

What is it?
Where is it?

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Poster

Chromosome 6 SNP Variations Are Suspect

SEPTEMBER 2008

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Newly Identified Genetic Variations May Affect Breast Cancer Risk

By Maritta Perry Grau

Editor's note: This article has been adapted from an NCI press office release. For the full article, please go to: <http://www.cancer.gov/newscenter/pressreleases/BreastCancerLocusGold>.

Through a genome-wide association study, researchers at NCI-Frederick, along with their collaborators in other study centers in several countries, have identified genetic variations in a region of DNA that may be associated with breast cancer risk. Women with the variation have a 1.4 times greater risk of developing breast cancer than do those without this variation.

The NCI-Frederick researchers are part of the Center for Cancer Research and include Michael Dean, Ph.D., Deputy Director of the Cancer and Inflammation Program (CIP); Bert Gold, Ph.D., CIP; and Jim Lautenberger, Ph.D., Laboratory of Genomic Diversity. The results of their research appeared online in the *Proceedings of the National Academy of Sciences* on March 3.

SNP Variations Associated with Breast Cancer Risk

The researchers looked for genetic variations of SNPs (single nucleotide polymorphisms) possibly associated with breast cancer risk. Dr. Gold, the study's lead author, explained, "a genome-wide association study looks at the entire genome for a type of genetic variation that occurs more frequently in people who have a



From left: Dr. Bert Gold, Cancer and Inflammation Program (CIP), Center for Cancer Research, and Dr. Michael Dean, Deputy Director, CIP, and their colleagues determined that the frequent presence of variations in four SNPs on chromosome 6 may contribute to breast cancer risk.

certain disease than in similar people who do not have the disease."

First, they analyzed more than 150,000 SNPs in DNA samples obtained from 249 Ashkenazi Jewish women who had breast cancer and a family history of the disease but did not carry the *BRCA1* or *BRCA2* mutation, as well as samples from 299 Ashkenazi Jewish women who had not developed cancer. In the next two phases, they verified their findings in 950 Ashkenazi Jewish women with breast cancer, 979 Ashkenazi Jewish women who did not have cancer, 243 Ashkenazi Jewish women who had sporadic breast cancer, and 187 cancer-free Ashkenazi Jewish women. Each study participant indicated that all four of her grandparents were Jewish and of Eastern European descent.

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Chromosome 6 SNP Variations Are Suspect

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Genes in Chromosome 6 May Contribute to Breast Cancer Risk

Dr. Gold and his colleagues discovered that variations in four SNPs located in a region of chromosome 6 were present more often in the breast cancer patients, suggesting that genes in this region might contribute to the risk of breast cancer. They also confirmed the finding of previous studies indicating that the locus *FGFR2* is associated with a 20 percent increased risk of breast cancer.

“We have already begun experiments to try to identify the genes associated with risk, and then try to characterize their function. It is hoped that identifying the genes responsible for this increased risk may lead to new therapies that target the actions of these genes,” Dr. Gold commented.

While the variations in chromosome 6 that increase risk for breast cancer were found in 23 percent of the women studied, their risk of

developing breast cancer is relatively small compared to the high risk associated with the *BRCA* gene mutations, among the strongest known genetic risk factors for breast cancer. The researchers estimate that only about seven percent of breast cancer cases in this study could be attributed to the locus they found on chromosome 6.

Better Understanding of Genetic Mutations

“Although identifying individual low-risk loci may have limited clinical implications, it is not known whether interactions among multiple loci will put a woman at greater risk of developing breast cancer,” Dr. Gold said. “A better understanding of the genetic mutations that contribute to breast cancer is likely to come from the identification of these low-risk variants and from studies that investigate the mechanisms underlying their associations.”

Other collaborators included researchers at Memorial Sloan-

Kettering Cancer Center, New York, New York; Dana-Farber Cancer Institute, Boston, Massachusetts; Tel Aviv University, Tel Aviv, Israel; Centre for Research in Women’s Health, Toronto, Canada; North Shore Long Island Jewish Research Institute, Manhasset, New York; SAIC-Frederick, Inc., NCI-Frederick, Frederick, Maryland; University of Chicago, Chicago, Illinois; Cornell University, Ithaca, New York; and Memorial Health University Medical Center, Anderson Cancer Institute, Savannah, Georgia.

The team’s research was published as: Gold B, Kirchhoff T, Stefanov S, Lautenberger J, Viale A, Garber J, Friedman E, Narod S, Olshen A, Gregersen P, Kosarin K, Olsh A, Bergeron J, Ellis N, Klein RJ, Clark AG, Norton L, Dean M, Boyd J, and Offit K: “Genome-wide Association Study Provides Evidence for a Breast Cancer Risk Locus at 6q22.23.” *Proceedings of the National Academy of Science*. <http://www.pnas.org/content/vol105/issue9/>. ♦

NCI-Frederick Programs

NCI-Frederick/Ft. Detrick Fitness Challenge 2008

saic.ncifcrf.gov/fitnesschallenge/

NCI-Frederick Suggestion Committees

web.ncifcrf.gov/campus/committees/

NCI-Frederick Advanced Technologies to Support Research

web.ncifcrf.gov/research-technologies/default.asp

Awards and Recognition

Three Kaplan Fellowship Winners Join NCI-Frederick

By Maritta Perry Grau

A national competition that enables women researchers to continue their work as postdoctoral fellows has placed three winning researchers at NCI-Frederick.

Emily Kramer, Ph.D., University of Maryland, Baltimore County, will join the Center for Cancer Research's (CCR's) Gene Regulation and Chromosome Biology Laboratory, Molecular Control and Genetics Section, later this fall. Her mentor, Donald Court, Ph.D., noted, "She will be an important part of a group of seven other scientists [and] will take on genetic and molecular biology studies using the model organism *Escherichia coli* and its phage lambda. Her project emphasizes work on homologous recombination and its application to in vivo engineering, a revolutionary new process called recombineering. With the aim of expanding recombineering systems to other prokaryotes and eukaryotes, Emily will determine how the bacteriophage lambda Red functions carry out homologous recombination in the cells of *E. coli*."

Lesley Mathews, Ph.D., University of Massachusetts at Amherst, works with William Farrar, Ph.D., head of the Cancer Stem Cell Section in the Laboratory for Cancer Prevention, CCR. Dr. Farrar explained that she is "studying the



Lesley Mathews, Ph.D.

role of cancer stem cells in metastasis; particularly, identifying the molecular mechanisms used to regulate the invasiveness phenotype."

Cynthia St. Hilaire, Ph.D., Biochemistry, Molecular and Cell Biology Program, Boston University School of Medicine, works with James Phang, M.D., head of the Metabolism and Cancer Susceptibility Section in the Laboratory of Comparative



Cynthia St. Hilaire, Ph.D.

Carcinogenesis, CCR. Dr. Phang said that Dr. St. Hilaire began her fellowship in June and is "working on the contributions of proline as a stress substrate to metabolic and inflammatory functions of macrophages in tumor progression."

The Sallie Rosen Kaplan Fellowship is an annual competition for women postdoctoral researchers.

While each fellow's primary monetary support will come from the laboratory in which she works, each will also receive a lump sum award of \$10,000 in her first year from the Foundation for the NIH, as part of the Kaplan Fellowship. These monies have been made available through a Cancer Research Training Award fellowship, according to the NIH web site, <http://www.fnih.org/programs>.

Dr. Alex Wlodawer Receives Medal of Merit in Chemical Sciences

By Nancy Parrish

Alexander Wlodawer, Ph.D., Chief, Macromolecular Crystallography Laboratory, CCR, recently received the Jaroslav Heyrovsky Honorary Medal for Merit in Chemical Sciences, awarded by the President of the Academy



Alexander Wlodawer, Ph.D., Chief, Macromolecular Crystallography Laboratory, CCR.

of Sciences of the Czech Republic, Professor Václav Pačes.

The award recognizes outstanding results of scientific work in chemistry. Dr. Wlodawer was recognized for his lifetime achievements in the studies of protein structure, and for his advisory role in the revitalization of the Institute of Organic Chemistry and Biochemistry (IOCB) in Prague.

Dr. Wlodawer's research focused on the structure-function relationship in retroviral proteases and antiviral lectins, both leading to the development of potential or actual anti-HIV drugs; studies of cytokines, kinases, and ribonucleases; and general investigations relating protein structure to function.

Dr. Wlodawer has been a member of the International Advisory Board of the IOCB for the last five years.

"I felt very honored by this award," Dr. Wlodawer said. He added that he is "especially pleased that the Czech Academy found my scientific output to be worth honoring with this very selectively awarded prize." ♦

Odds Are Good to Survive Breast Cancer at Least Five Years

Editor's note: This article has been adapted from NCI's "Cancer Advances in Focus," on Breast Cancer: <http://www.cancer.gov/cancertopics/cancer-advances-in-focus/breast>.

October is Breast Cancer Awareness Month. Although much progress has been made, both in early diagnosis and in treatment, experts predict that 182,560 women and 1,990 men in the United States will be diagnosed with breast cancer; and approximately 40,930 will die from breast cancer this year.

The good news is at least 90 percent of women will survive the disease for at least five years.

In recognition of Breast Cancer Awareness Month, "Science Today" takes this opportunity to review how far we've come in the past 35 years, today's research, and where we hope to go in cutting-edge research (See the *Poster's* lead article, "Newly Identified Genetic Variations May Affect Breast Cancer Risk," page 1).

Yesterday

- Approximately 75 percent of women diagnosed with breast cancer survived at least five years.
- Mastectomy was the only accepted surgical option.
- Only one randomized trial of mammography for breast cancer screening had been conducted.
- Clinical investigation of combination chemotherapy, using multiple drugs with different mechanisms of action, and of hormonal therapy as post-surgical treatment for breast cancer, was in its earliest stages.
- Hormonal treatment of inoperable or advanced breast cancer with tamoxifen was being investigated, but had not yet been approved.

- Genes associated with an increased risk of breast cancer had not yet been identified.

Today

- Nearly 90 percent of women diagnosed with breast cancer will survive at least five years.
- Breast-conserving surgery (lumpectomy), followed by local radiation therapy, has replaced mastectomy as the preferred surgical approach for early-stage breast cancer.
- Routine mammograms are an accepted standard for the early detection of breast cancer.
- Combination chemotherapy has become standard in the post-surgical treatment of early-stage breast cancer.
- Hormonal therapy, such as tamoxifen and aromatase inhibitors, is now standard in the treatment of women with estrogen receptor-positive breast cancer, both as post-surgical therapy and in the treatment of advanced disease.
- Tamoxifen and raloxifene have been shown in clinical trials to prevent the development of invasive breast cancer in women at high risk for this disease.
- The monoclonal antibody trastuzumab is being used to treat breast cancers that overproduce a protein called human epidermal growth factor receptor 2 or HER2.
- The study of large groups of related individuals has led to the identification of several breast cancer susceptibility genes, including *BRCA1*, *BRCA2*, *TP53*, and *PTEN/MMAC1*. Women who carry mutations in *BRCA1* and *BRCA2* genes have a lifetime risk of breast cancer that is roughly 10 times greater than that of the general population.

Tomorrow

NCI predicts that our rapidly increasing knowledge of genetics, molecular biology, and immunology will help us develop even more effective and less toxic treatments for breast cancer; to target and disrupt the effects of molecular changes that cause breast cells to become cancerous; and to "personalize" breast cancer therapy.

For example:

- Gene expression analysis has led to the identification of five subtypes of breast cancer that have distinct biological features, clinical outcomes, and responses to chemotherapy. This knowledge should allow the development of treatment strategies based on an individual's tumor characteristics.
- A patient's response to chemotherapy is influenced not only by the tumor's genetic characteristics but also by inherited variation in genes that affect the ability to absorb, metabolize, and eliminate drugs. This knowledge should allow prediction of tumor response to and the likelihood of severe adverse effects from individual chemotherapy drugs or classes of drugs. It should also aid in the design of more effective and less toxic chemotherapeutic agents.

