

IBASM

Volume 5 #3 January 2003

Message from the President- Jim Mitchell

Winter's greetings to all IBASM members! I hope you are all checking out our website at <http://users.ipfw.edu/merkel/IndianaASM.html>



Glenn Merkel is updating this site regularly with news, meeting minutes and upcoming events. I am pleased to

announce that Kara Eberly, IBASM Alternate Councilor has agreed to be our Educational Representative. If any full members are willing to act as judges for student posters at the upcoming meeting please contact Kara. Abstract submission and membership

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Message from the President-Elect Jeanne Barnett

The spring meeting will soon be here. A preliminary program for the meeting is in this issue. A registration form to be completed that includes the cost of rooms and meals is also included. Register early to avoid the last minute rush. The meeting is April 11 – 13, 2003, at Spring Mill State Park in Mitchell, Indiana. The program promises to be a really good one. Jim Mitchell



has given you the information about our speakers, Dr. Ian Lipkin and Dr. Stanley Spinola. In addition, we hope to have a number of poster presentations by our members and students. Let's make this one of the best meetings ever.

Spring Mill State Park offers a number of activities for free time on Saturday afternoon. There are a number of hiking trails that range from rugged to easy. The Pioneer Village has an operational grist mill as well as a number of shops and businesses from by-gone days. The Donaldson Cave and Twin Caves are part of the park. The Donaldson Cave includes about 150 yards that you explore on your own. A flashlight is recom-

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The IBASM thanks the Indiana University School of Medicine-Fort Wayne for financially supporting the publication of this news-letter.

forms are included in this edition of the newsletter.

I recently received an update of member status from Secretary/Treasurer Christian Chauret - we currently have 59 active members (36 of which are ASM national members). This is wonderful news as we have met the minimum requirement for branch status of 25 national members. Active membership is still lower than what we had 5 years ago, so please make plans to not only attend the April meeting but to bring a new member with you! I especially encourage students (high school, undergrad and grad) to attend and present a poster at the meeting. It is a great opportunity to meet professionals who can give them valuable ideas and provide leads and advice for future education and employment. Winners of the poster competition receive a plaque and monetary award when short papers are published in the IBASM newsletter. Jeanne Barnett will discuss in more detail local arrangements and the great agenda of not only speakers but recreational activities available at the meeting. One of our student members serves as a summer guide to the caves at Spring Mill State park, and I am sure we can arrange a private tour for interested persons.

We have two very exciting speakers arranged for the upcoming spring meeting. The ASM Foundation speaker is W. Ian Lipkin (M.D., Ph.D.) from The Mailman School of Public Health, Columbia University, New York, NY. He is Director for both the Center for Immunopathogenesis and Infectious Diseases and Center for Developmental Neuroscience. His laboratory is devoted to exploring the role of infectious and immune factors in human central nervous system (CNS) diseases, establishing small animal models for neuropsychiatric diseases, and exploiting neurotropic viruses as vectors for targeted gene therapy in the CNS. Dr. Lipkin will be presenting his work on either West Nile or Borna disease virus molecular biology and pathogenesis. He has a longstanding interest in the use of molecular methods (including 81 peer-reviewed articles) such as subtractive cloning and differential gene expression for studies in neuropathogenesis. His lab was the first to successfully apply these methods for identification of Borna disease virus and detection of the West Nile-like flavivirus in postmortem brain samples of subjects succumbing to the 1999 outbreak of encephalitis in New York city. Our second speaker is Stanley Spinola (M.D.), David H. Jacobs Professor of Infectious Diseases, Indiana University School of Medicine, Indianapolis, IN. His presentation is entitled, "Pathogenesis of *Haemophilus ducreyi* Infection of Human Volunteers". Dr. Spinola is currently the Director of the Division of Infectious Diseases and specializes in the area of sexually transmitted diseases with over 60 refereed-journal articles to his credit on this subject. Both speakers are in the front-line trenches of their respective area, and we all look forward to hearing their latest revelations in combating these human pathogens.

