The National Cancer Institute

What is it? Where is it?

Story on page 20.





Outstanding Mentors

What Makes an Outstanding Mentor?

by Maritta Perry Grau

"The day you accept a student or postdoc, you become a mentor," said Dr. Andrew Byrd, chief of the Structural Biophysics Laboratory, Center for Cancer Research (CCR), at NCI-Frederick.

Dr. Byrd and two other CCR colleagues were among 11 scientists that NCI recently recognized for their excellent mentoring skills. Dr. William Farrar, head of the Cancer Stem Cell Section, Laboratory of Cancer Prevention, received an Outstanding Mentor Award. Dr. Byrd and Dr. Alexander Wlodawer, chief, Macromolecular Crystallography Laboratory, received Mentor of Merit awards.

Created in 2001, the Mentoring Awards recognize NCI investigators



Second from right, Dr. William Farrar, Head, Cancer Stem Cell Section, Laboratory of Cancer Prevention, CCR, with mentees.

for their commitment to fostering the independent careers of their fellows, students, and trainees. According to Dr. John Niederhuber, NCI director, "Each of this year's Mentor honorees

 $continued\ on\ page\ 2$

Employee Assistance Program

Employee Assistance Program Now Offers Legal and Financial Consultation and 24/7 Coverage

by Nancy Parrish

The new Employee Assistance Program, introduced in September, offers all NCI-Frederick government and contractor employees a new network of counselors as well as legal and financial consultation.

Administered by Business Health Services (BHS), a nationally recognized company with over 20 years' experience in providing employee assistance plans, the new program offers a network of more than 7,000 licensed counselors to assist employees and dependents with issues that may affect their ability to work to full potential. In addition to counseling on personal and work-related issues, the program now offers assistance on issues related to personal finance and legal matters.

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Outstanding Mentors

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exemplifies the excellent leadership and staff that make up NCI, and I congratulate them for this recognition and for the key roles they play in creating the well-trained, highly motivated scientists of our future."

PI Expected to Mentor

All principal investigators are expected to mentor, although there is no formal training. Dr. Byrd explained,



Dr. Andrew Byrd, Chief, Structural Biophysics, CCR

"How well you do is directly related to how well you establish mutual respect and use your experience to foster the relationship, to encourage the person, and to take pride in their accomplishment rather than dwelling only on how the work benefits you."

While an intern may be mentored for only one summer, a postdoctoral fellow might work with his mentor five or more years. Dr. Farrar commented, "Many have gone on to be departmental chairs; these are my greatest career accomplishments."

Mentoring: the Activity of Science

The mentor suggests research topics, reviews results, helps in writing papers and posters, encourages the trainee to attend conferences, advises about job prospects, writes letters of

recommendation, and nominates the trainee for awards or other recognition.

Dr. Farrar explained, "Generally, I establish research goals, provide the means, and design experiments. I help with writing. In turn, I expect responsibility and accountability. I ask [post-docs/students] what they wish to achieve and in what employment sector they wish to have a career. I think it is important that they work on something that makes them highly eligible for the next step in their careers. My goal is to minimize their weaknesses and expand their strengths to make them highly competitive at their next career stop."

Dr. Byrd observed, "Mentoring is not a scheduled activity, it is the activity of science... Every interaction with a group member is mentoring. A natural outgrowth of this interaction is the discussion and development of their career plans, [encouraging] the person to become involved with the scientific community and to be aware of the [excitement in learning about] that field. The reward for this investment in time with each person is watching them mature scientifically."

Mentors Learned from Their Own Mentors

These mentors themselves were once trainees. Dr. Farrar said that one of his earliest mentors had "great integrity and made science a fun adventure."

Dr. Wlodawer noted that he had learned much from his graduate advisor, Dr. David Eisenberg, Associate Director of the Institute for Genomics and Proteomics at UCLA, one of the best known structural biologists in the United States; and from another mentor, Dr. David Davies, Chief, Section on Molecular Structure, Laboratory of Molecular Biology, the National Institute of Diabetes and Digestive and Kidney Diseases [NIDDK], "in whose laboratory I started my own fully

independent work and who taught me a lot about how to mentor others."

Dr. Byrd said that both high school and university teachers encouraged his interest in science. "Professors Don Kubler and William Harris [Furman University] instilled in me a respect for research and an excitement in truly enjoying research and science.... In graduate school, professors Paul Ellis, Jerry Odom, and Bruce Dunlap [University of South Carolina] were so enthusiastic and involved... that it was impossible not to be enthusiastic and motivated to achieve. They also enabled me to meet... future Nobel Prize winners Richard Ernst and Kurt



Dr. Alexander Wlodawer, Chief, Macromolecular Crystallography Laboratory, CCR

Wüthrich, as well as to interact with other scientists who have helped me since coming to the NIH, e.g., Drs. Ira Levin and Ted Becker [NIDDK, NIH]."

Dr. Farrar, Dr. Byrd, and Dr. Wlodawer all strongly advocate mentoring as an important part of the principal investigator's work ethic. "It is my duty to help them in establishing themselves as fully independent, tenured investigators," Dr. Wlodawer commented. Dr. Byrd concluded, "I strongly feel that the success we have as scientists is influenced by the people we work with as well as the physical opportunities that we have." *

Employee Assistance Program

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Services are available by calling 1-800-765-3277, 24 hours a day, 7 days a week. The call will be answered by a Masters'-level clinician, or care coordinator, who can assess needs, monitor progress of the case, and ensure that appropriate help is received. The care coordinator then handles all future calls.

Legal consultations cover any legal issue you or your dependents may be facing. Examples include estate planning, domestic/family matters, motor vehicle violations, real estate concerns, landlord/tenant disputes, IRS and business matters, even criminal charges. You and your dependents may speak with a qualified legal professional by phone or in person, for up to 30 minutes at no charge, per problem episode, per year. If additional legal consultation is needed, it may be continued at a discounted rate.

Financial consultations are available on such issues as budgeting, college funding, retirement funding, credit counseling, debt management/ consolidation, estate planning, and tax preparation. You and your dependents may speak with a BHS-qualified financial specialist for up to 60 minutes at no charge, per problem episode, per year. If further advice is necessary, a referral may be made to a local resource.

Telephone counseling is available through TTY and in 130 languages through a translation service.

Counseling is free and confidential. Counseling services are available at no charge to all employees and their dependents. Callers will be treated with the same confidentiality as they would find at their doctor's office: no information will be released without written consent.

Other Services Available

The new program provides access to the BHS Web site, with its on-line resource library containing thousands of articles related to health and wellbeing, legal, financial, small business and personal growth issues. The Web site also includes Solution Centers, which are designed to lead you or your dependents through problems related to specific life issues, such as adoption, buying a home or car, elder care, creating a will, and many more.

On-site Counselor Will Remain

The on-site counselor, Selden Cooper, will continue to be available for counseling sessions on Tuesdays, Wednesdays, and Fridays. You may request an appointment with him when you call the BHS toll-free number, 1-800-765-3277.

For More Information

For more information, call Occupational Health Services at 301-846-1096 or the Business Health Solutions toll-free number, 1-800-765-3277. Or, you may visit the NCI-Frederick Web site (http://web.ncifcrf.gov/news/NCIF%20Premier%20New sletter2.pdf), or log on to the Business Health Solutions Web site, www. bhsonline.com, and enter NCIF as the user name.

New EAP Services at a Glance

- · Free and confidential
- Available 24 hours a day,7 days a week, 365 days a year
- Offers counseling for personal and work-related issues
- Includes legal and financial consultation
- TTY accessible; 130 languages spoken
- Available to all NCI-Frederick government and contractor employees, legal spouses, and dependent children

Call 1-800-765-3277 Log on to www.bhsonline.com [User name: NCIF] ◆



Encouraging Young Scientists

Education Summit: Greater Science Training Needed

By Maritta Perry Grau

The Department of Defense (DOD) employs about 50% and in some areas, up to 90%, of the scientists and engineers working in the United States, according to Keith Thompson, Office of the Secretary of Defense, DoD. Mr. Thompson, speaking at an education summit conference in November sponsored by the National Interagency Confederation for Biological Research, noted that as these workers are ageing, fewer and fewer are replaced each year, with the result that many technical laboratories have fewer students each year with clearance security for critical placements such as in BSL3 laboratories.

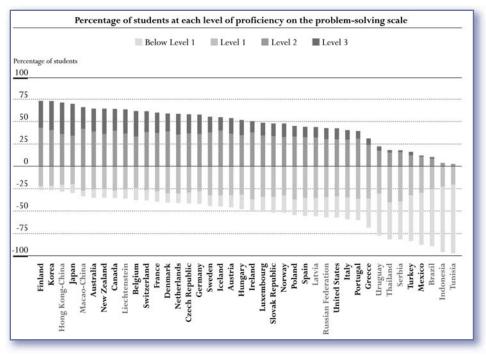
Nearly all the speakers focused on the need for more science and



math education in both public schools and universities, as well as internships in business and science-related organizations. Major General Eric Shoomaker, M.D., Ph.D., Commanding General of the U.S. Army Medical Research and Materiel Command and Fort Detrick, perhaps said it best when he set the tone of the conference in his welcoming remarks,

quoting Nelson Mandela: "Education is the most powerful weapon we can use to change the world."

org/pisa), one section of which tested problem-solving skills among students from 40 countries. Dr. Fuchs pointed



Programme for International Student Assessment 2003 (Web site http://www.oecd. org/pisa), one section of which tested problem-solving skills among students from 40 countries, ranked the United States 29th.