Indeed, tomorrow is nearly here. As Dr. Bert Gold pointed out (page 2), "We have already begun experiments to try to identify the genes associated with risk, and then try to characterize their function...identifying the genes responsible for this increased risk may lead to new therapies that target the actions of these genes." ♦

Combining Targeted Therapies Delivers Two-for-One Punch

By Maritta Perry Grau



Anil Shanker, Ph.D., Laboratory of Experimental Immunology

Anil Shanker, Ph.D., is a postdoctoral scientist in the Laboratory of Experimental Immunology, Cancer and Inflammation Program, Center for Cancer Research. Recent research that he and his colleagues have done on molecular-targeted therapies has proved particularly significant.

What usually happens is that certain proteins, called TRAIL death receptors, send signals for apoptosis, or cell death. However, because some types of cancer resist TRAIL receptor-targeted therapy, Dr. Shanker and his colleagues focused on combining two targeted therapies: bortezomib and MD5-1.

Bortezomib is used to treat multiple myeloma that triggers cancer cell death by interfering with protein degradation, while MD5-1 is an agonist antibody that can activate a TRAIL death receptor.

The combination of bortezomib and MD5-1 proved superior to either drug alone. For example, mice with lung metastases survived up to four times longer than those treated with just one drug. Furthermore, the combination treatment showed no host toxicity and did not appear to depend on the host immune system, an important observation because patients often have weakened immunity during cancer treatment, Dr. Shanker explained.

“To be able to unveil some scientific principles underlying the complex nature of tumor-host interaction, and to be able to confirm their therapeutic application in cancer treatment using preclinical models have been most gratifying to me,” Dr. Shanker said. ♦

Anil Shanker, Alan D. Brooks, Carlos A. Tristan, John W. Wine, Peter J. Elliott, Hideo Yagita, Kazuyoshi Takeda, Mark J. Smyth, William J. Murphy, Thomas J. Sayers

Treating Metastatic Solid Tumors with Bortezomib and a Tumor Necrosis Factor-related Apoptosis-inducing Ligand Receptor Agonist Antibody

J Natl Cancer Inst 100(9):649-662, 2008

Resistance of tumors to cell death signals poses a complex clinical problem. We explored the therapeutic potential and in vivo toxicity of a combination of bortezomib, a proteasome inhibitor, and MD5-1, a tumor necrosis factor-related apoptosis-inducing ligand (TRAIL) receptor (DR5) agonist monoclonal antibody, in mouse carcinomas. Mice bearing Renca-FLAG or 4T1 tumors were treated with bortezomib and/or MD5-1 and examined for lung metastases or monitored for survival. Toxicity was assessed by histopathology and hematology. Viability and apoptotic signaling in Renca-FLAG and 4T1 cells treated with bortezomib alone or in combination with TRAIL were analyzed. All statistical tests were

two-sided. We found that bortezomib sensitized Renca-FLAG and 4T1 cells to TRAIL-mediated apoptosis. Sensitization involved activation of caspase-8 and caspase-3 but not mitochondrial membrane depolarization, suggesting an amplified signaling of the extrinsic cell death pathway. Treatment with bortezomib and MD5-1 reduced lung metastases in mice carrying Renca and 4T1 tumors and increased median survival of mice bearing Renca-FLAG tumors in the absence of obvious toxicity. We concluded that bortezomib combined with a DR5 agonist monoclonal antibody may be a useful treatment for metastatic solid tumors.

Editor's note: This abstract has been adapted from the full abstract, <http://jnci.oxfordjournals.org/cgi/content/full/100/9/649>.

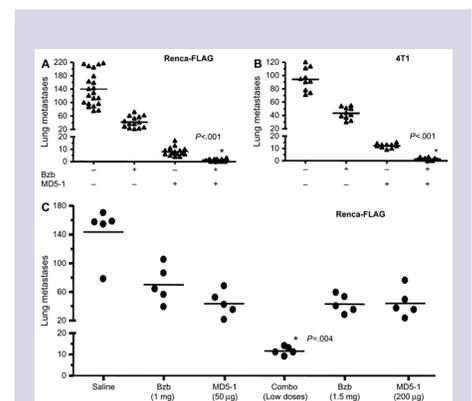


Figure 5. Effect on lung metastases in tumor-bearing mice of combination treatment with bortezomib (Bzb) and death receptor (DR5) agonist antibody vs. MD5-1 treatment with single agent.

The following 24 articles have been selected from 13 of the most prestigious science journals during the past quarter.

Biochemistry

Tsuge H, Nagahama M, Oda M, Iwamoto S, Utsunomiya H, Marquez VE, Katunuma N, Nishizawa M, Sakurai J. Structural basis of actin recognition and arginine ADP-ribosylation by *Clostridium perfringens* L-toxin. *Proc Natl Acad Sci USA* 105(21):7399–7404, 2008.

Cellular Immunology and Immune Regulation

Alderson KL, Zhou Q, Berner V, Wilkins DEC, Weiss JM, Blazar BR, Welniak LA, Wiltrout RH, Redelman D, Murphy WJ. Regulatory and conventional CD4(+) T cells show differential effects correlating with PD-1 and B7-H1 expression after immunotherapy. *J Immunol* 180(5):2981–2988, 2008.

Chen X, Subleski JJ, Kopf H, Howard OM, Mannel DN, Oppenheim JJ. Cutting edge: expression of TNFR2 defines a maximally suppressive subset of mouse CD4+CD25+FoxP3+ T regulatory cells: applicability to tumor-infiltrating T regulatory cells. *J Immunol* 180(10):6467–6471, 2008.

Gerosa F, Baldani-Guerra B, Lyakh LA, Batoni G, Esin S, Winkler-Pickett RT, Consolaro MR, De Marchi M, Giachino D, Robbiano A, Astegiano M, Sambataro A, Kastelein RA, Carra G, Trinchieri G. Differential regulation of interleukin 12 and interleukin 23 production in human dendritic cells. *J Exp Med* 205(6):1447–1461, 2008.

Halwani R, Boyer JD, Yassine-Diab B, Haddad EK, Robinson TM, Kumar S, Parkinson R, Wu L, Sidbu MK, Phillipson-Weiner R, Pavlakis GN, Felber BK, Lewis MG, Shen A, Siliciano RF, Weiner DB, Sekaly RP. Therapeutic vaccination with simian immunodeficiency virus (SIV)-DNA+IL-12 or IL-15 induces distinct CD8 memory subsets in SIV-infected macaques. *J Immunol* 180(12):7969–7979, 2008.

Klatt NR, Villinger F, Bostik P, Gordon SN, Pereira L, Engram JC, Mayne A, Dunham RM, Lawson B, Ratcliffe SJ, Sodora DL, Else J, Reimann K, Staprans SI, Haase AT, Estes JD, Silvestri G, Ansari AA. Availability of activated CD4(+) T cells dictates the level of viremia in naturally SIV-infected sooty mangabeys. *J Clin Invest* 118(6):2039–2049, 2008.

Nam JS, Terabe M, Mamura M, Kang NJ, Chae H, Stuelten C, Kohn E, Tang B, Sabzevari H, Anver MR, Lawrence S, Danielpour D, Lonning S, Berzofsky JA, Wakefield LM. An anti-transforming growth factor beta antibody suppresses metastasis via cooperative effects on multiple cell compartments. *Cancer Res* 68(10):3835–3843, 2008.

Winkler-Pickett R, Young HA, Cherry JM, Diehl J, Wine J, Back T, Bere WE, Mason AT, Ortaldo JR. In vivo regulation of experimental autoimmune encephalomyelitis by NK cells: alteration of primary adaptive responses. *J Immunol* 180(7):4495–4506, 2008.

Cell, Tumor, and Stem Cell Biology

Chen HX, Lee JS, Liang XH, Zhang HP, Zhu T, Zhang Z, Taylor ME, Zahnow C, Feigenbaum L, Rein A, Sukumar S. Hoxb7 inhibits transgenic HER-2/neu-induced mouse mammary tumor onset but promotes progression and lung metastasis. *Cancer Res* 68(10):3637–3644, 2008.

Developmental Biology

O'Brien SJ. The platypus genome unraveled. *Cell* 133(6):953–955, 2008.

DNA: Replication, Repair, and Recombination

Gao L, Hanson MN, Balakrishnan M, Boyer PL, Roques BP, Hughes SH, Kim B, Bambara RA. Apparent defects in processive DNA synthesis, strand transfer, and primer elongation of met-184 mutants of HIV-1 reverse transcriptase derive solely from a dNTP utilization defect. *J Biol Chem* 283(14):9196–9205, 2008.

Experimental Therapeutics, Molecular Targets, and Chemical Biology

Shanker A, Brooks AD, Tristan CA, Wine JW, Elliott PJ, Yagita H, Takeda K, Smyth MJ, Murphy WJ, Sayers TJ. Treating metastatic solid tumors with bortezomib and a tumor necrosis factor-related apoptosis-inducing ligand receptor agonist antibody. *J Natl Cancer Inst* 100(9):649–662, 2008.

Kuznetsov SG, Liu P, Sharan SK. Mouse embryonic stem cell-based functional assay to evaluate mutations in *BRCA2*. *Nat Med* 2007.

HIV

Abbondanzieri EA, Bokinsky G, Rausch JW, Zhang JX, Le Grice SFJ, Zhuang XW. Dynamic binding orientations direct activity of HIV reverse transcriptase. *Nature* 453(7192):184–U2, 2008.

Immunobiology

Ji M, Li H, Suh HC, Klarmann KD, Yokota Y, Keller JR. Id2 intrinsically regulates lymphoid and erythroid development via interaction with different target proteins. *Blood* 2008.

Li M, Gustchina A, Alexandratos J, Wlodawer A, Wunschmann S, Kepley CL, Chapman MD, Pomes A. Crystal structure of a dimerized cockroach allergen Bla g 2 complexed with a monoclonal antibody. *J Biol Chem* 2008.

Suh HC, Leeanansaksiri W, Ji M, Klarmann KD, Renn K, Gooya J, Smith D, McNiece I, Lugthart S, Valk PJ, Delwel R, Keller JR. Id1 immortalizes hematopoietic progenitors in vitro and promotes a myeloproliferative disease in vivo. *Oncogene* 2008.

Immunogenetics

Thomas R, Yamada E, Alter G, Martin MP, Bashirova AA, Norman PJ, Altfeld M, Parham P, Anderson SK, McVicar DW, Carrington M. Novel KIR3DL1 alleles and their expression levels on NK cells: convergent evolution of KIR3DL1 phenotype variation? *J Immunol* 180(10):6743–6750, 2008.

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Inflammation

Sato T, Shimosato T, Alvord WG, Klinman DM. Suppressing oligodeoxynucleotides inhibit silica-induced pulmonary inflammation. *J Immunol* 180(11):7648–7654, 2008.

Mechanisms of Signal Transduction

Choi SH, Czifra G, Kedei N, Lewin NE, Lazar J, Pu YM, Marquez VE, Blumberg PM. Characterization of the interaction of phorbol esters with the C1 domain of MRCK (myotonic dystrophy kinase-related Cdc42 binding kinase) alpha/beta. *J Biol Chem* 283(16):10543–10549, 2008.

Kanwar R, Fortini ME. The big brain aquaporin is required for endosome maturation and notch receptor trafficking. *Cell* 133(5):852–863, 2008.

Lee HS, Nishanian TG, Mood K, Bong YS, Daar IO. EphrinB1 controls cell–cell junctions through the Par polarity complex. *Nat Cell Biol* 2008.

Whittaker GC, Burshtyn DN, Orr SJ, Quigley L, Hodge DL, Pascal V, Zhang W, McVicar DW. Analysis of the linker for activation of T cells (LAT) and the linker for activation of B cells (LAB) in natural killer cells reveals a novel signaling cassette, dual usage in ITAM signaling, and influence on development of the Ly49 repertoire. *Blood* 2008.

Metabolism and Bioenergetics

Qiao LP, Zou CH, Shao P, Schaack J, Johnson PF, Shao JH. Transcriptional regulation of fatty acid Translocase/CD36 expression by CCAAT/Enhancer-binding protein alpha. *J Biol Chem* 283(14):8788–8795, 2008. ♦



Interested in Carpooling?

