction Disruption by  
Enteropathogenic E.Coli"

Residency: Internal Medicine-Medical  
Scientist, University of Michigan

### David Scott Moons

BS, Biological Sciences, University of  
Illinois at Chicago, 1997

PhD: Department of Biochemistry and  
Molecular Genetics; Advisor: Hiroaki  
Kiyokawa, MD, PhD;

Thesis: "Roles of Cell Cycle Regulation in  
Female Reproduction: Analysis of the  
Cdk4-Null Mouse"

Residency: Pathology, University of  
Michigan



## Awards, Honors, Presentations

**Yalda Afshar and Jennifer Kwan** attended the 57<sup>th</sup> Annual AMSA Convention in Washington, DC, March 7-11, 2007. The focus of the convention was health care justice and policy changes. Keynote speakers included Drs. Paul Famer, Gloria Wilder Brathwaite and Sanjay Gupta. Participants enjoyed a plethora of workshops, seminars and other activities.



**Janai Carr and Jennifer Kwan** attended the 1<sup>st</sup> Annual "Investing in the Future: Attracting MD/PhD Students into Gastroenterology" Conference in Miami, February 9-11, 2007, sponsored by the AGA Institute. Created and organized by UIC's Gail Hecht, MD, Chief and Professor of Medicine, the Institute aims to expose MD/PhD trainees to the research opportunities in GI and offer mentoring from pioneers in GI research in hopes of attracting MD/PhD students to enter the field of GI. Janai and Jennifer were among a selected group of 24 MD/PhD students chosen from 19 programs nationwide to attend.



**Jennifer Kwan** has been actively involved in the planning and promoting of the 3<sup>rd</sup> annual meeting of the American Physician Scientists Association (APSA), April 13-15, 2007, held in conjunction with the annual ASCI/AAP Joint Meeting. Her essay entitled "Intermingling of the Minds" was printed in the APSA Newsletter of January 2007.

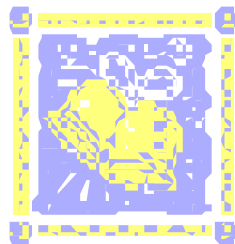


**Arpita Kadakia** received the 2007 UIC Student Leadership and Service Award for her numerous volunteer activities dedicated to serving the health care needs of the uninsured and underserved population of Chicago. To educate immigrant patients on preventative health measures, she obtained a \$200 community service award from the UIC COM. Through Unite for Sight and Student Sight Savers, she has organized and conducted vision screenings in the community. She arranged for UFS members to serve at the Gift of Sight, a clinic that screens and provides free eyeglasses for all Chicago Public School children. At the UIC COM Health Fair, she set up a children's vision screening booth by recruiting and training volunteer students from local medical and optometry schools. She volunteers with the Chicago Lighthouse, an organization committed to improving the quality of life of the visually impaired. She also tutors students through the Academic Support Network and still finds times to serve on the MD/PhD Program's Student Activities Committee.



**David Ramsey** has been awarded a 2007 Summer Student Fellowship from Fight for Sight.

## Wedding Bells and Baby Booties



### Congratulations

❖ To Sarah Hatch on her engagement on December 20 to Nathan Berth, a 1<sup>st</sup> Lieutenant in the US Marine Corps, currently stationed in Whidbey Island, WA where he is being trained to fly the EA6B Prowler. A September 2007 wedding is planned.



## Service, Service, Service

### Eight MD/PhD Students (and Friends) Volunteer for Annual Service Day, March 20

For this year's service project, MD/PhD students, under the chairmanship of SAC member **Yalda Afshar**, elected to participate in the Night Ministry Youth Outreach Event, doing hepatitis A/B vaccinations (Twinrix), blood pressure checks, condom distribution and answering general health questions to an indigent, often homeless, population.

This year's participants, in addition to Yalda, who gave up the evening for a 3-hour stint outdoors at Belmont and Halsted were **Sheila Barry, Janai Carr, Scott Feldman, Christina Floreani, Senta Furman, Ina Han and Roy Smetana**.

### Awards, Honors, Presentations, cont. from column 1

He has also been active this academic year in the transplant-ethics subcommittee of University of Illinois Medical Center Clinical Ethics Committee, charged with the task of developing a symposium on pediatric living organ donation at the UIC Medical Center. On Thursday, March 8, the Committee and the Division of Transplantation co-sponsored a conference that brought together experts from across Chicago and the US to discuss: "Living Donor Transplant Surgery: The Ethics of Innovative Transplant Surgical Techniques." David moderated the session on "Protecting Patients in Innovative Transplant Surgery."



