# MICROSCOOP

Fall 2010

DEPARTMENT OF MICROBIOLOGY & IMMUNOLOGY


## IN THIS ISSUE:



## International Bordetella Symposium


As most of us know, Nick Carbonetti organized and hosted the 9th International Bordetella Symposium this year. It was held at the Renaissance Harborplace Hotel, Baltimore, MD, Sept 30 - Oct 3, 2010. These meetings are held every three to four years and are a forum to update both clinical and research branches of the Bordetella community on current work. Some of the topics covered this year were advances in genomics and evolution, basic pathogenic mechanisms, immune responses to infection and vaccination, epidemiology, new diagnostic procedures and infection and disease in infants with focus on treatment and prevention.

Even with all those topics to keep attendees busy, there was one topic which seemed to gain the most attention- the *Bordetella pertussis* vaccine. This year the meeting organizers put together a round table discussion where community members could talk with vaccine manufacturers about concerns surrounding the current vaccine.

There is a strong feeling that the vaccine is poorly protective and is in need of improvement. The vaccine used prior to 1992 was a whole cell vaccine which came with many adverse side effects prompting the change to the acellular vaccine used today.

*"Bordetella" continues on page 5*

## GPILS Awards

by Priyanka Balasubrahmanyam

**Our Shining Stars from 2010!**

GPILS Award winners from the Dept. Of Microbiology and Immunology: June Green (Dedicated Service Award), Brian Peters (Otani Award) & Nicola Heller (Post-doctoral Scholar Award)

The Graduate Program in Life Sciences (GPILS) Awards is a set of prestigious accolades awarded to outstanding graduate students, post-doctoral fellows, faculty and staff. Every year, deserving candidates are selected from across different tracks, departments and categories, and are honored for their achievements. The GPILS Awards are meant to recognize outstanding achievements and future potential in a research career. The award ceremony was held on October 19 this year to honor outstanding achievers from the last academic year.

This year, we are proud to announce that three of the seven prestigious GPILS awards were bagged by members of the Microbiology and Immunology community. Our three outstanding achievers are Brian Peters, Nicola Heller and our very own June Green.

*GPILS Awards continues on page 10*

# Faculty Spotlight

**by Justin Taylor**

**Dr. Frank Robb**

**Where did you grow up?**
Cape Town, South Africa

**What is your education/research background?**
BSc (Hons) in Zoology, (University of Cape Town) PhD Biology (U. C Riverside), postocs at UC San Diego and the Argonne National Laboratory, Chicago

**What are your research interests at University of Maryland Baltimore?**
Protein folding systems in extremophiles and application of these systems to improvement of live attenuated vaccines.

**What are your hobbies?**
Sailing, hiking, visiting geothermal areas (see vort.org).

**What is your favorite restaurant in Baltimore and what is their best dish?**
Sabbatinos, shrimp parmagiana

# Meetings

NEW

## Student Seminar Series

Drs. Webb and Frieman have organized a student seminar series on **Monday @ 12:30** in **HH317**. Lunch is provided

**Brian Peters** gave a talk entitled *"Candida albicans-Staphylococcus aureus* dual species biofilms mediate invasive staphylococcal infection" at the International Conference on Gram Positive Pathogens in Omaha, NE on October 11, 2010.

**Brian Peters** gave a talk entitled "*Candida albicans-Staphylococcus aureus* dual-species biofilms mediate invasive staphylococcal infection" at the Maryland Branch Meeting of the American Society for Microbiology in Baltimore, MD on June 9, 2010.

**Brian Peters** presented a poster entitled "*Candida albicans-Staphylococcus aureus* dual-species biofilms mediate invasive staphylococcal infection" at the General Meeting of the American Society for Microbiology in San Diego, CA on May 25, 2010.

Budroni S., Siena E., Nofroni C., Dunning Hotopp J.C., Riley D., Daugherty S., Angiuoli S., Seib K., Serruto D., Comanducci M., Moxon R.E., Rappuoli R., Covacci A., Pizza M., **Tettelin H.**, and Medini D. (2010) Pangenomic anatomy of a species: *Neisseria meningitidis* population structure and dynamics. 17th International Pathogenic *Neisseria* Conference (IPNC 2010), Banff, Alberta, Canada.

**Carlita Philip** presented a poster entitled "Inhibition of Macrophage Responses by Pertussis Toxin During *Bordetella pertussis* Infection" at the 9th International Bordetella Symposium in Baltimore, MD.

