



THE NATIONAL CANCER INSTITUTE AT FREDERICK

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Robert H. Wiltrot, Ph.D., Recognized for Career Accomplishments

By Nancy Parrish

Robert Wiltrot, Ph.D., received the Career Achievement Award on January 6, 2009, from the Department of Health and Human Services (HHS) at a ceremony in Washington, D.C. Tevy Troy, then HHS Deputy Secretary, presented the award.

A leader and innovator in cancer research for 30 years, Dr. Wiltrot currently is director of the Center for Cancer Research (CCR) and its Scientific Director for Basic Research. He is also senior scientist for the Laboratory of Experimental Immunology (LEI) in the Cancer and Inflammation Program.

Dr. Wiltrot has worked continuously in the Intramural Research Program (IRP) at the National Cancer Institute (NCI) since 1979. He became an independent researcher in cytokine-mediated immunology in the early 1980s, a tenured principal investigator (PI) in 1986, and today continues to head the Experimental Therapeutics Section, LEI, in Frederick, MD. In 1999, he was appointed a Deputy Director of NCI's Division of Basic Sciences (DBS).

When DBS merged with the Division of Clinical Sciences to form the CCR in 2001, Dr. Wiltrot became a Deputy Director of that newly integrated organization, and the following year he was named Associate Director of NCI-Frederick. In 2004 he became CCR's Principal Deputy Director for Science, and a year later, was appointed CCR's

Director and its Scientific Director for Basic Research. Working with the Scientific Director for Clinical Research, Lee Helman, M.D., he has striven to meet the daunting challenge of improving the quality and impact of CCR despite the recent difficult budget climate.



Robert Wiltrot, Ph.D., is an innovative leader of the Center for Cancer Research (CCR) and head of a successful cancer research laboratory.

Dr. Wiltrot provides leadership in developing ways to appropriately recognize, review, and reward team science in the intramural program. He has encouraged CCR scientists to pursue high-risk, high-

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Career Achievement Award

reward research that might be challenging for industry or academia to undertake. To broaden the expertise applied to such complex projects, he created standards for evaluating PIs for their team research efforts, enabling them to take on the more difficult projects while receiving appropriate credit for their efforts.

Dr. Wilttrout currently heads the Center of Excellence in Immunology, one of the five Centers of Excellence within the NCI intramural program, and also facilitated the Chromosome Biology Center of Excellence and development of

the Cancer and Inflammation Program.

To spur innovation and the sharing of new technologies, he worked with Dr. Helman and CCR Deputy Director L. Michelle Bennett, Ph.D., to establish the Angiogenesis, Tissue Procurement and Processing, and Clinical Molecular Profiling cores, which offer centralized expertise and assistance in these respective areas. Dr. Wilttrout has fostered mergers and realignments of several labs and branches to create new programs in several key areas. He is a member of numerous scientific and administrative committees within NCI and NIH, and creator of the CCR Advisory Board (CAB).

Dr. Wilttrout's emphasis on technology transfer was exemplified by his creation of partnerships between CCR, the University of Maryland, and the National Institute of Standards and Technology to develop and apply novel technologies to detect and fight cancer. He also created a technology support office within CCR and directed the creation of a multi-compound "umbrella Cooperative Research and Development Agreement (CRADA)" for CCR, allowing PIs rapid access to industry's pharmaceutical pipeline compounds for research and clinical development. This CRADA template represents a new paradigm for collaborations in drug development.

In addition to managing CCR, Dr. Wilttrout is actively engaged in his own research in preclinical immunotherapeutic approaches for translation to clinical trials in cancer patients. He has published more than 190 scientific articles, holds five patents and one provisional patent, and has received six Federal Technology Transfer Awards and two NIH Merit Awards since 2000. ■

National Cancer Institute News

Dr. Niederhuber Continues as NCI Director During Early Days of Obama Administration

By Ashley Hartman

John Niederhuber, M.D., has been asked by the Obama Administration to continue as Director of the National Cancer Institute, pending a decision on a permanent appointment from the White House and the Department of Health and Human Services, reports Richard Folkers, Director of the Office of Media Relations, Office of the Director. Whether the appointment will be Dr. Niederhuber is unknown at this time.

In his weekly staff-wide e-mail message January 16, Dr. Niederhuber said he will remain director "to provide stability and continuity while the new administration develops its vision and plans for the NIH and the National Cancer Program."

"At NCI, the new administration will give us a fresh chance to shine, to continue our vital basic, clinical, translational, population, and behavioral research, even as we strive to implement new ideas and develop new lifesaving technologies and therapies," Dr. Niederhuber said in his e-mail.

Dr. Niederhuber became Director of NCI in September 2006. He has spent his 40-year career studying cancer and its treatments, according to an article on the NCI web site (<http://www.cancer.gov/aboutnci/directorscorner/jen>). ■



John Niederhuber, M.D.

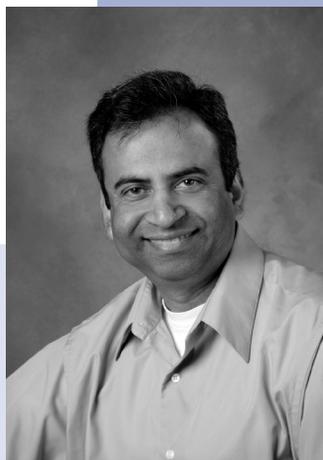
CCR Recognizes Two NCI-Frederick Scientists with Awards

By Maritta Perry Grau

Two NCI-Frederick scientists are among more than 150 that the Center for Cancer Research (CCR) recently honored with awards for their scientific advances in 2008.



Eric Freed, Ph.D., HIV Drug Resistance Program, CCR, was recognized for scientific advances in the study of HIV/AIDS, work summarized in “Real-Time Visualization of HIV-1 Gag Trafficking in Infected Macrophages” (Gousset K, Ablan SD, Coren LV, Ono A, Soheilian F, et al.; *PLoS Pathog* 4[3]:e1000015. doi:10.1371/journal.ppat.1000015. e-published March 7, 2008).



Shyam Sharan, Ph.D., Mouse Cancer Genetics Program, CCR, was selected for advances in genetics, research noted in “Functional Evaluation of Human BRCA2 Variants” (Kuznetsov SG, Liu P, and Sharan SK; *Nat Med* 14(8):875–81, 2008).

How Does This Recognition Help?

Dr. Eric Freed commented that the CCR recognition not only rewards his laboratory colleagues for their hard work, but also demonstrates that “the excellent work that they are doing is recognized by the NCI and by the HIV research community. I am also pleased that the study that received this recognition was funded not only by CCR itself but also by the Intramural AIDS Targeted Antiviral Program (IATAP) of the NIH, which has had a large, positive impact on our research effort.”

What Does the Future Hold?