## ***MD/PhD Program Again Holds Annual Research Symposium with COM***

For the 2<sup>nd</sup> year in a row, the MD/PhD Training Program participated in the COM's annual Research Forum on February 7. All MD/PhD Program students interested in presenting posters did so as part of the COM's Forum and many of the students attended either as presenters or observers. The nine poster presenters and their presentations were:

**Yalda Afshar** M2, future PhD Advisor: Asgi Fazleabas, PhD

***Notch1 signaling in the endometrium is regulated by human chorionic gonadotropin and ovarian steroids***

**Sheila Barry** G3, Dept. of Microbiology & Immunology, Advisor: Tom Hope, PhD

***Investigating the role of langerhans cells in HIC transmission***

**Ninh Doan** G3, Dept of Biochemistry & Molecular Genetics, Advisor: Peter Gettins, PhD

***Human  $\alpha_2$ -macroglobulin is composed of multiple domains, as predicted by homology with complement component C3***

**Christina Floreani** G2, Department of Anatomy & Cell Biology, Advisor: Yasuko Nakajima, MD, PhD

***Direct binding between  $G\alpha$  protein and potassium channels***

**Joel Fontanarosa** M2

***Synchronous neural activity in biologically-inspired and scale-free network models***

**Arpita Kadakia** G2, Department of Bioengineering, Advisor: Michael Cho, PhD

***Increased stem cell adhesion in a 3-D semi-interpenetrating network***

**Irene Klein** G4, Dept. of Pharmacology, Advisor: Asrar Malik, PhD

***Intersectin-2L regulates caveolae trafficking and junctional integrity***

**Mark Pilkinton** G4, Dept. of Pharmacology, Advisor: Oscar Colamonici, MD

***Mammalian MIP/LIN-9 provides a functional overlap between negative and positive regulators of the cell cycle***

**Roy Smetana** G3, Dept. of Biological Sciences, Advisor: Simon Alford, PhD

***Enhancement of reticulospinal neuron output by mesencephalic locomotor region activation of muscarinoceptive cells in the rhombencephalon of lampreys***

The other part of the Program's annual symposium--a presentation of research talks by students--was maintained as a separate event the night before, a dinner seminar on February 6. Following dinner, three current students presented talks:

**Rahul Davé** G4, Dept. of Physiology & Biophysics, Advisor: Mark Rasenick, PhD

***GS $\alpha$  stimulates tubulin's GTP hydrolysis rate and differentially interacts with tubulin isoforms***

**Ronald (Jake) Jackups**, M3, Defended PhD January 4, 2007 in the Dept. of Bioengineering, Advisor: Jie Liang, PhD on the topic "Prediction of transmembrane  $\beta$ -barrel protein structures"

***Prediction of transmembrane  $\beta$ -barrel protein structures***

**Evan Osmundson**, G4, Dept. of Biochemistry & Molecular Genetics, Advisor: Hiroaki Kiyokawa, MD, PhD

***The essential role of SMURF2, a Hect domain containing E3 ubiquitin ligase, in mitotic checkpoint regulation and cytokinesis***

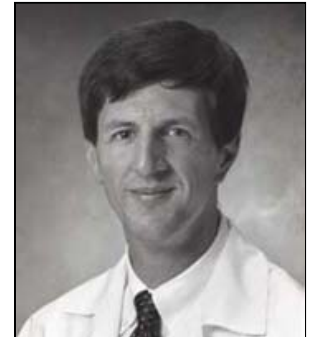


## MD/PhD PROGRAM DINNER SEMINARS

Monday, April 16, 2006, 5:30 p.m., 303 CSN

### Eric Svensson, MD, PhD

Assistant Professor of Medicine  
Co-Director, Physician Scientist Development Program  
Section of Cardiology, University of Chicago