Dr. Bruce Fuchs, Director, Office of Science and Education at NIH, stated that U.S. education is "in a Sputnik kind of era," referring to years when the then-Soviet Union sent first, a

Sputnik satellite, and then, cosmonaut Yuri Gagarin to orbit the earth. This "one-upsmanship" led to a vigorous emphasis on math and science in U.S. public education, resulting in the NASA space program and America's famed walk on the moon July 21, 1969.

According to Dr. Fuchs, the future U.S. workforce today's teenagers—are "sadly lacking in problemsolving skills." To

illustrate, he showed statistics from the Programme for International Student Assessment 2003 (http://www.oecd.

out the U.S. was 29th, ranked below most of the countries that are its economic partners and competitors, such as Japan (#4), Canada (#8), France (#12), Germany (#16), and the

Russian Federation (#28). Great Britain was not listed.

As part of encouraging students to seek careers in science fields, speakers also addressed the need for internships and mentors. Barbara Birnman, Outreach and Special Programs Coordinator, NCI-Frederick, discussed the many facets of the Werner H. Kirsten Student Internship Program

(SIP), which draws students from the Frederick and Washington County public school systems, St. John's

Encouraging Young Scientists

Literary Institute at Prospect Hall in Frederick, and the Jefferson County Public School System, West Virginia. Since 1990, 431 students have successfully completed SIP; this year's 62 students comprise the largest class yet. In addition, with the Employee Outreach Program, during the past 8 years, more than 350 NCI-Frederick employees have volunteered over 8,000 hours to teach science lessons to more than 13,000 elementary-aged students.

Dr. Donna Vogel, then of the Ellison Medical Foundation, Bethesda, focused on the characteristics of mentoring [see our lead article on mentoring awards, page 1]: A mentor must provide open communication;



help the mentee develop presentation skills needed in writing, creating posters, teaching, making grant applications, and competing for awards; and help the mentee develop visibility through involvement in site visit preparation. "There's no substitute for getting known," she said. Such visibility, she said, "opens the doors to collaborations and job opportunities." The mentor should encourage the mentee to search out career opportunities by developing his/her résumé and participating in interviews. A mentor has to learn to let go, not to make the trainee into a clone.

Finally, she said, "If we do it right, the trainee is not a threat but a compliment to the mentor's career...When our students look good, we look good."

Members of the National Interagency Confederation for Biological Research include the National Cancer Institute, the National Institutes of Health, the Department of Homeland Security, the Department of Agriculture, the Centers for Disease Control and Prevention, and the U.S. Army Medical Research and Materiel Command.





SIP Broadens Its Horizons

For several years, the Werner H. Kirsten Student Intern Program (SIP) has reached beyond the boundaries of Frederick County into neighboring Washington County. Now the program is crossing state lines, too. In response to a request from interested parents, Jefferson County, West Virginia, will participate in the program beginning in 2007. Jefferson County High School has more than 2,000 students, who will join Frederick County, Washington County, and St. John's at Prospect Hall students in competing for internships. In addition to scientific positions,

internships in other fields in support of science and research will also be available for the 2007–2008 school year. Applications were sent to the school systems in early November.

If you know any high school juniors who are interested in applying for the program, encourage them to contact their school transition coordinator for applications. Additional information on our internships and a listing of school transition coordinators may be found at http://web.ncifcrf.gov/careers/student_programs/internships/SIP.asp.

Science Today

There Is More to Searching than PubMed!

By Robin Meckley, Instructional Resources Librarian Scientific Library

When you plan to buy a new car, you visit various car dealerships, either in person or online, gathering information to find just the right car. Even after you choose a specific model, you may still further refine your search, looking for color and all the extras.

You should do the same thing when searching for information—whether on a specific author, about a specific disease, or for an article you are writing. Search various bibliographic databases. At the National Cancer Institute at Frederick (NCI-Frederick), most of us search PubMed, the free bibliographic database from the National Library of Medicine (NLM) and the National Center for Biotechnology Information (NCBI) that covers biomedical literature, including clinical medicine, life sciences, nursing, and dentistry. But, as good as PubMed is, it does not cover meeting proceedings, patents, dissertations, books, or reports; or all scientific journals. There is more to searching than PubMed!

In addition to *PubMed*, you can access several other databases at the Scientific Library's Web site, http://www-library.ncifcrf.gov. Although you do not need a password, you must access these databases through an NCI-Frederick computer. To access the databases from home or when you are traveling, use the library's offsite access method, which requires a library barcode. More information about off-site access is available from the library's Web site.

Web of Science

The multidisciplinary Web of Science combines the Science Citation Index and Social Sciences Citation Index and provides access to journal articles and meetings proceedings in scientific subjects, including biology, chemistry, mathematics, medicine, and veterinary science, as well as social scientific subjects such as history, psychology, public health, and sociology. Web of Science indexes more than 7,600 journals and meetings proceedings from 1955 to the present. It offers cited reference searching, allowing the searcher to learn who has cited a particular article since its publication. The newest version can analyze a group of records, letting the searcher generate a ranked list of authors who publish on a particular subject, with the most prolific authors at the top of the list.

EMBASE

EMBASE, the electronic version of the print European index Excerpta Medica, is a biomedical database with very strong pharmacological coverage, providing access to journal articles and meeting proceedings, including European journals that may not be covered in other databases. EMBASE indexes more than 4,500 international journals from 1966 to the present. Searchers who access EMBASE can, at the same time, search the database MEDLINE, one source of PubMed.

SCOPUS

The large multidisciplinary database, *SCOPUS* (Elsevier Science), provides access to scientific, medical, technical, and social scientific subjects. It simultaneously searches *EMBASE*, patents, and *SCIRUS*, a unique scientific Web browser. *SCOPUS* indexes more than 14,000 international journals, meeting proceedings, books, book chapters, patents, and Web sites from 1960 to the present, organizing

the results into three tabbed sections: *SCOPUS*, Web, and Patents. *SCOPUS* also provides some cited reference searching and ranks various fields in terms of numbers of references within a search.

NIH OVID Databases

The multidisciplinary NIH OVID databases offer access to several databases, indexing journals, meeting proceedings, patents, and books: AGRICOLA (National Agricultural Library), Biological Abstracts (life sciences), CINAHL (nursing and allied health), Health & Psychosocial Instruments (information on measurement instruments that may help with papers, dissertations, and grant proposals), and PsychINFO (psychology). The subject and year coverage of the NIH OVID databases varies with each database. The system allows simultaneous searching of multiple databases, and easy transfer of search strategies from one database to another.

Chemical Abstracts on CD

Chemical Abstracts on CD (CA on CD), an American Chemical Society database, is available on CD-ROM only through the Library's server. Instructions on connecting to the server are available from our Web site. CA on CD indexes more than 875,000 items annually, covering chemical journals, patents, dissertations, and technical reports from 1992 to the present. You can search unique fields such as patent numbers, formulas, and compound names.

Beilstein

Beilstein is another chemical database available from only one computer in the Scientific Library. There is no access via the Web. Beilstein is a very large German database that indexes thousands of chemicals from 1771 to the present,

Science Today

making it the only database that goes back centuries! It provides complete information on chemical properties and permits substructure searching.

NCI-Frederick-in-Print

NCI-FREDERICK-in-Print is a unique database created and maintained by the staff of the Scientific Library. To be included in the database, at least one author of the publication must work at NCI-Frederick, or did at the date of publication. NCI-FREDERICK-

in-Print indexes journals, meetings proceedings, books, and book chapters from 1997 to the present. While the database currently runs on a Reference Manager Web platform, staff is updating the software to a more user-friendly interface.

Now that you have learned about other databases, try your hand at searching. We encourage you to search as many databases as you can. You will find unique, helpful information. Many of these databases allow direct exporting to EndNote or Reference

Manager, software that can eliminate duplicates. However, if you don't have the time or feel you don't have enough knowledge to search, let us help. The Scientific Library staff can search for you and give you the results in whatever format you require. Just complete a Computer Search Request Form at http://www-library.ncifcrf.gov.ezlib.ncifcrf.gov/searchform.aspx.

Remember: There is more to searching than *PubMed*! ◆

Quick Reference Guide for Scientific Library's Bibliographic Databases

Most available via Scientific Library's Home Page: www-library.ncifcrf.gov ★

Beilstein	Chemical Abstracts on CD	EMBASE	NCI-FREDERICK-in-Print
Chemical coverage	Chemical coverage	Biomedical & pharmacological	Only authors from NCI-
Patents, journals, properties,	Patents, dissertations, reports,	coverage	Frederick Meetings, journals
structures	journals	Meetings, journals	1997–present
1771–present	1992–present	1966–present	Items unique to NCI-F
Keywords, formulas,	875,000 items yearly	4500+ journals	Keywords
compounds	Keywords, formulas,	EMTREE & keywords	No related documents
Allows substructure searching	compounds	"Related Articles"	No document delivery
No related documents	No related documents	No document delivery	Some full-text links
No document delivery	No document delivery	Full-text links	No Alerts
No full-text links	No full-text links	"E-Mail Alert"	No cited reference searching
No Alerts	No Alerts	No cited reference searching	All authors/all addresses
No cited reference search	No cited reference search	Most authors/only 1st author's	
All authors/all addresses	All authors/all addresses	address	

NIH OVID	PubMed	SCOPUS	Web of Science
Multidisciplinary coverage	Biomedical coverage	Multidisciplinary coverage	Multidisciplinary coverage
Patents, meetings, books,	Journals	Patents, web references,	Meetings, journals
journals	1950–present	books	1955–present
Years depend on database	5000+ journals	1960–present	7600+ journals
Journals depend on database	MeSH & keywords	14,000+ journals	Keywords
Keywords & controlled	"Related articles"	Keywords	"Related records"
words	Loansome Doc	"Related documents"	"Order Documents"
"Find Similar"	Full-text links	No document delivery	Full-text links
No document delivery	My NCBI	Full-text links	PORPOISE
Full-text links	No cited reference searching	"Save as Alert"	Cited reference searching
"Save Search/Alert"	Most authors/only 1st	Citation Tracker	All authors/all addresses
No cited reference searching	author's address	All authors/all addresses	
All authors/only 1st author's			
address			

Platinum Highlight

Chandravanu Dash, Ph.D. Postdoctoral Fellow HIV Drug Resistance Program



Dr. Chandravanu Dash's interest in HIV research began during his graduate studies at India's National Chemical Laboratory (NCL). After receiving his Ph.D. in biochemistry from the NCL in 2002, Dr. Dash joined the laboratory of Dr. Stuart Le Grice in the Resistance Mechanisms Laboratory, HIV Drug Resistance Program, NCI-Frederick, where he is currently a postdoctoral fellow.