Looking ahead, Dr. Freed said that he hopes in the next few years “to contribute significant advances to our understanding of how retroviruses in general, and HIV-1 in particular, utilize host cell machinery to promote their replication within the infected cell. My hope is that this increased understanding of virus–host interactions will lead to novel therapies for treating HIV-infected patients.”

Dr. Shyam Sharan hopes to apply his study to other genes. “Our work on the BRCA2 functional assay serves as a proof of principle. We have now developed a similar assay to study BRCA1 variants...It will be a challenge to understand if these variants disrupt the gene function or are neutral variants. In the coming years, we hope to develop similar functional assays for other genes, whose function can be assessed in embryonic stem cells.”

His group also wants to determine “why mutations in *BRCA1* or *BRCA2* result predominantly in breast and ovarian cancers...Based on the hypothesis that the answer lies in the genes that cooperate with *BRCA1* and *BRCA2* in the tumorigenesis process, we have initiated a screen to identify genes that interact with *BRCA1* or *BRCA2*.”

What Are “Scientific Advances”?

CCR defines a scientific advance as a new discovery or technique, or other research tool that represents a significant advance in a particular field (e.g., immunology) in either basic or clinical/translational research.

According to Sue Fox, Office of Communications, CCR, NCI-Frederick, more than 150 advances were submitted; those selected as most significant will be promoted through such venues as NCI press releases, inclusion in NCI’s *Annual Plan and Budget Proposal*, or publication in the *NCI Cancer Bulletin* and *CCR Connections*. ■

Mouse Models Prove Useful in Wide Range of Research

By Dr. Rick Bedigian and Dianna Conrad

Over the past century, scientists from a wide range of biomedical fields have gravitated to the mouse as the main mammalian model system for genetic research because of its close genetic and physiological similarities to humans, as well as the ease with which its genome can be manipulated and analyzed.

Model for Biomedical Research

Mice are excellent tools for probing the immune, endocrine, nervous, cardiovascular, skeletal and other complex physiological systems that mammals share, since mice naturally develop diseases, such as cancer, atherosclerosis, hypertension, diabetes, osteoporosis, and glaucoma, that affect these systems. Adding to the mouse's appeal as a model for biomedical research is the animal's relatively low cost of maintenance and its ability to reproduce every nine weeks.

Models for Innovative Genetic Technologies

In recent decades, researchers have used innovative genetic technologies to produce custom-made mouse models for many diseases and to study targeted genes. One of the most important advances has been creating transgenic mice, in which a new gene is inserted into the animal's germline, enabling study of genes whose functions are unknown. Genetic modification can also produce animals that are susceptible to certain compounds or stresses for testing in biomedical research.

Even more powerful approaches, dependent on homologous recombination, have permitted the development of tools to "knock out" genes, replacing existing genes with altered versions. Also known as knockout mice, these mice help researchers learn more about the function of a sequenced gene. Researchers draw inferences from

the difference between the knockout organism and normal individuals.

Another technique is to "knock in" genes, altering a mouse gene in its natural location. To preserve these extremely valuable strains of mice and to assist in propagating strains with poor reproduction, researchers use state-of-the-art reproductive technologies, including cryopreservation of embryos, in vitro fertilization, and ovary transplantation.

Rapid advances in the technology that allows us to manipulate the mouse genome and disrupt the function of specific genes (targeted mutations) have led to the production of numerous genetically engineered mouse (GEM) models of human cancer and other diseases. With emerging technologies, more sophisticated GEM models are being developed that provide invaluable information about the functional roles of specific genes in tumor initiation, disease progression, and metastasis.

LASP Mouse Models

The Laboratory Animal Sciences Program (LASP) at NCI-Frederick supports NCI investigators through the Transgenic Mouse Model (TMM) Laboratory, the Cryopreservation and Assisted Reproduction Core, and the Mouse Models of Human Cancers (MMHCC) Repository.

The TMM Core assists investigators in studying in-vivo gene function through transgenic and knockout mice. Since the program's inception in 1997, more than 1,500 new transgenic and gene-targeted mouse models have been developed, using a variety of technologies for overexpressing, knocking out/in, and knocking down gene expression. Although most of the models have been developed for NCI investigators, the TMM program has also developed GEMs for investigators in other NIH institutes.

The technology that allows us to selectively alter mammalian genomes has led to a rapidly expanding production of transgenic, targeted mutant, and chemically mutagenized rodents, necessitating the development of new

concepts in animal colony management.

Cryopreservation, another area of LASP's services, entails freezing a living organism, such as cells, embryos, or tissue, at extremely low temperatures, so that it can later be revived and returned to the living state for study or reproduction. The process helps preserve the cells and tissue of higher organisms that LASP specializes in. Strain cryopreservation is also a cost-effective means to maintain rarely used strains and to ensure against the loss of a colony from disease or other factors.

Recent achievements in cryopreserving mouse oocytes, ovaries, and sperm have increased the efficiency of embryo banking. The assisted reproduction component of this program contributes to significant time and cost savings by providing rapid colony expansion through in-vitro fertilization and rederivation of certain mouse strains to overcome infertility problems or to rescue valuable animals.

To expedite the progress of biomedical research, it is critical that these mice not only be protected against accidental loss but that they be distributed as efficiently and economically as possible to the scientific community. Genetically engineered strains of mice that develop tumors similar to human cancer have become the models of choice in the cancer research community, significantly aiding our understanding of the genetic mechanisms and cellular defects underlying neoplastic disease, and serving as crucial tools in the discovery of novel drugs for the prevention or treatment of cancer. The MMHCC Repository facilitates the distribution of these models developed at other institutions and cryopreserves them as protection from accidental loss. The models maintained in this repository are distributed at no cost to the scientific community worldwide.

Note: Some of the information concerning the background on the mouse as a model organism was taken from <http://www.genome.gov/10005834>. ■

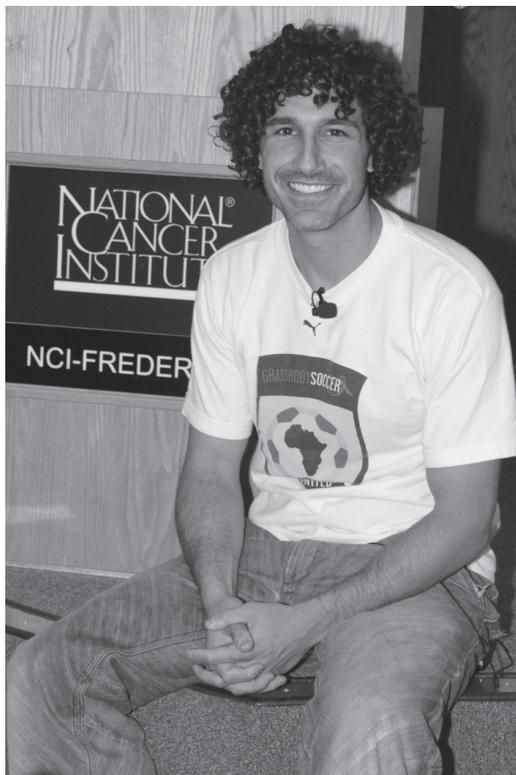


Grassroot Soccer: How Soccer Can Change the World

By Ashley Hartman

How can one person make an impact on the HIV/AIDS epidemic in sub-Saharan Africa when 22 million people there were living with the diseases in 2007 (The World Bank, <http://www.worldbank.org/>)? That's what Ethan Zohn thought before becoming a contestant and winning one million dollars on the television show *Survivor* in 2002. While Mr. Zohn admits *Survivor* was a challenge in his life, "the real challenge came when I had to answer—what do you do when you win a million bucks?"