Carpooling is a great way to save money on gas as well as wear-and-tear on your vehicle. NCI-Frederick has made it easy to find and participate in a carpool through its carpool web site, where you can register or search existing registrations by city or zip code. The program includes a Guaranteed Ride Home program, which participants may use up to four times a year in cases of personal emergency or sudden illness that leave you stranded at work. Over 250 NCI-Frederick and Ft. Detrick personnel have registered to date. Details and registration are found at <http://web.ncifcrf.gov/campus/carpool/default.asp> ♦

Web Sites of Note

By Ashley Hartman

Throughout our newsletter, you'll find web sites listed that provide you with more information than we can put in our articles. You're probably aware that there are many days, weeks, and months devoted to the recognition of particular health care issues. While we can't list them all, we've selected a few that seem most pertinent to NCI-Frederick.

September:

Family Health and Fitness Day, September 27: www.fitnessday.com/family/
Gynecologic Cancer Awareness Month: www.wcn.org/ or www.thegcf.org/
Leukemia & Lymphoma Awareness Month: www.lls.org/hm_lls
Ovarian Cancer Awareness Month: www.ovarian.org/
Prostate Cancer Awareness Month: www.fightprostatecancer.org/site/PageServer

October:

Breast Cancer Awareness Month: www.nbcam.org/
Lupus Awareness Month: www.lupus.org/newsite/index.html

November:

Lung Cancer Awareness Month: www.alcase.org/
Pancreatic Cancer Awareness Month: www.pancan.org/
American Diabetes Month: www.diabetes.org
National Alzheimer's Disease Awareness Month: www.alz.org

December:

World AIDS Day, December 1: www.unaids.org/en/default.asp

Helping the Environment

The Challenge of Reducing Energy Use

By Paul Stokely

With home heating oil and gasoline prices dominating the headlines, it is easy to overlook the high cost of energy and the increasing difficulty of maintaining an energy-efficient workplace. When the workplace is a laboratory, that challenge can be even greater.

Research laboratories can use five to ten times more energy per square foot than office, warehouse, or dining spaces.¹ It's easy to see why: the use of hazardous chemicals, select agents, or radionuclides requires ventilation—on the order of 8 to 12 room exchanges of air per hour.² This frequent exchange of air is important to the safety of employees, but it places a constant load on the ventilation systems. The use of freezers, autoclaves, centrifuges, computers, and other equipment adds to this ventilation load. While improved technology has made cooling and ventilation systems more efficient, many of these newer systems can be installed only in new or completely renovated buildings.

Turn off. Maintain. Eliminate.

Traditionally, insulation is used to help keep buildings airtight, so that heated or cooled air won't escape from inside. This approach does not work as well in laboratories, since the air exchange rate is akin to a huge, intentional air leak. This is why energy conservation in laboratories presents special challenges. Almost all offices and many labs throughout NCI-Frederick have been equipped with motion-sensor lighting. Fume hoods and biosafety cabinets have automatic controls to keep the ventilation balance constant. These automatic measures help conserve power.

What's left? Three things to start:

1. Turn off. Many computers and printers can be turned off at night, and personal computers can be set to boot up quickly and load only those applications you use regularly (contact the Computer Services Helpdesk, 301-846-5115 for help). Since a computer uses around 100



watts, turning it off helps decrease the cooling load in a room.³ Comfort fans and space heaters should never be left on overnight (not only to conserve energy, but also to avoid a fire hazard). Laboratory equipment can be assessed to determine what must run continuously and what can be powered up only when needed.

2. Maintain. Adhering to the maintenance schedule of mechanical systems helps avoid unnecessary energy use. Simple maintenance also helps. Freezers, for example,

operate much more efficiently when defrosted periodically—ice buildup insulates the coils and forces compressors to work that much harder.

3. Eliminate. Unused equipment can be eliminated through decommissioning. Surplus equipment, however, presents a deeper challenge. There is a balance between keeping samples or preparations readily at hand and taking a freezer out of service, requiring material to be kept in a central repository. No one wants to hinder research or dictate how many freezers may be placed in a lab, so the burden is on the investigators and laboratory personnel to take a sober look at what equipment is actually needed and remove the rest. One more small, but not insignificant, thing—print on both sides of paper whenever possible, or use the blank side of scrap paper in your printer. Your paper supply will last twice as long!

¹U.S. Environmental Protection Agency and Department of Energy, *Laboratories for the 21st Century: An Introduction to Low Energy Design*, http://www.labs21century.gov/pdf/lowenergy_508.pdf

²NIH Office of Research Facilities, *NIH Design Policies and Guidelines*, November 2003, <http://orf.od.nih.gov/PoliciesAndGuidelines/DesignPolicy/policy-index.htm>

³Grimm, D., "This man wants to green your lab," *Science Magazine* online, <http://www.sciencemag.org/cgi/content/full/318/5847/39>

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Helping the Environment

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Two New Steam Plants Save \$2 Million Annually

By Paul Stokely

Until this year, NCI-Frederick has relied on the Fort Detrick Army Garrison for steam to heat buildings and to operate laboratory equipment. To save fuel costs and comply with the reduction targets set by the

Department of Health and Human Services (HHS), NCI-Frederick worked with Allegheny Power and Constellation Energy to fund, construct, and operate two new, natural gas steam plants. Completed in April, the plants are located in buildings 359 and 1019. In addition, the agreement paid

for steam line repair and upgrades that increase the efficiency of the system. According to NCI-Frederick Civil Engineer and Project Manager Gary Happel, NCI-Frederick will save an



A view of the steam condensate and boiler water treatment equipment in Building 359.



The pumps used in the condensate and boiler water treatment equipment in Building 359.

estimated 10 to 30 percent in energy and realize a cost savings close to \$2 million per year. NCI-Frederick's work on this project was recognized in May, with an HHS Energy and Water Conservation Award. ♦

SAIC-Frederick Purchasing Department Proves Going "Green" Can Be Easy

By Ashley Hartman

When many people think of going "green," they often think of dramatic changes that will make life more difficult. But here at NCI-Frederick, the Purchasing Department is doing something rather simple: purchasing from "green" vendors. Fourteen of these vendors were on display in June during the Annual "Green" Vendor Show, sponsored by the Purchasing Department.

"In the past when the word 'green' was mentioned, you typically thought of recycling," said Lori Smith, Purchasing Administrator, SAIC-Frederick. "It's much more than that—it's increasing the life cycle of products [and] developing new ways to reuse."

Some of the vendors who attended the show included Corning Life Sciences, Whatman, Weiss Bros. of Hagerstown, Inc., Kimberly-Clark Professional, Thermo-Fisher Scientific, and Advance Business Systems. Some of the items these vendors had on display included the HyperFlask™ Cell Culture Vessel, compostable trash bags, Kimtech Science Sterling Gloves, and DocuWare5.

The cell culture vessel, from Corning Life Sciences, is designed to grow 10 layers of cells instead of one, reducing incubator space and plastic. Compostable trash bags, from Weiss Bros. of Hagerstown, Inc., are made from vegetable and plant material, so they easily decompose. Kimberly-Clark Professional displayed new



Kunio Nagashima, Electron Microscopy Laboratory, Advanced Technology Program, SAIC-Frederick, Inc., and Dr. Mike Dean, Deputy Director of the Cancer and Inflammation Program, Center for Cancer Research, NCI, examine "green" products for laboratory use at the June "Green" Vendor Show held in Building 549.

packaging for Kimtech Science Sterling laboratory gloves that allows for 50 percent more gloves per case and 33 percent less storage space for the glove cases. One of the products Advance Business Systems featured was DocuWare5, computer software that imports documents and organizes them electronically in one location. This system reduces paper use and carbon emissions.

SAIC-Frederick buys products from all the organizations that were



Many scientists, administrators, and support personnel found useful products at the "Green" Vendor Show in June.

represented in the Green Vendor Show. The next show will be in June 2009. ♦

Spring Research Festival

Congratulations to the 2008 Spring Research Festival Poster Winners

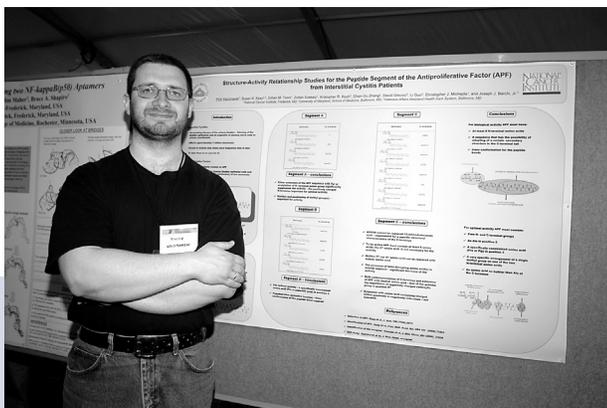
By Ashley Hartman

Listed below are the winners, their laboratories/programs and the poster categories.

Postdoctoral Fellows

First Place:

Piotr Kaczmarek (shown below), Laboratory of Medicinal Chemistry (Structural Biology and Chemistry)



Second Place:

Daniela Andrei, Laboratory of Comparative Carcinogenesis (Structural Biology and Chemistry)

Olaf Ludek, Laboratory of Medicinal Chemistry (Structural Biology and Chemistry)

Third Place:

Michal Legiewicz, RT Biochemistry Section, HIV-DRP (Biochemistry)

Naiche Adler, Cancer and Developmental Biology Laboratory (Developmental and Cell Biology)

Rieko Ajima, Cancer and Developmental Biology Laboratory (Developmental and Cell Biology)

Moon Kang, Laboratory of Cancer Prevention (Drug Development and Delivery)

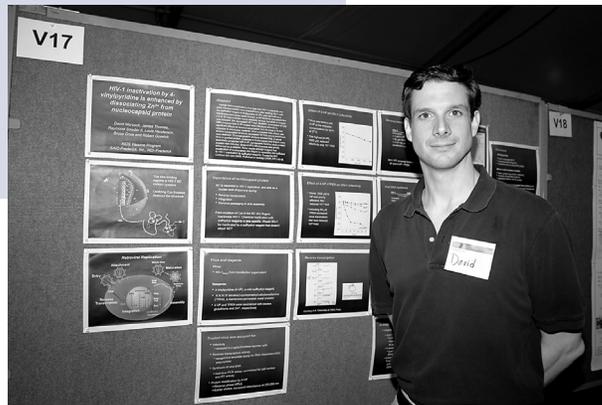
Neeraj Sharma, Laboratory of Experimental Immunology (Molecular Biology)

Qian Li, Laboratory of Medicinal Chemistry (Structural Biology and Chemistry)

Lab Technicians/Technical Support

First Place:

David Morcock (shown below), AIDS and Cancer Virus Program, SAIC-Frederick, Inc. (Virology)



Second Place:

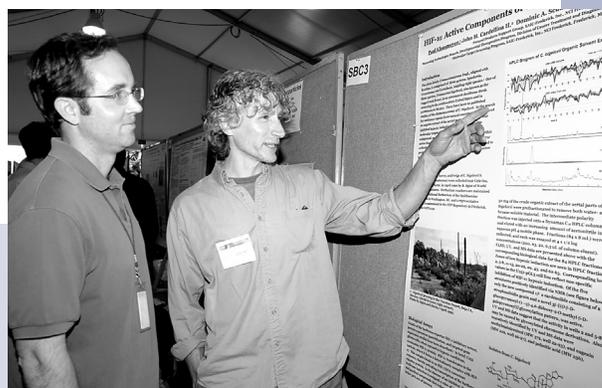
Gerald DeGray, Laboratory of Molecular Retrovirology, SAIC-Frederick, Inc. (Virology)

Third Place:

Wojciech Kasprzak, Basic Research Program, SAIC-Frederick, Inc. (Structural Biology and Chemistry)

Marzena Dyba, Structural Biophysics Laboratory, SAIC-Frederick, Inc. (Structural Biology and Chemistry)

Paul Klausmeyer (below, right), Natural Products Support Group, SAIC-Frederick, Inc. (Structural Biology and Chemistry)