During the HIV-1 life cycle, the multifunctional reverse transcriptase (RT) converts the single-stranded viral RNA genome to double-stranded DNA, which integrates into the host genome and allows production of the components needed to generate infectious virions. According to Dr. Dash, Dr. Le Grice's lab studies how RT from HIV and related lentiviruses, including those of simian, equine, and feline origin, process the conformationally distinct nucleic acids they encounter during viral replication. Ultimately, he said, this research is significant in developing antiviral therapies because "HIV-1 RT remains a prime target in the development of drugs to inhibit virus replication and stem the devastating consequences of AIDS."

Previous studies have investigated the geometry of duplex nucleic acids positioned between the catalytic centers of HIV-1 RT, yet how the single-stranded template traverses the fingers sub-domain prior to accessing the DNA polymerase catalytic center was not well understood. Using nucleoside analog

interference to examine its effect on HIV-1 RT's ability to function as a DNA polymerase, Dr. Dash and his colleagues have demonstrated that "altering the topology of the template two nucleotides ahead of the catalytic center [of RT] interrupts polymerization by stalling the replication complex." In addition, the specific physical interaction between HIV-1 RT amino acid Phe-61 and the nucleic acids ahead of the catalytic center of the enzyme plays a key role during polymerization. Dr. Dash noted, "Our unique experimental strategy allows us to investigate other amino acids of HIV-1 RT that are proposed to interact with the template during reverse transcription."

Dr. Dash added, "It is essential to obtain detailed mechanistic information about HIV-RT for the continued development of effective antiviral drugs and for targeting drugresistant viruses. This information may also help to eventually utilize the secondary structure of nucleic acids as an alternative approach to drug target development."

Chandravanu Dash, Timothy S. Fisher, Vinayaka R. Prasad, Stuart F. J. Le Grice

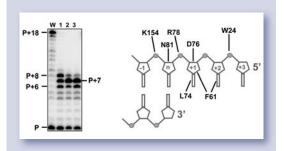
Examining Interactions of HIV-1 Reverse Transcriptase with Single-stranded Template Nucleotides by Nucleoside Analog Interference

J Biol Chem 281(38):27873-27881, 2006

Crystallographic studies have implicated several residues of the p66 fingers subdomain of human immunodeficiency virus type-1 reverse transcriptase (HIV-1 RT) in contacting the single-stranded template overhang immediately ahead of the polymerase catalytic center. This interaction is presumably important for efficient and accurate incorporation of the incoming dNTP. To investigate this, we introduced nucleoside analogs into the DNA template ahead of the catalytic center and investigated whether they

affect the polymerase function of HIV-1 RT. Analogs included abasic tetrahydrofuran linkages, neutralizing methylphosphonate linkages and conformationally-locked nucleosides. In addition, several fingers subdomain mutants of Phe61 residue were included, based on previous data indicating that altering this residue affects DNA synthesis. We demonstrate here that altering the topology of the template strand two nucleotides ahead of

the catalytic center can interrupt DNA synthesis. Mutating Phe61 to either Ala or Leu accentuates this defect, while replacement with Trp allows the mutant enzyme to bypass the template analogs with relative ease.



This figure presents data from, but is not included in, the featured publication. To access the complete article, please visit http://www.jbc.org/cgi/content/full/281/38/27873. ◆

Platinum Publications

The following 19 articles have been selected from publications in nine of the most prestigious science journals.

Cell, Tumor, and Stem Cell Biology

Mani A, Oh AS, Bowden ET, Lahusen T, Lorick KL, Weissman AM, Schlegel R, Wellstein A, Riegel AT. E6AP mediates regulated proteasomal degradation of the nuclear receptor coactivator amplified in breast cancer 1 in immortalized cells. *Cancer Res* 66(17):8680–8686, 2006.

Epidemiology and Prevention

McGlynn KA, Abnet CC, Zhang MD, Sun XD, Fan JH, O'Brien TR, Wei WQ, Ortiz-Conde BA, Dawsey SM, Weber JP, Taylor PR, Katki H, Mark SD, Qiao YL. Serum concentrations of 1,1,1-Trichloro-2,2-bis (p-chlorophenyl)ethane (DDT) and 1,1-Dichloro-2,2-bis (p-chlorophenyl)ethylene (DDE) and risk of primary liver cancer. *J Natl Cancer Inst* 98(14):1005–1010, 2006.

Enzyme Catalysis and Regulation

Dash C, Fisher TS, Prasad VR, Le Grice SFJ. Examining interactions of HIV-1 reverse transcriptase with single-stranded template nucleotides by nucleoside analog interference. *J Biol Chem* 281(38):27873–27881, 2006.

Fu Z, Larson KA, Chitta RK, Parker SA, Turk BE, Lawrence MW, Kaldis P, Galaktionov K, Cohn SM, Shabanowitz J, Hunt DF, Sturgill TW. Identification of Yin-Yang regulators and a phosphorylation consensus for male germ cell-associated Kinase (MAK)-related Kinase. *Mol Cell Biol* 2006. [Epub ahead of print] - This article is not yet available in the print journal.

Experimental Therapeutics, Molecular Targets, and Chemical Biology

Dote H, Burgan WE, Camphausen K, Tofilon PJ. Inhibition of Hsp90 compromises the DNA damage response to radiation. *Cancer Res* 66(18):9211–9220, 2006.

Genes: Structure and Regulation

Thangaraju M, Ananth S, Martin PM, Roon P, Smith SB, Sterneck E, Prasad PD, Ganapathy V. c/ebp delta null mouse as a model for the double knock-out of slc5a8 and slc5a12 in kidney. *J Biol Chem* 281(37):26769–26773, 2006.

Warming S, Rachel RA, Jenkins NA, Copeland NG. Zfp423 is required for normal cerebellar development. *Mol Cell Biol* 26(18):6913–6922, 2006.

Glycobiology and Extracellular Matrices

Helle F, Wychowski C, Vu-Dac N, Gustafson KR, Voisset C, Dubuisson J. Cyanovirin-N inhibits hepatitis C virus entry by binding to envelope protein glycans. *J Biol Chem* 281(35):25177–25183, 2006.

Sakamoto K, Ito Y, Mori T, Sugimura K. Interaction of human lactoferrin with cell adhesion molecules through RGD motif elucidated by lactoferrin-binding epitopes. *J Biol Chem* 281(34):24472–24478, 2006.

HIV

Hatziioannou T, Princiotta M, Piatak M, Yuan F, Zhang FW, Lifson JD, Bieniasz PD. Generation of simian-tropic HIV-1 by restriction factor evasion. *Science* 314(5796):95–95, 2006.

Mechanisms of Signal Transduction

Asano S, Park JE, Yu LR, Zhou M, Sakchaisri K, Park CJ, Kang YH, Thorner J, Veenstra TD, Lee KS. Direct phosphorylation and activation of a Nim1-related kinase Gin4 by Elm1 in budding yeast. *J Biol Chem* 281(37):27090–27098, 2006.

Pellegrini M, Celeste A, Difilippantonio S, Guo R, Wang WD, Feigenbaum L, Nussenzweig A. Autophosphorylation at serine 1987 is dispensable for murine Atm activation in vivo. *Nature* 443(7108):222–225, 2006.

Medical Sciences

Baba M, Hong SB, Sharma N, Warren MB, Nickerson ML, Iwamatsu A, Esposito D, Gillette WK, Hopkins RF 3rd, Hartley JL, Furihata M, Oishi S, Zhen W, Burke TR, Jr., Linehan WM, Schmidt LS, Zbar B. Folliculin encoded by the BHD gene interacts with a binding protein, FNIP1, and AMPK, and is

involved in AMPK and mTOR signaling. *Proc Natl Acad Sci USA* 103(42):15552–15557, 2006.

Molecular Basis of Cell and Developmental Biology

Lammerding J, Fong LG, Ji JY, Reue K, Stewart CL, Young SG, Lee RT. Lamins A and C but not lamin B1 regulate nuclear mechanics. *J Biol Chem* 281(35):25768–25780, 2006.

Neoplasia

Rudelius M, Pittaluga S, Nishizuka S, Pham THT, Fend F, Jaffe ES, Quintanilla-Martinez L, Raffeld M. Constitutive activation of Akt contributes to the pathogenesis and survival of mantle cell lymphoma. *Blood* 108(5):1668–1676, 2006.

Oncogene

Ishimura A, Lee HS, Bong YS, Saucier C, Mood K, Park E, Daar IO. Oncogenic Met receptor induces ectopic structures in Xenopus embryos. *Oncogene* 25(31):4286–4299, 2006. *Previously included as an "[Epub ahead of print]" reference.*Article is now available in the print journal.

Liu Y, Borchert GL, Surazynski A, Hu CA, Phang JM. Proline oxidase activates both intrinsic and extrinsic pathways for apoptosis: the role of ROS/superoxides, NFAT and MEK/ERK signaling. *Oncogene* 25(41):5640–5647, 2006. *Previously included as an "[Epub ahead of print]" reference.* Article is now available in the print journal.

