

VIRUS 911

The following article, written by Steven H. Hinrichs, M.D., appeared in The New York Times on March 16, 2006.

Wiretapping without a warrant isn't the only surveillance controversy we have to worry about. There is an even more dangerous one. Few people, even lawmakers, realize that federal law does not mandate that any doctor, hospital, laboratory, city or state report human diseases directly to the Centers for Disease Control and Prevention (CDC), our nation's medical counterpart to the Pentagon and Department of Homeland Security wrapped into one. And that applies to diseases as potentially devastating as avian flu.

Instead the CDC relies on a voluntary surveillance system that varies across 50 states and territories. Here's how it works. Doctors and laboratories report certain infectious diseases judged to be important for public health to local health authorities or state epidemiologists. Subsequently, the states send reports to the federal government, some electronically, some through the mail. The list of diseases required to be reported is typically written into state law. Over time, the typical list has grown from tuberculosis and syphilis to more than 50 diseases, including those caused by salmonella and certain antibiotic-resistant strains of bacteria. But different states have different lists: Nebraska has 68 diseases on its list, while Iowa has 48, even though they are separated by no more than a river.

In October 2001, following the post-9/11 discovery of human exposure to anthrax in Florida, state authorities called up the CDC, which was able to respond relatively quickly. But "relatively quickly" may not be fast enough in situations when a disease can be transmitted from human to human (as opposed to the anthrax case, in which the disease was limited to individuals who had direct contact with contaminated mail). In the case of potential avian influenza infecting humans, containment will depend on our ability to detect the disease and then rapidly introduce antiviral therapy and vaccines.

The federal government recognizes the importance of surveillance for infectious diseases that may represent a bioterrorist attack and has created programs to collect data without involving local or state government health officials. But unfortunately, it has done so without any legislative guidelines on how this data is to be collected or used.

An overwhelming case must be made to justify the collection of sensitive information about the health of private citizens. Witness the understandable controversy over the collection of data on the transmission of the virus that causes AIDS. It took a decade of trial and error before states were able to come up with regulations that maintained a level of confidentiality for those infected with the virus while allowing necessary investigations to occur and providing for appropriate treatment.

We need national legislation that will protect the rights of affected citizens and help us to speedily detect, and thus fend off, epidemics of naturally occurring diseases and attacks using biological weapons.

But the potential loss of life should terrorists find a way to distribute infectious diseases in crowded cities is reason enough to go ahead with a national reportable disease law. Senator Chuck Hagel and Representative Lee Terry, both Republicans of Nebraska, plan to introduce legislation that would establish a list of infectious diseases like avian influenza that states must report to the Department of Homeland Security and create a commission that would set guidelines for collecting and reporting such information, including rules on protecting patient privacy.

Diseases don't stop at state lines, any more than they do at national borders. That's why we need national legislation that will protect the rights of affected citizens and help us to speedily detect, and thus fend off, epidemics of naturally occurring disease and attacks using biological weapons.

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LETTER FROM THE CHAIRMAN



Samuel M. Cohen, M.D., Ph.D

The department has experienced extraordinary activity during the past four months. Most notable are the major awards received by several of our faculty, including Dr. Oluwatoyin Asojo being named the Outstanding Woman of Color Recipient in Science and Technology, Dr. Peter Iwen receiving the 2006 Outstanding Teacher Award from the UNMC Faculty Senate, Dr. Rakesh Singh receiving the Joseph P. Gilmore Award for Outstanding Investigator from the College of Medicine, Amber Donnelly receiving Teacher of the Year Award from the School of Allied Health Programs, and Phyllis Muellenberg receiving the Outstanding Service Award from the School of Allied Health Programs. Twelve of our pathologists were named to the regional list of "Best Doctors in America." In addition, several of our students received honors in various competitions locally, regionally, and nationally.

As always, there are changes that pose significant challenges and opportunities. Implementation of the LEAN program in the clinical laboratory is leading to major changes in organization, along with remodeling and repositioning of some of the laboratories. A temporary GMP facility is finally under construction and should be implemented this summer. All of the anatomic pathologists' offices will be consolidated to the south tower along with transcriptionists and associated secretaries. The overall organization of the department, in response to the five year departmental review, was changed, moving from having one vice chair to having four and eventually five. Four of our residents (Drs. John Gentry, Rachel Stevens, Brent Keenzport, and Kurt Matthews) and our senior hematopathology fellow (Dr. Vishala Neppalli) will be completing their training by the end of June, and new residents and fellows will be joining us. Graduate students are completing their theses, and new students will be starting their programs. Recruitment of several new faculty is in process.