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There are several upcoming meetings you may be interested in attending. The 2nd annual O'Reilly Bioinformatics Technology Conference will be held February 3-6 at the Westin Horton Plaza in San Diego, CA. This conference will focus on the engineering aspect of biological technologies, techniques, and tools - visit <http://conferences.oreilly.com/biocon/> for more information. The 32nd annual convention of the Hoosier Association of Science Teachers (HASTI) will be held February 6-8 at the Indiana Convention Center in downtown Indianapolis. I will be hosting an IBASM booth at this event and would be happy for company if any of you are planning to attend. A conference on "Rational Gene Therapy: The Next Five Years" will be February 26 - March 2, 2003 at Banff, Alberta, Canada. The overall goal of the conference is to critically evaluate progress made in the engineering of viruses as vectors for gene transfer and therapy. The 4th National Integrated Pest Management Symposium/Workshop will be held April 8-10 in Indianapolis. The overall goal is to share pest management successes and challenges from disciplines relating to IPM including weed science, plant pathology & microbiology, vertebrate management, entomology, nematology, horticulture, agronomy, communications, and economics. In response to the growing threat of bioterrorism, ASM will be holding its first meeting on the Future Directions for Biodefense Research: Development of Countermeasures at the Baltimore Marriott Waterfront Hotel in Baltimore, MD March 9-12, 2003. This meeting will bring together scientists conducting critical research to defend against the growing threat of bioterrorism and decision makers shaping the future biodefense research agenda. The 103rd general meeting of ASM will be held May 18-May 22, Washington, DC . The 15th Congress of the International Society for Human and Animal Mycology (ISHAM) will be held on May 25-30, 2003 in San Antonio, Texas.

A recently inaugurated website "connects you to U.S. government science and technology" and offers a ton of links to various entities including IPM, pest management, biological control, and much more. Labeled "Science.gov" and located at <http://www.science.gov> the site offers a specific topic search engine as well as a "by topic" selector. Keying in "IPM" led to <http://www.ree.usda.gov/agsys/nipmn> the National IPM Network, among others. The site's rationale is to offer "a gateway to authoritative selected science information provided by U.S. government agencies including research and development results." The site was created by an interagency working group of 14 scientific and technical information organizations from 10 major science-related agencies, or the "Science.Gov Alliance." The idea is to improve and enhance access to scientific information.

Looking forward to seeing old compadres and meeting new colleagues at the upcoming meeting!

the Donaldson Cave. The Twin Caves is a boat trip conducted by park employees. There is also an inside/outside swimming pool at the Inn for Inn guests only. There is plenty to do at the park for adults and children. For more information, you can visit the website <http://www.state.in.us/dnr/parklake/parks/index.htm>

We are planning to offer financial support for student presenters. In addition, to try to control costs for students, I will provide a "roommate match" service. If you are looking for a roommate to share the costs, send me the sex and number of roommates you need via e-mail (Barnett@usi.edu) or phone (812 465-1642) and I will try to match requests. This is a great opportunity to meet individuals from other institutions. We want to make the meeting available to all who want to come.

We are currently planning the spring, 2004, meeting. It will be held in Indianapolis on April 16 & 17. The meeting will be at the IU School of Dentistry on the campus of IUPUI in Indianapolis. We have rooms reserved at the University Place Conference Center and Hotel. University Place is within walking distance of the School of Dentistry, so transportation should not be a problem. We will begin on Friday evening and conclude Saturday afternoon. The cost of the rooms (double occupancy) is approximately \$125 plus tax. We hope the central location will result in a good turnout.

**Indiana Branch – ASM
2003 Spring Meeting Preliminary Program
April 11-13
Spring Mill Inn – Spring Mill State Park**

Friday, April 11th

4:30 – 6:00 pm	Registration, Poster Set-up, and Social Hour
6:00 – 7:00 pm	Dinner
7:30 – 9:00 pm	Speaker: Dr. Stanley Spinola
9:00 – 10:00 pm	Social Hour

Saturday, April 12th

8:00-9:00 am	Breakfast
9:30-11:00 am	Poster Judging
11:30-12:30 pm	Lunch
12:30-5:00 pm	Break
5:00-6:00 pm	Business Meeting & Social Hour
6:00-7:00 pm	Dinner
7:30-8:30 pm	ASM Foundation Lecture: Dr. Ian Lipkin
9:00 pm	Presentation of Awards followed by Social Hour