**Carly Page** presented a lecture entitled "A Role for STAT1 in SARS-CoV Pathogenesis." At the 29th American Society of Virologists Annual meeting in Bozeman, Montana, in July 2010. Ms. Page works in the lab of Matthew Frieman, PhD, Assistant Professor, Department of Microbiology & Immunology.

**Daniel Powell** presented a poster entitled "A *Francisella* Lipid A Mutant is Cleared by Interferon-gamma and Confers Protective immunity to Tularemia in Mice" at the11th Annual International Endotoxin and Innate Immunity Society and Society of Leukocyte Biology Joint Meeting, in Vancouver BC on October 7-9

Hiller N.L., Eutsey R.A., Powell E., Janto B., Ahmed A., Earl J., Bennett J., Longwell M., Dahlgren M., Martin D., Dawid S., **Tettelin H.**, Bentley S., Tomasz A., deLencastre H., Hillman T., Buchinsky F., Post J.C., Ehrlich G.D., Hu F.Z. (2010) Diversity and virulence determinants of clinical multidrug-resistant *Streptococcus pneumoniae*. 18th Annual International Meeting on Microbial Genomics, Lake Arrowhead, CA, USA.

**Joshua Lieberman** presented a poster entitled "Topology and Localization of BfpB, a Type IV Pilus Outer Membrane Secretin" at the Infectious Diseases Society of America meeting in Vancouver, Canada.

Krauland M.G., Marsh J.W., Dunning Hotopp J.C., **Tettelin H.**, and Harrison L.H. (2010) Whole genome comparison to identify genetic factors associated with emergence of serogroup Y *Neisseria meningitidis*. 17th International Pathogenic *Neisseria* Conference (IPNC 2010), Banff, Alberta, Canada.

Le Breton Y., **Tettelin H.**, and McIver K.S. (2010) Analysis of gene essentiality in an invasive M1T1 strain of the group A *Streptococcus*. International Conference on Gram-Positive Pathogens, Omaha, NE, USA.

**Khandra Sears** presented a poster titled "Analysis of the Surface Proteome of *Rickettsia typhi* str. Wilmington during *in vitro* infection" at the 110th ASM General

*Meetings continues on page 8*

# New Student Profiles

Erin Harberts grew up not too far from UMB outside of Annapolis. She then ventured up to Hamilton, NY for undergraduate studies at Colgate University where she graduated in 2008 with a degree in Molecular Biology. After graduating she worked in a viral immunology lab that focuses on Multiple Sclerosis at the NIH for 2 years. She is excited most by translational research which makes UMB a great fit! When not in the lab you may find her sailing on the Chesapeake.

Erin Harberts

Grant Jones

Grant Jones grew up in Chandler, Arizona, but managed to survive the boredom of suburban life. He went to Arizona State University to study Microbiology where he worked in several labs, although he spent most of his time studying Vaccinia Virus under Dr. Bertram Jacobs. He worked mainly on a project to increase the efficiency of generating viral recombinants with the intention of applying this to a vaccine screening project for Malaria. Suffice it to say, he helped a graduate student finally graduate but did not discover the cure for Malaria. He was very disappointed. Later, he worked in a hospital Microbiology laboratory, but it felt too much like working for "the man," so he quickly moved on. At long last, he was able to leave Arizona and went to work for Dr. Anne Simon at the University of Maryland, College Park. There, he helped with studies on the Turnip Crinkle Virus, and it was as exciting as it sounds. For his final transition to UMB, he got a job working for Dr. Gregory Melikian, and he helped with research into HIV/lentivirus fusion. Now, he is here and totally enjoying his first semester and can't wait to get to work/worry about his comps. Also, he has a boyfriend of four years, Max, who's in UMB's Law School, and two cats named Sausage and Potatoes. They are cute.

Hal Neely is originally from Louisiana, and got his undergraduate degree in Microbiology from the University of Texas at Austin. He then received his MS in Microbiology and Immunology from the University of North Carolina at Chapel Hill, where he studied B1 lymphocyte development and differentiation, and has spent the last several years at the National Institute on Deafness and Other Communication Disorders identifying novel genes involved in the development and function of the mammalian auditory system. His primary area of interest is cellular immunology.

Hal Neely

Daniel Phillips

Daniel Phillips is from Huntsville, TN. He went to school at East Tennessee State University. His previous lab experience includes 3 years in Dr. Pris Wyrick's lab working with *Chlamydia trachomatis.* His areas of interest here at UMB are microbiology, specifically microbial pathogenesis. The Star Trek character he most resembles is Captain James T. Kirk (Grant and Hal can explain that one...)