On campus, construction is underway for a new College of Medicine education building (to be named for Dr. Michael Sorrell), and construction of a second research tower is to begin later this year. New clinic and hospital facilities are also in the planning stages. We look forward to the continued growth of the programs and facilities of the department and campus. These are stimulating and exciting times.

PROMOTIONS(*) AND NEW HIRES

Marnie Imhoff—Operations Mgr., Regional Pathology

*Andi Hudson—Customer Services Mgr., Regional Pathology

Dumrul Gulen—Medical Technologist

Kalyan Nannuru—Graduate Research Assistant

Denise Timko—Other Hourly Worker

Seema Singh—Post Doctoral Research Associate

Renae Dobesh—Other Hourly Worker

Lisa Elkins—Accounting Clerk

Jun He—Scanning Electronic Microscopist

Laurie Wieting—Medical Technologist

Derick Njawe—Other Hourly Worker

FACULTY & STAFF SERVICE

25 YEARS

Sam Cohen

15 YEARS

John Chan

Steve Hinrichs

Bob Wickert

5 YEARS

Mary Barry

Dana El-Hajjar

Marilynn Larson

Darlene Waters

Tricia Aden

GRANT FUNDING

- **Ken Bayles:** *The Molecular Control of Bacterial Autolysis*; 1/1/06—12/31/06; \$235,200; NIH
- **Steve Carson:** *Junction Adhesion Molecule*; 1/1/06—12/31/06; \$325,275; NIH
- **Paul Fey:** *Environmental Regulation of Staphylococcus Epidermidis*; 2/1/06—1/31/08; UNL/NIH
- **Catherine Gebhart:** *Viral Load and Minimal Residual Disease Testing*; 2/1/06—1/31/08; \$144,787; Streck Labs
- **Steven Hinrichs:** *National Electronic Disease Surveillance*; 1/1/06—12/31/06; \$101,000; Nebraska DHHS

DR. SINGH RECEIVES GILMORE AWARD



Rakesh Singh, PhD

Congratulations to Rakesh Singh, PhD, for being named as the recipient of the 2006 Joseph P. Gilmore Outstanding Investigator Award.

“Cancer is puzzling and it is something that can’t be defined as one disease,” said Dr. Singh, Associate Professor. “It is very complex and there is a

lot of motivation to find a cure.”

Which is exactly what Dr. Singh hopes his research in tumor metastasis and angiogenesis will lead to one day.

“Rakesh has a long, sustained record of significant research in tumor metastasis and angiogenesis, critical milestones in the development of the malignant behavior of tumors,” said Dr. Sam Cohen, Professor and Chair.

Dr. Singh’s research the past few years has identified important new proteins regulating these processes, which potentially could be targets for therapeutic intervention, Dr. Cohen said. Findings, he said, that have received national and international recognition for their importance.

Dr. Singh first began to study tumor metastases and angiogenesis while working as a post-doctoral fellow at the MD Anderson Cancer Center in Houston, Texas. It was there, he said, that he began to realize there is more to cancer than just the tumor.

The overall goal of his research is to define the mechanism(s) that regulate the process of tumor progression and metastasis.

Dr. Singh came to the United States in 1991 from India. He earned his BSc, MSc, and PhD from Banaras Hindu University in Varanasi, India.

Rakesh has a long, sustained record of significant research in tumor metastasis and angiogenesis, critical milestones in the development of the malignant behavior of tumors.



DR. ASOJO WINS 2006 WOMEN OF COLOR AWARD



Oluwatoyin Asojo, PhD

Dr. Oluwatoyin Asojo has been awarded the Women of Color Award in the area of Science and Technology from the University of Nebraska at Omaha.

For the fourth consecutive year, six women of color were honored for their contributions and leadership in the community.

The event, titled “Connections,” was held at the Holiday Inn Central and drew a crowd of around 400.