Sunday, April 13th

8:00-9:00 am	Breakfast & Depart
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2003 Membership Application/Renewal

If you wish to pay your dues for 2003, you can do it now. Dues are \$15.00 for non-students and \$5.00 for students (per year). Please return the completed form with check, payable to IBASM, to

Dr. Christian Chauret
Biological and Physical Sciences
Indiana University Kokomo
2300 South Washington Street
Kokomo, IN 46904-9002
Phone: (765) 455-9290; Fax: (765) 455-9371; email: cchauret@iuk.edu

Please check:

New Member Application
 Renewal for 2003
 Student Member for 2003

Name:

Current Position & Title:

Institution:

Mailing Address:

Phone:

Email:

Fax:

National ASM Member #:

Background

Highest Degree:

Institution:

Professional Interests:

IBASM Annual Meeting Registration & Room Reservation Form

April 11 – 13, 2003

Spring Mill Inn – Spring Mill State Park

Please use this form to register for the meeting and reserve your room and meals at Spring Mill Inn. The meeting registration is \$25 for regular members and \$5 for students. Remember, regular members and presenting students must be an IBASM member to attend the meeting. A separate form will be provided in the newsletter to pay annual membership fees. Families are encouraged to come and, of course, they will not have to pay any registration fee. Please provide all of the necessary information below and send the completed form with check payable to "Indiana Branch ASM" for the total costs (room & meals and registration) by **March 1st** to:

Dr. Jeanne K. Barnett
 Department of Biology
 University of Southern Indiana
 Evansville, IN 47712

Name _____ # Adults _____ # Children _____

Address _____

Phone _____ Fax _____ E-mail _____

If you need to find a roommate for the meeting, please e-mail Barnett@usi.edu or contact Jeanne Barnett at (812) 465-1642.

Room rates are for a double room with 2 double beds. Check-in is 4:00 p.m. and check-out is 12:00 noon. Please check the appropriate spaces and send the total payment with your registration.

	Member (\$25)	Student (\$5)		Total
Meeting Registration	_____	_____		_____
Room (# nights at \$69/night)	_____			_____
Meals (# for each meal)	Dinner (\$10.30)	Lunch (\$6.75)	Brkft. (\$6.30)	
April 11	_____			_____
April 12	_____	_____	_____	_____
April 13			_____	_____
The price for children's meals (age 5 – 10) are breakfast - \$2.70, lunch - \$2.90, and dinner - \$4.30.				
April 11	_____			_____
April 12	_____	_____	_____	_____
April 13			_____	_____
Total Enclosed				_____

ANNOUNCEMENTS FROM ASM

Redesigned Website Makes Microbiology Accessible To The Public

Designed primarily for teenagers and adults, find information about basic microbiology, issues involving microbiology, and other resources. Complements ASM's award-winning site for middle-school children.

<http://www.microbeworld.org>

10th Anniversary of the UNDERGRADUATE MICROBIOLOGY EDUCATION CONFERENCE

<http://www.asmtusa.org/edusrc/edu4c.htm>

May 16-18, 2003. University of Maryland, College Park, MD.

Three day conference for microbiology and life science faculty. Events include scientific and education plenary sessions, workshops, poster, exhibits, and concurrent sessions, and small group discussions. Excellent opportunity for undergraduate faculty to learn and share teaching practices, receive updates in the science, and network with other educators. 2003 plenary sessions include:

- ? **Biocomplexity**
- ? **The Human Genome Project**
- ? **The Scholarship of Teaching and Learning -**

Deadline for Submission of Abstracts: March 14, 2003; Final Registration Deadline: April 11, 2003.

Travel Awards for Graduate Students and Early Career Faculty

<http://www.asmtusa.org/edusrc/edu23i.htm>

Graduate students and early career faculty are eligible to apply for travel awards to attend American Society for Microbiology's Education Conference for microbiology and biology educators.

Deadline for Applications: March 14, 2003.

Faculty Enhancement Program - Supporting Undergraduate Faculty at Minority Serving Institutions to Attend Education Conference

<http://www.asmtusa.org/edusrc/edu38b.htm>

Faculty who are not members of American Society for Microbiology (ASM) and who teach at 2 or 4 year institutions with a large percentage of minority students are eligible to apply for a travel award to attend the ASM's Undergraduate Conference and a one-year membership to the Society.