Spring Research Festival

Yuan Li, AIDS and Cancer Virus Program,
SAIC-Frederick, Inc. (Virology)

Lakshman K. Bindu, Protein Chemistry Laboratory,
SAIC-Frederick, Inc. (New Technology)

Karen Worthy, Protein Chemistry Laboratory,
SAIC-Frederick, Inc. (New Technology)

Students

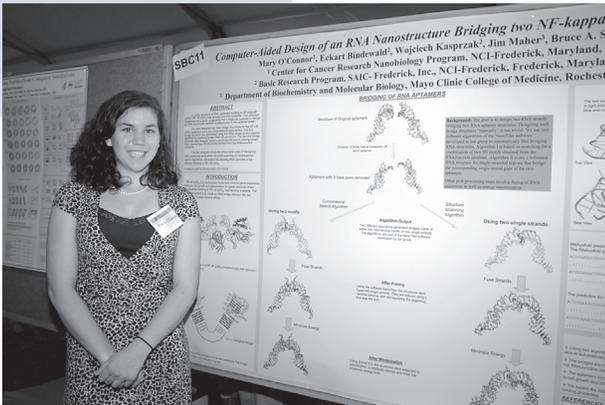
First Place:

Katelyn Burgee, Powell Lab, USAMRIID
(Diagnostics and Therapeutics)

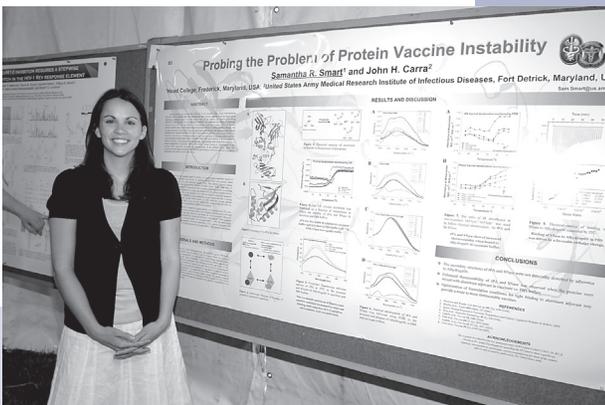
Maura Rose, Molecular Targets Development Program
(Virology)

Second Place:

Mary O'Connor (below), Center for Cancer Research
Nanobiology Program (Structural Biology and Chemistry)



Samantha Smart (below), USAMRIID (Biochemistry)

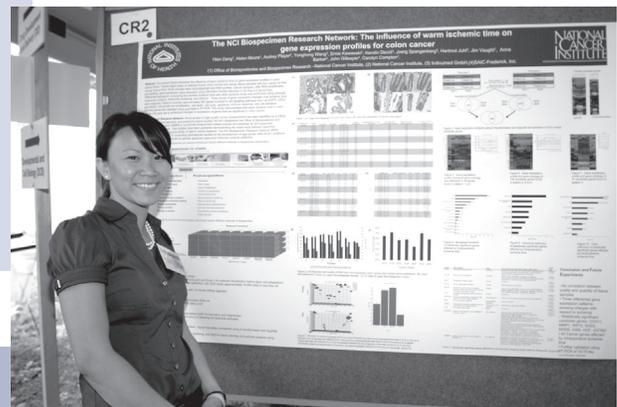


Third Place:

Stephanie A. Rodas (below, left), Integrated Toxicology
Division, USAMRIID (Biodefense)



Hien Dang (below), Office of Biorepositories and
Biospecimen Research at the National Cancer Institute,
Gaithersburg (Clinical Research) ♦



Section 508 Aims to Make Electronic Information Accessible

By Galen Mayfield

Since April 2008, the Department of Health and Human Services (HHS) has been making a concerted effort to comply with Section 508 accessibility requirements. According to Section 508 (29 U.S.C. 794d), passed by Congress in 1998 as part of an amendment to the Rehabilitation Act, “Agencies must give disabled employees and members of the public access to information that is comparable to the access available to others” (<http://www.section508.gov/index.cfm?FuseAction=Content&ID=3>).

HHS has issued a memorandum (<http://www.hhs.gov/web/508/frameworktransltr.html>) about its recent tightening of 508 compliance, as well as a framework that describes its five-year plan (<http://www.hhs.gov/web/508/framework.html>). All agencies within HHS and contractors doing work for those agencies must comply so that information is accessible to as many citizens as possible.

To that end, Computer and Statistical Services (C&SS), Data Management Services, is following the HHS framework for Section 508 compliance. C&SS is ensuring that all information that we help to convey electronically—including, but not limited to, web pages, Microsoft Word documents, Microsoft PowerPoint presentations, Adobe Acrobat files, and desktop applications—is Section 508-compliant.

C&SS, like HHS, has begun by making every new electronic document, presentation, application, and web page Section 508-compliant. C&SS will continue to follow the HHS timeline, which currently calls for complete compliance (of old and

new documents) within five years.

HHS has a very useful checklist to help you make sure that most common types of files are compliant: <http://www.hhs.gov/web/508/testdocuments.html>. This is the checklist C&SS uses, so you can feel confident using it, too. When you work on an electronic file, keep the following points in mind:

- Is the document as easily understandable when read out loud as it is when you view it on your computer screen? Those who are visually impaired can use software that reads the information on their screens out loud. You can even try out JAWS for Windows, the most popular screen reader, <http://www.freedomscientific.com/products/fs/jaws-product-page.asp>.
- Are meaningful and comprehensive descriptions provided for all images, charts, graphs, and other non-textual elements, so that blind users can understand the importance of the image?
- Have you used styles to format headings, bulleted lists, and page numbers, as opposed to manually typing them? The screen reader can understand the relative importance of items by the style you’ve chosen, but not by making a font larger, smaller, bold, or italic. In addition, we often are inconsistent in using fonts. To see how to create styles in MS Word, go to Format/Styles and Formatting, or call Scientific Publications, Graphics and Media at 301-846-1055.
- Do table columns and rows have headings? Is the table readable left to right and top to bottom? If the table breaks across pages, does each page contain its own table heading?
- Are colors used to emphasize different areas of the file? If so, you should make sure that there is an alternative way of understanding the importance of those areas. For

example, if you have used red text to indicate the importance of the information, you must explicitly state that importance in an alternative text tag. In addition, you should be careful when using colors because color-blind people may have difficulty seeing them or distinguishing one color from another. HHS has a series of questions and answers at <http://www.fda.gov/Section508/Printable/FAQprintable.htm> that address the use of colors. Often, it’s the combination or juxtaposition of colors that create problems in reading, HHS says. HHS recommends dark graphics and text against light, plain backgrounds.

We will all become much more knowledgeable about Section 508 in the next few months. C&SS has been working extensively with our clients to ensure compliance. If you have questions about Section 508 or how to make your files compliant, please contact the C&SS 508 Team at 508@css.ncifcrf.gov. ♦

Poster People Profile

Marti Welch: Licensed to Shoot

by Nancy Parrish

Almost anyone who has ever had a portrait done in the Scientific Publications, Graphics & Media (SPGM) studio knows that Marti Welch can get the best out of people in front of a camera. That's probably because she finds meeting people one of the most satisfying parts of her job. "It never really gets boring," she says. "I have a lot of versatility. I'm constantly meeting new people or meeting old friends."

You might think photography is all Ms. Welch does, but she actually wears many hats. As senior illustrator for SPGM, she helps the scientific and administrative staff with poster design, scientific illustration, brochures, and many other graphic arts needs. As a photographer, she divides her time between the studio and the NCI-Frederick campus. "A friend at work once said I'm 'licensed to shoot,'" she says with a laugh. When she's not in the studio, you might see her out and about, shooting assignments for a newsletter, retirement gathering, awards ceremony, student presentation, or special event. She's also a painter, card maker, and scrapbooker, as well as an experienced scuba diver.

Always Wanted to Be a Photographer

Ms. Welch recalls wanting to be a photographer since she first took pictures with her Kodak Brownie for a 4H project in high school. Following graduation, she enlisted in the Navy "with hopes of doing photography." However, there were more photographers than jobs, and she ended up in an office job at Naval Air Station North Island, in San Diego, CA. Following discharge, she returned home to Westminster, MD, to pursue

her bachelor's degree. She interrupted her education for the birth of her first daughter, and shortly thereafter, she was hired as a photographer's assistant. She later started her own photography business, specializing in weddings and portraiture. After eight years, she felt the business was



*Marti Welch, Senior Illustrator and
Photographer, Scientific Publications,
Graphics & Media*

taking too much time away from her family, so she closed the business and eventually came to work at SAIC-Frederick, Inc.

Shifting to a Digital World

About the time she closed her studio, Ms. Welch recognized that the world was starting to shift to computer technology, and she began taking as many classes as she could find in computer graphics. When she started in the Publications Department, as SPGM was called in 1990, there was only one computer, Ms. Welch recalls, and it was a while before everyone had their own desktop.

Computers were making an impact on photography, too, and she admits

she was not eager to switch to digital. "I embraced that as eagerly as the horse that the farmer was trying to drag back into the burning barn. I didn't want to go there!" Today she continues to take classes and workshops in photography and graphic arts. "The industry's always changing, and just to stay abreast of the technology, you've got to run to keep up!" she noted.

Ms. Welch observes that although computers have allowed us to work faster, people's expectations have changed. "Computers and the digital world have given us immediate gratification, and with immediate gratification, we want to be gratified faster and faster. I think that's created more pressure," she said. That's why she enjoys a variety of art forms, such as decorative painting, card-making and scrapbooking. These hobbies relieve some of the pressure and allow her to "get back to that hands-on, manual form of art."

Bitten by the Bug

Her true passion is scuba diving. Ten years ago, on a church mission trip to Puerto Rico, Ms. Welch said, she was "bitten by the bug" to dive. Two years later, she took her first dive trip to Key Largo. Since then, she has dived in Curacao, Grand Cayman Islands, and St. Vincent, and is planning to go to Cozumel in October. With an artist's eye, she appreciates the array of bright colors and seemingly endless variety of shapes and sizes of fish and coral. "If you like to go traveling and look at all of God's wonders above the water level, you haven't seen it all until you've been below the water level," she said. Must be a photographer's heaven. ♦

Outreach and Special Programs

Student Interns Show Their Stuff

By Maritta Perry Grau

Look Out, Alex Trebeck! The second annual Science Jeopardy tournament this past July hosted 22 students in the final rounds. And they might just be ready for Alex.

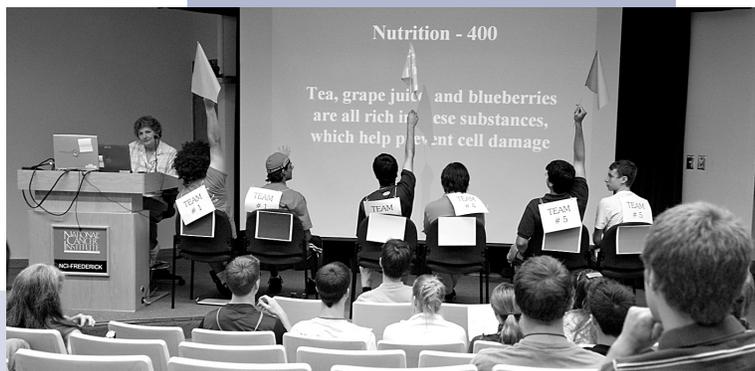
Jeopardy Team One, Rajesh Yalamanchili, a University of Maryland freshman, and Thomas Wolfe, a UMD sophomore, won first place.

Second place was awarded to Team Four, Usama Qadri, a Yale University junior, and Yuhan Gu, a Columbia University freshman.

Team Five, consisting of Umar Qadri, Yale University sophomore, and Chris Ecker, Smithsburg High School senior, won third place.

