

◀ *P. falciparum* sporozoite in a mosquito midgut



# Infectious Diseases

Washington University in St. Louis  
SCHOOL OF MEDICINE

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## ID NEWS & NOTES

### Management of HIV Disease and Hepatitis: Highlights from the 19<sup>th</sup> CROI

#### Guest Faculty

Glenn J. Treisman, M.D., Ph.D.  
Professor of Psychiatry and Behavioral Sciences and Internal Medicine  
The Johns Hopkins University School of Medicine  
Baltimore, MD

**Saturday, May 5, 2012**  
**Engineers' Club of St. Louis**  
**St. Louis, MO**  
**8:00 am to 12:45 pm**  
<http://actu.im.wustl.edu>

We are interested in your achievements, clinical and/or research activities, and other personal news since leaving WUSM. Please contact Dr. Gerald Medoff at [gmedoff@dom.wustl.edu](mailto:gmedoff@dom.wustl.edu) with any information you would like to share.

All division newsletters can be found at: <http://id.im.wustl.edu/> and follow the link "News".

## Bone & Joint Infectious Diseases Consult Service

Jonas Marschall, M.D.



Jonas Marschall, M.D.  
Assistant Professor of Medicine

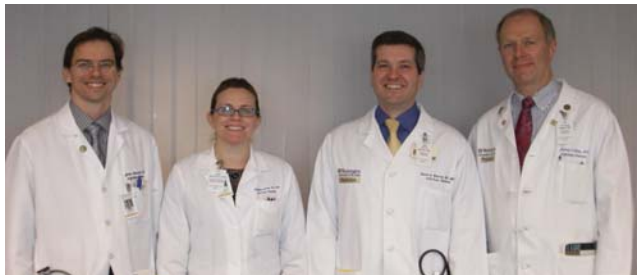
In August of 2009, the Bone and Joint Infectious Diseases (ID) Consult Service at Barnes-Jewish Hospital was formed. The attending physicians for this service are faculty members of the ID Division who have an interest in bone and joint infections. The service is supported by a nurse practitioner, Jodie R. Marcantoni, who joined us from Boston (see team photo below). The service consults on patients under the direct care of the WUSM Orthopedic Surgery Department, Vascular Surgery Division, and Medicine Department. The majority of patients seen by the Bone and Joint ID Consult Service are individuals with native or prosthetic joint infections and hardware-associated osteomyelitis. This new service was established to meet the needs of this

growing patient population, to strengthen our clinical collaboration with the orthopedic surgeons at WUSM, and to improve the transition from in-hospital to outpatient antibiotic treatment.

The Bone & Joint ID consult service has created new research opportunities by carefully describing and standardizing the care of patients with bone infections. One such question that has been addressed is the comparative effectiveness of different intravenous antibiotics in terms of patient outcomes. There are few such studies in the scientific literature since treatment success in bone and joint infections is difficult to measure directly, and often relies on the clinical picture and on indirect biomarkers such as ESR, CRP, and repeat imaging. In theory, a wide variety of intravenous antibiotics can be used for outpatient parenteral antimicrobial therapy (OPAT) of methicillin-susceptible *S. aureus* (MSSA). Oxacillin/nafcillin is the standard treatment. We specifically wanted to compare treatment outcomes of MSSA osteomyelitis with oxacillin vs. ceftriaxone. Ceftriaxone is dosed once-daily and therefore more convenient than oxacillin which requires multiple doses per day

or 24-hour administration via an infusion pump. For that reason, ceftriaxone has been increasingly used in clinical practice. However, no comparative data exist to support its equivalence to oxacillin.

We conducted a retrospec-



**ID Consult Team:** Jonas Marschall, MD, Jodi Marcantoni, FNP, David Warren, MD, MPH and Thomas Bailey, MD. Missing are Hilary Babcock, MD, Michael Lane, MD, Bernard Camins, MD, and Victoria Fraser, MD.

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Above image (*P. Falciparum*): CDC/Dr. Mae Melvin (PHIL #2704), 1973. == Licensing). Masthead image: Ute Frevert; false color by Margaret Shear; Copyright: © 2005 Frevert et al.