Deadline for Applications: March 14, 2003.

ASM Undergraduate Research Fellowships. Information and applications available on-line.

Application deadline February 1, 2003.

<http://www.asmtusa.org/edusrc/edu23a.htm>

ASM Minority Undergraduate Research Fellowships. Information and applications available on-line.

Application deadline February 1, 2003.

<http://www.asmtusa.org/edusrc/edu23b.htm>

COPIES OF THE FOLLOWING JOURNAL ARTICLES CAN BE ACCESSED ONLINE AT: <http://www.asmtipsheet.org/pcsrc/tip.htm>

Household Disinfectant Potential Cause of Antibiotic Resistance

Researchers from Midwestern University in Illinois, Curtin University of Technology in Australia, and Illinois State University have found that when bacteria become resistant to pine oil cleaners (POC), a common household disinfectant, they may also be resistant to some antibiotics. Their findings appear in the November 2002 issue of *Applied and Environmental Microbiology*.

In the study, POC-resistant *Staphylococcus aureus* were found to also be resistant to the antibiotics, vancomycin and oxacillin. Further testing suggests that the same genetic mechanism may be responsible for both types of resistance. "These results add to a growing body of reports suggesting that common disinfectants can select for bacteria with reduced susceptibilities to antibiotics," say the researchers.

(C.T.D. Price, V.K. Singh, R.K. Jayaswal, B.J. Wilkinson, J.E. Gustafson. 2002. Pine oil cleaner-resistant staphylococcus aureus: reduced susceptibility to vancomycin and oxacillin and involvement of SigB. *Applied and Environmental Microbiology*, 68. 11: 5417-5421.)

Bacterial Infection Possible Cause Of Liver Disease

A bacterial infection could be responsible for some cases of chronic liver disease, say researchers from Estonia and Sweden in the November 2002 issue of the journal *Clinical and Diagnostic Laboratory Immunology*. In the study, researchers compared levels of antibodies against *Helicobacter* bacteria (the acid tolerant family of bacteria responsible for most peptic ulcers) in patients with chronic liver disease to a random sample from the general public. The patients with liver disease had significantly higher antibodies to at least two species of *Helicobacter* bacteria.

"Bile-tolerant *Helicobacter* species such as *Helicobacter pullorum*, *Helicobacter bilis*, and *Helicobacter hepaticus* are associated with hepatic disorders in animals and may be involved in the pathogenesis of chronic liver diseases in humans," say the researchers.

(O. Ananieva, I. Nilsson, T. Vorobjova, R. Uibo and T. Wadstrom. 2002. Immune responses to bile-tolerant *Helicobacter* species in patients with chronic liver diseases, a randomized population group, and healthy blood donors. *Clinical and Diagnostic Laboratory Immunology*, 9: 1160-1164.)

Existing Antiviral Potential Treatment For Smallpox

A drug currently licensed for treatment of an opportunistic infection in AIDS patients may be an effective treatment against smallpox, say researchers from the Rega Institute for Medical Research in Belgium and the Academy of Sciences of the Czech Republic. Their findings appear in the November 2002 issue of the journal *Antimicrobial Agents and Chemotherapy*.

In the study, the researchers tested the effectiveness of a variety of drugs on their ability to prevent replication of vaccinia virus, a distant relative of smallpox that is used in the current smallpox vaccine. One antiviral drug, cidofovir, that has already been approved for other treatments, appeared to be highly active against poxvirus infection. "Cidofovir, which is on the market for treatment of human cytomegalovirus retinitis in immunocompromised patients, is potentially a good candidate for the treatment of a poxvirus outbreak, in the absence of any vaccination," say the researchers.

(R. Snoeck, A. Holy, C. Dewolf-peeters, J. Van Den Oord, E. De Clercq, and G. Andrei. 2002. Antivaccinia activities of acyclic nucleoside phosphonate derivatives in epithelial cells and organotypic cultures. *Antimicrobial Agents and Chemotherapy*, 46: 3356-3361.)

Greek Cheese Produces Potential Lantibiotic

Researchers from Greece and Belgium have isolated a bacteria in Greek cheese that produces an antimicrobial peptide which could be used as a natural preservative in some foods and fresh cheeses. Their results appear in the December 2002 issue of Applied and Environmental Microbiology.

