



University at Buffalo
The State University of New York

The Department of Biochemistry

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SUMMER 2009

Letter from the Chair



The past year has been a very busy one within the Department, featuring several exciting seminars, an outstanding Research Day, and a highly positive review by our external evaluators, Drs. Judith Bond (Penn State) and William Smith (Michigan). Our seminar program, this year divided between the Center of Excellence (where the Hauptman-Woodward Institute has generously made their Flickinger conference room available to us), and our traditional South Campus location, hosted a total of 26 visiting scientists, including such notables as Len Kaczmarek, Frank Pugh, Mike Levine, Judy Bond, and Marcus Clark. While downtown seminars can admittedly be an inconvenience, with the majority of the Department still on the south campus, they strengthen our connections with colleagues at Roswell Park and the HWI. The Developmental Genomics group continues to thrive in its COE location, and the Genome Integrity group has grown stronger with Jennifer Surtees secur-

ing her first RO1 this year. The programs of other south campus faculty in gene expression, neurobiology, regenerative medicine, and metabolic programming and regulation, are also maintaining their high productivity and scientific rigor. Despite the national research funding environment continuing to be a difficult one, several faculty have had their NIH grants renewed, or received new ones. In fact, over the past 3 years, our NIH grant holdings have increased by 38%, attesting to the excellence and creativity of all of our research faculty.

Congratulations are in order to Mulchand Patel, who was recognized as a SUNY Dis-



tinguished Research Professor last fall; to Dan Kosman, who was promoted to UB Distinguished Professor in recognition of his many scientific achievements and contributions to UB; to Norma Nowak, who was promoted to Professor; and to Marc Halfon, who was promoted

to Associate Professor with tenure.

Finally, those of you who read last year's newsletter will recall Dr. Kosman's hope that Santa would bring him an EPR spectrometer. Although Santa didn't materialize at Christmas, he did show up last month, although disguised as the NIDDK, in the form of a supplement to one of Dan's grants. With just a little more fund-raising, and some help from the Dean, we expect this instrument to be a productive part of our Biomolecule Interaction Lab very soon.

Kenneth Blumenthal,
Professor & Chair

DEPARTMENTAL AWARDS & HONORS

Undergraduate

John F. Moran Memorial Award 2009:

Casey Kilpatrick

The Deborah, Christopher & Adam White Memorial Award 2009: **Hieu Quang Nguyen**

The 2009 Outstanding Senior in Biochemistry:

Robert Borowski

The 2009 Outstanding Senior in Biochemistry Runner Up: **Zack Zurawski**

The Elizabeth Olmsted Ross Award For Outstanding Undergraduate Poster 2009:

Casey Kilpatrick

The 2009 American Chemical Society Outstanding Senior: **Brenda Basile**

Graduate

The Elizabeth Olmsted Ross Award for Outstanding Oral Presentation 2009: **Cassandra Kussius**

The Elizabeth Olmsted Ross Award for Outstanding Graduate Poster 2009: **Shu Shien (Mandy) Chen**

The Biochemistry Dissertation Research Recognition Award 2009: **Kori Ortt**

Medical Student

The Edward L. Curvish, M.D. Award for Excellence in Biochemistry 2007/2008: **Janel Smietana**

The Edward L. Curvish, M.D. Award for Excellence in Biochemistry 2007/2008 Runner Up: **Daniella Asch**

Meet the Chair: Ken Blumenthal

By Thomas Hohle



•Modified mouse can run non-stop for five hours

•Lives longer, has more sex, doesn't get fat

•Supermouse is also "very aggressive"

"If you want to check out a very cool recent advance in metabolism, you should google "Richard Hanson supermouse...it's pretty neat!"