Singh SR, Zhen W, Zheng Z, Wang H, Oh SW, Liu W, Zbar B, Schmidt LS, Hou SX. The Drosophila homolog of the human tumor suppressor gene BHD interacts with the JAK-STAT and Dpp signaling pathways in regulating male germline stem cell maintenance. *Oncogene* 25(44):5933–5941, 2006.

Rna: Structure, Metabolism, and Catalysis

Lindtner S, Zolotukhin AS, Uranishi H, Bear J, Kulkarni V, Smulevitch S, Samiotaki M, Panayotou G, Felber BK, Pavlakis GN. RBM15 binds to the RNA transport element RTE and provides a direct link to the NXF1 export pathway. *J Biol Chem* 2006. [Epub ahead of print] - This article is not yet available in the print journal.

Poster People Profile: Sharon Fritz

Sharon Fritz: Keeper of the (Card)keys

By Nancy Parrish

Everyone knows Sharon Fritz. She's one of the first people you meet when you come to work at NCI-Frederick because she issues the identification/cardkeys. With her easy-going manner, she takes the trauma out of having your ID picture taken, and she'll issue your ID/cardkey practically before the camera flash dies away.

What Ms. Fritz likes best about her work is "helping customers move around and get where they need to go." And she's been helping people at NCI-Frederick for nearly 30 years in the Protective Services department, first as a Senior Clerk/Typist and now as the Access Control Coordinator.

Thousands of Cardkeys

Ms. Fritz manages the cardkey system on the NCI-Frederick campus. She individually programs each person's cardkey with name and location, plus the buildings authorized for access. But it doesn't stop there. As people move locations or change jobs, Ms. Fritz has to update their cardkeys. With over 100 buildings on and off campus and nearly 3,000 employees, this is no small task; Ms. Fritz estimates she has completed more than 47,000 cardkey transactions since the system was installed nearly 25 years ago. She has also taken nearly 35,000 ID photos since 1981, when that function was taken over from the Army.

Job Grew with Facility

One of the biggest changes Ms. Fritz has seen over the years is the growth of the NCI-Frederick campus. Since she began working here, the number of employees has nearly quadrupled, and the number of buildings nearly doubled. This growth has had a direct impact on her job. "Programming cardkeys is now

a real challenge," she said, "because of building access restrictions."

Cardkey System Made a Difference

Ms. Fritz considers the installation of the cardkey system in 1984 one of the biggest improvements at NCI-Frederick. Before the advent of



Sharon Fritz
Access Control Coordinator
Protective Services

electronic access systems, buildings were open only during business hours. To access a building after hours, an employee had to sign out a key at Protective Services, and then return it when leaving. In addition, to monitor the scientific equipment, a Protective Services officer had to check each alarm panel individually and even manually check some pieces of equipment. With the cardkey system, people working after hours have direct access to their buildings. Just as important, now if there's a problem with the scientific equipment, the alarm panels flag the cardkey system in the Protective Services office.

providing continuous protection. "Needless to say, the access control system saves a lot of time for everyone," Ms. Fritz commented.

After the tragedies of September 11, 2001, all buildings were locked 24 hours a day, and all employees had to be issued cardkeys. Ms. Fritz remembers long lines of employees

waiting to have their cardkeys issued or updated. "It took three days to issue all the cards," she recalled.

Renaissance Woman

By her own admission, Ms. Fritz was born in the wrong century. In addition to making quilts and doing machine embroidery, she loves to garden and is especially interested in native plants and daylilies, perhaps because her father had a wholesale nursery business growing Maryland native plants. "I guess my father gave me my passion for gardening," she said, "and I have quite a variety of native plants."

She also has a koi pond built by her husband and stocked with over 100 koi, a hobby she finds very relaxing. "I just like to sit out by the pond and watch the world go by," she said. When she's not in the garden or sitting by the pond, she might be playing Chopin on her grand piano or painting a still life in oil, activities she wants to continue into retirement.

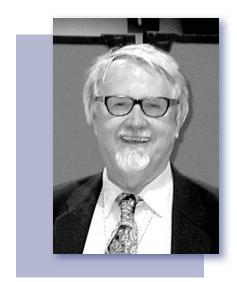
Deep Roots in Frederick County

Ms. Fritz has lived in Frederick County all her life. "I left briefly when I was 18, and I couldn't wait to get back," she laughed. Many years ago, her parents gave her the property next door, which had been in the family for five generations. Her roots run deep here, and, for her, "Frederick County is definitely home." Her mother still lives next door, and she said, "One of my favorite things to do is spend time with her. She's my best friend and my biggest fan."

Christopher J. Michejda

In Memoriam

Christopher J. Michejda, Ph.D.



Christopher J. Michejda, Ph.D., an internationally recognized research scientist and chief of the Molecular Aspects of Drug Design Section, Structural Biophysics Laboratory, Center for Cancer Research (CCR), died suddenly January 9 during NCI's annual scientific retreat.

With a Ph.D. in physical-organic chemistry, Dr. Michejda pursued a postdoctoral fellowship at Harvard University; was a professor of chemistry at the University of Nebraska in Lincoln; and spent a sabbatical in Zurich, working with Dr. Vladimir Prelog (Nobel Laureate in Chemistry, 1975). Returning to the U.S., Dr. Michejda became Program Director of Chemical Dynamics at the National Science Foundation. In 1978, he came to NCI-Frederick, first focusing on the chemical carcinogenesis of nitrosamines, and then concentrating on the fundamental problems involved in developing drugs against cancer and viral diseases, such as AIDS.

Dr. Michejda's research group at NCI became known for its ability to develop new therapies by combining data from biological studies of disease stages with structural data on potential drug targets within these stages. He pioneered the development of receptor-targeted small molecule toxins that selectively eliminate tumor cells without harming healthy tissue. This approach, now followed by many research laboratories, has made possible the design of new drugs with better selectivity and low toxicity. Most recently, together with Dr. Nadya Tarasova, he discovered a novel approach of shutting down the function of cell surface proteins with high selectivity and precision.

The Micheida group's pioneering work with bisimidazoacridones resulted in a new class of compounds potently cytotoxic to tumor cells, especially leukemias, liver, and pancreatic cancers. His collaborative work with Dr. Susan Keay, University of Maryland, resulted in discovery of an anti-proliferative factor (APF) in the bladder epithelium of patients who suffer from interstitial cystitis. By identifying the elements necessary for APF to inhibit normal epithelial growth, the Micheida group paved the way for APF to be developed as a potent inhibitor of bladder and renal cancer. Another collaboration with Dr. Brian Carr, University of Pittsburgh, led to the discovery of a new class of highly selective phosphatase inhibitors that are potently active against hepatocellular carcinoma in animal models.

Dr. Michejda published more than 175 articles in prominent scientific journals and held 15 patents for new therapeutic compounds or concepts. He also served as an associate editor for Cancer Research and on the editorial boards of Molecular Cancer Therapeutics; Cancer Epidemiology Biomarkers & Prevention; and Chemical Research in Toxicology. Highly respected in his field, he was an invited speaker at many local and global conferences and symposiums, Recently, he was a key figure in

organizing the joint American Chemical Society's and American Association for Cancer Research's Chemistry in Cancer conference.

An exceptional mentor, Dr. Michejda trained many postdoctoral fellows and pre-doctoral and medical students. As chair of the Chemistry and Structural Biology Faculty, he led CCR's efforts to establish the Program in Interdisciplinary Training in Chemistry for postdoctoral fellows and graduates. He was also an active member of several other NCI faculties and committees.

Dr. Michejda was a man of broad knowledge and interests, including language, world history, art and music. Active in the United States Polish community, he organized charitable help for political prisoners in Poland and worked with the Washington, D.C. Committee in Support of Solidarity. Using his personal relationships in both the United States and Poland, Dr. Micheida successfully connected Solidarity leaders with U.S. community and trade leaders, media personalities, intellectuals, and politicians, including those at the White House. A staunch supporter of human rights, Dr. Michejda was awarded Poland's Knight Cross of the Order of Merit.

In spite of his many administrative, academic, and research responsibilities, Dr. Michejda always made time to support his wife, Professor Maria Michejda, in her work on stem cell biology. In addition, he enjoyed sharing time with his grandchildren.

Survivors include his wife, Maria, North Potomac, Maryland; a daughter, Monika Goodrich of Marco Island, Florida; a brother, Albert Michejda of Winter Park, Florida; and two grandchildren, Gabriella and Andrew Goodrich, also of Marco Island. *

Science Communications

NCI-Frederick Hosts Regional Biocommunications Meeting

NCI-Frederick played host to more than 70 regional biocommunications professionals at an all-day symposium

November 18 in the Conference Center. Also cosponsored by the international BioCommunications

Association and the BlueRidge Chapter of the American Institute of Graphic Arts, the meeting was billed as a gathering of "Mid-Atlantic Biocommunicators" and attracted scientific illustrators, writers, editors, and imaging specialists from across Maryland and nearby states. Volunteers from Scientific Publications, Graphics and Media and the Conference Center organized and staged the meeting.

Cheryl Parrott, NCIFrederick Director of Public
Affairs, opened the morning
session with a history of Fort Detrick
and NCI-Frederick, and Frank
Blanchard, SAIC-Frederick, Inc.,
Director of Public Affairs, spoke

on communicating effectively with the news media. Dr. Jeffrey Lifson, Director of the AIDS Vaccine



Winners of the People's Choice Competition. L to R: Johns Hopkins University students Ophelia Lee and Fabian de Kok-Mercado; Cynthia Hye-Won Yoon, MediVisuals, Richmond, VA; Jennifer Fairman, speaker and principal, Fairman Studios, Baltimore, MD.