Lantibiotics are antimicrobial compounds produced by bacteria which are of increasing interest to scientists because they can kill a variety of bacteria responsible for food-borne disease and spoilage without causing harm to humans. Scientists have identified the bacterium, *Streptococcus macedonicus*, in Greek Kasseri cheese which produces the food-grade lantibiotic, macedocin, when grown in milk. Macedocin appears to be active against a broad spectrum of bacteria.

“The need for expanded and legal use of bacteriocins in foods is obvious, especially in light of consumers’ demands for safe and minimally processed foods that have adequate shelf life and are convenient and the global need for increasing the supply of healthy and safe foods,” say the researchers. “Thus, the use of *S. macedonicus* as a protective starter culture in food fermentations seems to be a straightforward option.”

(M. D. Georgalaki, E. Van den Berghe, D. Kritikos, B. Devreese, J. Van Beeumen, G. Kalantzopoulos, L. De Vuyst, E. Tsakalidou. 2002. Macedocin, a food-grade lantibiotic produced by *Streptococcus macedonicus* ACA-DC 198. Applied and Environmental Microbiology, 68.12: 5891-5903.)

Bacteria Protect Against Gonorrhea

Certain species of lactobacilli may protect women from gonorrhea, say researchers from the Uniformed Services University in Bethesda, Maryland. They report their findings in the December 2002 issue of the journal Infection and Immunity.

In the study, the researchers tested the ability of four species of lactobacilli commonly found in the vagina to inhibit the reproduction of *Neisseria gonorrhoeae*, the bacterium that causes gonorrhea, under different pH conditions. While all four inhibited growth in acidic conditions, only two were able to inhibit growth under neutral pH. The researchers believe that the lactobacilli were able to inhibit growth by producing hydrogen peroxide. “On the basis of these data, one might hypothesize that the capacity of commensal lactobacilli to protect women against gonorrhea may depend on both the species and stage of menstrual cycle,” say the researchers.

(D.C. St. Amant, I.E. Valentin-Bon and A.E. Jerse. 2002. Inhibition of *Neisseria gonorrhoeae* by Lactobacillus species that are commonly associated with the female genital tract. Infection and Immunity, 70:7169-7171.)

Bacteria In Worms Repel Ants

Symbiotic bacteria in the digestive tracts of microscopic worms produce a compound that is an effective ant repellent, say researchers from the University of California, Davis, and the University of Wisconsin, Madison. They report their findings in the December 2002 issue of the journal Applied and Environmental Microbiology.

Microscopic worms, known as nematodes, reproduce inside and kill some insects and are increasingly being used as natural alternatives to chemical pesticides in agricultural production. The researchers have discovered that the same bacteria that the nematodes use to kill their insect hosts also produce a compound called ant-deterrent factor (ADF) that discourages scavengers, such as ants, from consuming the dead insects before the nematodes inside mature. “Scavengers, such as ants, can adversely affect the persistence of entomopathogenic nematodes being used as biological control agents,” say the researchers. “Future research is needed to elucidate the nature of ADF, isolate the gene(s) required for the expression of ADF and determine the range of its activity against insects and other arthropods or vertebrates. The results of such studies may lead to an enhancement of ADF activity and ADF-fortified nematode application as a viable approach to agricultural and structural pest management.”

(X. Zhou, H.K. Kaya, K. Heungens and H. Goodrich-Blair. 2002. Response of ants to a deterrent factor(s) produced by symbiotic bacteria of entomopathogenic nematodes. Applied and Environmental Microbiology, 68: 6202-6209.)

ABSTRACT FORM FOR THE 2003 IBASM ANNUAL MEETING

Complete this form and submit the original and 1 copy by **March 15** and send to:

Dr. Christian Chauret, IU Kokomo, 2300 S. Washington St., Kokomo, IN 46904-9003

Electronic submissions are preferred (e-mail abstracts to: cchauret@iuk.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 if presenting author is a student competing for:

undergraduate __ , graduate __ , or high school __ Student Awards (a short paper is required from the award winners)

ABSTRACT

2002-2003 IBASM OFFICERS

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