Prior to *Survivor*, Mr. Zohn played and coached soccer in the U.S. and in Zimbabwe. Beneath the surface of life in Zimbabwe hid poverty, overcrowded hospitals, and an infestation of HIV/AIDS. The disease hit close to home when one of Mr. Zohn's teammates contracted the disease and died. But it wasn't until an experience on *Survivor* that Mr. Zohn decided he wanted to use his money and fame to have an impact on the epidemic. He visited a Kenyan village and played a game with some village children. He later found out from a nurse



Ethan Zohn used his money and fame to start Grassroot Soccer, Inc., an organization that teaches African children about HIV/AIDS prevention.

that all the children were HIV-positive.

After winning *Survivor*, Mr. Zohn collaborated with his friend Tommy

Clark, a physician, and others to start Grassroot Soccer, Inc., a nonprofit organization that trains professional soccer players to teach African children about HIV/AIDS prevention. Since 2002, the organization has spread to 15 African countries and 270,000 children, according to Mr. Zohn. Because soccer is very popular in Africa, the professional soccer players become heroes to the children they teach, Mr. Zohn said.

The curriculum consists of 20 hours of soccer-related exercises geared toward prevention, transmission, avoidance, assertiveness, peer pressure, gender roles, and other themes, according to www.grassrootsoccer.org. Students graduate after completing 15–16 hours. "We want to change [the kids'] behaviors so they can live healthy lives," Mr. Zohn said. The curriculum targets 11–14-year-olds because they are most likely HIV-negative.

Mr. Zohn spoke at NCI-Frederick in November during a break from Grassroot Soccer United Dribble 2008, an initiative to raise awareness about HIV/AIDS by dribbling soccer balls from Boston, Massachusetts, to Washington, D.C. The dribble covered 550 miles in 100 days to end in Washington, D.C., on December 1 for World AIDS day. ■



Passion for Cancer Research Leads to Better Understanding of Enzymes

By Maritta Perry Grau

Qiou Wei, MD, PhD, has a great passion for cancer research; in a recent e-mail exchange, he noted that “the field of redox proteins and their role in cancer biology are still not well understood. It is full of opportunities and challenges.”

Because of that passion and dedication to his work, Dr. Wei and his colleagues recently identified a novel redox enzyme, Sulfiredoxin (Srx), as a critical downstream target of oncogenic AP-1 activation and TAM67 (a dominant negative form of AP-1) inhibition. They investigated the functional significance of Srx expression in regulating cellular redox homeostasis, cell survival, growth, and proliferation, showing that “Srx is required for tumor promoter-induced transformation of mouse epithelial cells and is frequently upregulated in human tumors, including basal cell carcinoma, melanoma, and other solid tumors,” he said.

Dr. Wei’s research may help scientists better understand the physiological and

pathological role of Srx in normal cell and cancer cell development. Elucidation of the molecular mechanisms that modify Srx expression and function may provide novel strategies for cancer prevention and treatment.

Dr. Wei is generous in sharing credit for the group’s discoveries. “I am very happy that working together we can make some progress. However, this research would not have been possible without the previous findings led by Dr. Nancy Colburn and Dr. Matt Young, including elegant studies of TAM67 in mouse skin carcinogenesis (*PNAS* 96:9827) and recent identification of AP-1 targets (*Cancer Res* 67:2430).”

Dr. Wei is a CRTA fellow working under Dr. Colburn in the Gene Regulation Section, Laboratory of Cancer Prevention, Center for Cancer Research. The research was published in the *Proceedings of the National Academy of Sciences USA* (105[50]:19738–19743, 2008). ■



Dr. Qiou Wei, Laboratory of Cancer Prevention, CCR

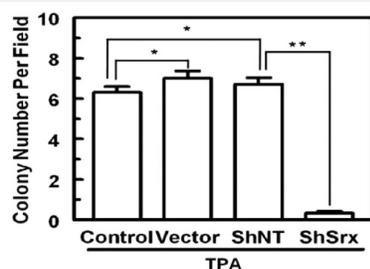
Sulfiredoxin is an AP-1 target gene that is required for transformation and shows elevated expression in human skin malignancies

Qiou Wei, Hong Jiang, Connie P. Matthews, and Nancy H. Colburn
Proc Natl Acad Sci USA 105(50):19738–19743, 2008

Previous studies have shown that a dominant negative form of c-Jun (TAM67) suppresses mouse skin carcinogenesis both *in vitro* and *in vivo*. The current study identifies Sulfiredoxin (Srx) as a unique target of activator protein-1 (AP-1) activation and TAM67 inhibition. Manipulation of Srx levels by ShRNA or overexpression demonstrates that Srx is critical for redox homeostasis through reducing hyperoxidized peroxiredoxins. In JB6 cells, knockdown of Srx abolishes tumor promoter-induced transformation and enhances cell sensitivity to oxidative stress.

Knockdown of Srx also impairs c-Jun phosphorylation, implicating a role for Srx in the feedback regulation of AP-1 activity. Screening of patient tissues by tissue microarray reveals elevated Srx

expression in several types of human skin cancers. Our study indicates that Srx is a functionally significant target of AP-1 blockade that may have value in cancer prevention or treatment.



Tumor promoter-induced transformation was greatly inhibited in Srx knockdown cells. You can find the full figure (four panels) at <http://www.pnas.org/content/105/50/19738.full.pdf+html>.

The following 21 articles have been selected from 20 of the most prestigious science journals during the past quarter.

Apoptosis

Wang X, Rao RP, Kosakowska-Cholody T, Masood MA, Southon E, Zhang H, Berthet C, Nagashima K, Veenstra TK, Tessarollo L, Acharya U, Acharya JK. Mitochondrial degeneration and not apoptosis is the primary cause of embryonic lethality in ceramide transfer protein mutant mice. *J Cell Biol* 184(1):143–158, 2009.

Cell Growth and Development

Li W, Kotoshiba S, Berthet C, Hilton MB, Kaldis P. Rb/Cdk2/Cdk4 triple mutant mice elicit an alternative mechanism for regulation of the G1/S transition. *Proc Natl Acad Sci USA* 106(2):486–491, 2009.

