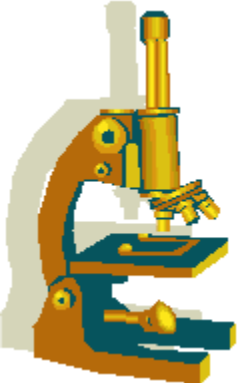


IBASM NEWSLETTER

December 2005
Volume 8, #1

Message from the President — Jeanne Barnett

Inside this issue:

2005 is almost over and it is time to think about 2006. The planning committee is busy putting together the meeting at McCormick's Creek State Park. The dates are April 21 – 23, 2006. We have 3 excellent speakers arranged for the meeting. Dr. William Summers, Yale University, will be our Waksman speaker. Dr. Summers joined the faculty at Yale in 1968. He is a professor in five departments or programs ranging from Molecular Biophysics and Biochemistry to Women's, Gender, and Sexuality Studies. His research has focused on virology and microbiology, history of medicine and science, and the relations between science and the humanities.

Dr. Yves Brun joined the faculty at Indiana University in 1993. He is currently Professor in the Department of Biology and is an active member of IBASM. He was the IBASM Academic Research Award winner for 2005, and will present his research on *Caulobacter crescentus*.

The third speaker is Dr. Stanley Maloy, the current president of ASM. Dr. Maloy is a Professor at San Diego State University and is the Director of the Center for Microbial Sciences and the Center for Applied and Experimental Genomics. His research focuses on *Salmonella.* A combination of genetic, molecular, biochemical, and genomic approaches are used to answer questions about general biological processes, and questions that relate to the evolution of pathogenesis.

The 2006 meeting promises to be an exciting one. Registration materials can be found in this newsletter and on the IBASM website. You will be able to register online this year. Dominique Galli has information about registration and housing in her article in this newsletter. I hope to see all of you at McCormick's Creek.

We are looking for a few good people who want to be involved in IBASM. We need nominations for vice-president and other offices. Please consider nominating yourself or someone who wants to be involved in the continued growth of this organization. I can confidently say that you will be working with a great group of individuals. Please send your nominations to either me (Barnett@usi.edu) or any of the other officers.

*See **J. Barnett**—page 2*

Points of Interest

- Next meeting will be held at McCormick's Creek State Park
- Three well-known researchers to speak at the next meeting
- ASM announces several funding opportunities
- Abstract and registration forms will be due soon

Message from the President– Elect — Dominique Galli

Happy New Year to all our members! Our next annual meeting is approaching and it is time again to submit your abstract and complete the registration form. The meeting will take place at the Canyon Inn at McCormick's Creek State Park from April 21-23, 2006. There are a few changes with respect to the registration process this year. To begin with, we would like for you to submit your registration and abstract form electronically. You should have received both forms as a Word document with this newsletter. Alternatively, you can download them from the IBASM website at ers.ipfw.edu/merkel/IndianaASM.html .

*See **D. Galli**—page 2*

J. Barnett's message (continued from page 1)

Dr. Kenneth J. Goodrum is the new Branch Coordinator for Area III. Dr. Goodrum is in the Department of Biomedical Sciences at Ohio University. He replaces Dr. John Stoltz in that capacity. The Branch Coordinator is the individual who is the connection with the national ASM. He also receives our grant applications, which we use to support student activities and promote the growth of our local organization.

The national organization has provided a way to renew your Branch membership online. When you renew your national membership, renewing your Indiana membership simply requires a click on the link. It is simple and the dues will be forwarded to IBASM. Take advantage of this opportunity when you renew your national membership.

ASM is also providing several funding opportunities. Many of you received e-mails from ASM, but I want to point out a couple of these opportunities.

1. Community Sequencing Program

The Community Sequencing Program (CSP) was created to provide the scientific community at large with access to high-throughput sequencing at the Department of Energy's Joint Genome Institute (JGI). Sequencing projects will be chosen based on scientific merit and judged through independent peer review. Criteria for participation in this program, the review process, and interactions between JGI and participants are outlined on the web site listed below. Through this program, the Department of Energy aims to assist and further Institute (JGI). Sequencing projects will be chosen based on scientific merit and judged through independent peer review. Criteria for participation in this program, the review process, and interactions between JGI and participants are outlined on the web site listed below. Through this program, the Department of Energy aims to assist and further sequence-based scientific research from a broad range of disciplines.

The CSP consists of two programs:

- a small-genome program for shotgun sequencing of genomes smaller than 250 Mb and other sequencing projects with a total request of less than 1 Gb.
- a large-genome program for shotgun sequencing of genomes larger than 250 Mb. Proposals to the large-genome program must address relevance to the DOE missions of environmental remediation, carbon sequestration, and alternative energy production.

Proposals to the two programs will be reviewed separately, but the application and review processes are similar.

URL: http://www.jgi.doe.gov/CSP/index.html

For more information, please write to csp@jgi.doe.gov , or call Jim Bristow at 925-296-5609.