### “The Role of FOG Proteins in Cardiovascular Development”

After completing his BS in Chemistry at the University of Minnesota, Dr. Svensson earned a PhD in Biological Chemistry and an MD from UCLA. He did his residency in Medicine and a fellowship in cardiology at the University of Chicago, following which he joined the faculty in 2001. In addition to co-directing the PSDP, he serves on the Committee on Developmental Biology and the Committee on Molecular Medicine at UC, as well as holding memberships on the national level in the American Heart Association Cell and Molecular Study Section and the NIH Special Emphasis Study Section. His distinguished list of honors starts during his undergraduate days with three financial awards (Presidential Scholarship, American Heart Association and G. B. Heisig Research Fellowship) plus Phi Beta Kappa and graduation with highest honors. Since college, his awards have included an NIH Medical Scientist Training Program Scholarship and the Laskey Award of Outstanding Research, both at UCLA School of Medicine, and First Prize for Fellowship Research in the Fourth Annual Astra Merck Young Investigator's Forum.



Coming in September 2007

### David H. Gutmann, MD, PhD

Professor, Donal O. Schnuck Family Chair,  
Dept. of Neurology Washington University School of Medicine

### “What Mouse Models Can Teach Us about Human Brain Tumors”

Dr. Gutmann earned his BS in Comparative Physiology with Highest Honors, his PhD in Microbiology and Immunology and his MD with Distinction all from the University of Michigan. He did his residency in Neurology at the University of Pennsylvania and a Postdoctoral Fellowship in Human Molecular Genetics at the Howard Hughes Medical Institute of the University of Michigan Medical Center.

### Recent Student Publications

**Christine Floreani:** Kawano T, Zhao P, **Floreani CV**, Nakajima Y, Kozasa T, Nakajima S, “Interaction of  $G\alpha_q$  and Kir3, G protein-coupled inwardly rectifying potassium channels,” *Molecular Pharmacology*, (2007) 0026-895/07/7104-1170-1184.

**Masakatsu Nanamori:** **Nanamori M**, Chen J, Du X, Ye RD. “Regulation of Leukocyte Degranulation by cGMP-Dependent Protein Kinase and Phosphoinositide 3-Kinase: Potential Roles in Phosphorylation of Target Membrane SNARE Complex Proteins in Rat Mast Cells,” *The Journal of Immunology*, (2006) 0022-1767/06



# MD/PhD PROGRAM GRAND ROUNDS 2007

**Wednesday March 14, 12:30 p.m., CSN 303**

**Topic: "Respiratory Failure in the Critically Ill"**

**Clinical Presentation: Michael Broman**

M4, defended doctoral thesis June 29, 2006 in the Dept. of Pharmacology on "The role of CDC42 in the maintenance and recovery of endothelial adherence Junction" (advisor: Asrar Malik, PhD)

**Research Presentation: Irene Klein**

4<sup>th</sup> year graduate student, Department of Pharmacology (advisor: Asrar Malik, PhD)

She plans to defend her doctoral thesis in spring 2007 on the topic: "The Role of Intersectin-2L in caveolae trafficking and junctional integrity in endothelial cells"

**Presentation Faculty Advisors: Asrar Malik, PhD, Head, Dept. of Pharmacology, and Howard Lipton, MD, Director of Basic Science Research, Neurology and Rehabilitative Medicine.**

**Wednesday, April 25, Noon, CSN 303**

**Topic: "The Multiple Identities of Methicillin Resistant Staphylococcus Aureus"**

**Clinical Presentation: Michelle Muza-Moon**

M4, defended doctoral thesis in the Department of on May 31, 2005 in the Department of Microbiology & Immunology on "Mechanism of Intestinal Epithelial Tight Junction Disruption by Enteropathogenic E.Coli" (advisor: Gail Hecht, MD)

**Research Presentation: Mark Pilkinton**

4th year graduate student, Department of Pharmacology (advisor, Oscar Colamonici, PhD). He plans to defend his doctoral thesis in spring 2007.

**Presentation Faculty Advisor: Jie Liang, PhD, Associate Professor, Dept. of Engineering**

**Tuesday or Wednesday, May 22 or 23, 4:00 p.m.**

**Topic: "Novel Antimitotic Therapies in the Treatment of Malignant Neoplasms"**

**Clinical Presentation: Ronald (Jake) Jackups**

M3, defended doctoral thesis in the Department of Bioengineering 2006 on the topic: "Prediction and Modeling of Transmembrane  $\beta$ -Barrel Structures" (advisor, Jie Liang, PhD).