# NEW STUDENT PROFILES continued

Alison Scott

Alison Scott hails from Southeast Michigan. She went to undergrad at Eastern Michigan University (Go Eagles!). Her previous lab experience includes an internship at Pfizer, Neuroscience developing screening assays for neurotransmitter re-uptake inhibition. After graduation she moved to University of Michigan, Kellogg Eye Center to work with Dr. Anand Swaroop on development of the retina in the context of heritable disease. As her interests began to develop more toward immunology she joined the lab of Dr. James Baker at the University of Michigan Nanotechnology Institute for Medicine and Biological Sciences working on the pre-clinical characterization of a novel, nanoemulsion-based vaccine adjuvant. Continuing in the vaccine development theme she moved to Maryland to work at Aeras Global TB Vaccine Foundation running the Assay Development & Validation team designing, validating, and implementing assays for clinical, pre-clinical, and QC use. Her areas of interest here at UMB include microbial pathogenesis and clinical immunology. In her spare time she likes to kayak, hike, bike, and work on her community garden plot.

Zhanna Shubin

Zhanna was born in Russia, grew up in Dallas, Texas, and went to school at The University of Texas at Austin. Upon graduating with a B.S. in Biology in 2008, she moved to Maryland where she was awarded a fellowship to do research at NIH. There, she joined a structural biology laboratory, and worked on the purification and crystallization of protein. She is excited to be here at UMB and looks forward to focusing her research interests in host-pathogen interactions and immunology. In her free time, she enjoys spending time with her fiancé, going dancing, exercising (she loves the URecFit Fitness classes), doing puzzles, and reading. She also loves visiting her family in Texas and playing with her cat, Murzik.

Kyle Wilson

Kyle Wilson hails from the small town of Climax, Michigan. No, really--he still retains his Michigan driver's license, even though he doesn't have a car, because it's a useful conversation starter. If you imagine the back of your left hand as the lower peninsula of Michigan (as most Michiganders do), Climax is over the most lateral point of the triquetral. At this scale, this is also the approximate location of Kalamazoo, Michigan--the location of Kyle's alma mater, Kalamazoo College. When he wasn't busy dancing in the school's student-organized dance company, he worked in the laboratory of James Langeland, studying evolutionary genetics. As he spent time in this field, he became less interested in sequencing genes, and more interested in modifying them, which lead him to the University of Maryland at Baltimore to study viral "vectorology" and immunology.

# Faculty Spotlight

by Justin Taylor

**Where did you grow up?** I grew up in Edison, NJ.

Dr. Vincent Bruno

**What is your education/research background?**
I received my undergraduate education at Carnegie Mellon University in Pittsburgh where I majored in Biology. As an undergraduate I become hooked on research while working in Susan Henry's lab where I had a project that involved using genetics to understand membrane biogenesis in baker's yeast. I received my Ph.D. from the College of Physicians and Surgeons at Columbia University in NYC. In graduate school I worked on developing genetic techniques in the fungal pathogen, *Candida albicans*, and used genetics to understand drug resistance and pathogenicity. After graduate school I moved to New Haven, CT where I performed post-doctoral research in two different labs at Yale. During my first post-doc, I studied bacterial pathogenesis centered around the Type Three Secretion System in *Salmonella* Typhimurium. During my second post-doc I moved back to study my old friend *Candida albicans*, this time using genomic techniques to study various aspects of fungal biology and pathogenesis.

**What are your research interests at University of Maryland Baltimore?**
The research in my lab is focused on using genomic techniques to uncover genes involved in the pathogenesis of *Candida albicans* and then using a combination of molecular biology, genetics, and cell biology to determine the specific role of these genes in the host-pathogen interaction and virulence.

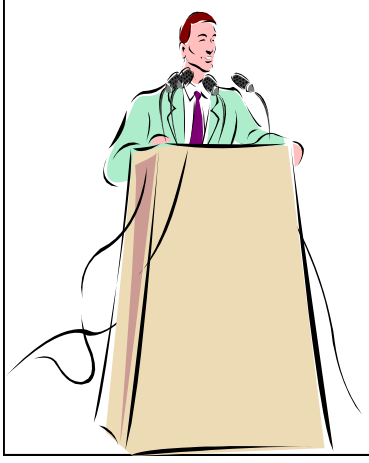
**What are your hobbies?**
In my free time I enjoy hiking, skiing, playing basketball, spending time with my 2 children and annoying my wife.