2. Ecology of Infectious Diseases (EID)

Full Proposal Deadline: February 10, 2006 (5pm submitter's local time)

URL: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf06506

It is never too early to begin to plan for 2007. The meeting will be at Turkey Run State Park on April 20 – 22. Mark your calendars early! See you all in April at McCormick's Creek.

" Drs. Summers, Brun, and Maloy will speak at the next meeting."

D. Galli's message (continued from page 1)

The completed registration form needs to be e-mailed to dgalli@iupui.edu, the abstract should be sent to jkmitchell@bsu.edu. Payment of registration fee(s) and meals and rooms, if applicable, still requires the mailing of a check via USPS. The address is listed on the registration form. Deadline for the receipt of registration and check is March13, 2006. Deadline for the abstract is February 15, 2006.

The registration form has a new look requesting some additional information such as the number of sessions you plan to attend and the name(s) of your room mate(s). This will make it easier for us to plan and organize the meeting.

Students who present a poster or give a talk should indicate if they request travel assistance. Eligibility for travel assistance is limited to presenting students whose attendance of the IBASM meeting is not supported by a grant or fellowship. The amount of financial assistance is contingent on the numbers of applications. Checks will be mailed after the meeting. We would also like to remind you that this year we are offering a new student travel award to the General ASM Meeting in Orlando, FL. This award is open to all presenting students. Check the appropriate box on the abstract form if you intend to present at the general meeting.

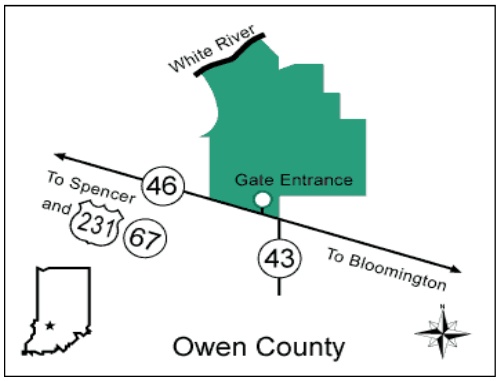
With respect to lodging, we offer you two options this year:

1. You can book your room at the Canyon Inn through us. Just check the appropriate boxes on the registration form and submit full payment with your registration fee. The advantages are that you will be guaranteed a room and not be charged any room taxes. If you take a look at the registration form, you will find a wide selection of room types offered by the inn. There are only a limited number of rooms available for each type. The rooms will be assigned on a first

*See **D. Galli**—page 3*

D. Galli's message from page 2

come basis with priority given to those of you who mail their checks in a timely manner. Keep in mind that per our contract with the Canyon Inn, room cancellations will be accepted no later than noon on March 21, 2006, no exceptions. For cancellations contact Dominique Galli at dgalli@iupui.edu, or call at 317-278-1936. 2. Alternatively, you can make your own reservations with the Canyon Inn by either calling the lodge at 1-877-922-6966, or booking a room online at https://canyoninn.dnr.state.in.us/ . The inn requires that a deposit for the first night is made within 10 days of the date of reservation or the reservation will be cancelled. Room taxes will be added to the basic room rate. Deposits will be refunded if cancellation of reservation is received 4 days before date of arrival.



Location of McCormick's Creek State Park

Check-in is at 4:00 pm and check-out is at 12:00 noon.

Admission to McCormick's Creek State Park is $4/car with in-state license plates. We have decided to go with last year's program and leave Saturday afternoon open so that you can enjoy the park and/or nearby Nashville, IN. McCormick's Creek State Park offers more than 10 miles of easy to rugged hiking trails, a nature center, two outdoor tennis courts, and a saddle barn where you can book guided trail and pony rides. For more information on the park, maps and directions please visit http://www.mccormickscreekstatepark.com/

As for the meeting in 2007, reservations have been made at the Turkey Run Inn in Turkey Run State Park, Indiana, for the dates of April 20-22, 2007.

Call For Nominations

President-Elect 2006-2008

We are asking for you help to nominate candidates for the position of President-Elect for the next two-year term starting on July 1, 2006. Responsibilities include the arrangement of the 2007 and 2008 annual meetings. Elections will be held at the annual meeting in 2006. Self nominations are encouraged. Potential candidates have to be full members. Please send your recommendations to Jeanne Barnett at Barnett@usi.edu.

Academic Awards 2006

We would like to invite you to nominate candidates for the Academic Scientific Achievement Award and the Academic Teaching Award. See http://users.ipfw.edu/merkel/conbylaws.html for selection criteria. The award will be presented at the annual meeting in 2006. Please send your nominations to Carl Bauer at cbauer@bio.indiana.edu.