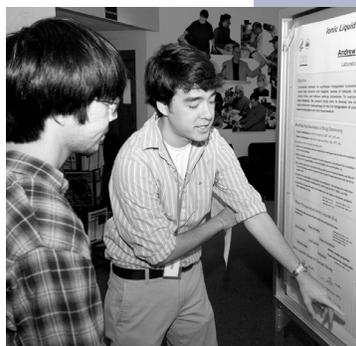
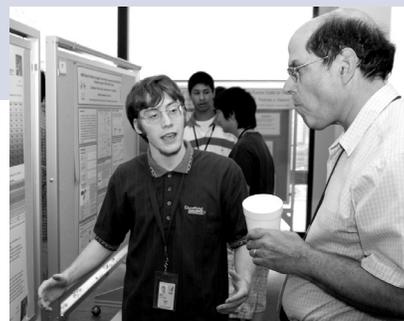
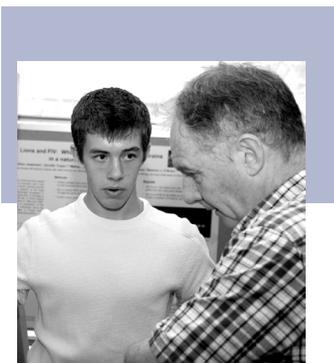


The Scientific Library organized the tournament; in addition, several vendors and contractors contributed prizes for the students: Miltenyi Biotec, Invitrogen, Millipore, eBioscience, PerkinElmer, ThermoScientific, GE Healthcare, NCI, SAIC-Frederick, and WISCO.



Student Poster Day

One of the more popular activities for interns is Student Poster Day. Guided by mentors, the interns designed posters about their research and then presented the posters, discussing their work with local researchers on July 31 at three sessions held in Building 549. Drs. Anu Puri, CCR Nanobiology Program, and Howard Young, Laboratory of Experimental Immunology, were co-chairs of the program.



Outreach and Special Programs

TYCTW Day Features 50 Activities

By Maritta Perry Grau

The 11th annual Take Your Child to Work Day (TYCTW Day) included everything from sensory experiences to exploding lunch bags. More than 260 children, ages 6 to 13, participated in the events sponsored by the National Cancer Institute at Frederick.

Whether inside laboratories, conference rooms, and lobbies, or outside at table stations in the shade, students had fun exploring the tools, both mental and physical, of science-related careers. For example, they dumped ordinary, harmless kitchen ingredients together to create exploding lunch bags; learned how to feed and handle mice; made observations and drew conclusions; and checked DNA through cheek swabs of buccal cells—just some of the 50 activities available.

In the grassy, shady “Hub” area, NCI scientist Russ Hansen’s “hands-on” exhibit was just that, as children let the snakes slither around their bodies. At another Hub activity, the Scientific Library focused on the environment with “Plant a Tree, Clear the Air; Swap a Book, Save a Tree.”



Nearby, at the Diversity table, Systems Analyst Paul Miller helped children write their names in Braille. Also at that station, children explored U.S.

Army manager Michelle Hewitt’s Sensory Box, guessing by touch at what was inside. At a related station, they learned American Sign Language. Elsewhere, students experienced even more hands-on activities, handling fire extinguishers and putting out real



fires (under close adult supervision, of course).

In the Discovery mobile laboratory, Discover Genomics, sponsored by



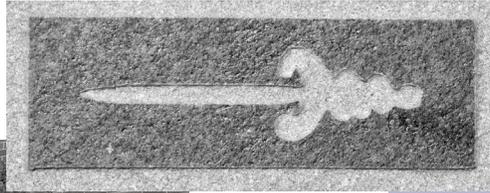
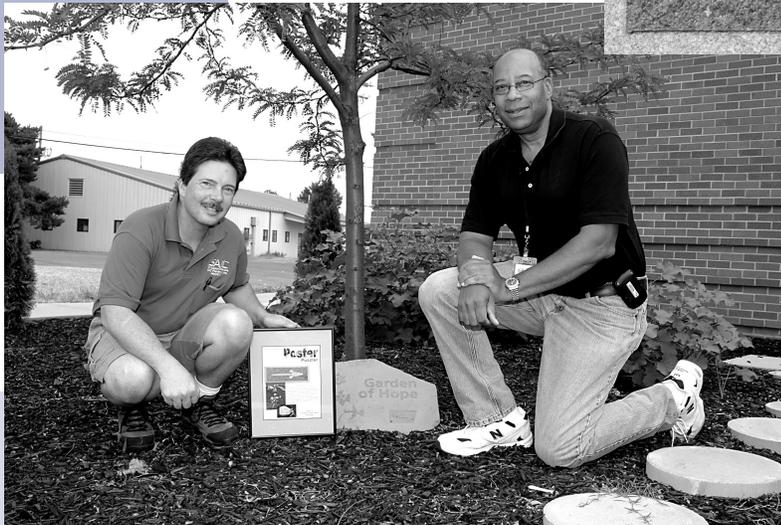
the J Craig Venter Institute, visitors shared simulated “body fluids” to learn how disease spreads in a population. At the “Washington Carver Traveling Trunk” exhibit, children could explore early twentieth-century scientist George Washington Carver’s life through facsimiles of letters and photographs, and perform a simple experiment.



Commenting in a survey about the day’s activities, one parent wrote, “My daughter has always said she wants to become a teacher when she grows up, [but] after TYCTW day...she has changed her mind [and wants] to become a biologist. She loved every program. She looks forward on attending every year. I enjoyed it myself and learned things... Every question was answered and every staff was excellent...I couldn’t ask for more.” ♦



Poster Puzzler Winner



Congratulations to the June 2008 Poster Puzzler winner! Brad Staup, Warehouse Specialist, Property Accountability Department (left), with Paul Miller, Executive Editor of the *Poster*. ♦

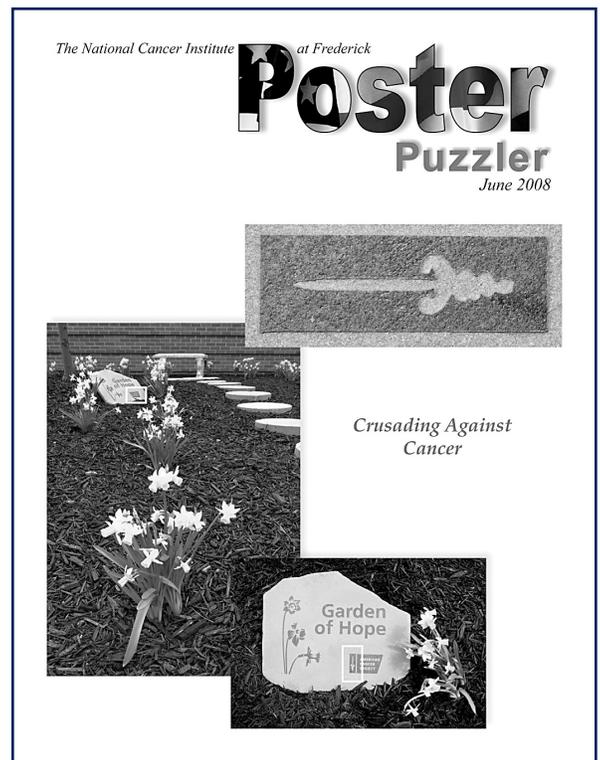
The Poster Puzzler:

Crusading Against Cancer

By Ashley Hartman

June's puzzler may seem tricky, but it can actually be found in the photos on page 13 of the issue! The picture is the symbol for the American Cancer Society, located on the "Garden of Hope" stone that sits in the garden of daffodils outside of the Café entrance to Building 549. The garden was planted in March by the Campus Improvement committee. According to the American Cancer Society (ACS) web site, the sword has been its symbol since 1928, when ACS sponsored a nationwide poster contest. George E. Durant of Brooklyn won the contest and explained that the sword expressed the crusading spirit of the cancer control movement. The twin-serpent caduceus, which forms the handle of the sword, emphasizes the medical and scientific nature of the society's endeavors.

Thanks to all the participants in the June 2008 Poster Puzzler! ♦



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 and an NCI-Frederick tee shirt 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, October 17, 2008**, and the winner will be drawn from all correct answers received by that date.

Good luck and good hunting! ♦



Have Poster – Will Travel!

The *Poster*, NCI-Frederick's newsletter, is beginning to make its way around the world, as readers grab the latest issue to take with them and read on the plane or train. Next time you're at a conference, have someone snap a digital of you with a copy of the *Poster*, and send it to us. You might just be featured in the next newsletter. ♦



Bruce Crise—Poster in hand—stands at the entrance of the Gaslamp Quarter in San Diego as he takes a break from the Biotechnology Industry Organization's 2008 International Convention. SAIC-Frederick was a major sponsor of the meeting in June that attracted 20,108 industry leaders from 48 states and 70 countries.

Janis Stoll: With Passion Comes Excellence

By Nancy Parrish

It follows that if you are passionate about something, you are likely to be excellent at it. Janis Stoll, M.D., is clearly passionate about science and medicine. And without doubt, she excels in both fields.

Excellence in Science

A 1995–1996 Werner H. Kirsten student intern, Dr. Stoll worked

in the Laboratory of Experimental Immunology with laboratory chief John Ortaldo, Ph.D., and mentor Robin Winkler-Pickett. Her passion for research began to blossom in that laboratory, beginning with her relation at isolating natural killer (NK) cells from murine spleens for the first time. “I remember rushing home to celebrate with my family,” she recalls.

Her proudest achievement as an intern, she says, was the conference she gave with Ms. Winkler-Pickett on recent research accomplishments.

The summer after graduating from Governor Thomas Johnson High School, Dr. Stoll entered Washington University of St. Louis, where she majored in biology and minored in music (cello performance). For two summers, she continued working with NK cells in the laboratory of Wayne Yokoyama, M.D., in the Division of Rheumatology at Washington University. For one of those summers she was a Howard Hughes Medical Institute Research Scholar. She also

was field director for the Washington University Emergency Support Team, as well as a research assistant in the Department of Immunology at Virginia Commonwealth University.

Excellence in Medicine

After graduating with honors, Dr. Stoll headed to East Virginia Medical School (EVMS), where she conducted research on childhood obesity with the Virginia Academy of Family Physicians, was a member of the Executive Committee for her class, and was a medical volunteer in a

500-mile bike ride for AIDS. Because of her academic excellence and leadership skills, she was inducted into the Alpha Omega Alpha Honor Medical Society during her fourth year. Her crowning achievement came during graduation from EVMS, when she received the Holmes Gillette Memorial Award, granted to “the medical student that best epitomizes what EVMS stands for.”

During her residency at the University of

Chicago Hospitals in internal medicine and pediatrics, she was awarded travel scholarships and was appointed Internal Medicine and Pediatric Chief Resident, in addition to participating in medical volunteer activities. She was also selected as Intern of the Year, Pediatrics, by graduating pediatric residents.

Today, Dr. Stoll is a fellow in pediatric gastroenterology, hepatology, and nutrition at Children’s Hospital in Boston, an accomplishment she considers her greatest to date. “I have an aspiration to help transition complicated liver and small bowel transplant patients from the pediatric

to the adult clinical world. This is my next big step to making this dream happen,” she said.

“Be inspired by those around you.”

Dr. Stoll believes her internship at NCI-Frederick helped her focus on a career path. “I knew I wanted to be in medicine, but I also really enjoyed doing basic science research experiments in the lab,” she said. This combined interest has carried her to where she is today. “My fellowship in gastroenterology will be the perfect combination of clinical work and lab research and I hope to continue this into my future career.” She also learned to rise above setbacks in the lab, recalling that “you certainly have your experiments that work well and those that fail miserably. You learn from this that perseverance is what makes research challenging yet quite rewarding.”

Also rewarding to Dr. Stoll was her relationship with her mentor, Ms. Winkler-Pickett, who influenced her decision to go to Washington University. “I learned a lot

from Robin...she was not only an inspiration in the lab, but an inspiration in how she approached her life.” Dr. Stoll encourages current interns to “be inspired by those around you and use your mentor as someone to advise you not only about your lab research, but about your dreams.” ♦



Janis Stoll (R) and mentor, Robin Winkler-Pickett, pause for a photo in the Laboratory of Experimental Immunology, in 1996



Dr. Janis Stoll, shown here with husband, Nathan Stitzel, has successfully combined interests in medicine and research.