Cell, Tumor and Stem Cell Biology

Waalkes MP, Liu J, Germolee DR, Tremppus CS, Cannon RE, Tokar EJ, Tennant RW, Ward JM, Diwan BA. Arsenic exposure in utero exacerbates skin cancer response in adulthood with contemporaneous distortion of tumor stem cell dynamics. *Cancer Res* 68(20):8278–8285, 2008.

Cellular Immunology and Immune Regulation

Adoro S, Erman B, Sarafova SD, Van Laethem F, Park JH, Feigenbaum L, Singer A. Targeting CD4 co-receptor expression to postselection thymocytes reveals that CD4/CD8 lineage choice is neither error-prone nor stochastic. *J Immunol* 181(10):6975–6983, 2008.

DNA Dynamics and Chromosome Structure

Daniel JA, Pellegrini M, Lee JH, Paull TT, Feigenbaum L, Nussenzweig A. Multiple autophosphorylation sites are dispensable for murine ATM activation in vivo. *J Cell Biol* 183(5):777–783, 2008.

Zhang NG, Kuznetsov SG, Sharan SK, Li KY, Rao PH, Pati D. A handcuff model for the cohesin complex. *J Cell Biol* 183(6):1019–1031, 2008.

Enzyme Catalysis and Regulation

Ehteshami M, Scarth BJ, Tchesnokov EP, Dash C, Le Grice SFJ, Hallenberger S, Jochmans D, Gotte M. Mutations M184V and Y115F in HIV-1 reverse transcriptase discriminate against “nucleotide-competing

reverse transcriptase inhibitors.” *J Biol Chem* 283(44):29904–29911, 2008.

Rausch JW, Chelico L, Goodman MF, Le Grice SF. Dissecting APOBEC3G substrate specificity by nucleoside analog interference. *J Biol Chem* 2009.

Epidemiology and Prevention

Kao WHL, Klag MJ, Meoni LA, Reich D, Berthier-Schaad Y, Li M, Coresh J, Patterson N, Tandon A, Powe NR, Fink NE, Sadler JH, Weir MR, Abboud HE, Adler SG, Divers J, Iyengar SK, Freedman BI, Kimmel PL, Knowler WC, Kohn OF, Kramp K, Leehey DJ, Nicholas SB, Pahl MV, Schelling JR, Sedor JR, Thornley-Brown D, Winkler CA, Smith MW, Parekh RS. MYH9 is associated with nondiabetic end-stage renal disease in African Americans. *Nat Genet* 40(10):1185–1192, 2008.

Kopp JB, Smith MW, Nelson GW, Johnson RC, Freedman BI, Bowden DW, Oleksyk T, McKenzie LM, Kajiyama H, Ahuja TS, Berns JS, Briggs W, Cho ME, Dart RA, Kimmel PL, Korbet SM, Michel DM, Mokrzycki MH, Schelling JR, Simon E, Trachtman H, Vlahov D, Winkler CA. MYH9 is a major-effect risk gene for focal segmental glomerulosclerosis. *Nat Genet* 40(10):1175–1184, 2008.

Experimental Therapeutics Molecular Targets, and Chemical Biology

Cao L, Yu Y, Darko I, Currier D, Mayeenuddin LH, Wan X, Khanna C, Helman LJ. Addiction to elevated insulin-like growth factor I receptor and initial modulation of the AKT pathway define the responsiveness of rhabdomyosarcoma to the targeting antibody. *Cancer Res* 68(19):8039–8048, 2008.

Philip S, Swaminathan S, Kuznetsov SG, Kanugula S, Biswas K, Chang S, Loktionova NA, Haines DC, Kaldis P, Pegg AE, Sharant SK. Degradation of BRCA2 in alkyltransferase-mediated DNA repair and its clinical implications. *Cancer Res* 68(23):9973–9981, 2008.

Wei Q, Jiang H, Matthews CP, Colburn NH. Sulfiredoxin is an AP-1 target gene that is required for transformation and shows elevated expression in human skin malignancies. *Proc Natl Acad Sci USA* 105(50):19738–19743, 2008.

Hematopoiesis

Naetar N, Korbei B, Kozlov S, Kerenyi MA, Dorner D, Kral R, Gotic I, Fuchs P, Cohen TV, Bittner R, Stewart CL, Foissner R. Loss of nucleoplasmic LAP2 alpha-lamin A complexes causes erythroid and epidermal progenitor hyperproliferation. *Nat Cell Biol* 10(11):1341–U213, 2008.

HIV

Catalfamo M, Di Mascio M, Hu Z, Srinivasula S, Thaker V, Adelsberger J, Rupert A, Baseler M, Tagaya Y, Roby G, Rehm C, Follmann D, Lane HC. HIV infection-associated immune activation occurs by two distinct pathways that differentially affect CD4 and CD8 T cells. *Proc Natl Acad Sci USA* 105(50):19851–19856, 2008.

Immunobiology

Chen WZ, Zhu ZY, Feng Y, Dimitrov DS. Human domain antibodies to conserved sterically restricted regions on gp120 as exceptionally potent cross-reactive HIV-1 neutralizers. *Proc Natl Acad Sci USA* 105(44):17121–17126, 2008.

Host Defense

Thio CL, Astemborski J, Thomas R, Mosbrugger T, Witt MD, Goedert JJ, Hoots K, Winkler C, Thomas DL, Carrington M. Interaction between RANTES promoter variant and CCR5 Delta 32 favors recovery from hepatitis B. *J Immunol* 181(11):7944–7947, 2008.

Oncogenes

Kitagaki J, Yang Y, Saavedra JE, Colburn NH, Keefer LK, Perantoni AO. Nitric oxide prodrug JS-K inhibits ubiquitin E1 and kills tumor cells retaining wild-type p53. *Oncogene* 2008.

Liu Y, Borchert GL, Surazynski A, Phang JM. Proline oxidase, a p53-induced gene, targets COX-2/PGE(2) signaling to induce apoptosis and inhibit tumor growth in colorectal cancers. *Oncogene* 27(53):6729–6737, 2008.

Protein Function, Structure, and Folding

Pletnev S, Shcherbo D, Chudakov DM, Pletneva N, Merzlyak EM, Wlodawer A, Dauter Z, Pletnev V. A crystallographic study of bright far-red fluorescent protein mKate reveals pH-induced cis-trans isomerization of the chromophore. *J Biol Chem* 283(43):28980–28987, 2008.

Signal Transduction

Reilly KM, Van Dyke T. It takes a (dys-functional) village to raise a tumor. *Cell* 135(3):408–410, 2008. ■

ATPI Business Development: Building Bridges and Partnerships

By David Hoekzema and Thomas Stackhouse, Ph.D.

The Advanced Technology Partnerships Initiative (ATPI) seeks to accelerate promising discoveries, technologies, therapeutics, and diagnostics to cancer and AIDS patients through translational research partnerships between NCI, academia, and industry.