**Research Presentation: Rahul Davé and Evan Osmundson**

Davé - 4th year graduate student, Department of Physiology and Biophysics (advisor, Mark Rasenick, PhD).

Osmundson - 4th year graduate student, Department of Biochemistry and Molecular Genetics (advisor, Hiroaki Kiyokawa, MD, PhD). Both plan to defend their doctoral theses in spring 2007.

**Wednesday, June 27, 2007, Noon, 303 CSN**

**Topic: TBA**

**Clinical Presentation: David Ramsey**

M3, defended doctoral thesis in the Department of Physiology & Biophysics on August 2, 2006 on "Modulation of the GABA Signaling Pathway in the Diabetic Retina" (advisor: Haohua Qian, PhD)

**Research Presentation: Roy Smetana**

3rd year graduate student, Department of Biological Sciences (advisor, Simon Alford, PhD)

He plans to defend his doctoral thesis on the topic: "Modulation of mesencephalic locomotor region mediated locomotor behavior by a brainstem nucleus"



## Ramsey Participates in two Medical Missions Abroad

As he has for the past three years, David Ramsey, currently an M3, again staffed a humanitarian medical mission to the Philippines this year, in February 2007. This time, he preceded his volunteer work in the Philippines with an additional mission to the Aravid Eye Hospital in Madurai, India the second week of January, 2007. On the India trip he was accompanied by his wife Kate and they enjoyed a little 2<sup>nd</sup> honeymoon side-trip on the way home to visit the Taj Mahal. Here are reports of David's trips in his own words:

### ARAVID EYE HOSPITAL, MADURAI, INDIA

Kate and I arrived safely at Aravind at the beginning of the week. Shortly after arriving, I taught a CPR class to the nursing department of the Aravid Eye Hospital in Madurai. We also got a tour of all of their facilities, including the Aurora lab where they make inexpensive IOLs accessible to masses in India (and the world).

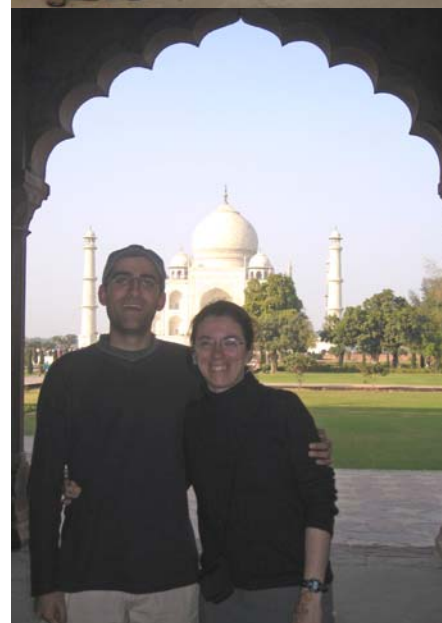
Throughout the week, I have enjoyed spending time in and around the clinics and have seen many eye diseases especially uncommon in our part of the world. They also have an advanced basic research program on the Madurai campus with a new multimillion dollar research building underway. I have enjoyed interacting with the epidemiologists and lab researchers with whom I share many interests. I also spent a day at a community outreach camp in rural India sponsored by the local Lions club where they screened from everything from cataract to diabetic retinopathy -- the local Loins were very excited to meet a fellow Lion from Chicago!



Yesterday, I was invited to give grand rounds at the hospital. My lecture was beamed by satellite to connect all five eye hospitals in the Aravid Eye Care system across southern India. Questions were even asked from the remote sites. There were about 75-100 people across the network. The lecture was very well received. Everyone in the Aravid Eye Care family has been very cordial to us.

### 4<sup>TH</sup> MEDICAL MISSION IN PHILIPPINES

My fourth trip to the Philippines was definitely worth the long journey. This year we served over 1,400 patients in the province of Nueva Vizcaya. The area was recently devastated by mudslides triggered by a typhoon that struck this inland province. Several of the barangays (or small villages) that we visited last year were totally devastated with a loss of life and livelihood. Where once verdant fields had stood, we found only a barren landscape. The boulders and rocks strewn across the rice fields made it impossible for many of the local farmers to plant their crop with only water- buffalo to clear their fields. Many of the roads connecting the local farmers to their markets were also washed out. This made our journey especially arduous this year and we even had to drive through a riverbed in order to circumvent an area still not properly restored.