McClung First Place Graduate (Masters) Winner

PI3K Mediates *S. aureus* Invasion Leading to Peri-Nuclear Vimentin Collapse in Human Endothelial Cells

Sharmon Knecht and Susan McDowell
Department of Biology, Ball State University, Muncie, IN

Staphylococcus aureus (*S. aureus*) is a medically important bacterial pathogen associated with many diseases and infections of the respiratory system, wound sites, surgical incisions, and other portals of entry and exit. *S. aureus* is able to invade cells via mechanisms that have yet to be fully characterized. Vimentin, a protein filament of the animal cell cytoskeleton, and phosphoinositide 3-kinase (PI3K), a family of kinases responsible for initiating several cell signaling events, were found to be associated with *S. aureus* invasion. Confocal microscopy revealed that the vimentin network in human umbilical vein endothelial cells (HUVECs) undergoes dynamic rearrangement in steady state under control conditions. However, cells infected with *S. aureus* demonstrated peri-nuclear collapse of the vimentin network. Pre-treatment with LY294002, a drug that inhibits PI3K activity, decreased invasion of *S. aureus* and paralyzed the vimentin network. These data suggest that PI3K mediates *S. aureus* infection and vimentin rearrangement.

Results

Confocal microscopy revealed that vimentin is actively rearranged in HUVECs under normal, control conditions (Figure 1). An immunofluorescence time course revealed that *S. aureus* is able to invade HUVECs after only

*See **PI3K**—page 5*

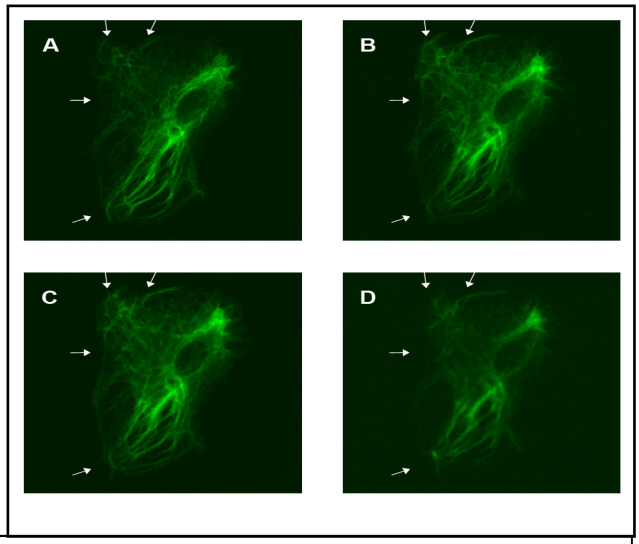


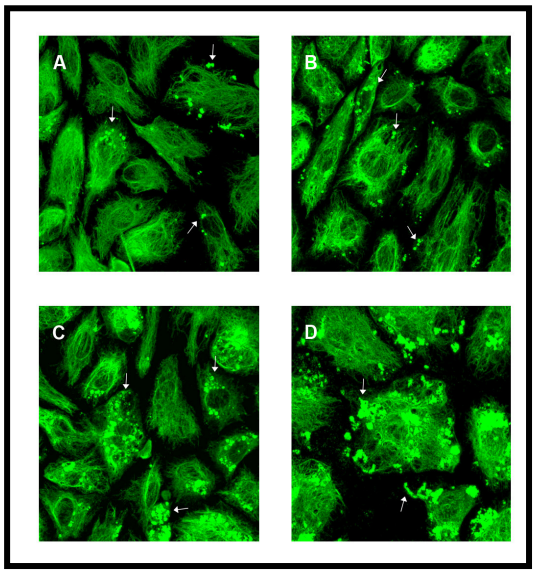
Figure 1. The vimentin network is dynamic in control human umbilical vein endothelial cells (HUVECs). HUVECs were imaged using confocal microscopy for 1 hour in complete media containing 10% FBS supplemented with N-Acetyl-L cysteine. Arrows indicate regions of interest where vimentin filaments appear to rearrange over time. Time points A-D are 0, 18, 24, and 42 minutes respectively.

(continued from page 4)

P13K

10 minutes of exposure and after 2 hours of infection, bacterial colonies were evident within the cells, indicating intracellular bacterial replication (Figure 2).

Figure 2. Human umbilical vein endothelial cells (HUVECs) can become infected within 10 minutes of exposure to *S. aureus*. HUVECs were infected with *S. aureus* for 10, 20, 30, and 120 minutes to examine infection time course (A-D). Cells were incubated with a primary monoclonal mouse antibody to vimentin and a secondary rabbit anti-mouse Alexa Fluor 488 antibody that bound to the anti-vimentin as well as the Protein A region of *S. aureus*. Imaging revealed that many cells became infected with only 10 minutes of exposure to *S. aureus* (A). White arrows indicate *S. aureus* that has been taken into the cells. Colony clusters of bacteria are evident in cells exposed to *S. aureus* for 2 hours (D).