The ATPI Business Development Office (BDO) has 20 to 30 partnership opportunities under consideration at any given time. Assessing and prioritizing opportunities for their strategic, technical, operational, and administrative fit is a challenging task requiring teamwork among SAIC-Frederick and NCI staff to effectively match internal interests with the outside partners.

Last year, a Strategic Business Development Team (SBDT) was formed that comprises science, technology, business administration, and intellectual property directors and managers from the Advanced Technology Program, the Biopharmaceutical Development Program, and NCI. This cross-functional team focuses on specific issues related to partnership opportunities; its primary goal is to accelerate creative decision making, leading to positive partnership interactions.

Bridging Internal and External Interests

Developing partnership opportunities is a “bridge-building” exercise requiring an understanding of both internal and

external interests. This understanding is achieved through both “in-reach” and “outreach” activities.

In-reach activities improve our understanding of NCI-investigator- and program-driven research and development (R&D) priorities, and partnership/collaboration interests. Examples include holding meetings between the ATPI BDO and NCI’s Translational Research Working Group to discuss research project priorities and collaboration opportunities, and coordinating with NCI Centers of Excellence administrators to bring

presentations to firms we learn about through these and other sources.

The SAIC-Frederick ATPI members of SBBDT correlate information gathered from their in-reach and outreach activities, enabling the team to identify opportunities to bridge the internal and external interests and prioritize partnership projects.

NCI-Frederick TTC Plays Key Role

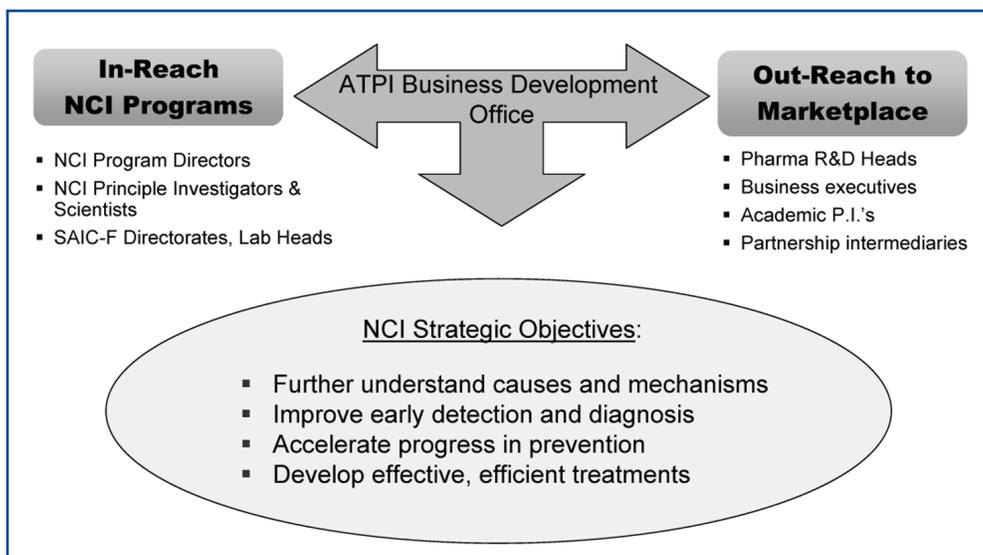
The NCI-Frederick Technology Transfer Center (NCI-Frederick TTC) is a member of the SBBDT. Its staff provides insight about NCI’s intellectual property (IP) portfolio, associated research efforts, and federal policies and statutes affecting partnerships. They negotiate

the final terms that govern the NCI/ATPI partnerships. Their expertise complements the technology, contract, and bridge-building knowledge brought by other NCI and SAIC-Frederick team members.

By building bridges between the internal and external parties, the ATPI SBBDT helps create partnerships that accelerate the progression of new concepts to clinical development. NCI’s ATPI team concept

provides a unique forum for exploring creative avenues to accelerate the development of new technologies. These efforts help achieve NCI’s mission of translating scientific discoveries into improved treatments for cancer and AIDS patients.

For more information about ATPI business development activities, contact David Hoekzema, Director of Strategic Business Development, 301-846-5895 or hoekzemadt@mail.nih.gov. ■



The ATPI Business Development Office bridges the interests of internal and external parties to create successful research partnerships.

together external partners and NCI key opinion leaders in particular areas of cancer R&D.

Outreach activities raise awareness of the ATPI in the broader marketplace and identify opportunities for partnerships. Examples include generating leads by participating in BIO International partnering conferences; developing business-to-business contacts through market research; and giving “roadshow”

Student Intern Semifinalist at Intel Science Talent Search

By Nancy Parrish

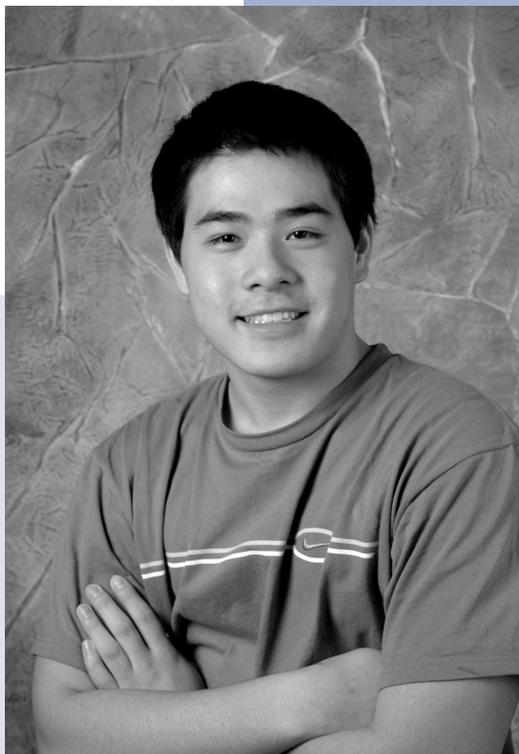
In an announcement in January 2009, Marvin Gee, a Werner H. Kirsten student intern, was named a semifinalist in the Intel Science Talent Search. A senior at Tuscarora High School, Mr. Gee works in the Laboratory of Comparative Carcinogenesis with mentor Yih-Horng Shiao, Ph.D., and sponsor Lucy Anderson, Ph.D.

Mr. Gee's award-winning research, "Ribozyme-like non-coding RNAs spanning upstream and transcribed regions of the 45S rRNA," focused on identifying and characterizing two RNA species that are sensitive to cation-induced self-cleavage and may play key roles in regulating the transcription of the rRNA gene. This regulation, according to Mr. Gee, is essential for cell proliferation, which is a key feature of uncontrolled cancer cell growth.