Program, delivered the keynote address, entitled "Facilitating the Effective and Artful Presentation of Biomedical Research." Other speakers' topics included using variable data printing; communicating in compliance with Section 508 of

the Rehabilitation Act; creating a special exhibit for the St. Louis Zoo; incorporating video in PowerPoint; and tagging and selecting keywords for indexing. Dennis Biela's capstone presentation explored the effective use of QuickTime Virtual Reality. Attendees selected four "People's Choice" winners from the entrants in the illustration and photography competition. Two of the winners were students from the Art as Applied to Medicine program at The Johns Hopkins University.

"The meeting was a great success," commented Colin Celaya, Conference Center Manager and meeting General Chairman. "We drew more

people than we expected, and I think everyone felt it was a day well spent." \star

Check It Out!

Were you looking for information about....

Avian Influenza, Pandemic Influenza

World Health Organization

http://www.who.int/csr/disease/avian_influenza/en/

Department of Health and Human Services (Pandemic and Avian Influenza)

http://www.pandemicflu.gov/

(Note: this link was included in the March '06 issue of the *Poster*)

English for Speakers of Other Languages

Frederick Community College; English as a Second Language courses

http://www.frederick.edu/ProgramCourses/ESL/index.cfm?documentid=313

English as a Second Language

http://www.word2word.com/eslad.html

Writing Aids

Online dictionaries

AlphaDictionary.com (portal to hundreds of dictionaries) http://www.alphadictionary.com/index.shtml

Stedman's Online Medical Dictionary http://www.stedmans.com/section.cfm/45

Plagiarism

Ohio University, College of Arts and Sciences, ESL help http://www.ohiou.edu/esl/help/plagiarism.html

Language and Grammar

Hamilton College, Nesbitt-Johnston Writing Center http://www.hamilton.edu/academics/Resource/WC/index.html

NIH Plain Language in the Sciences

http://www.plainlanguage.gov/usingPL/sciences/index.cfm

Documentation

Monroe Community College, Council of Biology Editors (CBE) Style of Documentation in Science and Mathematics http://www.monroecc.edu/depts/library/cbe.htm *

Outreach and Special Programs

No Coin? Give Me Ten!

By Maritta Perry Grau

It's not often that a civilian sees a colonel drop and give him ten, but that happened at a recent Mentoring Day for students with disabilities.

Colonel Mary Deutsch, Installation Commander at Fort Detrick, had just given coins to the group of 18 students, to commemorate their visit. She said Army tradition states that a



soldier without his or her coin can be required to do 10 push-ups. When one of the students asked if she had her coin. she had to admit she

didn't. So she immediately dropped and did 10 push-ups.

The day began on the Fort Detrick side, where the students toured a number of USAMRIID laboratories. First they were shown "the slammer," USAMRIID's Biosafety Level 4 (BSL-4) patient containment suite, as well as a "space suit" like those worn in BSL-4 laboratories. They were also introduced to tarantulas and hissing cockroaches in the insectarium while learning how the military protects soldiers from insect-borne diseases. Finally, the students learned how aerosol testing is used to obtain FDA approval for drugs and vaccines to protect U.S. troops.

At NCI-Frederick, the students toured the Scientific Library, Charles River Laboratories, the warehouse, the mail room, and the NCI-Frederick Café. At each stop, the students



learned about the work they might do in those facilities. For example, when Cliff Hubbard, Charles River Laboratories, took them through the cage-washing areas (which they pronounced "smelly"), he explained the importance of cleaning cages and feeding the animals to keep them in excellent condition for research.

After the walking tours, the students ate lunch and enjoyed a PowerPoint presentation about landscaping, gardening, and other outside work opportunities at NCI. The students were then given a hands-on demonstration on how to



access various employment Web sites for work at the NCI-Frederick and other federal facilities. The students' teachers planned to help them develop résumés and look at other job sites in follow-up activities.



Colonel Deutsch and Donald Wheatley, the NCI-Frederick Contracting Officer, gave the students certificates for completing the tour. The students, 18 to 21, will graduate from local high schools this year. Conducted as a cooperative effort between the NCI-Frederick Employee Diversity Team and the Army's Equal Employment Opportunity Office, the mentoring visit was so successful that it may be done annually.





Protective Services

Chilly Today...

The day was chilly but the chili was hot at the Protective Services'

4th Annual Chili Cook-off on December 1. Nearly 90 people came to Building 426 to sample the 18 entries—more than ever before—and cast their vote for the top three.

Tom Gannon-Miller,
Manager of Protective
Services, organizes the annual
event to "first, have a good
time." Secondly, however,
he sponsors the cook-off
to gather the community's
input about his department.
Attached to the chili ballot
was a short survey asking
participants to rate the
services of the department
and describe any specific security
concerns. "If any major concerns
are expressed, I take them to the

Serious Business

Emergency Preparedness Committee,"

Mr. Gannon-Miller explained.

With so many entrants, many people found it a challenge to sample all the chili. Others commented that it was

hard to compare them because they were so different: the chilis were made with such varied ingredients as chocolate, coriander, black beans,



pasta, chicken, and a variety of peppers and seasonings to provide just the right "kick." Some attendees had never tasted chili before, so it was difficult to determine which ones were best. Nonetheless, people were quite serious as they made their way from

crockpot to crockpot. Voices were hushed as they quietly pondered the nuances of flavors they were experiencing and made notes about each entry.

Just as earnest were the chili masters. According to Sharon Fritz, one of the organizers, "These people are really serious about their chili." Some, she said, practice cooking their recipe two or three times at home before creating the final batch for the contest. Others, however, launch their maiden creations on the day of the contest.

And the Winners Are...

This year's top winner, Barbara Romeka of Occupational Health Services, said not only was it the first time she entered the cook-off, but it was also the first time she made that particular chili (#14, White Bean Chicken Chili). Her beginner's luck earned her a 30-day reserved parking space. Advancing from third place last year to second place this year was Siobhan Tierney, Environment, Health, and Safety (chili #15), who won a 15-day reserved space. Third place, a 5-day reserved space, went to Bill Brady, Environment, Health, and Safety, for chili #1.

Hope Springs Eternal

Mr. Gannon-Miller has been entering his family chili recipe the past 4 years, in hopes of finishing in the top half of the pack, making minor adjustments each time. Better luck next year, Tom. •

Barbara Romeka's Winning Recipe:

White Bean Chicken Chili

1 lb	Dried Great Northern beans, picked over and rinsed	4	Garlic cloves, minced
1½ lb	Skinless, boneless chicken breast halves	2 tsp	Ground cumin
2 qts	Chicken stock or low-sodium chicken broth	1 tsp	Cayenne pepper (or to taste)
1 Tbs	Olive oil	7 C	Monterey Jack cheese, shredded
2	Medium onions, finely chopped	3–4	Jalapeno peppers, halved, seeded, coarsely chopped
2	4-oz cans chopped green chilies		

Cover beans with 2 inches of water and soak overnight. Drain beans; return to pan and again cover beans with 2" of water. Bring to boil and simmer until tender (about 1 hr). Drain. Simmer chicken over low heat in 1 qt of the stock (add water to cover if needed) until just opaque throughout (about 15 min). Remove chicken and shred when cool. Boil stock over high heat until reduced to $2\frac{1}{2}$ cups (about 4 min). Cook onions in oil over moderate heat until translucent. Add chilies, garlic, cumin, and cayenne, and cook, stirring, 3 min. Add beans, chicken, reduced stock, cheese, jalapenos and remaining chicken stock. Simmer 2–3 hrs until thickened.

Open House Around the Facility





Protective Services





Occupational Health Services and Protective Services both held open houses earlier this fall. The open houses showcased renovations and program improvements.





Occupational Health



Services

Books for Mongolia

Making a Difference: Books for Mongolia

Last spring, we published an article about student intern Bilguujin Dorjsuren's efforts to send books to a school in her native Mongolia. Ms. Dorjsuren developed the project as part of her senior graduation requirements for Governor Thomas Johnson High School in Frederick. Last November, she received the following letter (reprinted here as it appeared) and pictures from the Nomuun School in Mongolia.



Letter of the heartfelt gladness

From English teachers of "Nomuun" school

Before all, Please accept that we very thank for you sent many English books to us.

In our country English is the most important language and it is declared "English is second language of all Mongolian people" by Mongolian government. But this decision didn't spend long time in Mongolia. It's about for 3–4 years. Mongolian all people (from children of 5 ages to old people of 70 ages) already have known this English language's importance.

But English teachers in Mongolia have many roles and difficulties. For example: English books and necessary things (audio and video cassettes,



CD-s, colorful illustrations and other materials) are very expensive and rare.

We acknowledged those 300 English books. These books which you sent are very useful for our training of English. And will develop all four skills (reading, writing, listening and speaking) through dialogues and everyday life's communication words in the books.

Another most important thing is to add new words in vocabulary box while reading these books. Some books contain pictures relating to the books content. Of course, it's very interesting for primary children and pupils. Our school's children received them very happily, too.

[The letter lists a number of books designed for elementary-aged children.] Those books are very useful for children to read for the first time, letter script is big and very interesting. We think so these books enable pupils

to use English effectively and believe that have fun while reading.

[The letter then lists books for students in grades 5 through 8.] Those books are very useful to know about all new things and other's life especially another life of another world's people.

[Another list of books for high schools students followed.] They have many useful things especially importance to improve teaching method, grammar and vocabulary knowledge and about American and other's life and other peculiarities of the English language. Moreover there are 5 Japanese books with English books. Our school has a plan to open "Foreign language training center" in future. So we hope these Japanese books will be useful, too.

Finally we very thanked again for giving us so many useful books.