**What is your favorite restaurant in Baltimore and what is their best dish?**
My favorite restaurant is any one where crayons do not come with the menu and you are not allowed to draw on the tablecloth.

## International Bordetella Symposium continued...

Although the current vaccine decreases the negative side effects it elicits a $T_H2$ immune response, where a $T_H1$ response has proven effective for proper protection previously. One idea for improvement that may be more appealing to manufacturers than a total overhaul of the current vaccine was the addition of an adjuvant that could elicit the necessary $T_H1$ response. Another exciting possibility is a live attenuated strain that has been developed and shows promise. This strain is in phase 1 clinical trials in a small adult population where it has been found to be safe and immunogenic. In the end, manufacturers were still wary of making any change without a consensus from the scientific community.

When attendees were asked about their favorite part of the conference there were varied responses. The talk The Biology of Cough given by Brendan Canning from Johns Hopkins won over a number of people. The prospect of a new pig model, which would allow long-term study of the immune response to *Bordetella pertussis*, had one researcher hopeful. Others found the overall organization of the meeting to be very beneficial. The first half of the meeting focused on research and genomics while the second had an epidemiological and clinical focus. This gave everyone a well-rounded experience instead of running concurrent sessions that would separate researchers from clinicians. It is safe to say the meeting was a success and everyone is looking forward to the next meeting.



This meeting would not have been possible without the help of the University in setting up the website and accounts and Teri Robinson. Teri was a huge help with the posters, paperwork and getting documents in order, her help was greatly appreciated.

# Microbiology & Immunology Holiday Party

Microscoop

It is that time of year for the annual Microbiology and Immunology Holiday Party.

The eggnog is chilled; it's time for some toasting!! If this doesn't tempt you - there will be plenty of fermented beverages. So turn up your glass and let's spread Holiday Cheer!! Take time to away from last minute holiday shopping and end of the year experiments to enjoy the company of your fellow staff.

This year's celebration will be held on Friday, **December 17th** in the **MSTF Atrium** from **2 PM** to **5 PM**. Contact Maria Calloway (MCalloway@som.umaryland.edu) or visit HSF I Suite 380 to RSVP.

When there is food, fun, and holiday cheer there are contests and games.

**Laboratory Christmas Tree**

The challenge is for each lab/office to construct and decorate a Christmas tree made ONLY from lab/office recycle supplies. Since scientific collaboration is encouraged in the department, Christmas tree collaborations are acceptable. Please fill in an entry form for each tree. The entry forms will be at the mailboxes outside the department office and must be turned in by 5:00 PM on December 15th. The height requirement is at least 2 1/2 feet tall. Christmas tree submissions should be set up in MSTF Atrium by 12:00 PM on December 17th.

**Holiday Dessert Contest**

There are only two rules and there are absolutely no limits on what you make or the number of desert entries you submit.

Rule #1) All desserts must be home made
Rule #2) All desserts must be delivered to room HSF I suite 380 kitchen by 11 AM on 12/17/10

Prizes will be judged and awarded in two categories: best looking and best tasting. A grand prize will be awarded two the entry that receives the highest score in both categories in addition to the awards given in each category.

**Microbiology and Immunology 1st Cocktail Contest (Virgin and Non-Virgin Beverages)**

The rules for this contest are as follows:

Rule #1) All cocktails have to be the result of mixing two or more ingredients (liquor, fruit, juice, etc…)
Rule #2) Cocktails need to be brought pre-made
Rule #3) Choose a name for your cocktail
Rule #4) At least one 1-quart pitcher must be presented for the judges.
(Note: If you think people will like it bring more!!)

Prizes will be awarded based on the best taste and how many ingredients were used. A grand prize will be awarded to the one cocktail that receives the highest combined scores in both categories.

**The 3rd Annual Microbiology / Immunology Gift Exchange**

Finally, the 3rd annual Gift Exchange Game will also take place during the party. All participants should bring a $5 gift to the party. Upon arrival, please bring your gift to the gift table or look for Maria Calloway to sign-up. Game will begin at 4 PM.

Stay warm and hope to see you there!