The organizations and individuals were honored in six categories: Arts and Humanities, Business/Entrepreneurship, Community Service, Education, Science and Technology, and Leadership.

Dr. Asojo came to the United States from Nigeria, where she saw first-hand the devastation of diseases such as malaria, hookworm and HIV on predominately poor populations. She has spent her career investigating treatments and cures for these diseases, as well as mentoring economically disadvantaged youth and persons of color in the field of science.

Dr. Asojo joined UNMC in 2003 as a research assistant professor at the Eppley Research Institute. In 2005, she was appointed assistant professor in the Department of Pathology/Microbiology, where she continues her research on immunity and crystallography, as well as collaborative work with the human hookworm vaccine initiative, directed by Peter Hotez, MD, PhD, at George Washington University.



Women of Color Award Winners (left to right): Debra Paris, Education Award; Georgiana Lee, Youth Leadership; Dr. Oluwatoyin Asojo, Science and Technology; Chancellor Nancy Belck; Athena Ramos, Community Service; Geraldine Tyrance, Arts and Humanities; Terrie Jackson Miller, Business/Entrepreneurship.

GRADUATE PROGRAM

Eric Benner (Advisor: Dr. Gendelman) has received the Thomas Jefferson Ingenuity Award. This award recognizes a PhD graduate student who has exhibited unmatched creativity in his/her doctoral research efforts. Congratulations, Eric!

Congratulations to **Brian Boer** (Advisor: Dr. Angie Rizzino) and **Anguraj Sadanandam** (Advisor: Dr. Rakesh Singh), recipients of the 2006 Harris Award. These awards, made possible by the generosity of the Harris family, recognize graduate students for excellence in cancer research.

PRESENTATIONS

March 29, 2006

Beth Schweitzer, MS — Master of Science
"Seroprevalence of WNV-Specific Antibodies After An Epidemic"



Schweitzer and Advisor, Peter Iwen, PhD

April 4, 2006

Michael P. Dempsey, PhD Doctoral
"Geographic Differentiation of *Francisella tularensis* Using Molecular Methods"



Dempsey and Advisor, Steven Hinrichs, MD



RESIDENCY PROGRAM

It is with great pleasure to announce that beginning with the academic year 2006-2007, the residents' individual annual Educational fund will be increased to \$1,000 per year, making it competitive at the national level. The residents use this fund to purchase books, journals, membership dues and to help supplement their attendance at educational meetings. We feel that this is a great step forward in allowing the residents more flexibility in pursuing their educational endeavors.

CHIEF RESIDENTS ANNOUNCED



Talmon

Drs. Geoff Talmon and Shane Kohl have been named as the Chief Residents for 2006-2007. Dr. Talmon will serve from April—September, 2006; Dr. Kohl will assume the responsibility October 2006—March 2007.



Kohl

NEW RESIDENTS TO BEGIN JULY 1, 2006

Three new Residents will join the Department in July.

Bari Fritz, MD — University of South Dakota School of Medicine.

Lidia Manouilova, MD, PhD — I.M. Sechenov Moscow Medical Academy

Alireza Torabi, MD, PhD — Shahid Beheshti University of Medical Sciences

RESIDENT PUBLICATIONS

SK Kohl, JD Landmark, DF Stickle: Demonstration of Absorbance Using Digital Color Image Analysis and Colored Solutions. *J Chem Ed*, 83(4):644-646, 2006.

SK Kohl, K Mathews, J Baker: Renal Hilar Mass in an 85-Year-Old Woman. *Arch Pathol Lab Med*, 130(1):117-119, 2006.

MG Madariaga, SK Kohl, R Starlin, PW Smith, WW West: Visceral Leishmaniasis in an HIV-infected Patient. *Infect Dis Clin Pract*, 14:119-122, 2006.

KB Plath, GA Talmon, DF Stickle. Immunosuppressant Drugs: Measurement by Tandem Mass Spectrometry. *Clin Lab News*, May 2006.

GA Talmon, I Persidskii, JA Gulizia: Cystic Mass in a Young Woman with Presumed Polycystic Ovarian Syndrome. *Arch Pathol Lab Med*, 130(2):225-226, 2006.