# Welcome...Jim Fleckenstein, MD



**Thomas Chambers, MD with wife Ying Li in Seoul, Korea, 2005**

After leaving Washington University in 1993, I served on the faculty at Saint Louis University School of Medicine primarily doing research in the area of viral pathogenesis and vaccine development. The culmination of this work was the invention of a new vaccine approach for Flaviviruses. The technology was transitioned to clinical development resulting in a novel investigational vaccine for dengue virus and a next generation vaccine for Japanese encephalitis which is currently licensed for use in Asia.

In conjunction with these events, my interests gradually shifted to the regulatory aspects of vaccine development. In early 2004, I accepted a position in global vaccines and biologics regulatory affairs at Merck & Company. This offered an unusual opportunity to be a part of the regulatory activities surrounding the introduction of four new vaccines, including the human papillomavirus vaccine for prevention of cervical cancer for which I was responsible for global strategic regulatory development outside of the US.

More recently, I have worked in the area of small molecule development and was involved in the licensure of a first-in-class protease inhibitor for Hepatitis C virus which along with other direct antiviral agents are expected to transform the therapeutic options for treatment of chronic HCV infection. I still appreciate Dr. Medoff's guidance in obtaining outstanding training in laboratory research at Washington University, and to the faculty in general for helping me to establish a foundation in infectious diseases which I still rely on continuously while working within the ID franchise in the pharmaceutical industry.



## **James M. Fleckenstein, M.D.**

I was born in St. Louis in the old St. John's Hospital when it was on Euclid Avenue and Parkview Place (now the site of the McDonnell Pediatric Research Building where my new lab is currently located). I grew up in Huntington, WV where my parents still live. I went to Xavier University in Cincinnati for my undergrad and SLU for medical school followed by the University of Michigan where I was an intern, resident and chief resident. After a brief stint in Operation Desert Storm, I went to Walter Reed Army Medical Center for my fellowship in Infectious Diseases and remained there for 3 additional years on staff. On leaving the army, I joined the faculty at the University of Tennessee

Health Sciences Center in Memphis where my lab has been since 1997.

In December, I was pleased to join the Infectious Diseases Division at Washington University School of Medicine. Our lab works on Enterotoxigenic E. coli (ETEC) which were discovered in the late 1960's during clinical investigation of patients in developing countries presenting with cholera-like illness characterized by severe watery diarrhea and profound dehydration, but who were culture-negative for Vibrio cholerae. ETEC are estimated to cause nearly 1/2 million deaths in young children in developing countries each year, result in substantial morbidity in both children and adults, and are perennially the leading cause of traveller's diarrhea.

We are interested in the molecular pathogenesis of ETEC and in the discovery of novel targets for vaccine development. Our lab uses a variety of molecular approaches to investigate ETEC pathogenesis and more recently we have begun to employ a number of newly available technologies to define potential vaccine targets. In collaboration with investigators at the International Center for Diarrheal Diseases Research in Bangladesh (icddr,b) we have recently started to examine the immune response to candidate antigens. We ultimately hope that data emerging from these studies and ETEC pathogenesis investigations will inform rational approaches to vaccine development for these important pathogens.

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*Bone & Joint continued from page 1*

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tive cohort study of 124 patients, of which 74 were treated with ceftriaxone and 50 with oxacillin. Ninety percent of patients underwent some form of surgical treatment along with antibiotics. We evaluated treatment success at an early follow-up (3-6 months), after completion of the intravenous antibiotics, and at a late time point (6+ months). Criteria for success were defined in a stricter way than previously reported in the literature.

We found the overall success rates to be 85% and 78% at earlier and later follow-up times, respectively. The success was similar across the two treatment groups (83% vs. 86% for ceftriaxone vs. oxacillin, respectively, at early follow-up) which was not significantly different. Interestingly, there were more toxicities in the oxacillin group that led to drug discontinuation compared to ceftriaxone. Also, ceftriaxone treatment is significantly less expensive than treatment with oxacillin. The results of this study indicate that ceftriaxone is an effective agent for the treatment of osteoarticular MSSA infections and can produce a similar rate of treatment success as the standard oxacillin (Wieland, B.W., et al. A retrospective comparison of ceftriaxone vs oxacillin for osteoarticular infections due to MSSA. Clin Infect Dis 2011; Dec 5 [Epub ahead of print]). We are now using ceftriaxone on a regular base in our service.