Happy Holidays
Microbiology & Immunology

# GRANTS/ AWARDS/ PROMOTIONS

**Abdu Azad** received stimulus funds for his grant R37-AI017828 – "Murine Typhus: Vector Biology & Transmission"

**Brian Peters** received a Trainee Travel Grant to the International Conference on Gram Positive Pathogens. Brian also received the Elaine Miye Otani Award for Outstanding PhD Student in GPLIS and the Ollie Eylar Award for Outstanding Graduate Student in MMI Department from the UMB, as well as the J. Howard Brown Award for Outstanding Grad Student Presenter from the ASM Maryland Branch, and the Milton Huppert Graduate Student Award from the Medical Mycological Society of the Americas

**Carly Page** received a travel award to attend the 29th American Society of Virologists Annual meeting in Bozeman, Montana, in July 2010.

**Daniel Powell** received a Student Travel Award from the Society of Leukocyte Biology.

**Hervé Tettelin,** Associate Professor, Department of Microbiology & Immunology and Institute for Genome Sciences is the PI on a two year $1,504,050 project entitled "Comparative genomic analyses of *Streptococcus pneumoniae*: emergence of multidrug resistant and vaccine replacement serotypes." This is a subproject to the IGS contract "Genome Sequencing Centers for Infectious Diseases," Claire Fraser-Liggett PI – NIAID HHSN272200900009C.

**Joshua Lieberman** received the Kass Award from the Infectious Diseases Society of America.

7/1/10-6/30/15 PI: **Kaper** Co-PI, Donnenberg, Barry, Pasetti, and **Rasko,** Contract/grant#: 1U19AI090873-01"Severe Enteric Disease: Pathogenesis and Response". This proposal aims to examine the most extreme cases of diarrheal disease, those associated with lethality. Three projects within this proposal examine will focus on the pathogenesis of diarrheal infections, the role of the host in combating that infection and the application of these findings to the clinical investigations and treatments. National Institutes of Health/ National Institute of Allergy and Infectious Diseases

**Khandra Sears** (Azad lab) received travel awards to attend the 110th ASM General Meeting in San Diego, CA and the 24th Meeting of the American Society for Rickettsiology in Stevenson, WA.

**Leah Cole** (Vogel Lab) was promoted to Assistant Professor in the Department of Microbiology and Immunology in the School of Medicine in July 2010.

"Staphylococcus aureus biofilms: in vitro and in vivo studies". National Institutes of Health (Agency NIAID) – R01-ARRA Supplement. PI – **ME Shirtliff**. 2010 – present. $321,000

NIH R21 AI090379 "Development of a monkey model of Bordetella pertussis infection and disease", P.I. **Nicholas Carbonetti**, Ph.D., 6/15/10 - 6/14/12

NIH R13 AI091296 "9th International Symposium on Bordetella", P.I. **Nicholas Carbonetti**, Ph.D., 6/1/10 - 5/31/11
**Patrik Bavoil** elected President-Elect of the Chlamydia Basic Research Society

Drs. Vincent Lee, Howard Sintim (UMCP) and **Patrik Bavoil** (UMB) were awarded UMB-UMCP Seed Grant "Characterization of Novel Broad-Spectrum Inhibitors of Bacterial Type III Secretion Systems"

9/1/10-8/31/13 PI: Sokurenko Co-PI: **Rasko/Donnenberg,** Contract/grant#: RC4 AI092828-01, "*E. coli* Variome" Utilizing high throughput methodologies we will examine the genomic variability of multiple pathovars of *E. coli*. We will first use MLST to select further isolates for sequencing and then analyze >100 loci for positive and negative selection. This is the largest evolutionary study of *E. coli* to date. National Institutes of Health/ National Institute of Allergy and Infectious Diseases

**Shane Ceraul** (Azad lab) was promoted to Assistant Professor in the Department of Microbiology and Immunology in the School of Medicine in July 2010.

**Yan Yan Li** of the **Ernst** lab received a Young Investigator Award at the 11th Annual International Endotoxin and Innate Immunity Society and Society of Leukocyte Biology Joint Meeting in Vancouver BC on October 7-9.

# Meetings continued

Meeting in San Diego, CA in May and gave an oral presentation titled "Surface-exposed proteins of Rickettsia typhi str. Wilmington: Expression of Surface Cell Antigens (Sca) Autotransporters During in vitro and in vivo Infections" at the 24th meeting of the American Society for Rickettsiology in Stevenson, WA.

**Lauren Hittle** presented a poster entitled "Site Specific Activity of htrb1 and htrb2 in *Pseudomonas aeruginosa* Lipid A Biosynthesis" at the 24th Annual North American Cystic Fibrosis Conference on October 21-23 in Baltimore, MD and "Regulation of *Psuedomonas auruginosa* lipid A Modifications Under Oxygen Limited Growth Conditions" at the 11th Annual International Endotoxin and Innate Immunity Society and Society of Leukocyte Biology Joint Meeting, in Vancouver BC on October 7-9.

