



IBASM NEWSLETTER

Volume 10, Issue 2

January, 2008

Greetings from the President — Dominique Galli

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My best wishes for a happy and successful 2008 to all of you. As you are reading this latest newsletter we are busy putting our joint meeting at Ball State University together. We will be offering a very strong program and have lined up five excellent guest speakers including ASM President, Dr. Clifford Houston. Furthermore, as in recent meetings, graduate students and postdoctoral fellows from Indiana and Ohio will have the opportunity to give an oral presentation. Please make sure that you check the appropriate box on the abstract submission form. Due to time constraints student presentations will be offered in concurrent sessions. I also want to remind you that the monetary awards in the poster competition were raised last year.

New this year is a student forum, where undergraduate and graduate students can consult with junior and senior microbiologist about their career choices. Outside of science, John McKillip has arranged for a variety of leisure-time activities that are listed in the meeting's agenda on page 5. A vendor exhibition will be running concurrently with the poster session. Please make sure to stop at the vendors' booths and learn more about their products. The vendors' sponsorship has enabled us to put this ambitious program together. To learn more about this year's registration process please take a look at John's article. A final agenda including all presentation titles will be emailed to you closer to the meeting date.

Points of Interest

- The annual meeting will be held at Ball State University on March 28 & 29, 2008.
- IBASM is requesting nominations for President-Elect.
- Indiana Governor's Internships are available at IDEM for summer 2008.
- Registration and Abstract forms for the Annual IBASM meeting are due in the next few weeks.

In other news, I would like to increase the participation of our students in IBASM activities. After consulting with my fellow officers, I am suggesting an amendment to our constitution that will allow for an undergraduate and a graduate student (MS or Ph.D.) to join the executive committee and help organize future branch meetings. The amendment needs to be approved by our membership. I intend to send out an electronic ballot prior to the joint meeting and ask all full members to please cast their votes. Meanwhile, I want to encourage our students to consider this unique opportunity to sit on the executive committee.

Last but not least, this coming summer I will pass the presidency to John McKillip. Hence, we need to elect a new president-elect. Please consider nominating a colleague or yourself. You will be working with a dedicated and supportive team of microbiologists representing all of Indiana.

Please join us at BSU on March 28th for a great weekend.

Message from the President– Elect — John McKillip

This newsletter issue showcases the upcoming Spring IBASM meeting preparations. It is my pleasure to overview some of the unique features of what promises to be an exciting event. Ball State University will host the Spring meeting jointly with the Ohio Branch of ASM, the first joint branch meeting in several years. Excellent facilities have been reserved for our meeting (the recently constructed Alumni Center), which will be March 28 & 29th (Fri. & Sat.), slightly earlier in the year than we have traditionally met.