HEMOPATH FELLOWSHIP PROGRAM

PROGRAM WELCOMES NEW FELLOW

Wai Lap Choi, MD. will join the Hematopathology Fellowship program on July 1, 2006.



He received his medical degree from the University of Hong Kong and has been with the Anatomic/Clinical Pathology Department at Emory University since July, 2002.

Dr. Choi enjoys swimming and soccer. Please join us in welcoming Dr. Choi to the Department.

NEPPALLI TO JOIN IOWA PRACTICE

At the end of her fellowship in June, Vishala Neppalli, MD, will be joining the faculty at the University of Iowa Hospitals and Clinics in Iowa City, Iowa.

MIDWEST STUDENT BIOMEDICAL RESEARCH FORUM/USCAP ANNUAL MEETING

Hina Naushad, MD was nominated for the Stowell-Orbison Award for her poster presentation at the 2006 USCAP Annual meeting, and received a cash prize and award of "Excellent Presentation by a House Officer" for her poster presentation at the Midwest Student Biomedical Research Forum. Her poster was entitled "Prognostic Significance of Bcl-2 and Bcl-6 Expression in Patients with Nodular Sclerosis Hodgkin Lymphoma (NSHL)."

Vishala Neppalli, MD was nominated for the Stowell-Orbison/Autopsy Award for her poster entitled "Co-expression of CD15 and CD30 in Anaplastic Large Cell Lymphoma."

Congratulations!

There are two kinds of people, these who do the work and these who take the credit. Try to be in the first group; there is less competition there."—*Indira Gandhi*

FACULTY HIGHLIGHTS

- **Steve Hinrichs** was recently featured in an article discussing the bird flu entitled "Spreading Its Wings." The article appeared in *US News & World Report* in the March 20, 2006 issue.
- **Julia Bridge** participated in the writing and publication of the recently released AFIP Fascicle on Tumors of Bone (4th Series)(Unni KK, Inward CY, **Bridge JA**, Kindblom L-G, Wold LE. American Registry of Pathology Press, Washington D.C., 2005.)
- **Samuel Cohen** was highlighted in an article in the *Journal of the National Cancer Institute* (98(4):228-230, 2006) entitled "Researchers Exploring Faster Alternatives to 2-Year Test for Carcinogenicity."

JOHANSSON AWARD DINNER

Sonny Johansson was awarded the Amelia F. and Austin L. Vickery, Jr. Chair of Pathology for a term effective July 1, 2005 through June 30, 2010. An award ceremony was held January 28th at the DoubleTree Hotel.



TWELVE TOP LIST

Twelve of our pathologists have been named by their peers as "Best Doctors in America." The physicians included in the recently released 2006 list of "Best Doctors in America" are shown below. A total of 182 UNMC physicians were named by their peers for this honor.



Not pictured: Rodney McComb and Leslie Bruch

SPP NAMES NEW PRESIDENT

Congratulations to Dr. Deborah Perry for being elected as President of the Society for Pediatric Pathology (SPP). Dr. Perry is a Volunteer Assistant Clinical Professor in our Department and serves as the Medical Director of the Pathology Department at Children's Hospital in Omaha. She has been a member of the Society of Pediatric Pathology since 1991 and previously served as Secretary-Treasurer.

The SPP was founded in 1965 and is an educational and scientific organization of physicians and scientists who share a common interest in this vital subspecialty. Over 600 members of the Society practice in more than 60 Children's Hospitals and University Hospitals in the United States, Canada, and throughout the world.

Congratulations, Dr. Perry!