Dr. Kenneth Blumenthal joined the Biochemistry department as Chairman in 2000 after having spent 22 years at the U of Cincinnati. He is a protein biochemist by training and inclination, and for many years his lab has used polypeptide toxins to understand ion channel structure and function, mostly voltage-gated sodium channels. Dr. Blumenthal was born in Chicago, and received his B.S in Chemistry at the University of Wisconsin and his Ph.D. at the University of Chicago. He and his wife Susan have two children. In 2006, he received the **Dean's Award for Outstanding Service to the School of Medicine and Biomedical Sciences.**

When did you decide on science as your career choice?

I think in grade school, mostly because I was always interested in figuring out how things worked. When I graduated high school, I actually had Biochemistry as my yearbook ambition. Of course, my friends all thought it was a great joke.

What are your regular duties as Chairman of the Biochemistry department?

A lot of bureaucratic things. Assign teaching, which I prefer to delegate because it makes more sense for the people running the course to pick who they want. I do faculty performance evaluations, which take up a big chunk of July, bigger now than when I came here and we had only 8 faculty members, instead of 18. There are lots of reports that have to be written, and read: annual reports about department activities, individual faculty, UB20/20, etc. I partake in planning things with both the medical school and IGPBS. I don't think I do a lot of actual supervision though. That's a common misconception. It's more a matter of working with individual personas to get everyone moving towards a common goal, and ultimately to establish ongoing department growth in scientifically synergistic ways.

You are also fairly active in teaching. Do you prefer teaching or the administrative aspects of your job?

You left out research, but given the choice, teaching for sure. Honestly, administration is mostly boring. The only fun thing about it is being able to develop and implement programs, which is possible because people tend to listen when you're Chair. Teaching is more interactive and a worthwhile investment of time and energy. I think you have to enjoy performing to be a good teacher, and obviously you have to be comfortable with your material. I know that when I first started teaching, I wasn't especially good at it, at least in part because I wasn't able to put the material into an engaging story. You have to be able to do this, rather than just putting a series of facts out there. It took me about 10 years to figure that out. Oddly, I think the improvement in my teaching coincided with my involvement in community theatre for about ten years. It must be something about getting comfortable in front of crowds.

How has the UB20/20 program affected the Biochemistry department?

"From my viewpoint, 2020 is a good investment by UB."

I think it's been great for Biochemistry. I was on the original academic planning committee that President Simpson put together, and also helped organize the original Molecular Signaling group which became Molecular Recognition in Biological Systems and Bioinformatics. This group has played a big role in interdepartmental recruiting over the past few years. In Biochem, we were able to recruit Jennifer Surtees and Michael Buck through UB 20/20, and this has strengthened us in terms of gene expression, DNA repair, and compu-

tational biology. Also, people in the department with differing strengths favor interaction with non-department faculty. Science is increasingly multidisciplinary, so UB20/20 is good for scientists. In non-technical areas, it impacts in other ways. From my viewpoint, 2020 is a good investment by UB. Certainly, we're a stronger and broader department because of it, and I think that it also helps the University by increasing our recognition for excellence in different areas. A strong Biochemistry department improves UB's stature. Sure, a top 10 football team would do this even better, but let's be realistic.

What do you think is the current hot topic in biochemistry?

There are lots of them. If you and I were to each list our top 5, we would probably agree on at least three. Genomics and system biology are hot. Structure/function is always there, since it's the basis of understanding mechanisms, and can also be used to design drugs. If you think about it, Biochemistry could be defined as structure/function analysis applied to system biology. One challenge in biochemistry is keeping people interested in some of the more traditional areas. Enzymology and metabolism were considered stale for a while, and students lost interest in them. Metabolism has had a makeover, mostly owing to insights from the genome project and transgenic animals, but you still don't see lots of students



here going into it. But after all, metabolic changes underlie most human disease. If you want to check out a very cool recent advance in metabolism, you should google "Richard Hanson supermouse." It's pretty neat!

Do you have any advice for prospec-

Meet the Chair: Ken Blumenthal (con't)

tive graduate students?