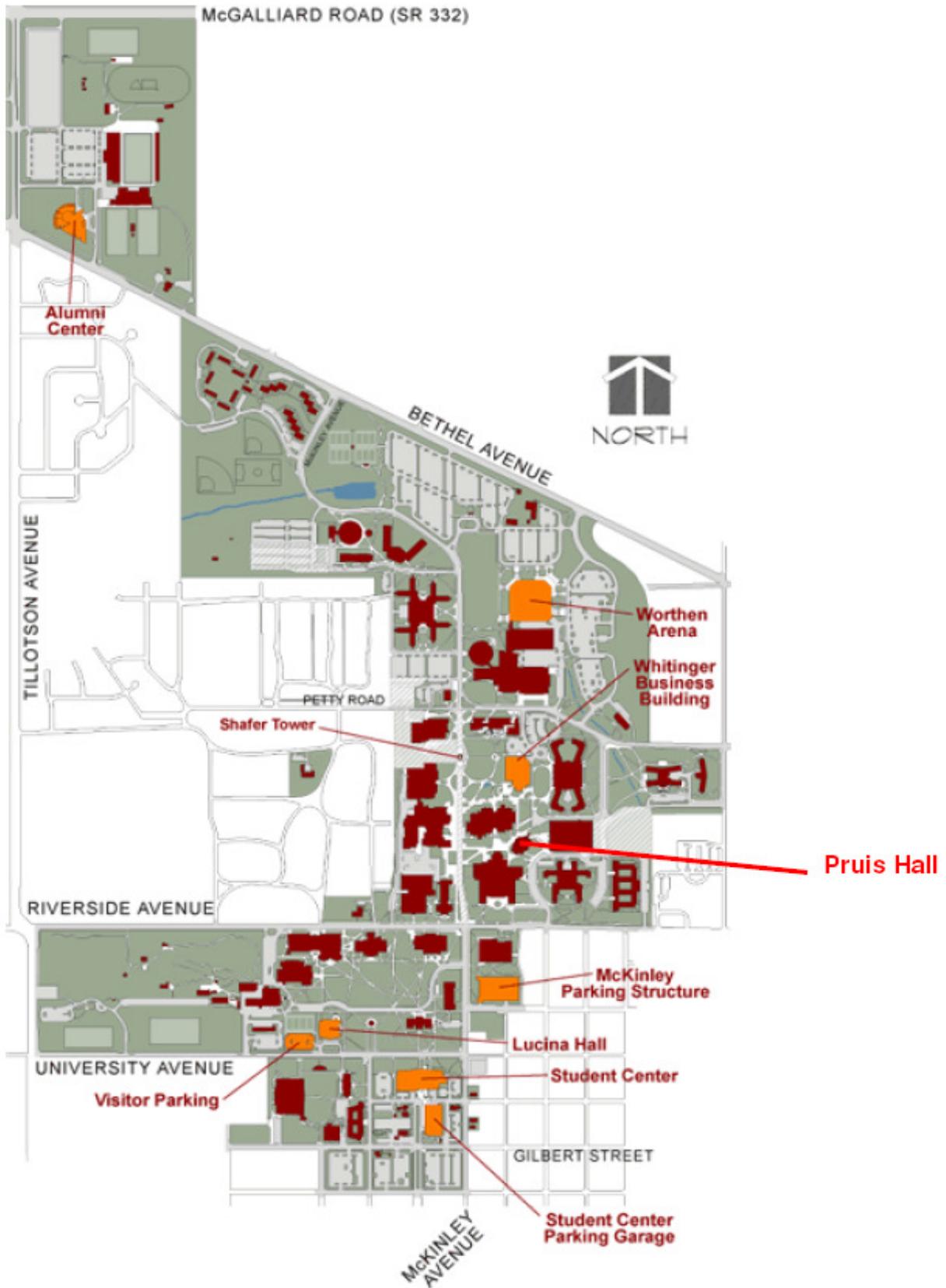
Because of the increased attendance from our joint meeting, you are encouraged to register early to secure your desired accommodations and meal choices. As such, our registration form has a new look with added options that you will want to read over carefully. For example, lodging will be available on the Ball State campus at the University Student Center hotel, but only a limited number of rooms are available (see registration form). These accommodations allow attendees and guests several convenient choices for dining within a just a few blocks (for Friday dinner and those who do not select meal options during registration). The weblink on the registration form will allow for you to look over the rooms and read about the accommodations. For those driving and staying at the BSU Hotel, a campus parking pass will be provided upon check-in. If you register and the BSU hotel is full, I will inform you immediately so that you may then reserve a room at one of the other listed hotels off-campus and thus not have to include lodging costs in your registration form. Details on parking, specific maps, shuttle bus service to and from the meeting venue, and other logistics will follow soon in the meeting program, although the accompanying map of the Muncie area (on page 3) provides information on the relationship of campus to major highways that serve the city. The BSU Student Center location is indicated on the map, as is the location of the BSU Alumni Center, the site for most of the meeting events.