Good luck for your work!

YOUR SINSERELY

The headmaster of Nomuun school,
Mr. Uzmee.D
English teachers,
Myagmarsuren.B
Bolortsetseg.Ts ◆



Frederick Employee Diversity Team

Diversity: Myth or Reality?

By Maritta Perry Grau

True or false:

- 1. Diversity is good for business.
- 2. Minority students would rather be doctors than research scientists.
- Women usually earn less than men for the same job because they make detours in their careers to have and raise children.

Are these statements you've heard at the lunch table? If you think they're true, you might want to read the November 20, 2006, online edition of *The Scientist* (20:11, s5). "Diversity: Some Myths, and the Realities" offers several teasers that may seem somewhat misleading at first read.

For example, one teaser questions whether the maxim "Diversity is good for business" is a myth to get you to read "Diversity: the New Business Case." The teaser refers to research that *The Scientist* says

"showed—controversially—that ethnic and gender diversity can harm team and company performance if they're not managed effectively." The key is "if they're not managed effectively." The article states that it's not enough to simply have ethnic and gender diversity in place: you also need to focus on "managerial skill and organizational development...to address how people operate in organizations."

Another "myth" that the issue addresses is the generalization that minority students opt out of careers in research for careers in medicine. The teaser points out that nearly all graduates—of all races—express an interest in medicine, rather than in science. "Shared Challenges, Shared Solutions" notes that mentoring, opportunities for research, and hands-on experience are integral to successful programs to encourage minorities to stay on track for Ph.D's. It cites reports from several symposia held among 60 host institutions that explored the characteristics of successful programs.

"Show Me the Money" explores the myth that the only reason women generally earn less than men is that women are more likely to be on the "Mommy track": being diverted from careers to raise their children. The article points out that "Women with no kids have higher salaries than those who have children, but they still earn less than a man doing the very same job... In the life sciences the average median salary for white men is \$80,000, compared to \$72,000 for Hispanics, \$65,000 for African Americans, and \$65,000 for women, according to the most recent figures from the Commission on Professionals in Science and Technology." The article goes on to cite several studies that indicate wage disparities, "even when controlling for total publications, years of seniority, and hours worked per week."

You can read about these myths and others in *The Scientist* at http://www.the-scientist.com/article/display/36454/. *



The Diversity Team sponsored a Mariachi band in the fall. The band strolled and strummed through the NCI-Frederick Café and the farmer's market for nearly two hours. *





New Faces at NCI-Frederick

NCI-Frederick Welcomes New Staff

Ninety-eight people joined our Facility in July, August, and September 2006.

NCI-Frederick welcomes...

Sandip Basu Julie Belanger Ravindra Chalamalasetty Weizao Chen Ravi Kalathur Oyindasola Oyelaran Joshua Thomas Giorgio Trinchieri Celine Walmacq Jessica Walrath Karen Wylie *







Sandra Zimmerman



Kyle Knott



SAIC-Frederick, Inc., welcomes...

James Albert Molly Assion Kshama Aswath Ohn Aung Kimberly Bearr Frank Blanchard Robert Burns Ryan Bushey Rocco Caldararo **Ehydel Castro** Amy Coburn Joseph Cogliano Terri Darr Gaby Dasema Xiang Deng Linda Dixon Tvra Estwick Bernard Eurie Andy Fisher

Vilmarie Franco Sadie Frary Cathleen Frein **Brandy Gaydos** Xin Ge Bradlev Getridge Deborah Goldstein Wenjuan Gu Felesha Hanga John Harshman Sima Hayavi Christina Hernandez Belynda Hicks Rosemary Hniang Jill Hudak

Lilia Ileva

Jeffrey Jagoda

David Johnson Waldo Johnson David Keller Shelby Kenney Kyle Knott Julian Kusel Elena Kuznetsova Lvdia Lacuesta Julie-Anne Lanahan Sally Larson Huaiie Li Jun Lu Karen Martin Reggie Mose Cathryn Niane Kelly Nowalk Mary O'Connell

Paola Ouinones-Olson Erin Renshaw Anna Risse Sabrina Rossi Daniel Rubinstein Cristian Rusu Christine Sadr Sylvia Sanni-Thomas Monica Segreti

Michael Orlando

Ravithat Putvatana

Shaila Sharmeen Jose Sotelo John Sparks David Sweeney Albina Toderas Huong-Lan Tran Megan Turley Heather Walsh

Loralyn Walther Andrew Waters Gave Wilson Jeanne Yimdjo Pei-Hung Yu





Julie Belanger



Celine Walmacq



Ravindra Chalamalasetty



Charles River Laboratories welcomes...



Vicky Clark William Danner Michele Driver M. Jane Shelton Leroy Smith, Jr. Sandra Zimmerman +

Data Management Services welcomes...

David V. Hoberman Jason W. Holbert *

NCI-Frederick People

Chou-Chi Li, Ph.D., Retires

by Lisa Simpson



(L to R) Dr. William Farrar, Amy Huter-Imming, Dr. Chou-Chi Li, Dr. Nancy Colburn, Dr. Sandy Ruscetti, and Dr. Dolph Hatfield celebrate at Dutch's Daughter restaurant.

Chou-Chi Li, Ph.D., Head of the Protein Function Section in the Laboratory of Cancer Prevention, retired September 22, 2006, after more than 23 years with NCI-Frederick. Dr. Li's research into protein function revealed a key player (p97/VCP) in the cellular protein degradation pathway, thus shedding light on human diseases caused by abnormal protein accumulation.

Persistence pays off. Dr. Li recalled a time when, during a site visit, her proposals for two projects did not receive positive reviews. However, Dr. Li had faith in the projects and, with support from Dr. Frank Ruscetti and other colleagues, nurtured the projects to maturity and subsequently attracted the interest of many investigators. In fact, one project developed into "a new direction for pharmaceutical companies

to use to pursue cancer therapy drugs," Dr. Li noted.

Dr. Li added, "I am extremely thankful for having been given the opportunity to develop my research projects at NCI-Frederick. Although my research path was not always smooth, I really enjoyed it and gained tremendous life experience from the 'ups and downs' along the way. It was truly a pleasure to be a research scientist at NCI-Frederick."

In honor of Dr. Li's retirement, her friends treated her to two celebrations at area restaurants. First, 30 current and former coworkers gathered at the Lotus, where the chef prepared her favorite dishes. Then, 50 friends, colleagues, and family members enjoyed a party at Dutch's Daughter, where, in appreciation of her many contributions to NCI-Frederick, she was presented with a commemorative plaque, a bound anthology of her scientific publications, a check, and an artist's proof of Nallin Pond by well-known watercolor artist Rebecca Pearl.

Dr. Li earned her doctorate from the Johns Hopkins University in 1988, where she studied the tumorigenic effects of Human Papillomaviruses.

Building 539 Animal Facility Makes a Difference

Recently, 29 employees in the Building 539 Animal Facility, Laboratory Animal Sciences Program, sponsored a needy military family during Fort Detrick's "Operation Happy Holidays," purchasing clothes, toys, games, and other goods for the children; food for the family; and a gift card "from" the children to the parents. Even gift wrap was provided so the parents could enjoy wrapping the gifts. The SAIC-Frederick, Inc., and NCI-Frederick co-workers spent three weeks gathering the gifts for delivery to the HOT Dome, where

Army organizers arranged private pick-ups.

"What a wonderful way to help make someone's Christmas a little better," Nancy Walsh, LASP staff member, commented. "I know other people were not aware of this event and it could be a great idea for next year."



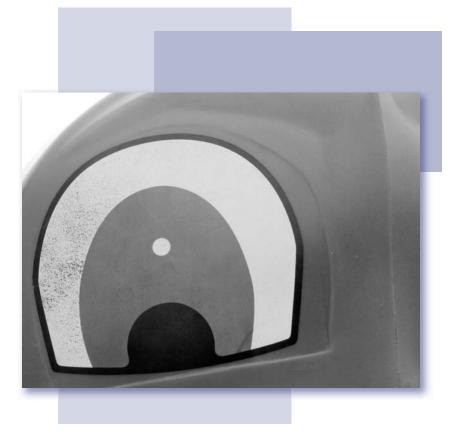
Poster Puzzler

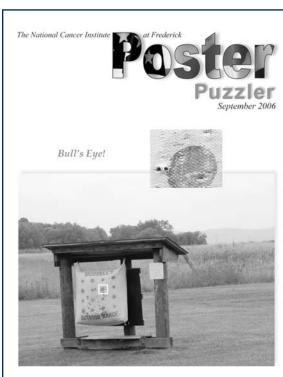
What is it?

Where is it?

Your challenge, should you decide to accept it, is to correctly identify the item and its location from the picture to the right. Clue: It's somewhere at Fort Detrick/NCI-Frederick. Win a framed photograph of the Poster Puzzler by e-mailing your guess, along with your name, e-mail address, and daytime phone number, to Poster Puzzler at poster@ncifcrf. gov. Alternatively, you can send us your guess, along with your name and daytime phone number on one of the *Poster* forms found on the front of the *Poster* stands in the lobbies of Buildings 426 and 549. All entries must be received by Friday, February 23, 2007, and the winner will be drawn from all correct answers received by that date.

Good luck and good hunting! ◆





Congratulations to our September Puzzler winner: Jon Keller, a Werner H. Kirsten student intern who works in the Laboratory of Cell and Developmental Signaling.

The Poster Puzzler:

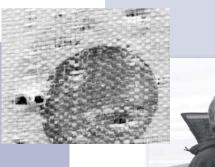
Bull's Eye!