Graduate school is not what you should do because you don't know what else to do. I was the Graduate director for 8 or 9 years at Cincinnati and discovered that most of our applicants had no idea what graduate school was like. The first thing you should ask yourself is "how do I cope with frustration?" After all, the majority of experiments just aren't going to work, at least, not the way you planned them to. You have to objectively analyze where your motivation is and you have to find science fun: you should enjoy what you are doing on a daily basis. When it stops being fun, you need to find something else. If you want to have a career in science, you should get a rush from designing an experiment



and having it work.

Do you have any hobbies?

Photography. Digital cameras

and Photoshop are great inventions! As a kid, I had a B&W darkroom, but color was just too hard for me, not to mention expensive. Then digital cameras, Photoshop and color printers came along. I also enjoy golf, but would like it better if I was any good at it. I'm also a history buff. I was a double major in History and Chemistry, and I read a lot of non-fiction.

Do you have any secret talents?

I used to do community theatre, but that's more nerve than tal-

ent. We mostly did musicals, and while I could sing a little, dancing at the same time was another matter. One of my kids was a professional actress for 10 years, so I guess the bloodline is there somewhere.

With the exceptions of Dr. Etinger and a few of the younger guys, I've noticed that most faculty members are going bald. Is this something I should expect if I were to continue my career in biochemistry?

Just by looking at you, I'd say you're doomed.

Your beard is arguably your most distinguishing feature. How much time and effort do

you put into grooming your beard on a daily basis?

Seconds. I grew a beard when I started going bald. A lot of my friends grew them too, for various reasons. Ten years later, they mostly shaved them off, I guess because they no longer needed to look older. I've had



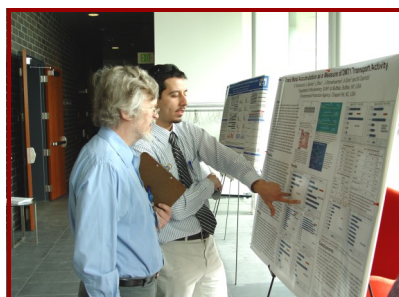
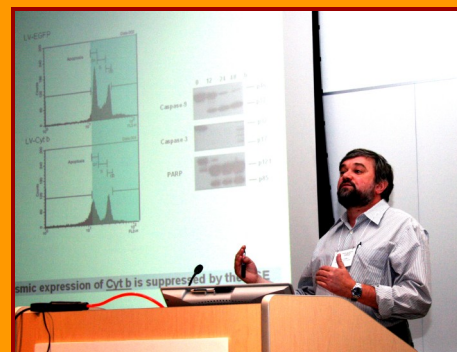
dreams where I've shaved half my beard off, but whatever deep meaning this might have escapes me.

NEWS: RESEARCH DAY

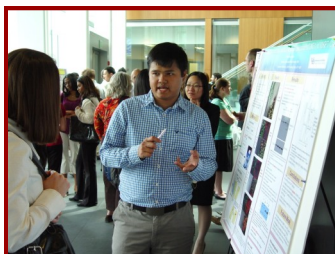
Our 7th Annual Research Day, held on May 4, 2009 at the Hauptman Woodward Institute, was attended by approximately 80 faculty, postdocs, graduate and undergraduate students, and was highlighted by an excellent keynote talk given by Dr. Roger Woodgate, Chief, Laboratory of Genetic Integrity, Eunice Kennedy Shriver National Institute of Child Health & Human Development, who described his work on "Y-family DNA Polymerases: Suppressors and Facilitators of Mutagenesis and Carcinogenesis". Thirteen graduate students spoke about their research progress, while poster presentations were done by 9 grad students and 7 undergraduates. The Elizabeth Olmsted



carcinoma, and Cassandra Kussius for best talk, *Covalent modification of the NMDA receptor ligand-binding domains*. Congratulations to these students and their mentors, Drs. Repaskey, Garrett-Sinha, and Popescu, and to all those who participated in Research Day. Thanks as well to the Biochemistry Graduate Student Association, who organized the day and hosted Dr. Woodgate, and to Sat Sinha who continues to do an outstanding job as the faculty coordinator of this event.