While at the meeting, there will be a number of activities outside of the realm of microbiology to occupy your time, or to entertain family and guests. For example, Friday evening, after the keynote speaker, you may remain in the BSU Pruis Hall auditorium for a free movie (title TBD), or venture to the nearby Cooper Science Complex for a special night planetarium show in the Department of Physics & Astronomy. Saturday, the BSU Museum of Art will be open for self-guided tours, or, starting at 10:30, you may wish to take a guided tour of the Biology Department's Christy Woods preserve and Wheeler Orchid Collection (http://www.bsu.edu/web/fseec/environment/Properties/ChristyWoods/christy_woods.htm), used for teaching, research, and service to the community.

This joint Spring meeting will therefore provide an ideal environment for students who have never before attended IBASM to get actively involved. I encourage each of you to bring students to present at this exciting event. Several vendors have been invited to bring exhibits for display on Saturday during the sessions; as of this writing, it is uncertain exactly how many will be present, but I am hoping for a good representation from regional and national companies. If you have any questions regarding registration, please do not hesitate to contact me by email (see registration form). Best wishes for a Happy New Year!



Muncie Area Map



Announcements

Call for Nomination President-Elect 2008-2009

We are asking for your help to nominate candidates for the position of President-Elect for the next two-year term starting on July 1, 2008. The President-Elect will be responsible for organizing our 2009 and 2010 annual meetings. Elections will be held at the joint meeting in March 2008. Self-nominations are strongly encouraged. Candidates have to be full members of the IBASM. Please send your nominations to Dominique Galli at dgalli@iupui.edu.

Save the Date!

**IBASM
Spring Meeting
March 28-29, 2008
Ball State University,
Muncie, IN**



2008 Indiana Governor's Summer Internship Program at the Indiana Department of Environmental Management (IDEM)

How to Apply: Students may apply online at:

<http://www.in.gov/jobs/programs/internships.htm>

Deadline: Applications should be received by February 15, 2008

Qualifications: To be considered, students must currently be enrolled in an accredited college or university and have completed at least one full year of college-level education.

Salary: \$11.29 per hour

Dates: The summer program will run from May 12, 2008 to September 12, 2008.

Information on IDEM can be accessed at :

<http://www.in.gov/idem/>

2008 Annual Meeting of the IBASM

Ball State University

Tentative Meeting Agenda

Friday, March 28th

4:30 - 6:30 pm	Registration & Dinner (on your own)
6:30 - 7:30 pm	ASM Branch Lectureship Program Dr. Laura Kramer, New York Department of Health <i>Dynamics of virus-vector-vertebrate interactions</i>
7:45 - 9:00 pm	Welcome Reception
	<i>Optional</i>
8:30 - 9:30 pm	Planetarium Show
8:30 - 10:30 pm	Movie: Title TBA

Saturday, March 29th

7:30 - 8:30 am	Breakfast
8:30 - 9:30 am	ASM Branch Lectureship Program Dr. Joanne Bartkus, Minnesota Department of Health <i>Microbial CSI - Using DNA Fingerprinting to Identify the Source of Disease Outbreaks</i>
9:40 - 10:30 am	Dr. Carolyn Vann, BSU, 2007 IBASM Teaching Award Recipient: TBA
9:40 - 10:30 am	Guest Speaker (Ohio Branch): TBA
10:40 - 12:00 pm	Poster Judging (closed to public)
10:40 - 11:30 am	Student Forum: Career Choices Q&A session with representatives from academia, industry, and postdoctoral fellows
	<i>Optional</i>
10:40 - 12:00 pm	Guided Tour of Christy Woods & Wheeler Orchid Collection
10:40 - 12:30 pm	BSU Art Museum open for self-guided tours
12:00-1:30 pm	Lunch & Business Meetings
12:00 - 2:15 pm	Poster Session <i>Students will be at their posters from 1:15-2:15 pm</i>
12:15 - 2:15 pm	Vendor Exhibition
2:30 - 3:30 pm	ASM President Dr. Clifford Houston, University of Texas, Galveston TBA
3:45 - 5:45 pm	Student Oral Presentations (concurrent sessions)
6:00 - 7:30 pm	Dinner & Awards Ceremony
7:30 - 9:00 pm	Social