By Nancy Parrish

The September puzzler shows what you can do with a little practice. It is an extreme close-up of a bull's eye in one of the four targets at the archery range located across from the pond at Nallin Farm. Judging by the stress points on the material, this shooter must have been very good. The archery range is open to all military personnel and their families, as well as to people who work on or are affiliated with the Fort Detrick post. You don't need a reservation, and no test is required to use the range. The only regulation is that only field or target points must be used; broadheads and hunting points are prohibited.

Thanks to all the participants in the September 2006 Poster Puzzler!

Poster Puzzler Winner



The September Poster Puzzler winner:

Jon Keller, a Werner H. Kirsten student intern who works in the Laboratory of Cell and Developmental Signaling pictured here with Paul Miller, Executive Editor of *The Poster*, on the archery range.





PALS' Celebrations























Technology Transfer Branch

Technology Transfer Branch Staff: Honors and Transitions

By Nancy Parrish



TTB Staff Honored at Awards Ceremony

Four members of the Frederick office of the NCI Technology Transfer Branch (TTB) were honored at the NCI Director's Awards ceremony held October 25 at the National Institutes of Health (NIH) in Bethesda.

Dr. Jeff Thomas, a TTB senior advisor, participates on the NCI Biospecimen Coordination Committee, which earned an NIH Award of Merit for developing best practices guidelines for acquiring, storing, and tracking high-quality biospecimens in cancer biorepositories. "It's very gratifying to be recognized for your work," Dr. Thomas commented, "especially when you look around at all the incredible things being done at NCI." Dr. Melissa Maderia, Technology Transfer Specialist, is part of the Center for Cancer Research-Fellows and Young Investigators (CCR-FYI) steering committee, which also received an NIH Merit Award. for "outstanding effort in planning and implementing the CCR-FYI Annual Retreat," which drew approximately 500 attendees. Dr. Maderia was pleased that the committee's efforts to "ensure that NCI remains a premier institute for young scientists" were recognized.

Length-of-service awards were granted to Dr. Bjarne Gabrielsen, for 20 years of government service with USAMRIID and NCI, and to Technology Development Administrative Specialist Chris Sappington for 10 years of service. Mr. Sappington joined the Frederick office of the TTB in 2005, following nine years at the NIH Clinical Center in Bethesda, where he worked as an administrator in the nursing department and the Department of Clinical Research Informatics.

Dr. Bjarne Gabrielsen Retires

Dr. Bjarne Gabrielsen, Senior Advisor at the TTB in Frederick, retired after nearly 15 years with the National Cancer Institute.



Dr. Gabrielsen first worked at NCI-Frederick as Assistant Project Officer for the Research Support Services, which provided biological/chemical services to NCI and NIH scientists in Frederick and Bethesda. In 1997, because of his expertise in organic chemistry and natural products and his interest in technology transfer issues, Dr. Gabrielsen was recruited to the TTB in Rockville as a Senior Advisor, Drug Discovery/Development.

Dr. Gabrielsen found his new position gratifying, he said, because "I could play a more active role in actually facilitating and safeguarding research collaborations involving NCI, SAIC, and NIH scientists and their forprofit and/or academic collaborators. It was as if I were actually a part of the intramural laboratory programs."

Over the years, Dr. Gabrielsen has observed that research has become more collaborative, as evidenced by the number of NCI/SAIC-Frederick, Inc., collaborations with extramural entities, USAMRIID, and with other NIH institutes such as NIAID. He commented that "scientists themselves have become much more conscious of the benefits...of technology transfer and protection of intellectual property through the licensing of their inventions and the potential royalties gained thereby."

Career highlights include negotiating agreements between NCI and foreign countries and their institutions to obtain and screen samples from their biodiversity for developing new drug therapies; helping identify potential therapeutic agents, "thus aiding NCI, NIH, the general public, and especially the source countries and their scientists"; and being named NCI/NIH representative to a committee created "to establish and enhance scientific collaborations and exchanges of scientific personnel between Norway, Canada, and the U.S." He appreciates each time he received personal thanks from "scientists with whom I had interacted, and whose expertise I respect" and also appreciates the collegiality he had with his fellow scientists, as well as the TTB's "supportive and stimulating environment."

Following two months as a special volunteer, Dr. Gabrielsen will move to Florida, where he will spend high-quality time with his family, fish in the Gulf of Mexico, and devote time to composing and arranging music, a lifelong avocation. He also anticipates exchanging seasonal visits with his Norwegian family.

Charles River Laboratories



New CRL Building

Charles River Corporate sponsored a picnic at Nallin Pond in September to celebrate the new 10-year contract awarded to Charles River Laboratories. Linda Blumenauer, the Project Officer for the Animal Production Area (APA) contract, gave a presentation of what is happening in the government and the importance of the new building that is scheduled to be built in the next two years.

Lise DeVore Honored



Lise DeVore, Supervisor of the Isolator Production Unit at the APA/Charles River Laboratories, received a Charles River Laboratories Exceptional Employee Award for 2006. Lise was nominated by her staff for this award. There were 475 nominations submitted from Charles River's U.S. facilities for all categories, with 174 nominated for the Exceptional Employee Award category. From these 174, only 43

were chosen from Charles River's U.S. facilities to receive this prestigious award.

Lise has supervised more than 21 employees for the last 12 years and has been praised by her staff as

a top-notch supervisor. As noted by one individual, "Lise cares deeply for her employees as people, not just bodies to get the job done." Other employees complimented Lise for her strong devotion to the company's biosecurity, which is necessary for raising pathogen-free rodents; for writing and implementing standard operating procedures for the Isolator Production Unit; for her open-minded attitude toward change, especially if the change helps employees do a better job; and for getting questions answered and problems solved quickly.

Her personal interaction with her staff is also appreciated. When an employee was seriously

hurt in a car accident, Lise updated her group daily on his progress. Lise greets her group with a "good morning" call and is in the Isolator Unit daily. She always goes the extra step: when special orders for animals are being shipped from the Isolator Unit, her group knows that she will personally review these orders for accuracy prior to shipment. With a no-nonsense attitude about the welfare of the laboratory animals raised at the APA/Charles River Laboratories, she

makes it clear that these animals are always her first priority.

Lise has been an integral part of the NCI-Frederick Take Your Child to Work Day (TYCTWD) for the last five years. She is the APA/Charles River Laboratories representative on the planning committee, but she also organized popular sessions in which children got to work in an isolator, see litters of mice of different ages, and learn how mice are cared for. The program was so popular that



Lise encouraged the barrier groups to develop a similar program for TYCTWD.

As written in the letter that accompanied her award, "If there is a person that should be recognized for his award, that one should be Lise DeVore. We would like to thank her for the tremendous job she has done, and is still doing. [She is] a very great asset to the APA/Charles River Laboratories."

Data Management Services (DMS)

Data Management Services: Computers and Statistical Support

Although perhaps most widely known for our Microcomputer Support and Web Development services, C&SS also offers many other services to the NCI-Frederick community. Listed here are some of these other services.

Statistical Consultation

The Statistical Consultation group provides a wide array of mathematical and statistical consulting services to the NCI-Frederick scientific community. The director and consulting statisticians work in collaboration with principal investigators through all facets of the scientific process: from development and formulation of research and statistical hypotheses through design of experiments and statistical analyses, preparation of technical reports and modern graphics, to preparation of formal scientific documents and publications in peerreviewed journals. *

Custom Software Development

Our team of analysts and developers employs the most modern methods and tools to create custom software solutions to meet the unique needs and requirements of NCI-Frederick. Our staff can assist you with both administrative and scientific programming needs, as well as Web design and development services.

Visit the C&SS Web site at http://css.ncifcrf.gov or call 301-846-1060 for information about custom development services available from C&SS.

Technology Advocacy and Consultation

As NCI-Frederick's information technology experts, C&SS continually explores and evaluates new

Computer Software Training

The fall 2006 training session is underway. Classes are now being held in the new C&SS training room located in Building 362. Please see the Computer Software Training Web site at http://css.ncifcrf.gov/training for more information or to register for classes. •



technologies that could benefit the user community and further NCI-Frederick's mission. C&SS staff would be happy to meet with you to discuss your specific technology needs. *

Computer Services Helpdesk

The Computer Services Helpdesk provides the NCI-Frederick community with a single point of contact for computer assistance, information, service, and support. The Helpdesk is staffed from 8:00 a.m. to 5:00 p.m., Monday through Friday, excluding NCI-Frederick holidays.

Requests for service can also be placed via the C&SS Web site (http://css.ncifcrf.gov/helpdesk) at any time.

Site-Licensed Software Available from the Helpdesk!

C&SS, in conjunction with the NCI, has worked to secure site licenses for many of the programs in broad use at NCI-Frederick. To view the growing list of software available from the

Helpdesk, visit the C&SS Web site at: http://css.ncifcrf.gov/helpdesk/software.asp or contact the Computer Services Helpdesk to borrow the software or request installation assistance.

Contacting C&SS

Computer Services Helpdesk

Web: http://css.ncifcrf.gov/helpdesk E-mail: helpdesk@css.ncifcrf.gov

Phone: 301-846-5115

Hours of Operation:

8:00 a.m.–5:00 p.m., Monday through Friday

NCI-Frederick Webmasters

Phone: 301-846-6700

E-mail: webmaster@css.ncifcrf.gov govwebmaster@css.ncifcrf.gov

Other Inquiries

Phone: 301-846-1060 *****

SAIC-Frederick, Inc.

BDP Makes a Difference!

Whether it's producing and studying the effects of various drugs or teaming up outside the workday, the Biopharmaceutical Development Program (BDP) staff makes a difference: reaching out with their talent and time to improve others' lives.



Making Holidays a Little Cheerier for Troops in Iraq

In November, BDP staff collected all sorts of items to be packaged and sent to Marine troops in Iraq. They filled both a van and a car with items for personal care and hygiene, chap sticks, hand warmers and sanitizers, baby wipes, disposable razors, books and magazines, wrapped hard candies, cheese and peanut butter cracker packages, strong toilet paper.