In summary, the new Bone & Joint ID consult service has not only improved the delivery of care in the form of antibiotic management for patients with osteoarticular infections, but also offers an opportunity to ask clinical research questions that can impact the future of outpatient parenteral antimicrobial treatment.

# Awards & Announcements

## RECENT RESEARCH AWARDS

PRINCIPAL INVESTIGATOR	AWARD	PROJECT TITLE
Jeffrey P. Henderson, M.D., Ph.D.	2011 Diabetes Research and Training Center Pilot and Feasibility Award	Identification of metabolic factors predisposing to diabetes-associated infection
Robyn S. Klein, M.D.	National Multiple Sclerosis Society	Cytokine control of homeostatic chemokines within during CNS autoimmunity
Jonas Marschall, M.D., DTM&H	Barnes Jewish Hospital Patient Safety & Quality Fellowship	Decreasing urinary catheter use, unnecessary urine cultures, and inappropriate antibiotics for bacteriuria in the hospital: Piloting an electronic intervention (start July 2012)
Nur F. Önen, M.D., MRCP	Bristol Myers Squibb	Characterization and Experiences of Urban and Rural HIV-infected Persons Attending Urban Based HIV Outpatient Clinics; in collaboration with James H. Willig, M.D., Assistant Professor of Medicine at University of Alabama.

## Special Recognition

**Thomas C. Bailey, M.D.**, Professor of Medicine, was appointed as member of the Agency for Healthcare Research and Quality (AHRQ) Health Information Technology Research study section, and has been asked to serve as a member of the first Special Emphasis Panel to review applications to the Patient Centered Outcomes Research Institute (PCORI).

**E. P Barrette, M.D., FACP**, Associate Professor of Medicine, has been named Director of the Joseph Levitt Medicine Clinic at Washington University School of Medicine.

**Nigar Kirmani, M.D.**, Professor of Medicine, received the 2011 Distinguished Service Teaching Award, Washington University School of Medicine.

**Michael Lane, M.D., MSc**, was recently promoted to Assistant Professor of Medicine and named Medical Director of the Adult Infectious Disease Clinic.

**Hitoshi Honda, M.D.**, Teine Keijinkai Medical Center (Hokkaido, Japan) and former ID fellow at Washington University School of Medicine, was recently named a SHEA 2012 International Ambassador Program delegate. Each year, SHEA selects 10-12 delegates from around the world to participate in intensive training in healthcare epidemiology and infection prevention in the United States as well as connect to leading experts in the field worldwide.



**Nordiah Jalil, M.D., M.Sc.**, Professor of Medical Microbiology, University Kebangsaan Malaysia, and a visiting research scholar at the Infectious Diseases Division, Department of Internal Medicine, received a prestigious award from the Sarawak State Government Malaysia. The Excellent Achievement in Research and Development Award was presented to Dr. Jalil on November 27, 2011, in conjunction with the Islamic new year calendar of Maal Hijrah 1433H. The award was presented by the Sarawak Chief Minister Pehin Sri Abdul Taib Mahmud.

Dr. Jalil received a plaque, certificate, gift and RM 5,000 cash at the ceremony, attended by Sarawak ministers, heads of departments and the public, at the civic centre in Kapit, Sarawak. Dr. Jalil described this recognition as an inspiration to the locals to progress forward despite coming from limited-resource areas. Dr. Jalil has also served as a SHEA 2010 International Ambassador Program delegate and an executive committee member of the Asia Pacific Society of Infection Control (APSIC).



# Food Outreach Honors Infectious Diseases Division

Food Outreach hosted its first ever award dinner on November 17, 2011. The event, called "Food Outreach's Main Ingredient," was designed to celebrate the people, businesses, and community groups who have made a difference for Food Outreach Clients.