IBASM Annual Meeting Registration & Room/Meal Reservation Form
March 28/29, 2008
Ball State University
(to be held jointly with the Ohio Branch of ASM)

Please use this 2-page form to register for the IBASM meeting and reserve your room and meals. The meeting registration fee is \$25 for regular members and \$5 for students. Remember, participants must be IBASM members to attend the meeting. Family members are encouraged to attend; they will not have to pay registration fees. Please provide all of the requested information and **e-mail** this form to John McKillip (jlmckillip@bsu.edu) no later than February 15, 2008. Forms may also be mailed to John McKillip, Department of Biology, Ball State University, Muncie, IN 47306. **Registrations received after February 22nd will be subject to a \$7.00 late fee (regular members) or a \$4.00 fee (student members).**

Please fill out the appropriate spaces and check all boxes that apply. If you have any questions contact John McKillip at (765) 285-8820, or send an e-mail to jlmckillip@bsu.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 have the option to reserve a room at the Ball State University Pittenger Student Center Hotel through the IBASM. A very limited number of these rooms are available and will be assigned on a first come, first served basis. After receiving your registration form you will be informed immediately by email whether your room choice at the BSU Pittenger Student Center Hotel is available. Do not send a check until you know whether you need to include lodging fees with your registration fees. Options for alternative accommodations are listed below.

Room cancellations at the BSU Student Center Hotel will be accepted no later than noon on March 17, 2008 (notify John McKillip by email for cancellations).

The following room choices are available at the BSU Pittenger Student Center Hotel (<http://www.bsu.edu/studentcenter/hotel/>) and do not include tax:

- Twin (two twin beds) - \$49.00/night
- King (one king bed) - \$54.00/night
- Queen (one queen bed) - \$54.00/night
- Queen Suite (one queen bed + adjoining room with queen-sized pullout couch + 2 baths) - \$99.00/night

Name of roommate(s) if applicable:

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

Other hotels in the Muncie area close to meeting events:

Signature Inn, Muncie – 3400 North Chadam Lane, 765-284-4200
Days Inn, Muncie/Ball State – 3509 Everbrook Lane, 765-288-2311
Holiday Inn Express – 4201 W. Bethel Pike, 765-289-4678
Super 8 – 3601 W. Fox Ridge Lane, 765-286-4333;
Best Western Muncie – 3011 W. Bethel Ave., 765-282-0600
Fairfield Inn – 4011 W. Bethel Ave., 765-282-6666

Hotels on list above may be accessed/reserved online at: <http://www.hotels-rates.com/Muncie/IN/usa/#visited=true&cityID=701>

NOTE: You will need to contact these hotels yourself, make your own reservations, and pay them directly. Also, if you need to cancel your room in any of these hotels please contact them directly. For more information please consult the latest IBASM newsletter.

Registration			
Member (\$25)			\$
Student (\$5)			\$
	Friday	Saturday	
# of rooms (\$49-99/night; see page 1)			\$
# of adult meals			
Breakfast* (\$ 5.00)	-----		\$
Lunch** (\$9.50)	-----		\$
Dinner*** (\$15.00)	-----		\$
<i>Late fees (if any)</i>			\$
			\$
Total Enclosed			\$

* Breakfast Sat., 3/29 – Continental breakfast at Alumni Center, 7:30-8:30 a.m.

** Box lunches (deli sandwiches, drink, etc.) will be available at the Atrium Food Court

*** Friday dinner – off-site not provided

Sat. dinner banquet: Please select one from the following options:

- Cajun Chicken Alfredo entrée
- Beef Teriaki with vegetables & brown rice
- Vegetarian meal

A check payable to "Indiana Branch ASM" for the total costs of registration, lodging and meals must be sent by mail by Friday, **Feb. 22nd, 2008** to:

John L. McKillip
 Ball State University
 Department of Biology
 CL121
 Muncie, IN 47306

Student Poster Competition

Abstract submission form/procedure is included on page 9 of this newsletter. We will be utilizing 4x4 sq.ft. tri-fold styrofoam poster boards and each student is limited to one board. Tacks will be supplied but it wouldn't hurt to bring some extras in case we run short. You may participate in both oral (limited # of slots available) and poster sessions but you will only be judged for an award in the poster session. Awards will be presented in the following divisions: Undergraduate, MS graduate and Ph.D. graduate. Post-Doctoral Fellows are welcome to participate in either session but are not eligible for the award competition.