No Stranger to Competitions

Mr. Gee has participated in the Frederick County Science and Engineering Fair since he was in fourth grade. "I have won a handful of placement ribbons in the mathematics, physics, and biochemistry categories," he said. Other awards include a Mu Alpha Theta award (for mathematics); an International Society for Optical Engineering Award; and a National Institutes of Standards and Technology Sigma Xi Chapter Award. He was also named a Maryland Distinguished Scholar Semifinalist and an AP Scholar with Honor.

Out of more than 1,600 applicants, only 300 reached semifinalist in the Intel competition. To enter, Mr. Gee said he had to submit a research report of no more than 20 pages. "The application required up to 3 recommendations and multiple personal questions dealing with scientific attitude, curiosity, work habits,



Marvin Gee, an intern in the Laboratory of Comparative Carcinogenesis, wants to pursue a career in research or medicine.

inventiveness, and initiative. There were several other short-answer questions dealing with the idea of the project, who helped, and where the research was done," he said.

Continuing a Family Tradition

You might say Mr. Gee's interest in the NCI-Frederick internship program runs in the family. He is the youngest of six, and all have been Werner H. Kirsten student interns. "Four of my siblings have won the Grand Prize at the Frederick County Science Fair and have gone on to the Intel Fair, so it is quite the tradition," he noted.

He views his internship as a springboard to greater achievements. "I knew, as a budding scientist, that I would love to come to NCI-Frederick to help contribute to the scientific world," he said.

Sound Advice for New Interns

Clearly, Mr. Gee has gained great technical experience in his internship. Just as important is the wisdom he has acquired. He advises incoming interns not to get discouraged when they hit a "rough patch" in their work. "Your results may not seem to lead in any direction, but you should always keep moving forward with new ideas, regardless of the adversity." He also urges other students to work hard: "Rewards don't come easily. Working hard is important, even if it means staying at work until 7 p.m. after a long day of school to finish an experiment on a Friday night, coming on no-school days, or going that extra mile by doing more work at home."

This work ethic has clearly served him well. Mr. Gee hopes to study biology at Massachusetts Institute of Technology, Harvard University, or the California Institute of Technology. ■

NCI-Frederick Recycling at a Glance

By Paul Stokely

We all work with so many different items, pieces of equipment, and materials, it's often hard to know how to do the right thing, such as recycle, and to find the time to do it!

Like all federal agencies, the Department of Health and Human Services has set ambitious goals to reduce energy and water usage, decrease waste output, and increase recycling rates. Fort Detrick and NCI-Frederick staffs collect most of the recyclables here, but some materials are recycled only when you take the time to collect and drop them off yourself.

This short guide is excerpted from NCI-Frederick's recycling web page (see box at right), which is an excellent resource for anyone with questions on what, how, and where to recycle. The U.S. Army Garrison (USAG) at Fort Detrick has set up drop-off points for cardboard, wood pallets, certain plastics, metals, glass, and newspaper, and it's very easy to find them on the NCI-Frederick recycling web page. (Remember: government-owned equipment can be transferred, recycled, or disposed of only through the NCI-Frederick Property Accountability office, <http://web.ncifcrf.gov/campus/als/property.asp>).

Office paper is the most visibly recycled material here and is collected by the USAG. Sensitive or private documents should be shredded before recycling.

Cardboard should be flattened and placed in any one of 20 cardboard dumpsters set up around base.

Plastic bottles (#1, #2, and #4 only) will be collected by the USAG if sorted,

bagged, taped shut, and left next to paper recycling locations. Look for the number on the bottom or side of the bottle. Make sure the bottles are clean of any food or chemical residue. NEVER empty hazardous chemicals in your sink just to recycle the bottle!



Recycling bins are located throughout campus. Check the map on the NCI-Frederick recycling web page for the nearest location.

Wood pallets and crates should be cleared of plastic cushioning, wraps, and insulation, and dropped off at Building 393. Only wood, not pressboard or chipboard, can be accepted for grinding and reuse as mulch.

Sealed, unused chemicals, such as solvents, salts, acids, and bases, that have a stable shelf life will be collected by contacting NCI-Frederick's Waste Management Office (see box at right).

Metal items, such as foil, shelving, and furniture, can be dropped off at one of seven scrap metal bins. Bags of metal foil that contain no trash or other items will be collected by the USAG if bagged, taped shut, and placed next to paper recycling spots. To recycle metal gas cylinders, even when empty, contact Waste Management for a pick-up.

Ink and toner cartridges from printers and copiers may be dropped off in specially marked boxes found in most

offices. When these boxes are nearly full, contact Waste Management for pick-up.

Pipette tip boxes will be picked up by calling Waste Management.

Lead "pigs," blankets, and foil used in radioisotope research will be collected and surveyed for contamination prior to recycling or disposal. Contact Waste Management for pick-up.

It Doesn't Stop There

Other items you may recycle include: lead acid batteries from computer backup systems and shop equipment; X-ray and photographic film and paper; metal gas cylinders and lecture bottles; fluorescent light tubes; Tyvek suits; and shrink wrap. Contact Waste Management for details and to arrange for pick-up. ■

Where to Find Help for Recycling

For questions or comments about NCI-Frederick or other environmental efforts, or to arrange for a pick-up of recyclable materials, contact:

NCI-Frederick Waste Management Office
301-846-5718
chemwaste@ncifcrf.gov

For information about recyclable material, or to find a drop-off point, visit:

NCI-Frederick recycling web page:
<http://home.ncifcrf.gov/ehs/recycling/>

Earth Day at NCI-Frederick

The Environmental office of the Fort Detrick USAG will again host several Earth Day events at the H.O.T. Dome on Thursday, April 9, from 10:00 a.m. until 2:00 p.m. Stop by and see what NCI-Frederick and Fort Detrick are doing to use less water and electricity, reduce trash, and encourage recycling! ■

Programs Provide Insights into Many Cultures

By Maritta Perry Grau

The programs sponsored by the NCI-Frederick Employee Diversity Team (EDT) offer many opportunities to explore and appreciate the people that make up the diverse population at NCI-Frederick and our world at large.

From the “Your Name in Braille” hands-on exhibit that demonstrates how the sight-impaired communicate via the written word to the varied seminars and lectures on a variety of topics we sponsor, EDT has striven to provide entertaining and informative programs to the NCI-Frederick community.



Paul Miller, Diversity chairperson, shows how a Braille machine translates letters into raised, touch-readable dots.

Upcoming Events and Commemorations

March is Women’s History Month. Visit the display case (across from the entrance to the Scientific Library in Building 549) to see pictures of the women who were honored by their peers as women who are making history right now.