Play and Learning Station

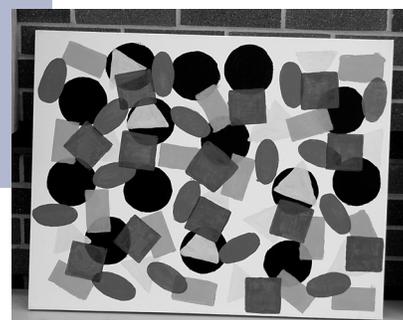
PALS Holds Sixth Annual Art Auction and Bake Sale

By Ashley Hartman

The Play and Learning Center (PALS) held its sixth annual art auction and bake sale on July 15 in Building 549.

Infants, toddlers, two-year-olds, and preschoolers designed pieces of art for the auction. Infants created a field of flowers made out of their handprints. Toddlers used various tools to make textured backgrounds for their art pieces, and created a path out of child-shaped stencils that demonstrated the theme of “A child’s path to discovery.” Two-year-olds had abstract shapes on display and preschoolers designed animal print/safari/jungle patchwork art pieces.

The event raised nearly \$200 and the proceeds will be used to purchase fresh fruit and supplies for PALS. ♦



Learn to Defend Yourself

By Ashley Hartman

Captain Kirby Lee Maybush, Commander of the Judicial Services Division of the Frederick County Sheriff’s Office, returned to NCI-Frederick in June to teach his Personal Self-Defense class that attracted 200 employees last year.

Here are some tips from Captain Maybush:

Don’t go to a second crime scene: Scream or otherwise attract the attention of others to avoid being taken elsewhere, where a crime could be committed.

Use your strong side: If you fall, try to fall on your strong side. Stand at a 45-degree angle, strong side toward your attacker, with weight evenly distributed (so you don’t lose your balance).

If a criminal wants your property, give it up: Throw the property to

the attacker at a 45-degree angle, so the attacker has to lean away to get it. When the attacker picks it up, run.

Run in a zig zag: Change directions as much as you can and try to put things between you and your attacker.

Listen to your gut feeling: It is usually right. If you have a gut feeling about someone, avoid him or her.

Beware of tunnel vision: Open up your range of vision when you are alone. Know there will always be two attackers, and, if approached, be alert to another attacker.



Captain Kirby Lee Maybush, Frederick County Sheriff’s Office, lectures on self-defense.

Follow “Kirby’s 15-second rule”: Attacks are always made from the rear, so check behind you every 15 seconds when you’re alone. If you’re in a mall, check the reflections in the glass storefronts.

Watch for emotional changes: Watch a potential attacker’s eyes, not hands. You will see a threat escalating in the eyes first.

To avoid carjacking: Do not load cargo on the right side of your vehicle because you have to walk around to get in. If you have a small child, put the child in last and take the child out first.

If a police car signals you to pull over: If you don’t feel safe, turn on your dome light and flashers, wave to the police car, and drive to a safe area. When you stop, put both hands on your steering wheel and wait for the officer. Do not open your windows all the way. And remember, you can ask the officer to call the stop in to his supervisor before you comply. ♦

Preserve Life Safety During a Fire Emergency

By Peter Boving

Since 1922, Fire Prevention Week has been observed on the “Sunday through Saturday period in which October 9 falls.” It commemorates the Great Chicago Fire of October 8–10, 1871, that killed more than 250 people, left 100,000 homeless, destroyed more than 17,400 structures, and burned 2,000 acres. Although this fire is well known, it was not the largest or most damaging fire in 1871. The most devastating forest fire in American history was the Peshtigo Fire on October 8, 1871, that killed 1,152 people and burned 1.2 million acres in northeast Wisconsin and western Michigan. A large weather system caused high winds that contributed to the rapid growth of both fires.

Fire Prevention Week

This year’s fire prevention theme is “Prevent Home Fires.” Please stop by the fire prevention display in the lobby of Building 549 during October. We will provide fire prevention information on home fire extinguishers, home smoke alarms, and carbon monoxide detectors.

At NCI-Frederick, we conduct our fire drills throughout October, due to the number of buildings. The average time for the October 2007 evacuation drills, which involved 73 buildings and 1,342 occupants, was 1 minute and 29 seconds: 179 more occupants were evacuated in an average of three seconds less time than in 2006. We hope to improve even more this year.

Fire Safety

The key to life safety during a fire is prompt evacuation from enclosed spaces to the outdoors. Exposure to smoke can cause tissue damage as a result of breathing the hot products of combustion. In the event of a fire,

occupants need to leave a building at the earliest opportunity, well before their breathing and vision are impaired by smoke. Stairways, in general, are



separated from the rest of a building to provide a continuous and safe path from the upper floors to the outdoors. Fire doors self-close and -latch in order to protect this path from hot smoke.

A small trash can fire will fill an office with smoke in about two minutes. It takes variable amounts of time to detect a burning odor, visible smoke, or flame. After a fire is detected, it is best to alert others, close the door while leaving the area, and pull the fire alarm, all within less than a minute. Once outside, follow up with a phone call to 911 to describe the location and type of fire. Unless you are near the location of a fire, you are first notified by the fire alarm system.

Practice Makes Perfect

Evacuation drills are your opportunity to practice the procedure, exit routes, and assembly area you will use during a fire emergency. A reasonable estimate of evacuation time is 30 seconds to get to the exit on your floor, plus 30 seconds per floor

to travel to street level. If it takes you more than three minutes to get outside after a fire alarm is activated, you should reconsider your procedure.

When a fire alarm sounds:

1. **LEAVE PROMPTLY.** Take your keys and ID, and close the door as you leave.
2. **USE THE CLOSEST EXIT.** Close fire doors as you use the closest exit.
3. **GO TO THE DESIGNATED AREA.** Walk to the assembly area and remain there until told it is okay to enter the building or other instructions are given.

Supervisors must ensure that everyone exits the building promptly, account for employees at the assembly area, and immediately notify the Fire Department of missing persons and their last known locations. It is hazardous to individuals, firefighters, and research for anyone to remain inside a building after a fire alarm sounds. Search and rescue efforts will delay firefighter action to extinguish a fire.

For your safety, assembly areas have been designated away from the areas expected to be used first by the Fire Department. In the event of a significant fire, the Fire Department will occupy the entire area and streets around the building. After a fire, you will not be able to immediately return to the building and will likely be relocated as a group to the Building 549 dining room or other shelter area. If asked to do so, please go directly to the designated shelter. We will need to be able to communicate with you and find you.

Fire Emergency Action Plan, Fire Prevention Plan, and assembly areas reference: <http://home.ncifcrf.gov/ehs/ehs.asp?id=7> ♦

Automatic External Defibrillators Expected in the Fall

By Ashley Hartman and Tim Rowe

Automatic external defibrillators (AEDs) are expected to arrive at NCI-Frederick in the fall after being delayed for several months.

The shipment was delayed because of “quality system issues in Physio-Control’s Redmond facility that were identified by Physio-Control, Medtronic, and the U.S. Food and Drug Administration (FDA),” according to a press release from the vendor, Medtronic, Inc.

Congress passed the Cardiac Arrest Survival Act of 2000, recommending that federal agencies implement a Public Access Defibrillator (PAD) program. The Department of Health and Human Services issued guidelines in January 2001 to provide a framework for federal facilities to implement a PAD program. In early 2007, NCI directed Operations and Technical Support staff to develop a PAD



program for NCI-Frederick, according to Tim Rowe, Life Safety and Fire Prevention Officer, Environment, Health, and Safety (EHS).

The Heart Rhythm Foundation estimates that 325,000 people die each year from sudden cardiac arrest (SCA). SCA is defined by the American Heart Association as “the

sudden, abrupt loss of heart function.” Medical professionals say that the key to survival is timely initiation of a “chain of survival,” a series of actions that reduce the mortality associated with SCA. Two of these actions include CPR and early defibrillation. AEDs have become important medical tools as portable lifesaving devices. Trained, non-medical personnel can use these electronic machines to treat a person in cardiac arrest. AED devices use audio and visual prompts to tell rescuers what steps to take, according to the American Heart Association.

The American Heart Association notes that the use of AEDs could save at least 20,000 lives annually, and, with broad deployment of AEDs among trained responders, as many as 50,000 deaths due could be prevented each year.

Nearly 200 NCI-Frederick employees have been trained to use AEDs, and training will resume in late summer/early fall. If you are interested in receiving this training, contact EHS at 301-846-1451. ♦

Rosemont Gate Open for Outbound Traffic

The U.S. Army Garrison (USAG) Provost Marshal’s Office (PMO) announced in July that the Rosemont Gate is now open for outbound traffic only, and only during certain daytime hours as follows:

Monday through Friday:

**11:00 a.m. until 1:00 p.m.
and 2:30 p.m. until 6:00 p.m.**

Note that if you are the first car through the gate, you must drive all the way over and beyond the tire shredders to activate the traffic light. Under no circumstances should you back up over the tire shredders or attempt to enter the Rosemont Gate, as the tire shredders will damage your tires.

As always, the Rosemont Gate will be closed on weekends and all federal holidays, as well as two hours after an early release by USAG. Remember, this gate is for EXITING ONLY. If you have any questions, call the PMO on 301-619-7114.

NCI-Frederick Employee Diversity Team

“Because I could not stop for Death, he kindly stopped for me...”

By Maritta Perry Grau

At NCI-Frederick, we deal with death on a molecular level, exploring the nature of apoptosis, tracking cell lyses, or manipulating cellular components or drug regimens to kill tumor cells but not normal cells.

We don't often focus above the molecular level—what's going on in the whole body, how the mind is coping with the tumor's assaults on its body, when it's cancer 1 and body 0.

That's why the biennial REWARDS program, “Death: Alive and Well in the Twenty-First Century,” was especially significant. The program included the films *The Bucket List* and *Five People You Meet in Heaven*; a book discussion on *Tuesdays with Morrie* by Mitch Albom; and a panel discussion on death and dying.

Panel Discussion Explores Death Issues

Leading the panel discussion was Cheryl Parrott, Director of Communications, NCI-Frederick, who spoke with a delightful sense of humor about the euphemistic language we often use to keep death at bay, such as “passed away,” “taking a dirt nap,” or “lost” rather than “died.” She also talked about going *through* grief, rather than trying to get over it, and challenged the audience to think of mourning and remembrance as a journey we take in tribute to someone who has died.

Andrea Warnick, a registered nurse with a master's in thanatology, helps parents and children learn to be open about impending death. “They know,” she says. “The parent knows the child is dying, the child knows he is dying, [or vice versa]; and each knows the other knows. And yet they don't talk about it.”

Not talking openly can have long-lasting repercussions. Ms. Warnick told the story of a child who had been told only that his father was sick; soon after, the child and his siblings contracted chicken pox. When the father died a week or so after the children became ill, the child was convinced, several months later, not only that he had killed his father but that he would also die soon.

The third speaker, Marlene Lee, volunteers with the Red Cross at Walter Reed Army Hospital, counseling military families whose loved ones died in combat or were gravely injured. The outgrowth of her experience was a book, *Hero in My Pocket*, which helps children come to terms with the death of a military loved one. Ms. Lee has made several copies of *Hero* available through NCI-Frederick and Fort Detrick.

Ms. Lee suggested that when someone dies, you can help by writing the survivor a “memory letter” describing special times you've shared with the one who has died. The letter may give comfort and help the survivor—especially a child—gain insights into the deceased's personality or life.

The final panelist was NCI-Frederick's own Selden Cooper, the Employee Assistance Program representative. Mr. Cooper's studies in philosophy have deeply influenced his approach to counseling. Mr. Cooper, M.S.W., Ed.M., LCSW-C, BCD, CEAP, has spent nearly 40 years in human services, including almost 25 years in employee assistance. His expertise includes life-span development, post-trauma services and crisis intervention, family therapy, and stress management.

Mr. Cooper is familiar with heart attack symptoms, whether classical or atypical. So he was shocked to discover that sometime in the past seven years, he had had a silent heart

attack. He is absolutely sure he did not have any recognizable symptoms. After an angioplasty revealed a 90 percent occlusion and led to bypass surgery and a stent, Mr. Cooper found himself contemplating his brush with death. The experience, he said, has helped him be a better counselor. “In the past, when Mortality knocked, I would have barred the door,” he said. “Now, I let him in and took a good look at him.”