Ross Awardees for this year were Casey Kilpatrick for best undergraduate Poster *Physiologically relevant temperature shifts influence T cell lipid raft aggregation*, Shu Shien (Mandy) Chen for her poster *Investigating functions of transcription factor Ets-1 in oral squamous cell*



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Special Thanks to Thomas Hohle, Carol Saraceno, Jennifer Hunt and Beth O'Brocta

We appreciate the response of our readers who have taken the time to let us know that they enjoy keeping up with happenings in the department, and invite those of you who will be visiting Buffalo to stop by and see how things have changed since you were here. We are especially grateful to those alumni who have made contributions to the Department. These funds are of great value to the department, and help to support a wide range of activities including our Research Day, student travel to meetings, and even acquisition of new instrumentation.

Please update your personal information on our website: http://www.smbs.buffalo.edu/bch/announcements/bch_grads_news.htm Future volumes of the newsletter will be sent to the e-mail that you include in your information.

NEWS: Advanced Degrees Awarded for 2008/2009

Dong Hyun Lee: MA (September 2008) UB Dental School. Mentor: Richard Gronostajski
Catherine McCord: MA (February 2009) Georgia State Dept. of Public Safety. Mentor: Alfred Ponticelli
Kori Ortt: Ph.D. (June 2009) Erie County Forensics Lab. Mentor: Satrajit Sinha
Saaket Varma: Ph.D. (September 2008) Postdoctoral Associate Boston University Medical Center, Pulmonary Center. Mentor: Shiu Ming Kuo
Laurie Sanders: Ph.D. (September 2008) Postdoctoral Scholar, Pittsburgh Institute for Neurodegenerative Diseases. Mentor: Mark Sutton
William Wiltsie: MA, (September 2008) Morphotek. Mentor: Daniel Kosman
Rachel Desanto, MA, (June 2009) ACPHS-Cytotechnology. Mentor: Jennifer Surtees
Sara Ponticelli, Ph.D., (June 2009) Mentor: Mark Sutton
Julie Smith, MA (June 2009) Mentor: Daniel Kosman
Jessica Zinaty, MA (June 2009) Mentor: Te Chung Lee

Congratulations to our 2009 Phi Beta Kappa Inductees:

Kevin Barnum, Junior
 Robert Borowski, Senior
 Casey Kilpatrick, Senior
 Russell Van Coevering, Junior
 Rachel Jin Hua Wu, Senior
 Zack Zurawski, Senior



Visit our Website:
www.smbs.buffalo.edu/bch/

FACULTY ACHIEVEMENT:

Dan Kosman has been named a "UB Distinguished Professor" in recognition of achieving "national or international prominence and a distinguished reputation within their field through significant contributions to the research/scholarly literature...." Our sincere congratulations to Dr. Kosman!

Mulchand Patel has been recognized by the SUNY Board of Trustees as a "Distinguished Professor". Dr. Patel has made many contributions to UB in his years here, and to our understanding of carbohydrate metabolism in his many years as a research scientist. Congratulations Dr. Patel!

Dan Kosman has been recognized as this year's winner of the *Stockton Kimball Award*, in recognition of his outstanding research program and long-time service to the School of Medicine. Congratulations to Dan for this well-deserved honor!

STUDENT ACHIEVEMENT:

Thomas Hohle (Faculty mentor Dr. Mark O'Brian) was the second place winner for the 2009 Erwin Neter Award which is presented annually at the Buffalo Conference on Microbial Pathogenesis. Congratulations!!!

Congratulations to **Hieu Quang Nguyen** who has won the **SUNY Chancellor's Award for Student Excellence!** The SUNY Chancellor's Award for Student Excellence acknowledges students who have received recognition for student excellence. Hieu is the first BCH undergrad to receive a SUNY Chancellor's Award. Good job!



CONGRATULATIONS!