Time lapse microscopy revealed continued vimentin rearrangement following infection. Within 1 hour post infection, a significant collapse of vimentin toward the nucleus was observed, while the cell membrane remained intact (Figure 3). The bacteria in infected cells also appeared to be associated with the vimentin network, being swept in toward the nucleus (Figure 3).

Treatment with LY294002 prior to infection inhibited invasion of HUVECs by *S. aureus*. The LY294002 treated cells appeared to cease their normal dynamic characteristics. The cell membrane did not falter, but the vimentin network remained stable, failing to demonstrate rearranging filaments as in the control (data not shown). Cells underwent no bacterial infection during the hour of time lapse imaging (data not shown). From these findings, it was concluded that PI3K activity contributes to bacterial invasion.

*See **P13K**—page 6*

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P13K

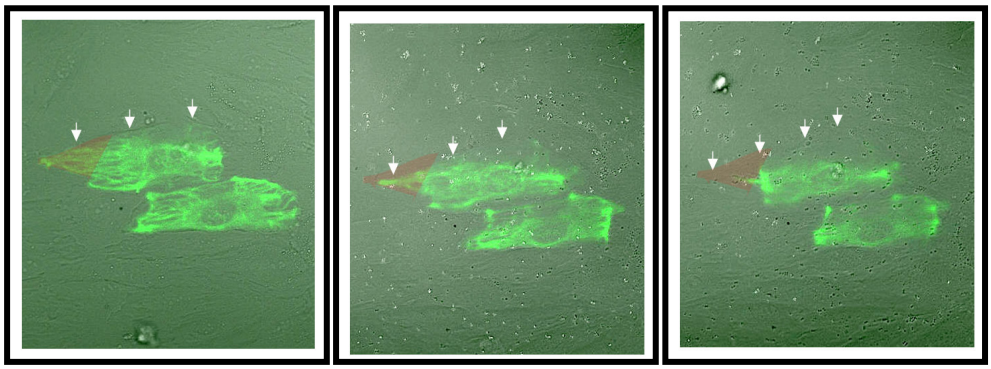

Figure 3. Peri-nuclear vimentin collapse occurs in infected human umbilical vein endothelial cells (HUVECs). HUVECs were transiently transfected with EGFP-vim FL prior to fluorescent imaging overlayed with differential image contrast which revealed that the vimentin network is extended to the cell membrane during 1 hour of control time lapse imaging (A). After 1 hour of infection, the vimentin network began an overall movement toward the nucleus, especially at the poles, while the cell membrane remained intact (arrow). Following two hours of infection with *S. aureus*, the vimentin network collapsed toward the nucleus even further while the cell membrane remained unchanged, indicated by the red region in each image (C). Arrows indicate cell membrane.

Jeanne presenting 1st place McClung award (Masters category) to Sharmon Knecht

Second Place Winner (Undergraduate Category)

In Vivo Hydrolysis of S-Adenosylmethionine Inhibits Recruitment of FtsA to the Cell Division Ring in *Escherichia coli*

Kile Carter and Jeffrey Hughes
Department of Biology, Hanover College

S-adenosylmethionine (SAM) plays many important roles in normal prokaryotic metabolism. It serves as the primary methyl donor in most one carbon transfer reactions, contributes an aminopropyl group in spermidine and spermine synthesis, contributes to novel nucleotide production, among other reactions. The importance of SAM has been illustrated through a variety of procedures using extracts or living cells. To circumvent problems with earlier procedures using leaking mutants or toxic methionine analogs, our laboratory makes use of cloned coliphage T3 S-adenosylmethionine hydrolase (SAMase) expression vectors in *Escherichia coli* to reduce in vivo pools of SAM. As a consequence of this, we observed that depleting SAM levels induced lethal cell filamentation, an observation that we have been investigating for some time.

Several previous studies carried out in our lab have attempted to uncover the cause of this filamentation due to depleted SAM levels. The first of these studies was conducted by Jennifer Cole (1997). Her study hypothesized that SAMase somehow activates the SOS response, which would then inhibit cell division. However, cells in which the SOS genes had been knocked out still showed filamentation when SAMase was expressed. Another experiment, conducted by Michelle Fisher (1998), explored the theory that SAMase inhibits cell division by inhibiting DNA replication, an hypothesis based on the SAM-dependent methylation of *ori*C.. However, she observed multiple nucleoids inside SAMase-induced filaments, reliable *ori*C plasmid reproduction, and normal levels of DNA in cultures of filamentous cells.

These results turned our attention to the cell division apparatus. Emma Thompson (1999) attempted to evaluate the effect of in vivo expression of SAMase on FtsZ activity. FtsZ is the first of several cell division proteins to localize to the cell midpoint and form the division ring. A disruption in the function of a single cell division protein could lead to filamentation. For this experiment, a reporter plasmid containing the *ftsZ* gene fused to green fluorescent protein (GFP) was used to track the location of FtsZ in the cell. By viewing these cells microscopically under UV light, Thompson saw multiple FtsZ rings in the SAMase-induced filaments. This determined that the ability of FtsZ to form the division ring was not impaired by the depletion of cellular SAM.