**Mark Shirtliff** gave the following talks:
1) "Who's smarter: The bugs or us?" 2010 Orthopaedic Trauma Association. Baltimore, Maryland. October 16, 2010.
2) "Biofilms and Biosafety" American Biological Safety Association 2010 Meeting. Denver, Colorado. October 2, 2010.
3) "Advancements in the fight against biofilms in chronic infections" ATACCC 2010 Conference. St. Petes Beach, Florida. August 17, 2010.
4) "Diagnosis and vaccine prevention of biofilm-mediated chronic orthopaedic infections." AOTrauma CPP Bone Infection workshop. Boston, Massachusetts. July 23, 2010.
5) "MRSA biofilm vaccine." NIAID Staphylococcal Vaccine Workshop. Bethesda, Maryland. May 10, 2010.

**Martin Flajnik** organized a symposium and presented a seminar at the AAI Meeting in Baltimore (May). He was also invited to give seminars at the FASEB Meeting on "Immunoreceptors" (July) and in Belgium at a meeting focusing on antibody therapy (October). He was the 'immunological guru' and presented a plenary talk at the NIH Immunology Retreat in September.
Martin also gave a plenary talk at a meeting of Comparative Immunology at the University of Waterloo in May and a seminar at Pfizer Pharmaceuticals in Aberdeen, Scotland in August.

**Patrik Bavoil** gave the following presentations:
1) November 18, 2009: "Polymorphic Membrane Proteins of *Chlamydia trachomatis*: Potential in Vaccine Development" at Wyeth Pharmaceuticals, Inc, Pearl River, NY
2) February 12, 2010: "A Well Kept Secretome: the Polymorphic Membrane Protein family of *Chlamydia trachomatis*" at Dept of Microbiology & Immunology, University of Miami.
3) June 25, 2010: "Expression of polymorphic membrane proteins under conditions of stress-induced persistence in *Chlamydia trachomatis" at the* Twelfth International Symposium on Human Chlamydial Infection, Salzburg, Austria.
4) November 12, 2010: "The Well Kept Secretome of Chlamydia" at Dept of Cell Biology & Molecular Genetics, University of Maryland, College Park
5) November 15, 2010:
"The Well Kept Secretome of Chlamydia" at Dept of Physiology & Biophysics, UMDNJ-Robert Wood Johnson Medical School, Piscataway, NJ

**Preeta Dasgupta** presented a poster titled "Absence of the Type I IL-4 receptor increases the severity of airway inflammation in a murine model of asthma" at the American Association of Immunologists (AAI) 2010 annual meeting held in Baltimore this May. Preeta has also submitted and abstract to the Pittsburgh International Lung Conference to be held December 10-11, 2010.

**Robert Ernst** gave the following presentations:
1) 24th Annual North American Cystic Fibrosis Conference October 21-23 Baltimore MD "Anaerobic Growth Induces a CF Specific Lipid A Modification in *P. aeruginosa*"
2) 11th Annual International Endotoxin and Innate Immunity Society and Society of Leukocyte Biology Joint Meeting, Vancouver BC, October 7-9 "Repair of the *Yersinia pestis* Palmitoyl Transferase Gene, pagP, Results in the Addition of Two Palmitate Moieties and Restores Robust Lipopolysaccharide Proinflammatory Response"

**Shane Ceraul** gave an oral presentation titled "Defining a kunitz-type protease inhibitor and defensin as factors that limit rickettsial colonization in Dermacentor variabilis, a vector for Rocky Mountain Spotted Fever." at the 24th Meeting of the American Society for Rickettsiology in Stevenson, WA

**Tom Obrig** presented a talk entitled "Diarrhea-associated hemolytic uremic syndrome: renal pathophysiology and therapeutics." at the Hospital for Sick Children, Toronto on September 24, 2010.

**Tom Obrig** served as the external examiner ('the opponent') in a PhD Thesis defense in the laboratory of Dr. Philip Sherman at the University of Toronto September 23, 2010.

**Victor Ayala** gave a talk entitled "*B. pertussis* Infection Exacerbates Influenza Virus Infection through Pertussis Toxin Activity" at the 9th International Bordetella Symposium in Baltimore, MD.