REWARDS Materials Available at Scientific Library

REWARDS (**Read** a book on a selected topic; **Enjoy** talking about the book with others; **Watch** a movie on the topic; **Analyze** the topical points in the movie; **Review** the literature using a topic bibliography; **Discuss** the topic with an expert; **Share** the topical information with a friend) is a twice-yearly program jointly presented by Occupational Health Services, the Employee Diversity Team, and the Scientific Library.

After each program is completed, the book, movie, handouts, and speaker videotape are packaged together for you to borrow from the Scientific Library, Building 549. For more information, please call the Scientific Library at 301-846-1093, contact librarian Ethel Armstrong, or go to <http://www-library.ncifcrf.gov/rewards.aspx>.

By the way, the title of this article was taken from a poem by the nineteenth-century American poet Emily Dickinson. She often wrote her poems to the tune of hymns popular then. The words of “Because I Could Not Stop for Death” can be sung to “Amazing Grace.” ♦

Fitness Challenge

Fitness Challenge Winners Announced for May-July

By Ashley Hartman

Fitness Challenge winners for May were:

Sheryl Ellis

Vaccine Clinical Materials Program (VCMP),
SAIC-Frederick, Inc., for pounds lost

Judith Poiley-Nelson

Biopharmaceutical Development Program,
SAIC-Frederick, for miles walked

Robin Dewar

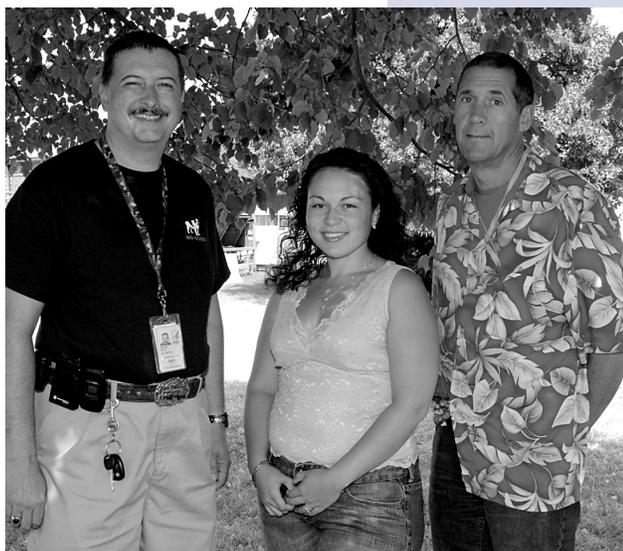
Applied and Developmental Directorate (ADD),
SAIC-Frederick, for miles run

Susie Culler

Wilson Information Services Company, for miles biked

Carolyn Eyler

Contracts and Administration, SAIC-Frederick, for hours
performing other fitness activities



The winners for June were:

James Albert (*not pictured*)

Clinical Research Directorate, SAIC-Frederick, for pounds lost

Steve Stull (*above, left*)

Basic Science Directorate (BSD), SAIC-Frederick, for miles walked

Christina Hernandez (*above, middle*)

Laboratory Animal Sciences Program, SAIC-Frederick, for miles run

William Glaser (*not pictured*)

VCMP, SAIC-Frederick, for miles biked

Greg Warth (*above, right*)

VCMP, SAIC-Frederick, for hours performing other fitness activities



July winners were:

Alison Hazen (*above, right*)

DCR-AIDS Monitoring Lab,
SAIC-Frederick, for pounds lost

Roberta Matthai (*above, left*)

BSD, SAIC-Frederick, for miles walked

John Carter (*above, middle*)

ADD, SAIC-Frederick, for miles run

Tara Grove (*not pictured*)

VCMP, SAIC-Frederick, for miles biked

Cami Bittner (*not pictured*)

Advanced Technology Program, SAIC-Frederick, for
hours performing other fitness activities ♦

Farmers' Market

Farmers' Market Continues through October 28

By Ashley Hartman

Take a walk over to Building 549 on Tuesdays through October 28 and you'll see a variety of fruits, vegetables, baked goods, and gifts during this year's Farmers' Market. The hours are 11 a.m. to 1:30 p.m. (or until sell-out).

Check out gourmet popcorn, cherries, peaches, strawberries, blueberries, tomatoes, corn, honey, baked goods, breads, and more, at the food stands.

If you are looking for plants, Janet's Flowers offers cut flowers, flowering plants, and herbs.

And for the sweet tooth, the Imperial Chocolate Company has hand-made truffles.

Also, look for gift items such as pottery, lotions, jewelry, and soap. ✦



Then and Now

Do You Remember When?

by Ashley Hartman

The photos on the right are of Building 325 in 1976, when a covered walkway connected it to Building 321. The U.S. Army constructed Building 325 in 1944 as part of the Biological Defense Laboratories. It became a part of NCI-Frederick in 1972.

In 1977, the covered walkway was removed and the north and center wings of the building were renovated with new laboratories and small-scale processing areas as a Pilot Plant for the Chemotherapy Fermentation Program.

In 1991 during the “Desert Storm” operation in Kuwait, the Army planned to use Building 325 as an additional manufacturing facility for the anthrax vaccine. The building was renovated, but was never used.

Trailers were placed between Building 321 and 325 in 1994 (Building 320) and 2003 (Building 327). Building 320 now houses Biopharmaceutical Development Program (BDP) offices and the Drug Mechanisms Group, Developmental Therapeutics Program. Building 327 houses the Protein Expression Laboratory, SAIC-Frederick. The south wing of Building 325 was renovated in 1999 for BDP.

Special thanks to Rocky Follin of FME for the photos from 1976 and the information for this article. ♦

1976



2008



Team Spirit

NCI and SAIC Well Matched in First Softball Game

By Nancy Parrish

What looked like a sure victory turned into a squeaker in the first-ever softball game between NCI-Frederick (NCI) and SAIC-Frederick (SAIC) on May 29. By the seventh inning, NCI was down by 7, with the score 13 to 6. In the top of the eighth, NCI came back to tie the score at 13-13. SAIC responded with one more run in the bottom of the eighth. NCI, however, came up dry in the top of the ninth, and the final score was 14-13. David Goldstein was named Most Valuable Player (MVP) for NCI; Colin Celaya was MVP for SAIC.

Dianna Conrad, NCI team captain, said she and SAIC team captain Ginny Whipp originally planned to make the game an annual event, “like the golf tournament.” But, she said, “Ginny and I had a lot of people ask us to plan a fall game...that’s to be determined.” She expressed thanks to Ms. Whipp for organizing the SAIC team; to Craig Reynolds, Associate Director, NCI, for approving the idea; and “especially, thanks to the folks who came out to play.”

Newcomers to the Game

The NCI team included Michael (Kenny) Moore, Ph.D., and Rebecca Russell, Ph.D., both postdoctoral research fellows from England, who have never played softball (or baseball) before. Dr. Moore said he has a “new-found respect for the guys hitting home runs—that fence is miles away.” Dr. Russell enjoyed playing the game, although, she said, “I am a bit confused about why it is called softball because the ball is not soft at all, as my knees and shins discovered!” ♦



Technology Transfer Center

You Can Take It (Materials) with You When You Go

By Kathy Higinbotham and Thomas Stackhouse

When you move to a new job after working in a laboratory at the National Cancer Institute (NCI), you can take NCI materials with you to continue your research. Whether you've worked at NCI for many years or for just a few years, it is likely that your research has involved particular materials, and it may be necessary for you to transfer some of those materials to your new place of employment.

Plan Ahead

When you're planning ahead for a new job, you should consider what materials you will need to continue your research. Some of the research reagents may require that NCI execute a Material Transfer Agreement (MTA) with your new employer, while the transfer of materials that NCI received from others may require that your new employer execute a separate MTA with the original provider.

Once you have discussed continuing your research project using NCI materials with both your current NCI lab chief and with your new employer, please contact the NCI Technology Transfer Center (NCI TTC) for help in determining the appropriate procedures and agreement for transferring materials.

Starting these processes ahead of time may allow the materials to be shipped and waiting for you in your new laboratory!

Begin with a List

An important first step in the process is to list the materials according to the following categories. For any transfer of material, you will need the approval of your lab chief.

NCI materials: These are materials that were created or discovered at NCI. According to NIH policy, these materials are to be transferred to academics and nonprofits via an MTA. NCI TTC will work with your new employer's technology transfer office to put an MTA in place. If you are moving into a commercial/for-profit entity, an appropriate license must be executed through the NIH Office of Technology Transfer. Either way, NCI TTC can help you set up the right contacts.

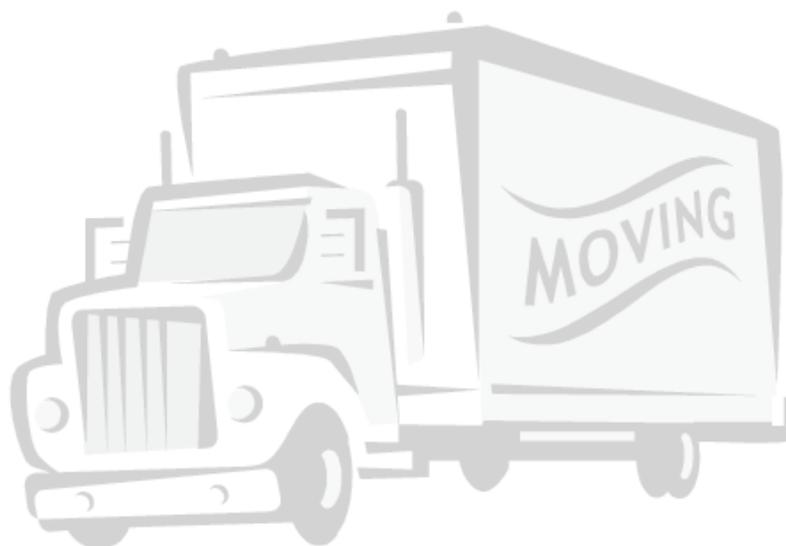
Materials NCI has received from others via MTA: In these cases, our institute may be in physical possession of the materials, but ownership is retained by the original provider. Most MTAs restrict the further distribution of the materials and unmodified derivatives of the materials. Therefore, for NCI to remain compliant with the terms of the MTA, you will must ask the technology transfer office of your

new employer to execute the necessary agreements directly with the original provider. If there is reason for such materials to be shipped directly from NCI rather than from the original provider (e.g., the original provider no longer has the materials), contact NCI TTC for assistance in coordinating the MTA with outside organizations.

Commercially available, unmodified materials: Materials that are commercially available and were purchased by NCI are not typically transferred to third parties by way of MTA. Rather, they are treated as government property (similar to equipment). Transferring these purchased materials should be discussed with your lab chief or your laboratory's administrative officer to determine the appropriate means of sharing government property.

By working with the NCI TTC early in your moving process when materials need to go with you and understanding these basic categories of materials, you can help simplify the transition to your exciting new career.

For more information about transferring materials, or any other issue related to technology transfer, please contact the NCI Technology Transfer Center at (301) 846-5465. ♦



New Faces at NCI-Frederick

NCI-Frederick Welcomes New Staff

Ninety-seven people joined our facility in April, May, and June 2008.

NCI-Frederick welcomes...

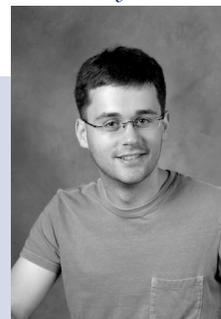
Ogan Abaan
 Kristie Adams
 Raymond Brinas
 Leslie Chinn
 Mohammed Elzarrad
 Sheryl Gough
 Rita Grantner
 Sam Hong
 Jee Hoon Kim
 Yu-He Liang
 Kristin Loomis
 Kenya Lyons
 Kate McGee
 Yifat Miller
 Everette Nelson
 Rachel Novak
 David Rawson

Stephan Sauer
 Wei Shen
 Arvinder Singh
 Jessica Smith
 Cynthia St. Hilaire
 Blake Sweeney
 Yong Guang Tao
 Albert Van Wyk
 Yanping Wang
 Hui Yang
 Jiahui Yang
 Jeongheon Yoon
 Wendy Yuen

Kristie Adams



Blake Sweeney



Data Management Services welcomes...