Thompson's results directed the focus of this study to FtsA, the next protein to localize to the cell division ring after FtsZ. The *E. coli* strain JM107 was transformed with a control plasmid (pBR322) and either the pZG (*ftsZ*::*gfp*) or the pAG (*ftsA*::*gfp*) plasmid. In both cases, when viewed UV light microscopy, the majority of the cells observed were non-filamentous often displaying a single FtsZ of FtsA band in the middle of the cell. JM107 cells were also transformed with a SAMase expression plasmid (pHBBR2) and either the pZG (*ftsZ*::*gfp*) or the pAG (*ftsA*::*gfp*) plasmid. When visualized with UV light microscopy, the cells containing the pZG plasmid showed filamentous cells with multiple FtsZ bands along the length of the cells, while cells containing the pAG plasmid also showed filamentous

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(continued from page 4)

SAM

cells but with no FtsA bands.

The strain EWH110 (temperature sensitive *metK* with nearly normal SAM sythetase activity at 30°C and dramatically reduced levels at 42°C) was also transformed with a control plasmid (pBR322) and either the pZG (FtsZ::GFP) or the pAG (FtsA::GFP) plasmid. In both cases, when grown at 30˚C and viewed UV light microscopy, the majority of the cells observed were non-filamentous and often displaying a single FtsZ of FtsA band in the middle of the cell. At 42˚C, fewer cells were seen, but the cells were not filamentous and often contained a single band at the cell midpoint. EWH110 cells were also transformed with a low-level SAMase expression plasmid (pHBF1BR) and either the pZG (*ftsZ*::*gfp*) or the pAG (*ftsA*::*gfp*) plasmid. When grown at 30˚C and visualized with UV light microscopy, most of the cells were non-filamentous, again displaying single bands in the center of the cell. When grown at 42˚C and visualized with UV light microscopy, the strain containing the pZG plasmid again showed filamentous cells with multiple FtsZ bands along the length of the cells. The cells containing the pAG plasmid again showed filamentous cells but with no FtsA bands.

The object of this study was to determine if the SAMase-induced filamentation observed in *E. coli* was caused by inhibiting the ability of FtsA to localize to the septal ring. The fact that cells containing both FtsA::GFP and SAMase (pHBBR2 or pHBF1BR) expression vectors failed to show FtsA bands at the mid-cell division ring suggests that the ability of FtsA to localize to the division ring is impaired by SAMase activity. In parallel experiments done with a FtsZ::GFP fusion, FtsZ rings were seen. This reconfirmed the results of a previous study that concluded that FtsZ activity is not impaired by SAMase activity.

References Cited

Cole, J.L.*, VanZee, K.D.*, Bizri, R.M.*, and Hughes, J.A. 1997. Examination of the Role of the SOS Response in S-Adenosylmethionine Hydrolase-Mediated Cell Filamentation in *Escherichia coli*. *In* Abstracts of the 97th General Meeting of the Am. Soc. for Microbiology, p.363. Jennifer Cole's senior thesis may be obtained from the Hanover College library.

Thompson, E.E.* and Hughes, J.A. 1999. Induction of Cell Filamentation in *Escherichia coli* Does Note Impair FtsZ Ring Formation. *In* Abstracts of the 99th General Meeting of the American Society for Microbiology, p.352. Emma Thompson's senior thesis may be obtained from the Hanover College library.

Fisher, M.K.* and Hughes, J.A. 1998. In Vivo Hydrolysis of S-Adenosylmethionine Leading to Cell Filamentation in Adenosylmethionine *Escherichia coli* Does Not Block DNA Replication. *In* Abstracts of the 98th General Meeting of the American Society for Microbiology, p.298. Michelle Fisher's senior thesis may be obtained from the Hanover College library.

Highlights from the Journals of the ASM, October 2005 (ASM Tipsheet)

New Topical Antibiotic May Inhibit Skin Infections

Researchers from Colorado have identified a new topical antibiotic that may inhibit skin infections in humans. Their findings appear in the October 2005 issue of the journal *Antimicrobial Agents and Chemotherapy*.

Ongoing emergence of drug-resistant bacteria continues to propel the search for new antibiotics. In the year 2000, methicillin-resistant *Staphylococcus aureus* (MRSA) measured an infection rate of 43.7% in U.S. hospitals, with nasal carriage as an important risk factor in transmission. Until recently, mupirocin effectively treated *S. aureus* and *Streptococcus pyogenes* skin infections, however *S. aureus* is now showing signs of resistance.

In the study the antibacterial activity of a novel methionyl-tRNA inhibitor, REP8839, was tested against samples of *S. aureus* and *S. pyogenes*. Researchers found all isolates of *S. aureus*, including strains resistant to methicillin, mupirocin, vancomycin, and linezolid, to be susceptible to REP8339 as well as all isolates of *S. pyogenes*.