RECOGNITIONS

- **Thomas "TJ" Wilson**, a second year medical student, has been awarded a Howard Hughes Memorial Institute Medical Training Fellowship (Rakesh Singh, Mentor).
- **Keshav Rao & Jacob Bredthauer** received first place in the Health and Medicine Division of the Greater Nebraska Science and Engineering Fair (GNSEF), the INTEL Excellence in Computer Science Award, and the Infotech Best IT Project (Rakesh Singh, Mentor).
- **Eric Benner, PhD** was named recipient of the Thomas Jefferson Award (Rakesh Singh, Mentor).
- **Anguraj Sadanandam** has been named as one of the 2006 Harris Award winners. The award recognizes students for excellence in cancer research.
- **Melissa Yeska (Tramp), John Leland Clements, and Jason Kenneth Hesser** were named recipients of The Jerald R. Schenken, MD Outstanding Achievement in Pathology and Microbiology Award. This award is given "for outstanding professionalism and scholastic excellence in pathology and microbiology." Candidates are selected for interviews based on their overall class standing at the end of their M2 year, pathology and microbiology scores during their M2 year, Step 1 and Step 2 board scores, and nomination to AOA (Alpha Omega Alpha). During the interview process, candidates are evaluated on academic achievement, career goals, outside activities including service and hobbies, motivation, and poise. The winners receive a plaque and monetary award.
- Congratulations to second-year medical student **Sonja Reynolds** on receiving the American Society for Clinical Pathology Award for Academic Excellence and Achievement. ASCP annually honors one second-year student from each medical school in the United States and Canada who best fulfills the ASCP award criteria of general academic excellence and promise. We wish Sonja continued success in medical school and hope to see her pursue pathology as a career choice in a few years.

DEPARTMENT CHANGES, ADOPTS NEW STRUCTURE

DEPARTMENTAL VICE-CHAIRS HAVE BEEN NAMED, EFFECTIVE IMMEDIATELY:

- Jim Wisecarver, MD, PhD — Vice Chair for Clinical Affairs
- Sam Pirruccello, MD — Vice Chair for Outreach Programs
- Kerry Bernal, MD — Vice Chair for Education
- Steven Hinrichs, MD — Vice Chair for Research and Development
- Ken Bayles, PhD — Vice Chair for Research (effective 7/1/2007)

DEPARTMENTAL COMMITTEE MEMBERS

- **Administrative Team**

Sam Cohen, Chair
 Kerry Bernal
 Steve Hinrichs
 Rod Markin
 Sam Pirruccello
 Jim Wisecarver
 Ken Bayles
 Administrative Director (TBA)

- **Resident Education Committee**

Mavis Fletcher, Chair
 Pat Aoun
 Kerry Bernal
 John Baker
 John Gentry
 Chris Hans
 Jim Landmark
 Doug Stickle
 Bill West
 Jim Wisecarver

- **Promotion and Tenure Committee**

Steve Carson, Chair (2004-2006)
 Julia Bridge (2004-2006)
 John Chan (2005-2007)
 Jim Talmadge (2005-2007)
 Sam Pirruccello (2006-2008)
 Phyllis Warkentin (2006-2008)

- **Graduate Committee**

Rakesh Singh, Chair
 Steve Carson
 John Chan
 Nora Chapman
 Paul Fey
 Tom Jerrells
 Don Johnson