**Yan Yan Li** of the **Enrst** lab gave a talk entitled "Temperature Regulated N-Acyltransferases (LpxD) Contribute to Lipid A Structural Heterogeneity and Pathogenesis in *Francisella tularensis* supspecies *novicida*" at the 11th Annual International Endotoxin and Innate Immunity Society and Society of Leukocyte Biology Joint Meeting, in Vancouver BC on October 7-9.

# PERSONAL NEWS

**Carlita Philip** and David Kauffman got married at the Sunset Beach Resort and Spa in Montego Bay, Jamaica at sunset on June 27, 2010.

**Mark Shirtliff** and his wife Birthe welcomed their fourth child, Sophie Veno Shirtliff, to the world on May 26, 2010.

**Jason Sahl** of the Rasko lab and his wife Kelly had their second child, Sloane Diane Sahl, on November 5, 2010.

**Joe Gillespie** of the Azad lab and his wife welcomed their second child, Greta Mae Gillespie on May 10, 2010.

**Kelley Hovis** of the Bavoil lab and her husband David are the proud parents of Katelyn Nicole Hovis, born on September 26, 2010.

**Patricia Pelczar-Rossi** of the Oram lab and her husband Rob had the first child, Adriano John Rossi, on August 31, 2010.

**Daniel Powell** and his wife are expecting their first child on January 1st.

**Jennifer McClure** and **Simran Jeet Kaur** joined the Azad lab as Postdoctoral Fellows in July and August of this year respectively. Jennifer received her PhD from the University of Missouri's Pathobiology Area Program in May of 2010 where she worked on tick-borne ehrlichial diseases of humans and companion animals. In the Azad lab, she hopes to work on tick immunology and mechanisms required for tick acquisition of bacterial pathogens. Simran received her PhD in Microbial Pathogenesis from Helmholtz Center for Infection Research at Braunschweig, Germany in 2009. Her dissertation work included identifying virulence factors and pathogenic mechanisms of invasive *Streptococcus pyogenes*. She now aims to identify and characterize virulence determinants involved in *Rickettsia typhi* pathogenesis.

**Leelamma Jacob** joined the Feldman Lab as a Research Associate in September.

**Daniel Prantner** joined the Vogel Lab as a Postdoctoral Fellow in August.

**Mahesh Dharne** joined Dr. DasSarma's group as a postdoctoral fellow at the Columbus Center in September. Dr. Dharne received his PhD from the University of Pune in India. His expertise is in bacterial and archaeal genetics, physiology, and ecology.

**Patricia Marques**, from Portugal, joined the Bavoil lab as a postdoc in Spring 2010 to study polymorphic membrane proteins of Chlamydia.

**Valerie Huse,** GPILS Molecular Medicine PhD graduate student transferred to the Bavoil lab in November 2010.

Four teams participated in the marathon relay at the Baltimore Running Festival on October 16, 2010. Team "M.I. Crazy" (**Carly Page**, **Nick Carbonetti**, Mallory Ungs, and Nate Noyes) finished 45th with a time of 3:32:41. Team "3 Foxes and a Hound" (**Anna Seekatz**, **Caitlin Doremus**, **Aaron Christensen-Quick**, and Lindsay Smith) finished 310th with a time of 4:16:51. Team "Nerdy but Cool" (**Michelle Laird**, **Melissa Hayes**, **Victor Ayala**, and **Jess Shiu**) finished 380th with a time of 4:27:48. The team without a name (Colin Brooks, **Daniel Powell**, Jennifer Stiltz, and **Nick Bushar**) finished 391st with a time of 4:28:52.

**Lani Lorenzo** and **Khandra Sears** participated in the 2nd annual Indoor Triathlon at URecFit.

**Carly Page**, **Michelle Laird** (pushing her children in a jogging stroller!), **Nicolas Dorsey**, **Anna Seekatz**, **June Green** and her daughters Jenna Molidor and Jessica Whittemore ran in the Baltimore Women's Classic 5K on June 27, 2010. In addition to running, Carly lead a training group of 20 intermediate runners for 8 weeks prior to the race.

# GPILS Awards continued...

**Otani Award**: Brian Peters, a graduate student in the Molecular Microbiology and Immunology program, from the Shirtliff laboratory won the Otani Award this year. This honor is bestowed upon graduate students who accomplish extraordinary goals and show promise as future independent investigators. The Otani Award is given in loving memory of a dedicated and exceptionally talented graduate student Elaine Miye Otani by her family. This award is given to students who are not only exceptionally talented researchers but who also maintain a warm, helpful and affectionate rapport with their peers. In other words, the Otani Award recognizes an outstanding candidate who can not only achieve seemingly impossible academic goals, but who can also reach out to his fellow-students and help strengthen the student community.