"This study has shown that REP8839 has important coverage against both major skin pathogens: *S. aureus* and *S. pyogenes*," say the researchers. "The compound is currently in preclinical development as a topical antibiotic for the treatment of skin infections and for the eradication of nasal carriage of *S. aureus*."

(I.A. Critchley, C.L. Young, K.C. Stone, U.A. Ochsner, J. Guiles, T. Tarasow, N. Janjic. 2005. Antibacterial activity of REP8839, a new antibiotic for topical use. Antimicrobial Agents and Chemotherapy, 49. 10: 4247-4252.)

Human Neurons Mount Innate Immune Response During Viral Attack

Human neurons may mount an innate immune response specific to the type of viral infection say researchers from France. Their findings appear in the October 2005 issue of the *Journal of Virology*.

In the study researches infected human neuron cell lines with rabies virus (RABV) and herpes simplex type 1 (HSV-1) and analyzed changes in gene expression. Results showed that both viruses increased the transcription of genes indicative of an innate immune response, however the genes that were turned on differed based on the virus. For example, increased gene expression following RABV infection included those responsible for the production of the cytokine beta interferon while infection with HSV-1 did not.

"Human neurons have the machinery to sense viral infection, and the nature of the innate immune response depends on the nature of the infection," say the researchers.

(C. Prehaud, F. Megret, M. Lafage, M. Lafon. 2005. Virus infection switches TLR-3-positive human neurons to become strong producers of beta interferon. Journal of Virology, 79. 20: 12893-12904.)

Highlights from the Journals of the ASM, November 2005 (ASM Tipsheet)

New Gene Identified for Antiviral Activity

Researchers have identified a gene in mice capable of producing an innate antiviral response to infection. Their findings appear in the November 2005 issue of the *Journal of Virology*.

The innate immune response, largely composed of the alpha/beta interferon system, is the first defense against controlling viral infections. These interferons are produced in response to viral infection and stimulate specific genes to produce antiviral compounds. These interferon-stimulated genes (ISGs) are responsible for many of the bodies' innate antiviral activities, but there are still some effects yet to be explained by the genes already identified.

In the study researchers used a modified Sindbis virus to express selected ISG responses in mice and looked for an attenuated infection. Through this approach they identified the interferon-stimulated gene 15 (ISG15) as having antiviral activity, protecting mice against mortality and decreasing viral replication in multiple organs.

"We show that expression of ISG15 in INF-α/βR mice attenuates Sindbis virus infection, providing in vivo evidence that ISG15 can function as an antiviral molecule," say the researchers.

(D.J. Lenschow, N.V. Giannakopoulos, L.J. Gunn, C. Johnston, A.K. O'Guin, R.E. Schmidt, B. Levine, H.W. Virgin IV. 2005. Identification of interferon-stimulated gene 15 as an antiviral molecule during Sindbis virus infection in vivo. Journal of Virology, 79. 22: 13974-13983.)

Gene Identified in Epstein-Barr Virus that May Contribute to Cancer

Researchers have identified a gene in the Epstein-Barr virus that may contribute to the development of lymphoproliferative disease (LPD) in humans. Their findings appear in the November 2005 issue of the *Journal of Virology*.

Epstein-Barr virus (EBV) is a form of human herpes virus that is the causative agent of mononucleosis. It is often associated with various types of human cancers, specifically lymphoproliferative disease (leukemia and hodgkins/non-hodgkins lymphoma), in immunosupressed patients.

In the study immunodeficient mice infected with an EBV mutant missing a gene that controls cell lysis (the rupturing of the infected cell to release new viruses) did not develop LPD, however, when mice were challenged with EBV containing the lytic gene, development of LPD was enhanced. These results indicate that lytic gene expression contributes to EBV-associated LPD.

"Our results suggest that the decreased ability of immunosuppressed hosts to control the lytic form of EBV may promote the development of LPD not only by allowing enhanced horizontal transmission of the virus but also by increasing the number of lytically infected tumor cells," say the researchers.

(G.K. Hong, M.L. Gulley, W.H. Feng, H.J. Delecluse, E. Holley-Guthrie, S.C. Kenney. 2005. Epstein-Barr virus lytic infection contributes to lymphoproliferative disease in a SCID mouse model. Journal of Virology, 79. 22: 13993-14003.)

Special Thanks to All Judges!

On behalf of all of the students in the poster competition, the committee would like to express sincere appreciation to all of the members who volunteered their time to judge at the last annual meeting. Students were evaluated in 4 different categories: scientific thought, creativity, thoroughness and presentation (abstract, oral and poster). This was no easy task! Next time you see any of these persons please thank them for sweating through a very difficult challenge.