Students will be judged in 5 categories:

Professional Appearance: Jeans and sweat pants are unacceptable; torn, dirty, or frayed clothing is unacceptable. Business casual dress is the standard dress code. (20 points)

Scientific thought: Is there a clear hypothesis? Are the goals of the study defined? Were data correctly analyzed? Were statistical analyses performed? Did a logical conclusion result? (20 points)

Creativity: Was the topic original? Is there anything new in the approach to answering the question? Were new methods developed? (20 points)

Thoroughness: Was the study as complete as possible? Does the student understand the background material? Were subject headings (e.g. Introduction, Materials & Methods, etc.) presented? Is the student aware of the drawbacks of the study? (20 points)

Presentation (poster): Were the results/conclusions clearly presented? Was the student's verbal expression clear and concise? Was the student able to answer questions? How well did the poster convey the information? (20 points)

ABSTRACT FORM FOR THE 2008 IBASM ANNUAL MEETING

Complete this form and submit by **March 3rd** to: Dr. Jim Mitchell, Department of Biology, Ball State University, Muncie, IN 47306-0440. **ELECTRONIC SUBMISSIONS ARE PREFERRED** (e-mail abstracts to: jkimitchell@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 (see registration form).

Name and mailing address of presenting author:

Name
Address

Phone
Fax
E-mail

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

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

Oral and/or Poster presentation (check appropriate boxes)

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 competition.

Check if presenting student will also be presenting at the ASM general meeting:

Are you competing for the national travel award to the 2008 ASM General Meeting in Boston? : Yes No

ABSTRACT

Highlights from the Journals of the ASM, November 2007 (from ASM Tipsheet)

New Study Suggests Many Unknown Microbes in Soil

Metagenomic analysis of microbial biodiversity in soil samples suggest that non-bacterial species greatly outnumber bacterial species. This means the majority of microorganisms on the Earth remain undiscovered, according to researchers from the University of Colorado, University of South Florida, San Diego State University and Duke University. They report their findings this month in the journal *Applied and Environmental Microbiology*.

Soil microorganisms represent a significant portion of living matter on Earth and play a key role in ecosystem functions. Bacteria, fungi, archaea and viruses are the four microbial groups currently known to man. Bacterial presence in soil has been the most extensively studied, however with the environment at the forefront of worldwide focus, expanded research on fungal, archaeal, and viral communities is much needed.

In the study researchers used an RNA-based analysis technique to examine the richness of bacteria, fungi, archaea, and viruses in samples collected from prairie, desert, and rainforest soils. These sites were specifically targeted because they represent globally dominated ecosystem types and are broad in aridity and productivity. Results showed that unique archaeal or fungal units appeared to rival or exceed unique bacterial units in each of the soil samples.

"In this first study, to comprehensively survey rival communities using a metagenomic approach, we found that soil viruses are taxonomically diverse and distinct from the communities of viruses found in other environments that have been surveyed using a similar approach," say the researchers. "Within each of the four microbial groups, we observed minimal taxonomic overlap between sites, suggesting that soil archaea, bacteria, fungi, and viruses are globally as well as locally diverse."

(N. Fierer, M. Breitbart, J. Nulton, P. Salamon, C. Lozupone, R. Jones, M. Robeson, R.A. Edwards, B. Felts, S. Rayhawk, R. Knight, F. Rohwer, R.B. Jackson. 2007. Metagenomic and small-subunit rRNA analyses reveal the genetic diversity of bacteria, archaea, fungi, and viruses in soil. *Applied and Environmental Microbiology*, 73. 21: 7059-7066.)