Brain Peters, who recently defended his PhD thesis on December 3, 2010, has always been an outstanding student. He finished his undergraduate degree from the Pennsylvania State University with a major in Microbiology and minors in Biochemistry and Molecular Biology to join the University of Maryland Baltimore as a PhD student. His research work mainly concentrates on the pathogenesis of biofilm-forming infectious agents and his PhD thesis is entitled "*Candida albicans- Staphylococcus aureus* dual species biofilms mediate invasive staphylococcal infection". Brian has no less than 9 publications and has another couple of papers in the pipeline. Apart from spectacular publications, Brian also has a long list of national and international presentations at prestigious events like the American Society for Microbiology (ASM) General Meeting, Eurobiofilms (Italy) and the Annual NARSA Investigators Meeting. Besides being an active student in the research community, Brian has also received previous honors and accolades for this work. He received the Milton Huppert Graduate Student Award (2010), ASM Travel Grant (2009), the FEMS Young Scientist Meeting Grant (2009) and many others.

Apart from academic excellence, Brian also has the goodwill and affection of his fellow students, peers and colleagues- making him a deserving receiver of the Otani Award!

**Post-doctoral Scholar Award**: Nicola Heller, a post-doctoral fellow in the Keegan Laboratory was honored for her outstanding achievements in the field of signaling in the context of inflammatory diseases and allergy. Nikki is a researcher in the Department of Microbiology and Immunology and the Center for Vascular and Inflammatory Diseases (CVID). Nikki has shone as an outstanding researcher, underscored by her K99/ R00 award from the NHLBI last September. Besides this and the GPILS awards, Nikki has maintained a steady flow of publications. Her most stellar papers include one on differences in IL-4 signaling via the two IL-4 receptor complexes in Science Signaling and the functional signaling studies for the IL-4/IL-13 receptor complex in Cell. Nikki also received the Strategic Training in Allergy Research (ST*AR) Award by the American Academy of Allergy Asthma and Immunology in 2008. Apart from conducting high quality research Nikki has shown spectacular promise as an independent investigator with her high-profile publications, awards and funding. Needless to say, the GPILS Post-doctoral Scholar Award could not be better deserved. Along with building an extraordinary profile as a researcher, Nikki mothers two adorable children and considers them her greatest achievement over her post-doctoral year.

**Dedicated Service Award**: Our very own, coordinator, manager not to mention- friend, philosopher and guide- June Green received the Dedicated Service Award this year. June has been an invaluable asset as Coordinator for the program in Molecular Microbiology and Immunology for over ten years now. With all these years of dedicated service on record and a whole Micro/ Immuno community willing to vouch for her unrelenting dedication, June was the perfect candidate for this award.

Every new student first sees UMB and the MMI program through June Green. She is the one who patiently answers every possible question, replies to all the applying students, makes a new student at home instantly, sends deadline reminders to all of us, helps choose labs, but also helps switch labs, and basically supports each student until they graduate and afterward. So many of us make a beeline for her office immediately after an exam: sometimes to share the excitement of an aced exam, and sometimes to simply whine about having a bad day.

Coordinator June Green and Director Nicholas Carbonetti (Program in Molecular Microbiology and Immunology)

Whether it's the dreaded Core Course or the terrifying Qualifying Exam, it's no secret that June is the one to seek- for a morale boost, a smile, a hug and some candy. So if anyone ever needs a supportive and affectionate word, just follow the aroma of freshly brewed coffee anytime after 7am and you will land up straight in June's office. Our early bird knows who's being admitted, who's graduating, who's publishing and who's getting funded. Not only this, she also knows who's dating whom, who's getting married and who's having babies! But when a confidential or controversial fact is revealed, June's office door is shut fast: no word gets out and no eavesdropper is spared…

After years of being the Coordinator for the program and a friend and supporter for everyone in the department, we are proud to know that her efforts and unwavering dedication have been recognized by others. Year after year, students graduate and the department continues to admit new students, researchers move on and new faculty are recruited, but all variables eventually rely on one constant- June Green.

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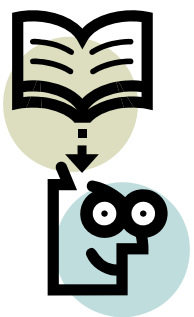

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