Team #1 Undergraduate = *Kehoe (IUB) and DeLoney (USI)*

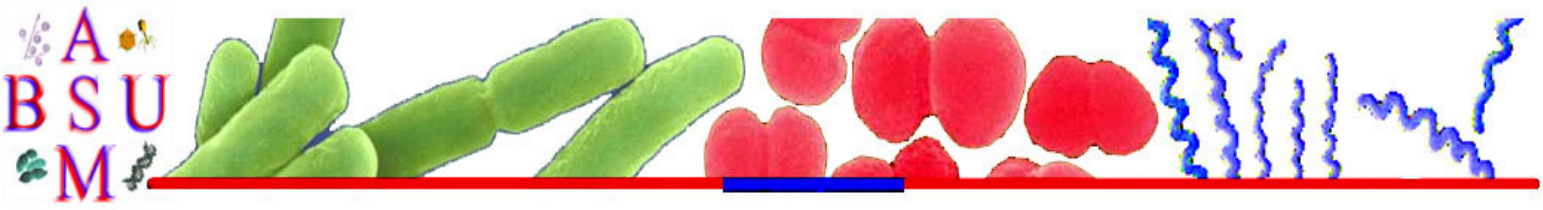
Team #2 Undergraduate/MS Graduate = *Fuqua (IUB) and Gregory (IUSD)*

Team #3 Ph.D. Graduate = *Vann (BSU) and Bruns (BSU)*

Team #4 Ph.D. Graduate = *McKillip (BSU) and Mitchell (BSU)*

From the Desk of Jim Mitchell-...

There were a total of 31 posters presented at the last meeting. The quality of the student presentations was awesome and it was very informative for me to see the range of different research areas. Nicole Stephenson (BSU) won 1st place and Kile Carter (Hanover College) won 2nd place in the undergraduate category. In the MS category Sharmon Knecht (BSU) received the McClung award for 1st place. Amelia Tomlinson (IU-B) and Jeffrey Stumpf (IU-B) both received the McClung award for 1st place and Kimberly Mauch (IU-B) 2nd place in the Ph.D division. **Congratulations !!!** The socializing which occurred during the judging segment was almost deafening at times, but a great opportunity for students to visit with each other and also to interact with professionals who can provide valuable ideas and advice for future education and employment. All of us who viewed the poster session look forward to a similar number of participants next year, and I hope to possibly see students compete in the high school division. First place winners received a complimentary ASM membership and all winners will receive a certificate and monetary gift when a short paper is published in the IBASM newsletter.



The Ball State student chapter of ASM (BSUASM; http://bsuasm.iweb.bsu.edu) has had an active Fall Semester, with a diverse array of engaging speakers and activities that will continue Spring term. In early October, BSU President Dr. JoAnn Gora accepted the student's invitation to speak at an open forum attended by some 90 university administrators, as well as faculty and students from multiple colleges. The topic was 'biotechnology and the Indiana economy from a BSU perspective.' This was a precedent for a student chapter in the Department of Biology to invite and receive the University President as an event speaker.

More recently BSUASM hosted a joint luncheon forum for two recent graduates from the Biotechnology Certification Program (http://www.bsu.edu/biology/biotechnology/). April Reed (currently at Riley Hospital, Indianapolis) and Robin Cooper (currently at Roche Diagnostics, Indianapolis) spoke to students and faculty from their own experiences regarding career preparation and professional development in the molecular biosciences. The reception was very well received by all those who attended.

As a community service project, BSUASM is hosting (through November) a non-perishable food drive to benefit the Muncie Mission. As of Thanksgiving, ten boxes of canned and boxed food items had been collected for the hungry of Delaware County. Similar service/outreach activities are being planned for Spring term.

Social activities keep student interest high, and BSUASM recently held a bonfire event at the home of Dr. Jim Mitchell, BSU Professor of Microbiology. The cold temperatures didn't prevent those in attendance from having a great time outside the realm of classes and research. Tentative plans to host a similar event are being discussed for Spring.

For the January BSUASM chapter meeting, the scheduled speaker is Vanna Hanway, from the Department of Criminal Justice and Criminology, who will be presenting a talk on careers in forensics for microbiologists. Hanway has recently worked with Dr. John McKillip (BSU Biology) on a collaborative forensics proposal for the Justice Department, and has a background in the forensics area. This topic and speaker is expected to be well-received, and will inaugurate a diverse array of additional speakers and activities for an outstanding Spring Semester.

ASM Announces

Women's Career Development Grants

Purpose

Women's Career Development Grants are given to encourage the careers of women with outstanding accomplishments and potential to carry out research in the area of microbiology. The fields covered by the award are any of those represented by Divisions of the American Society for Microbiology. The grants are to support the career development of the candidate by providing funds to travel to a meeting, to visit another laboratory, to take a course in a geographically distant place, or for other purposes to advance the candidate's career. Up to two grants are given annually.

Eligibility

A woman scientist holding a doctoral degree and currently performing postdoctoral work in microbiology, at an institution in the United States, in one of the aforementioned scientific areas. The candidate must be a member of ASM.