A special committee selected recipients from a pool of several candidates, each a representative of a category of supporter. These awards represent all volunteers and supporters who do so much.

**Washington University School of Medicine Adult Infectious Diseases Division** is the recipient of the *Plate Pioneer Award*. The Plate Pioneer is an innovator who understands the difficult journey of those fighting hunger and illness. It is with great insight and initiative that the Plate Pioneer surges into the future.

Recipients of additional awards are listed below.

*Sustenance Award* acknowledges a group who is committed to addressing critical community needs through in-kind, advocacy, and monetary gifts: **Missouri Foundation for Health**.

*Nourishment Award* honors businesses - who through their vision, compassion and insight - have responded with continued corporate citizenship: **Wells Fargo Advisors**.

*Hunger Hero* consistently goes above and beyond to support the mission of Food Outreach whether it is through time, talent or resources: **Paul Higgins**, former Food Outreach Board member and long-term supporter.



Greg Lukeman, Food Outreach Executive Director, Vicky Fraser, M.D., Co-director, Infectious Diseases Division at Washington University School of Medicine and David Kehm, Food Outreach Board President

## Welcome to our new staff



**Jim Maus** joined the Division in September, 2011 as the Senior Research Administrator. His role in this position is to provide service and guidance to the Division's faculty and staff in the administration of their research grants and contracts. Jim has over 25 years of research administration experience at Washington University. He has held positions in the University's Office of Sponsored Projects Accounting, the Medical School's Office of Gifts, Grants and Contracts and both clinical and basic science departments. Prior to joining the Division, Jim spent the last 9 years at The Genome Institute.

Jim is a Certified Research Administrator (CRA) and an active member of the National Council of University Research Administrators (NCURA). He has made presentations at numerous regional and national meetings, is a past Chair of NCURA Region IV Board of Directors and a recipient of the NCURA Region IV Distinguished Service Award.

If you have any questions or concerns or you just want to talk fishing or bluegrass music, feel free to stop on by his office on the 7th floor of the MPRB, or give him a call at 2-2686.

## Congratulations . . .

*Makhawadee (Joy) Pongruangporn, M.D., (ID Fellow) and her husband, Dr. Jonathan Sagum, welcomed their first child, baby boy Joshua, on October 9, 2011.*



# Life of Former Fellow Anucha Apisarntharak, M.D.

...serving the monkhood is an ideal for all males in Thailand.



Although many young men continue to become official members of the Sangha, as the monkhood is called, for many others it is not practical or not possible due to family financial obligations. The three-month Buddhist Retreat is a time when the new monks are initiated into the order, and it is a time when many young men, and older men, who can not become full-fledged monks engage in a short period of service.

On the day of ordination, Dr. Apisarntharak's head and eyebrows are shaved, he dons a robe, and he is accompanied to the temple by his family and friends.



## Photo descriptions by Anucha Apisarntharak, M.D.



As a monk, you have to dedicate yourself to clean for the temple and do other works in the mountain (grow a tree, make way for people who want to climb up the mountain, etc). I clean the temple every morning and afternoon and do some other work as well. It is quite difficult, since I have never done this before. At the end, I lost 7

kilograms (2.2lbs = 1kg).

I walk in the village in the morning and people donate food to us. Buddhist is the main religion in Thailand and people considered donating food to monks as a precious ceremony for them. You can see that they donate food and still have to pay respect for monks. As a monk, you don't wear shoe, so it is quite painful when you walk around 6 kilometers up and down the hill in the forest.



This is the place that I stay at night and I also did meditation here three hours per day. At night, particularly when it rained, it was very difficult. There are many animals such as snakes, scorpions, spiders at night that keep me busy all night sometimes. I learn to live with it,

but have to prevent it by applying a chemical around the place (prevent the dangerous animals is just like infection control to prevent NI). I learn how to do good things (get them out of my place), but did not hurt them.



This man donated food to us everyday. He just passed away last month and monks had attended his ceremony. This is the thing that makes you realize about the uncertainty of human life. Some questions do not need answers, but you can seek answers if you have right concentration, mindfully and peacefully. For human beings, if you start with these questions, you will decide to do only good things for people.