Eric Brower
 George French ♦

Charles River Laboratories welcomes...

Jessica Maust

Zoila Chestnut



SAIC-Frederick, Inc., welcomes...

Peter Alexander
 Sarah Blevins
 Zoila Chestnut
 Lindsay Church
 Scott Coccodrilli
 Karen Comegys
 Keith Cutsail
 Zuoming Deng
 Nareshbhai Desai
 Yvonne Evrard
 Brian Gebhart
 Karen Gray
 Kevin Groch
 Xiang Guo
 Linda Halton
 Chad Hancock
 Robin Harrington
 Sheldon Hawkins Jr.
 Todd Hiltner
 David Hoekzema
 Gretchen Howlett
 Wangting Hsieh
 Denise Johnson
 Seth Johnson
 Leslie Johnston
 Gregory Korzeniewski
 Maria Nazzarena Labo
 Kimberly Larsen
 Avrum Leeder
 Alexander Levitsky
 Bor Ruei Lin
 Thomas Mann, Jr.

Christopher Manning
 Donna Messersmith Jones
 Michael Minchik
 Nelmarie Miranda Garcia
 Jeffrey Ott
 Amara Pabon
 Omar Pacheco Velez
 Raymond Paggi
 Mathew Philip
 Justina Pongonis
 Carl Probert, Jr.
 Bruce Roberson
 Aaron Rodriguez
 Vadim Sapiro
 Jalpa Shah
 Venus Shahamatdar
 Hidekazu Shirota
 Derrick Smith
 Apurva Srivastava
 Angela Stahl
 Mary Stewart
 Justin Taylor
 Jeannie Tower
 Aaron Uk
 M B Vasudevachari
 Vanessa Wall
 Yanping Wang
 Gregory Warth
 John Weisgerber
 Marion Williams
 Yineng Wu
 Saixia Ying

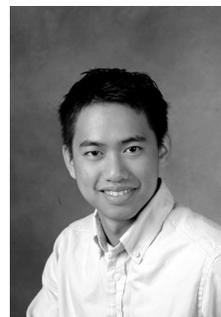
Albert Van Wyk



Wendy Yuen



Sam Hong



Stephen Sauer



SPGM Wins Design and Editorial Awards

By Maritta Perry Grau

Scientific Publications, Graphics & Media recently won a platinum Hermes award for a logo design for the “Center of Excellence in Chromosome Biology,” a gold Hermes award for a “Summer Student Interns” poster design, and a bronze award from Magnum Opus for the Poster “Puzzler” series.

The Hermes Creative Awards is an international competition for publication professionals. It is administered and judged by the Association of Marketing and Communication Professionals. Magnum Opus awards are juried and are offered in conjunction with the Missouri School of Journalism.

The “Puzzler” features a two-page spread with a picture of the last quarter’s winner, a description of that quarter’s puzzler, and a picture of the new Puzzler for you to hunt. The winner receives a framed photograph of the Puzzler and a customized NCI-Frederick tee shirt. The Puzzler usually appears on the center spread of each issue.

SAIC-Frederick Receives Technology Leadership Award

By Maritta Perry Grau

SAIC-Frederick was recognized with a Technology Leadership Award at the Sixth Annual Frederick County Technology Awards program, held by the Tech Council of Maryland. In just the past year, SAIC-Frederick has produced “a dozen new drugs for the National Cancer Institute,” some of which are already in clinical trials, noted Dr. Larry Arthur, president of SAIC-Frederick, in an article about the spring event in the *Frederick News-Post*.

In the same article, Laurie Boyer, director of the Frederick County Economic Development Office, said that SAIC-Frederick is very involved in the Frederick community through the research done here, and that the work ripples out “regionally, nationally and internationally.”

She pointed out the many instances of volunteer work SAIC-Frederick’s employees perform, including participation in the Frederick County Chamber of Commerce, the YMCA, Frederick County Public Schools, the Frederick Marathon, Relay for Life, and the new Frederick County Business Roundtable for Education.

In addition, SAIC-Frederick has once again received the Maryland Work-Life Alliance Workplace Excellence Seal of Approval. The award recognizes organizations that have embraced work-life practices to meet the needs of their workforce, resulting in long-term growth and business success.

Management Training Focuses on Contract Environment

The Management Development Program (MDP), a training initiative for SAIC-Frederick’s managers and supervisors, provides an overview of essential information needed to

successfully manage in our work environment. Participants also learn about specific policies and procedures unique to our organization. This program includes nine comprehensive modules spread over four weeks.

Session 1: Increasing Self-Awareness and Understanding Diversity, October 30, 8:30 a.m.–5:00 p.m.

Session 2: Benefits Overview and Compensation, November 5, 8:30 a.m.–5:00 p.m.

Session 3: Staffing and Coaching for Managers, November 13, 8:30 a.m.–5:00 p.m.

Session 4: Conflict Management and Employee Relations, November 20, 8:30 a.m.–5:00 p.m.

For additional training opportunities and registration details, contact Sukanya Bora, Training and Development Manager, HR, 301-846-1129, or boras@mail.nih.gov ♦

"What Can I Do?" – An Environmental Awareness Campaign

By Robin Meckley

Throughout 2008, the Scientific Library staff is sponsoring an awareness campaign about the environment. The purpose of this campaign is to help all of us learn how, in both small and big ways, we can make our world a better place. The campaign includes speakers, movies, documentaries, demonstrations, and information tables.

The campaign began in March with a public Science in the Cinema program at Hood College, featuring former Vice President Al Gore's Academy Award-winning documentary, *An Inconvenient Truth*. Following the film, a panel of speakers from Hood College discussed the information in the documentary.

In April, we showed a series of episodes from the television series *Living with Ed*. Ed Begley, Jr., is an actor and a dedicated environmentalist. In this reality series from the HGTV network, he is trying to show his wife how they can live an "environmental" life. After 13 years together, Ed likes to believe he's winning his wife Rachele over to his green lifestyle and sometimes odd contraptions. Hang out with Ed as he tinkers with his solar roof, makes toast with a bicycle, and rides in Jay Leno's 1909 Baker electric car.

During May's Spring Research Festival, *An Inconvenient Truth* was shown multiple times on the NCI-Frederick campus. We also hosted a talk by Dr. John Beutler, staff scientist in the Molecular Targets Development Program, about the impact of global warming on the research at NCI-Frederick as it relates to the testing of

organisms from around the world to find viable treatments for disease.

Beginning in June, and running through the end of August, we showed the beautiful and amazing series, *Planet Earth*. This groundbreaking program redefines natural history filmmaking to provide the highest-quality programming in the world. The multi-part series offers never-before-seen animal behaviors, startling views of locations captured by cameras for the first time, and unprecedented high-definition production techniques.

The Scientific Library staff even incorporated the environmental theme into our program for July's Take Your Child to Work Day. The children planted trees and decorated recycled bags in which to transport their trees. Staff members read the Dr. Seuss environmental story, *The Lorax*, to the children, who then had the opportunity to select a "gently used" book to take with them.

Plans for the rest of 2008 include a Science in the Cinema program about weather and climate change, using the movie *The Day After Tomorrow*, and hosting a speaker who will address the weather issues presented in the movie. We also plan to show the documentary from the National Geographic Society titled *Six Degrees Could Change the World*. In *Six Degrees Could Change the World*, narrator Alec Baldwin illustrates the consequences of rising temperatures on Earth, one poignant degree at a time.

Remember that any DVDs or books that the Library purchases in support of this year-long environmental awareness campaign will be available for check out. Visit the Library's web site for more information about the campaign: <http://www-library.ncifcrf.gov/default.aspx>. ♦

You can help the environment. Just follow these suggestions from the Scientific Library staff:

1. Use the blank sides of printed sheets for notes and internal printing.
2. Use rechargeable batteries in equipment.
3. Use personal coffee mugs, cups, etc., instead of disposables.
4. Turn off lights when offices are unoccupied.
5. Open window blinds during the winter and close them during the summer.
6. Distribute documents, such as office memos and article requests, electronically.
7. Set computers and printers to "sleep" mode or to power down when not in use.
8. Place recycling bins in public and work areas to encourage people to recycle.
9. Place live plants in rooms to act as air filters.
10. Encourage staff with purchasing power to complete "Green" purchasing training.
11. Reuse everything that can be reused (i.e., photocopier boxes, small boxes, bubble envelopes).
12. Use coffee filters made from recycled paper.
13. Use recycled paper products in printers and photocopiers.
14. Recycle books by participating in the Scientific Library's Annual Book Swap.
15. Volunteer to serve on the NCI-Frederick Campus Improvement Committee.

What's the Story?

By Ken Michaels

Matt Rix, one of the speakers at a meeting I recently attended, talked about the pernicious problem of misinterpretation and how we frequently cause ourselves trouble by jumping to erroneous assumptions and conclusions. He illustrated his point by recalling an experience he had while waiting for a flight in a very small airport somewhere in Nebraska. A lilting female voice came over the public address system with the request, "Will the man who dropped his pants at the ticket counter a few minutes ago please return to the counter?" The airport was small enough that reactions from all over—gasps and snickers—were clearly audible. About a minute later, the same voice, more cross than lilting this time, announced, "The pants were **on a hanger!**"

Mr. Rix's presentation was titled "Facts Tell, But Stories Sell" and emphasized the power of stories to paint memorable visual pictures.

Storytelling is as old as language itself as a means of education and entertainment in virtually all cultures. Historical icons such as Mark Twain taught, and amused, by effectively using stories to illustrate the points they wanted to make. Many of the best public speakers are those who

recognize the value of really ramming a point home with a story that will stick with the listener, and breathe some life into the facts of the matter. Following are Mr. Rix's eight elements of an effective story:

1. Premise: What's going on?
2. Problem or conflict: Difficulties that beg to be resolved are intrinsically captivating.
3. Payoff: The resolution can be funny, enlightening, or both.

The first three elements are simple and are present in virtually every story of any interest. It's the final five elements that transform a good story into a great one.

4. People: Good storytellers talk about real people. They say "Angela" rather than "a friend."
5. Places: Real places help the listener form a picture. "I was headed south on I-270" creates a more vivid mental image than "I was out on the highway."

6. Dialog: First-person accounts with real dialogue are highly effective.
7. Educational: A really good story has a message that teaches something.
8. Entertaining: Things that give us a chuckle tend to be more memorable than things that don't.

Storytelling is not joke-telling. A great story doesn't have to be funny, and in fact some of the greatest stories of all aren't the least bit funny, but they're memorable all the same.

A phrase often heard in an oral presentation is, "If you remember only one thing from this presentation, remember that ..." Try this: The next time you give an oral presentation, identify that "most important" item and see if you can't come up with a story that illustrates it and makes it really memorable. It may be the key to a highly effective conclusion, and your audience will appreciate and remember it. ♦

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web.ncifcrf.gov/ThePoster

42407

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

www.criver.com

Data Management Services

css.ncifcrf.gov/services

National Cancer Institute at Frederick

www.training.nih.gov/postdoctoral

SAIC-Frederick, Inc.

saic.ncifcrf.gov
www.saic.com

Wilson Information Services Corporation

www-library.ncifcrf.gov

Upcoming Events and Dates to Note

October 13: Columbus Day; NCI-Frederick closed

October 17: Poster Puzzler entries due

Farmers' Market: Every Tuesday through October 28, 11:00 a.m.–1:30 p.m.
(or sell-out)

November 11: Veteran's Day; NCI-Frederick closed

November 27: Thanksgiving Day; NCI-Frederick closed

December 25: Christmas Day; NCI-Frederick closed

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Reminder: When you have a change in staff, be sure to change the information in the NCI-Frederick database. You can do this online by logging on to 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 poster@ncifcrf.gov.

The National Cancer Institute at Frederick

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