In addition to the medicines and medical care that we provided to the rural population of Nueva Vizcaya, the Global Medical Foundation delivered over a quarter of a million meals from the US to the province. Over the next month, the government will distribute this food to families with children in the regions most severely affected by the devastation. The Global Medical Foundation also fielded a general surgical team at the local Veterans Hospital this year. In addition to the surgeries performed, an 8 x 10 foot shipping container of surplus US hospital equipment and much needed medicines was delivered to the provincial hospital.

All of this work would not have been possible without the aid of the talented nursing students and faculty at St. Mary's University in Bayombong. The senior class provided much needed logistical and translation support necessary to handle so many patients. With their obliging help I was able to see nearly 100 patients in the province. As a part of our mission, I also gave an evening lecture at the university. The topic that I choose this year was "The Aging Eye: Strategies to Safeguard Our Sight". This lecture was inspired by the many aged patients that I have met over the years in the province with advanced cataract and other sight-impairing conditions accelerated by the rural environment. Over 200 students and faculty turned out for the lecture and stayed for the question and answer session that went from 5pm-8pm.

Upon our return to metro-Manila, we again held a one day outreach with the Sisters of the Holy Family of Nazareth, a Polish order that is dedicated to serving families. We saw an additional 405 patients, almost entirely women and children, in this inner city community. The socioeconomic difficulties faced by these patients are blatantly compounded by the diseases of overcrowding, including diarrheal illness and the scourge, TB. Of the 87 patients that I triaged that long day, three of the children had signs suspicious for extra-pulmonary tuberculosis. It is some consolation to know that the Sisters of this order continue to care for these people on a daily basis. At the conclusions of our day together, they gathered round and sang several pastoral hymns to give thanks and to inspire us to continue on our mission.

## 4<sup>th</sup> Annual UIC MD/PhD Soiree

You and your guests are cordially invited to a reception benefiting  
the Student Run Free Clinic at CommunityHealth on

**Thursday, April 19, 2007**

From 7 o'clock to 10 o'clock in the evening at

**CityFront 455**

in the NBC Tower  
455 City Front Plaza  
Chicago, Illinois 60601

*This is a semiformal event designed to bring together students and faculty for an evening of dancing and pleasant conversation. Admission for this event is \$25 for students and \$50 for faculty/staff. Any additional donation to support CommunityHealth is appreciated.*

**RSVP to [Roberta@uic.edu](mailto:Roberta@uic.edu)**



## University of Illinois at Chicago

### College of Medicine Administration

Joseph Flaherty, MD, Dean

Sarah Kilpatrick, MD, PhD  
Vice Dean

Leslie J. Sandlow, MD  
Sr. Assoc. Dean for Education

Karen Colley, PhD  
Interim Assoc. Dean for Research

Jorge Girotti, PhD  
Assoc. Dean for Admissions and  
Urban Health Program

Kathleen Kashima, PhD  
Senior Assoc. Dean of Students

## The Retreat is Coming! August 12-13

By popular demand, the students, staff and faculty guests of the MD/PhD Program will return to the Illinois Beach Resort and Conference Center on Lake Michigan in Zion, Illinois for the Program's annual Retreat .



As in 2006, the 2-day event will begin with lunch on Sunday and end with lunch on Monday. In between, there will be interactive break-out sessions, volleyball, walks or runs along the beach, an evening cook-out and bonfire, a hospitality suite, lots more eating and a seminar by a distinguished guest speaker, Amelia M. Bartholomew, MD, Associate Professor of Surgery at UIC.

**Students interested in helping plan the retreat sessions should contact Senta Furman, [sfurma2@uic.edu](mailto:sfurma2@uic.edu).**

## MD/PhD Training Program

MD/PhD Training Program  
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We're on the Web!

[www.uic.edu/com/mdphd](http://www.uic.edu/com/mdphd)

### MD/PhD Training Program Administration

Larry S. Tobacman, MD  
Director

Roberta Bernstein, MA  
Coordinator, Editor

## Graduation Seminar and Banquet

Thursday, May 10, 2007

Reza's Restaurant – 432 W. Ontario Street

5:00 p.m. Reception    5:30 p.m Seminar    6:30 pm Dinner

### Our Honored Graduates:

Michael Broman    David Moons    Michelle Muza



RSVP by May 1 to [Roberta@uic.edu](mailto:Roberta@uic.edu), 312-996-7473