DEPARTMENTAL WORKING GROUPS

- **Specimen Labeling**

Rita Van Fleet
 Sam Cohen
 Jim Wisecarver
 David Muirhead
 Travis Rhinehart

- **Surgical Coverage**

Mavis Fletcher
 Bill West
 John Gentry

- **Procedure Manual**

Jim Wisecarver
 Beth LaFave
 Scott Smith
 Konnie Zeitner
 David Muirhead

- **Standardization of Specimen Protocols**

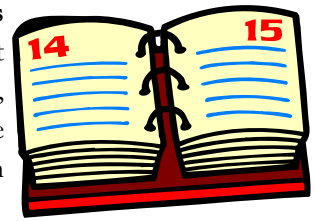
Jim Wisecarver
 Surgical Pathologists

FACULTY PUBLICATIONS

- Yang SJ, Dunman PM, Projan SJ, Bayles KW: Characterization of the *Staphylococcus aureus* CidR regulon: elucidation of a novel role for acetoin metabolism in cell death and lysis. *Mol Microbiol* 60(2):458-68, 2006.
- Patton TG, Yang SJ, Bayles KW: The role of proton motive force in expression of the *Staphylococcus aureus* cid and lrg operons. *Mol Microbiol* 59(5):1395-404, 2006.
- Tenover F, McDougal LK, Goering RV, Killgore G, Projan SJ, Patel JB, Dunman PM: Characterization of a strain of community-associated methicillin-resistant *Staphylococcus aureus* widely disseminated in the United States. *J Clin Microbiol* 44:108-118, 2006.
- Luong TT, Dunman PM, Murphy E, Projan SJ, Lee CY: Transcription profiling of *mgrA* regulon in *Staphylococcus aureus*. *J Bact* 188(5):1899-910, 2006.
- McAleese F, Wu SW, Sieradzki K, Dunman P, Murphy E, Projan S, Tomasz A: Overexpression of genes of the cell wall stimulon in clinical isolates of *Staphylococcus aureus* exhibiting vancomycin-intermediate-*S. aureus*-type resistance to vancomycin. *J Bact* 188(3):1120-33, 2006.
- Roberts C, Anderson KL, Murphy E, Projan SJ, Mounts W, Hurlbert B, Smeltzer M, Dunman PM: Characterizing the effect of the *Staphylococcus aureus* virulence factor regulator, SarA, on log-phase mRNA half-lives. *J Bact* 188(7):2593-603, 2006.
- Potula R, Haorah J, Knipe B, Leibhart J, Chrastil J, Heilman D, Dou H, Reddy R, Ghorpade R, Persidsky Y: Alcohol abuse enhances neuroinflammation and impairs immune responses in an animal model of HIV-1 encephalitis (HIVE). *Amer J Pathol* 168:1335-1344, 2006.
- Persidsky Y, Heilman D, Haorah J, Persidsky R, Weber G, Shimokawa H, Kaibuchi K, Ikezu T: Rho-mediated Regulation of Tight Junctions During Monocyte Migration Across Blood-Brain Barrier in HIV-1 Encephalitis (HIVE). *Blood*. In press.
- Kanmogne G, Schall K, Leibhart J, Knipe B, Deupree J, Gendelman HE, Persidsky Y: HIV-1 gp120 compromises blood-brain barrier (BBB) integrity and enhance monocyte migration across BBB: Implication for viral neuropathogenesis. *J Cerebral Flow Metab*. In press.

UPCOMING EVENTS . . .

- **May 24, 2006**—Resident Farewell Dinner
- **Sign Language Classes**
— Lisa Elkins will host four sessions on June 5, 12, 19, and 26 in the McWhorter Room from 12:00-12:30.
- **June 23, 2006**—Vickery Professorship recognition dinner for Dr. John Chan, Embassy Suites
- **July 22, 2006** — Department Summer Picnic at the Henry Doorly Zoo. Watch your email for details and announcements regarding the event.
- **October 20, 2006** — McFadden Lecture presentation by Professor Alexander Tomasz, The Rockefeller University (Dinner to be held on October 19, 2006)



ASCP TELECONFERENCES . . .

- **May 5**—*Liquid-Based Cytology for Non-Gynecologic Specimens*
- **May 9**—*Applications in Prenatal and Pediatric Fluorescence In Situ Hybridization (FISH) testing*
- **May 11**—*Practical Application of Pharmacokinetics & Pharmacodynamics to Antimicrobial Therapy of Bacterial Infections*
- **May 18**—*Problem-Based Learning of Thyroid Cytology*
- **June 6**—*Motivating Employees and Making Change Less Threatening in the Workplace*
- **June 15**—*Pesky Paps with Endometrial Cells*
- **June 22**—*Clinical & Lab Diagnosis of Heparin-Induced Thrombocytopenia*
- **June 23**—*Parasitology for the Histotech: What Are Those Little Critters Doing in My Tissue?*
- **June 28**—*Practical Medical Laboratory Quality Control: What you Always Wanted to Know*

NEWSLETTER TEAM

Kim Christian

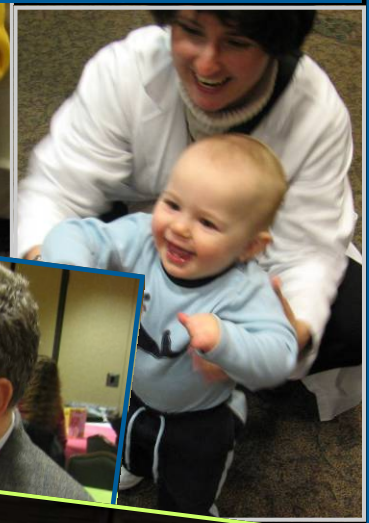
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Baby Party
2006