Grant

A cash award of $1,200 and a commemorative plaque will be made.

Nomination Procedures

Nominations for the grant will consist of four parts:

1. Completion of a form by the candidate which will explain her academic accomplishments and career goals and specify how the grant will be used to aid her career.
2. The candidate's CV must be submitted with the form.
3. A letter of support by a nominator, who ordinarily would be the candidate's mentor, Department Chair, or Center Director. The nominator must also be a member of ASM.
4. A second letter of support from a scientist familiar with the candidate and her work.

Additional Nomination Information

Candidates may be re-nominated as long as the nominee continues to meet the eligibility criteria. No person shall be a nominator for more than one candidate in any given year. Once submitted, nomination materials become the property of the selection committee and will not be returned. Winners will be decided by a committee appointed by the Membership Board Chair. Women's Career Development Grants are administered by the ASM Membership Services Department.

Submit the grant nomination materials (CV, Candidate form, nomination letter, additional letter of support) to the address below postmarked by March 1st. Copies are not required.

Membership Board Women's Career Development Grant
American Society for Microbiology
1752 N Street, N.W.
Washington, DC 20036-2804

ABSTRACT FORM FOR THE 2006 IBASM ANNUAL MEETING

Complete this form and submit by **February 15** to: Dr. Jim Mitchell, Department of Biology, Ball State University, Muncie, IN 47306-0440. **ELECTRONIC SUBMISSIONS ARE PREFERRED** (e-mail abstracts to: jkmitchell@bsu.edu). Abstracts should be prepared according to the National ASM guidelines. All abstracts should include the title, authors, and institutional address. Abstracts will be published in the meeting program as submitted. Limited funding will be available to subsidize lodging and food for student presenters.

Name and mailing address of presenting author:

Name **Phone**
Address **Fax**
E-mail

Subject Category
(i.e. pathogenesis, DNA viruses, etc.)

Are you a student presenter? ☐ Yes or ☐ No (check one)

☐ Oral or ☐ Poster (check one)

If you are not selected for an oral presentation, are you willing to present a poster? ☐ Yes ☐ No ☐ Does not apply

Check if presenting author is a student competing for:
☐ High school ☐ Undergraduate ☐ M.S. graduate ☐ or Ph.D. graduate Student Award (a short paper is required from the award winners). If left blank student will not be judged in comptetion.

Check if presenting student will also be presenting at the ASM general meeting:
Are you competing for the national travel award to the 2006 ASM general meeting in Orlando? : ☐ Yes ☐ No

ABSTRACT

IBASM Annual Meeting Registration & Room/Meal Reservation Form

April 21 – 23, 2006
Canyon Inn – McCormick's Creek State Park

Please use this 2-paged form to register for the meeting and reserve your room and meals at Canyon Inn. The meeting registration fee is $25 for regular members and $5 for students. Remember, participants must be IBASM members to attend the meeting. Families are encouraged to come and, of course, they will not have to pay any registration fees. Please provide all of the requested information and **e-mail** this form to dgalli@iupui.edu no later than March 13, 2006.

Please fill out the appropriate spaces and check all boxes that apply. If you have any questions contact Dominique Galli at (317) 278-1936, or send an e-mail to dgalli@iupui.edu.

Name # Adults # Children

Address

Phone Fax E-mail

Please indicate which sessions you plan to attend:

☐ I will attend the Friday evening session
☐ I will attend the Saturday morning session
☐ I will attend the Saturday evening session

If you are a student presenter, do you request travel assistance?

☐ Yes
☐ No

LODGING
You can reserve a room with your registration. You will not be charged any room tax. However, room cancellations will be accepted no later than noon on March 21, 2006. Payment for lodging will need to be sent with your registration fee. Alternatively, you can call Canyon Inn directly and make your own reservations (1-877-922-6966). You will pay the lodge directly when you check out. A room tax will be added to your room bill. See newsletter for further details on lodging options.

If you reserve a room through the IBASM, please select the type of room you want to reserve:

☐ Twin (two twin beds) - $59/night
☐ Single (one double bed) - $59/night
☐ Double (two double beds) - $69/night
☐ Queen-Queen (two queen beds) - $79/night
☐ Studio (two double beds, one pullout couch) - $89/night
☐ Studio Conference (one double bed, two pullout couches) - $89/night

There is only a limited number of rooms available for each type. The rooms will be assigned on a first come basis with priority given to those who mail their check within days of sending the completed registration form.

Name of room mate(s) if applicable:

If more than one person occupies a room, who will submit payment for the room?

✳15

Important Dates

Feb. 15, 2006:	Completed abstract form due
March 13, 2006:	Completed registration form due
April 21-23, 2006:	Annual IBASM meeting at McCormick's Creek State Park
May 19-21, 2006:	13th ASM Conference for Undergraduate Educators, University of Central Florida -

2005-2006 IBASM OFFICERS

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