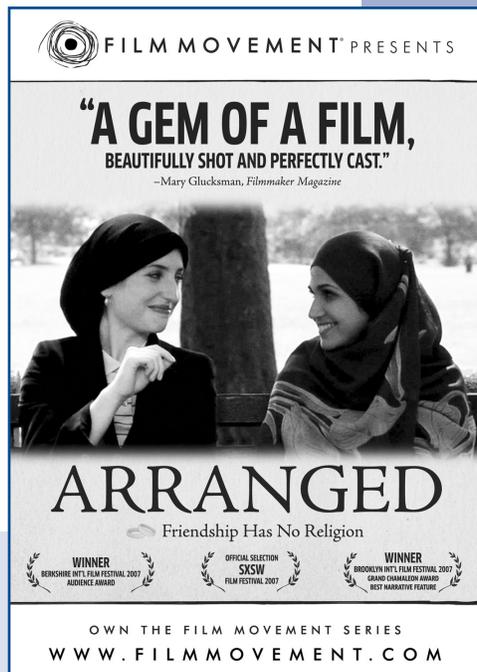
For April and May, check out our web site and watch your e-mail for upcoming events. Look for activities to commemorate the holocaust. Visit the Diversity booth April 29 and 30 at the Spring Research Festival for your 2009 *Diversity Cookbook*. In the meantime, you can send your recipe for inclusion in the new cookbook to <http://diversity.ncifcrf.gov/cookbook/submit.aspx>.

Diversity Café Movies

One of the more popular programs the EDT sponsors is the Diversity Café movie series. The Diversity Café movie series gives you the chance to explore life through different eyes. Movies that depict life in other cultures or that highlight women, African American, Hispanic, Irish-American, or some other special emphasis group are selected for the series. The movies are shown in their entirety on two consecutive days beginning at noon. Since one of the selection criteria is that the running time for the movie cannot be longer than two hours, you can spread the viewing of a movie over a two-day period, with each viewing session lasting about one hour. If you happen to miss an hour or just want to watch the movie uninterrupted, about a week after the last viewing, you can check the movies out of the Scientific Library at no charge.

Films are free and open to the NCI-Frederick community and are shown in Building 549 in the Auditorium, Executive Board Room, or Conference Room A or B. To find out what film is being shown each month, as well as a complete listing of EDT movies go to <http://diversity.ncifcrf.gov/movies.asp>.

In March, EDT is showing *Arranged* as part of our Diversity Café movie series. *Arranged* is about two Brooklyn schoolteachers—one Jewish and one Muslim—who find a commonality in that both their families are setting up arranged marriages for them. Will they go along with these marriages? Watch the movie in its entirety on March 25 and 26 at 12:00.



New Research Documents Existence of African-American Doctors in 1860s

Interested in American Civil War history? You might want to go online to the Frederick *News-Post* to read “Civil War Author Researches Early African-American Doctors,” which originally was published February 1, 2009 (http://www.fredericknewspost.com/sections/archives/display_detail.htm?StoryID=92829). The article describes Dr. Robert Slawson’s discovery that 22 African-Americans from the Civil War era, 21 men and one woman, had attended medical school.

Dr. Slawson, a docent with Frederick’s National Civil War Medicine Museum, had done extensive research on the subject, and all authorities had said that there were no African-American doctors during the Civil War. When a Baltimore lecturer provided him with sources showing that at least eight had been doctors, he continued his research, found documentation for several others, and published a book in 2006, *Prologue to Change: African Americans in Medicine in the Civil War Era*. ■

Poster Puzzler Winner



Congratulations to the December 2008 Poster Puzzler winner! Jim Stull, a technical operations manager in the Laboratory Animal Sciences Program (right), with Paul Miller, Executive Editor of the *Poster*. ■

The Poster Puzzler:

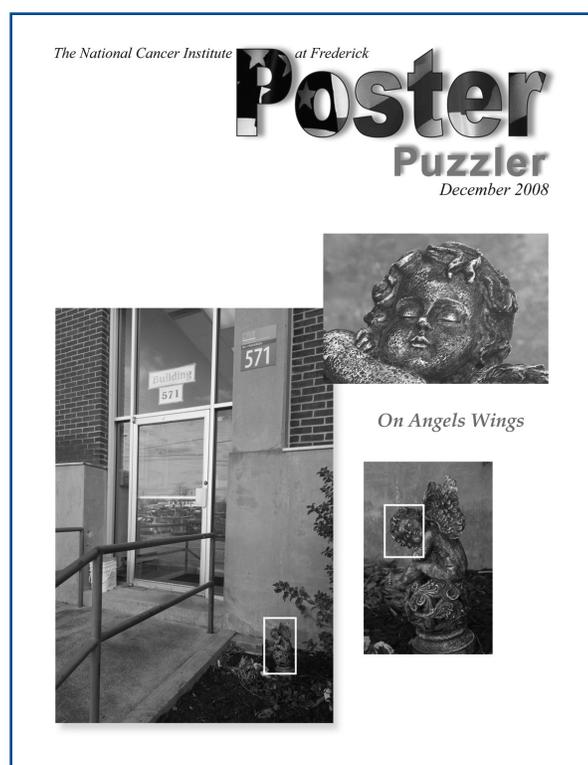
On Angels' Wings

By Ashley Hartman

The idea for the Poster Puzzler for December 2008 came from the photo directly below on page 15. It is the angel that sits in the memorial garden outside Building 571 that was established as a tribute to Ruth McCrossin, LASP, a colleague and friend who passed away in March 2007. “Ruth is a gift from God. The enthusiasm and dedication that she showed made her a valuable asset not only to Building 571, but also to the Laboratory Animal Sciences Program,” said Yongzhen “Amy” Qian, Research Associate III, LASP. Building 571 employees wanted to create the memorial garden to honor Ms. McCrossin’s memory.

Thanks to all the participants in the December 2008 Poster Puzzler!

Special thanks to Cindy Staup and Yongzhen “Amy” Qian, LASP, for providing the information for this article. ■



Poster Puzzler

What is it? Where is it?

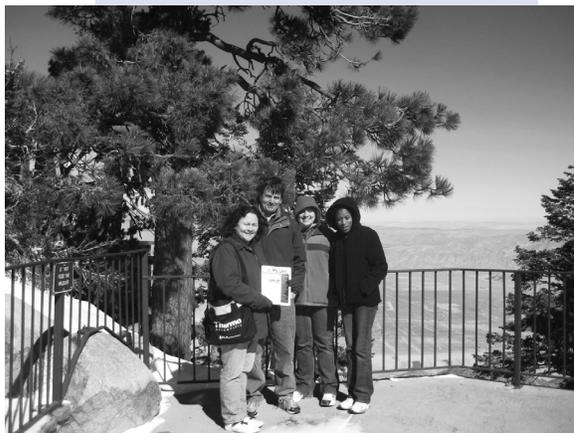
Your challenge, should you decide to accept it, is to correctly identify the item and its location from the picture to the right. Clue: It's somewhere at Fort Detrick/NCI-Frederick. Win a framed photograph of the Poster Puzzler and an NCI-Frederick tee shirt by e-mailing your guess, along with your name, 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, April 17, 2009**, 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. ■



Claudia Stewart (above, right) and Todd Hartley (above, left) of the Laboratory of Molecular Technology brought a copy of the Poster with them when they attended LabAutomation2009, the world's leading conference and exhibition on emerging laboratory technologies, from January 25–28 in Palm Springs, California.