New Vaccine That Protects Monkeys Against Avian Flu Ready for Human Trials

Researchers from the National Institutes of Health and University of Maryland report that a new vaccine that protects monkeys against the avian influenza virus is now a candidate for clinical trial in humans. They report their findings in the November 2007 issue of the *Journal of Virology*.

The rate of transmission of the highly pathogenic avian influenza virus (HPAIV) from birds to humans is rapidly increasing. The H5N1 strain is responsible for 278 known human infections resulting in 168 deaths. The possibility of a pandemic outbreak emphasizes the need for an effective vaccine, however development has been impeded by factors such as poor immunogenicity, biosafety concerns, and risk of genetic exchange with circulating influenza virus strains.

In the study researchers developed a live vaccine incorporating the avian Newcastle disease virus (NDV), which expresses a common gene found in the H5N1 avian influenza virus, and tested it in African monkeys. The vaccine was administered both intranasally and through the respiratory tract in two doses with a 28-day interval in between. Response after one dose showed low amounts of virus shedding indicating protection. Following two doses, high levels of neutralizing antibodies were present in all immunized monkeys. A substantial response to either dosage was noted in the respiratory tract indicating a likely reduction in transmission in the event of an outbreak.

"In this study, we have developed a vaccine candidate, NDV-HA, for immunization against H5N1 HPAIV and have tested it in a nonhuman primate model," say the researchers. "The vaccine was well tolerated and induced substantial local and systemic immune responses, demonstrating that NDV has potential as a live virus candidate vaccine against HPAIV."

(J.M. DiNapoli, L. Yang, A. Suguitan Jr., S. Elankumaran, D.W. Dorward, B.R. Murphy, S.K. Samal, P.L. Collins, A. Bukreyev. 2007. Immunization of primates with a Newcastle disease virus-vectored vaccine via the respiratory tract induces a high titer of serum neutralizing antibodies against highly pathogenic avian influenza virus. *Journal of Virology*, 81. 21: 11560-11568.)

Highlights from the Journals of the ASM, December 2007 (from ASM Tipsheet)

Novel Virus Identified in Endangered Species May Represent Evolution of Two Major Virus Families

The near extinction of the western barred bandicoot has led to the identification of a novel virus exhibiting characteristics of two ancient virus families. The researchers from Murdoch University, Perth, Western Australia, and the University of Leuven, Belgium report their findings in the December 2007 issue of the *Journal of Virology*.

The western barred bandicoot (WWB), an Australian marsupial once commonly found across western and southern Australia, is now endangered throughout parts of the country and already extinct on the mainland. While promoting conservation efforts, researchers discovered a debilitating disease affecting the species causing full body lesions.

Papillomaviruses (PVs) and polyomaviruses (PyVs) are known to infect human, mammalian, and avian species. They were previously considered subunits of the Papovaviridae family, however they are currently recognized as two separate virus families due to significantly different genome sizes and organizations. In the study researchers analyzed skin swabs taken from the lesions of infected WWBs and identified a novel virus exhibiting properties of both the Papillomaviridae and Polyomaviridae family. They have designated this new prototype the bandicoot papillomatosis carcinomatosis virus type 1 (BPCV1).

"BPCV1 may represent the first member of a novel virus family, descended from a common ancestor of the papillomaviruses and polyomaviruses recognized today," say the researchers. "The discovery of the virus could have implications for the current taxonomic classification of Papillomaviridae and Polyomaviridae and can provide further insight into the evolution of these ancient virus families."

(L. Woolford, A. Rector, M.V. Ranst, A. Ducki, M.D. Bennett, P.K. Nicholls, K.S. Warren, R.A. Swan, G.E. Wilcox, A.J. O'Hara. 2007. A novel virus detected in papillomavirus and carcinomas of the endangered western barred bandicoot (*Perameles bougainville*) exhibits genomic features of both the Papillomaviridae and Polyomaviridae. *Journal of Virology*, 81. 24: 13280-13290.)