The Army Volunteer Corps had also asked for empty shoebox-size boxes and mailing tape to package the gifts for mailing. All items had to be small enough to fit into the soldiers' backpacks.

"The donations were requested on behalf of a unit of soldiers in Iraq whose duty it is to guard a dam," said event organizer Brenda Chasteen. "The Army/Marines had a goal of sending 108 boxes, but due to the very generous donations of the BDP, they were able to send 350 boxes. The Army/Marines wanted you to know they really appreciated your generosity and to extend a huge 'Thanks.'"

Towanda Stockton, Army Volunteer Corps Coordinator, said the support that the Shoebox Drive received from SAIC-NCI was exceptional: "The Marine Corps Key Volunteer Network was able to send over 300 item packed shoe boxes to Iraq, largely due to the support of the Fort Detrick Community. More proof positive that when our service members have a need, there are no organization boundaries on our installation. Army Community Service feels very fortunate to be able to partner with NCI on projects that touch so many lives."

Raising Diabetes Awareness

Did you know that more than 20 million Americans have diabetes, and nearly one-third don't even realize it? To make people more aware, the American Diabetes Association (ADA; http://www.diabetes.org/home.jsp.) annually sponsors a 5K run/walk/ride event, raising funds for diabetes research, education, and advocacy.

In October, friends and family of the late Phil Rothchild, BDP's Business Operations Director who died last July of complications from diabetes, participated in the 2006 America's Walk for Diabetes.

The "For Phil" team comprised Mr. Rothchild's wife, Marion; his daughter, son-in-law, and granddaughter, Jill, Michael, and Farah Goldman; family friends Marilyn Ohring, Stacey Shenker and her daughter, Elyssa, and Sara Weiser; BDP friends Judy Duears, Kathy Miller (team captain), Vonnie Hill, Patty Green, Deena Wisner, Carla Bryant; and friend Fran Hostetler, manager of the Café NCI-Frederick.

The team raised \$2,960 in sponsorship contributions and was among the top five fundraisers for the Frederick County Walk.



Several members of the "For Phil" team at the beginning of the Diabetes Walk. From L to R: Vonnie Hill, Marilyn Ohring, Marion Rothchild, Sarah Weiser (peering over Marion's shoulder), Michael Goldman, Jill Goldman, and Stacey Shenker. Youngest members Farah Goldman (L) and Elyssa Shenker (R) participated by stroller.

Wilson Information Services Corporation (WISCO)

Book and Media Swap Highlights Ben Franklin

The October Book and Media
Swap has become a traditional part
of the Scientific Library's monthlong celebration of National Medical
Librarians Month. Because this year
marked the 300th anniversary of
Benjamin Franklin's birth in 1706, it
seemed only fitting to commemorate
his accomplishments as the focal
point for the celebration. For example,
did you know that:

- Ben opened the first free lending library;
- In addition to being one of our country's Founding Fathers, Ben was a scientist, inventor, musician, publisher, author, politician, and diplomat;
- Ben proposed daylight savings time 150 years before the practice was adopted;
- Ben encouraged the circulation of fresh air to fight disease 100 years before Louis Pasteur;
- Ben discovered the Gulf Stream while crossing the ocean in his travels between the United States and Europe; and
- Ben invented hot air balloons, and bifocals (for which most of us over 50 express profound gratitude)?

In tribute to this true Renaissance man, the lobby of the Conference



Center was festooned with kites, symbolic of his early experiments with electricity. In the first hour alone, more than 1.200 items

were swapped, and by the end of the day, the grand total came to nearly 1,700 items. The library collected more items than in any previous year, with mystery/thriller titles in the top category. Outgoing favorites this year were science fiction/fantasy titles.

Curiously, many people asked library staff what was going on, an indication that not everyone knows about the swap. So please tell your co-workers to save their books, CDs, DVDs, and cassettes for next year's event on October 8. The more, the merrier! +

Technology Training Lab Update: Practice Your Presentation in the Technology Training Lab

Have a big presentation coming up? Now you can practice—and record—your presentation in a quiet space before "going live." The Scientific Library's Technology Training Lab is available on a first come, first served basis to anyone who would like to

practice or record his or her presentation. Whether you are preparing to face your first audience or your hundredth, being able to see yourself on film is a great way to improve your performance. The library also now offers the capability to record

presentations and play them back via the Web. Don't hesitate to call 301-846-5840 and let us know how the library can help you share your work with others. *

Staff Commemoration

Congratulations go to Library Aide Jolaina Page, who recently celebrated her five-year anniversary.

"The rapid progress true science now makes occasions my regretting sometimes that I was born so soon."

— Benjamin Franklin, in a letter to Joseph Priestly, 1780 ◆

The Amazing Life Of Ben Franklin

The library invites readers to take advantage of its new resources describing the amazing life of Ben Franklin. Here is a selection:

- The Autobiography of Benjamin Franklin, by Benjamin Franklin Book; Call No. WZ 100 .F831 1964
- The Ben Franklin Book of Easy and Incredible Experiments, edited by Lisa Jo Rudy Book; Call No. Q 182.3 .B456 1995
- Benjamin Franklin, by Edmund S. Morgan
 Book; Call No. WZ 100 .M827 2002
- Benjamin Franklin: An Extraordinary Life, An Electric Mind, by Walt Disney Entertainment DVD; Call No. AV 00201 no.21
- Doctor Franklin's Medicine, by Stanley Finger Book; Call No. WZ 100 .F497 2006
- The First Scientific American: Benjamin Franklin and the Pursuit of Genius, by Joyce E. Chaplin Book; Call No. WZ 100 .C464 2006
- *National Treasure*; Science in the Cinema Series
 DVD; Call No. AV 00201 no.21
- *Poor Richard's Almanack*, by Benjamin Franklin Book; Call No. WZ 309 .F831 1980
- The Wit & Wisdom of Benjamin Franklin, by James C. Humes Book; Call No. WZ 309 .E921 2001 ◆



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http://web.ncifcrf.gov/ThePoster

Employment Opportunities

Please contact the individual contractor's human resources representatives or go to the contractor's Web site for up-to-date, detailed information about jobs or research and training opportunities and requirements.

Charles River Laboratories

http://www.criver.com

Data Management Services

http://css.ncifcrf.gov/about/dms.htm

National Cancer Institute at Frederick

http://www.training.nih.gov/postdoctoral

SAIC-Frederick, Inc.

http://saic.ncifcrf.gov www.saic.com

Wilson Information Services Corporation

http://www-library.ncifcrf.gov

Upcoming Events and Dates to Note

Presidents' Day: February 19, 2007

Scientific Writing Workshop: April 16, 18, and 20, 2007

Eleventh Annual NCI-Frederick/Ft. Detrick Spring Research Festival:

May 16–17, 2007

Armed Forces Day: May 19, 2007

Reminder: When you have a change in staff, such as new staff, a promotion, retirement, loss of staff, be sure to change the information on the NCI-Frederick database. You can do this online by logging on to http://web.ncifcrf.gov/campus/phonebook/, or by contacting your human resources representative. For more information, you may refer to the inside front cover of the NCI-Frederick Telephone & Services Directory.

Comments or suggestions for The Poster may be directed to http://web.ncifcrf.gov/ThePoster



Weather Advisory

You peer out the bedroom window and see softly falling snow or the gleam of ice. Is the base closed? Here's how to find out. Call the Fort Detrick Telenews (301-619-7611), or listen to local radio/television stations for information.

Closing or Delayed Opening

Remember: When Fort Detrick is closed, NCI-Frederick is also closed; when Fort Detrick has a delayed opening, NCI-Frederick has a delayed opening. NCI-Frederick **does not** follow weather closing or delayed opening advisories for the NIH-Bethesda campus or Washington metropolitan area.

Early Dismissal

For early dismissal, NCI-Frederick operates independently of Fort Detrick; therefore, your supervisor will notify you if NCI-Frederick closes during work hours.

Who Ya Gonna Call?

Telephone

Recorded weather line 301-619-7611

Ft. Detrick toll free number 1-800-256-7621, *8, 37611#

TDD 301-619-2293

Internet (This will only be used if there is a change in operating hours.) Fort Detrick's home page: http://www.detrick.army.mil/. Weather information pops up automatically. ◆

Radio/TV

Frederick, MD		
WAFY	FM/103.1	
WFMD	AM/930	
WFRE	FM/99.9	
WTOP	AM/820	
Hagerstown	, MD	
WARK	AM/1490	

0	
WARK	AM/1490
WJEJ	AM/1240
WQCM	FM/96.7
WWEG	FM/106.9
WHAG	TV/Channel 25

WBAL	AM/1090
WCAO	AM/600
WIYY	FM/97.9
WPOC	FM/93.1

Thurmont, 1	MD
WTHU	AM/1450

Williamsport,	, MD
WCRH	FM/90.5

Chambersbu	ırg, PA
WHCT	$\Lambda M/150$

ttysburg,	PA
WGET	AM/1320
WGTY	FM/107.7

Mercersbur	g, PA
WSRT	FM/92.1

Greencastle, PA	
WAYZ	FM/104.7
WWMD	FM/101.5

Martinsburg, WV	
WEPM	AM/1340
WICL	FM/95.9
WLTF	FM/97.5

Charles Town	ı, WV
WMRE	AM/155



, asiming ton,	20
WGMS	FM/104.1
WMZQ	FM/98.7
WRQX	FM/107.3
WTOP	FM/103.5
WWTP	AM/1500 and FM/107.7
WUSA	TV/Channel 9 ◆



NCI-Frederick Annual Halloween Contest