Herpesvirus May Play Role in Central Nervous System Diseases

Scientists have discovered evidence suggesting a herpesvirus may be responsible for some cases of meningitis and encephalitis. Researchers from the New York State Department of Public Health, Albany and SUNY, Albany report their findings in the December 2007 issue of the *Journal of Clinical Microbiology*.

Human herpesvirus 6 (HHV-6) is one of the most prevalent in humans. There are two variants of HHV-6, HHV-6A and HHV-6B which is attributed to a common childhood disease characterized by a high fever and rash. Studies indicate that by age 3 the majority of children have been infected by HHV-6, after which the virus persists in the salivary glands into adulthood. The virus may remain dormant or reactivate in immunocompetent or immunocompromised individuals.

Over a span of four years, researchers collected specimens from patients hospitalized with symptoms of encephalitis and meningitis, and tested them for the presence of HHV-6. The majority of the specimens were taken from cerebrospinal fluid and some of the symptoms exhibited by the patients include fever, altered mental status, and abnormal CSF profile, as well as seizures in those ages 3 and under. Results showed that 26 specimens from 24 patients were positive for HHV-6, of which 20 were identified as the HHV-6B strain. Forty-two percent of the patients were age 3 or under, possibly indicating primary infection, while the remaining patients ranging from 4 to 81 years old were probably experiencing viral reactivation.

"The detection of HHV-6 in specimens from patients diagnosed with encephalitis or meningitis, in the absence of a positive PCR result for other agents, strongly suggests a role for HHV-6 in the pathogenesis of these central system diseases," say the researchers.

(N.P. Tavakoli, S. Nattanmai, R. Hull, H. Fusco, L. Dzigua, H. Wang, M. Dupuis. 2007. Detection and typing of human herpesvirus 6 by molecular methods in specimens from patients diagnosed with encephalitis or meningitis. *Journal of Clinical Microbiology*, 45. 12: 3972-3978.)

MICROBIOLOGY IN THE NEWS

(from www.asm.org)

Germ confusion runs rampant

USA Today

December 9, 2007

If you believe everything you hear, you'd think the world is a cesspool of germs that threaten the safety of our children. Or that our overly sanitized kids should be exposed to viruses and bacteria to strengthen their immune systems. No wonder parents are confused.

http://www.usatoday.com/news/health/2007-12-09-germ-confusion_N.htm

Cancer cells hide from immune system with invisibility cloak

Daily Mail, UK - Nov 11, 2007

Scientists have discovered how cancer cells use an "invisibility cloak" to hide from the immune system.

http://www.dailymail.co.uk/pages/live/articles/technology/technology.html?in_article_id=492968&in_page_id=1965

Med school findings challenge 'dogmas' about cancer

Student Life, A newspaper of Washington University in St. Louis

Nov 9, 2007

In a groundbreaking report recently published in the Journal Molecular and Cellular Biology, the researchers report that the enzyme MOF contributes to the development of tumors and may be susceptible to radiation treatment.

<http://media.www.studlife.com/media/storage/paper337/news/2007/11/09/News/Med-School.Findings.Challenge.dogmas.About.Cancer-3091504.shtml>

Long dormant, antibiotic pipeline flowing again with more than 120 compounds in development

American Medical News

9/30/2007

After years of concern about the dearth of new bacteria-fighting drugs, researchers are investigating a greater number of novel compounds than ever before.

<http://www.ama-assn.org/amednews/2007/10/08/h1121008.htm>

Important Dates

- February 15, 2008:** Registration form due for Annual IBASM meeting
- March 3, 2008:** Abstract form due for Annual IBASM meeting
- March 28-29, 2008:** Annual IBASM meeting at Ball State University, Muncie
- June 1-5, 2008:** 108th Annual Meeting of the ASM, Boston, MA

2007-2008 IBASM OFFICERS

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