Fitness Challenge

Are You Ready for the 2009 Fitness Challenge?

By Alberta Peugeot

It is evident that Dr. Larry Arthur, Chief Executive Officer for SAIC-Frederick, is ready for fitness. He kicked off the 2009 Fitness Challenge on January 9, telling the approximate 100 attendees, "It's time to breathe new life into this" program. He showed his enthusiasm by participating in the activities that the local Fitness First speakers demonstrated.

The Fitness First speakers included Irvin Dickstein, a personal trainer; Karl Noyes, general manager; and Jeff O'Clair, assistant manager. Seventy-year-old Mr. Dickstein, with more than 50 years experience in the fitness industry, struck a chord with many when he pointed out, "You're not taking care of your family when you're not taking care of yourself."

Hula Hooping New Fitness Activity

Plans for this year's challenge include many activities designed to make achieving and maintaining fitness enjoyable, including hula hooping. Lunch and Learn sessions will include a Fort Frederick park ranger's talk about local hiking trails; cooking classes; stress elimination classes for parents; a chance to climb the rock-climbing wall; and much more. Participants will receive a monthly newsletter via e-mail, to keep them up to date with all the planned fitness events both at Fort Detrick and in the local community.

Hula hooping, which some of NCI-Frederick's oldest members may remember from the 1960s, has made a resurgence as a health fitness craze, with everyone from First Lady Michelle Obama to SAIC-Frederick's chief executive officer, Larry Arthur, Ph.D., giving it a whirl.

In a recent article on hula hooping, columnist Vicky Hallett of the *Washington Post* quoted Noelle Powers, who had taught hooping workshops at the White House under the Bush administration, as saying, "You can do it on your arm, neck, shoulders, chest, and ankles. Most people think it's just the stomach, but it's total body and requires incredible stamina."



During the Fitness Challenge kick-off, members of audience were asked to come on stage and do a few exercises. Left: Larry Arthur, Ph.D., (right) does a step platform exercise. Below: Two members of the audience do exercises with a ball and a weight.



Are you ready to hula hoop? Join (left to right) OHS staffers Marla Mullen, Collen Table, and Sarah Hooper; Dr. Larry Arthur; OHS staffers Carolyn Cable, Mary Carol Fleming, and Mary Stewart. Hula hooping is part dance, part exercise, and all fun. Just 30 minutes of hula hooping a day can help you lose weight.

weight loss, miles traveled, and hours logged in fitness activities—will be acknowledged. See the accompanying article on page 15 for a list of the 2008 Fitness Challenge top performers.

Dr. Arthur said that he and Rick Bedigian, Ph.D., consultant with the Laboratory Animal Sciences Program, have challenged each other to "get in better shape." Dr. Arthur plans to train for a half-marathon (he ran the New York Marathon years ago) and challenged those at the fitness kick-off, saying, "Let's see who can beat me [in losing weight]!"

No matter what your level of fitness activity is, you can join us in our pursuit of fun and fitness in 2009. Check with your doctor if you haven't exercised in a while, especially if you have high blood pressure or are overweight. Then take advantage of those activities that interest you. Visit the Fitness Challenge web site, <http://saic.ncifcrf.gov/fitnesschallenge/>, for more information.

Are you ready? Catch the fitness bug! ■

Prizes Will Continue

Prizes will be awarded throughout the year, and at the end of the year the top three performers in three categories—

Fitness Challenge

Winners for 2008 Recognized

By Ashley Hartman

The 2008 Fitness Challenge winners received recognition from Larry Arthur, Ph.D., Chief Executive Officer, SAIC-Frederick, at the end of December. First-place winners received \$500, second-place winners received \$250, and third-place winners received \$150. ■



Year-end Fitness Challenge winners are shown with Dr. Larry Arthur. Left to right; Lana Cross, Dr. Robin Dewar, Terri McLellan, Wayne Helm, Stephanie Henderson, William Lonergan, Dwayne Neal, James Albert, and Dr. Arthur.

Winners for the Greatest Percentage of Weight Lost

First place: Lana Cross, Clinical Research Program
Second place: Robin Dewar, Ph.D., Applied and Developmental Research
Third place: James Albert, Clinical Research Program

Winners for the Most Miles Traveled

First place: Dwayne Neal, Vaccine Clinical Materials Program
Second place: Wayne Helm, Facilities Maintenance and Engineering (FME)
Third place: Terri McLellan, Laboratory Animal Sciences Program (LASP)

Winners for the Most Hours Logged in Other Fitness Activities

First place: Terri McLellan, LASP
Second place: William Lonergan, FME
Third place: Stephanie Henderson, LASP

Then and Now

Then and Now: Building 535

By Ashley Hartman

Building 535 was designed to provide modern research laboratories for the AIDS Vaccine Program (now the AIDS and Cancer Virus Program). The photo taken in 1992 shows the beginning of construction in October of that year. Construction was completed in May 1996. In the photo from 1992, the portion of the building to the left of the construction area is Building 549 and the building directly behind the construction is Building 550. In the photo of Building 535 today, you can see the side of the building that faces Building 549.

Building 535, an 84,400-gross-square-foot, five-story steel frame structure, cost \$14,546,469 to build. The programs in this building are the AIDS and Cancer Virus Program, SAIC-Frederick, the Virus Technology Laboratory, SAIC-Frederick, the Vaccine Branch, Center for Cancer Research (CCR), the HIV Drug

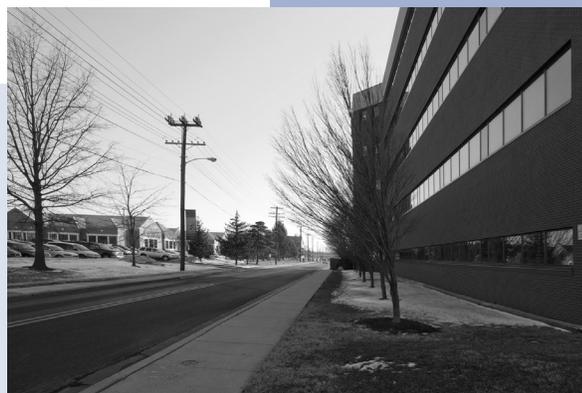
Resistance Program (DRP), CCR, the core facility of the Host Virus Interaction Branch, DRP, CCR, and part of the Retroviral Replication Laboratory, DRP, CCR.

Special thanks to Rocky Follin and Bill Adkins of FME for providing information for this article. ■

1992



2009



Poster People Profile

It's Not Just Boxes

By Dave Mayo and Maritta Perry Grau

“Did you ever have a feeling that something’s watching you?” said Ricky Cregger, chuckling as he described making a delivery of frogs. The crate echoed with the ribbits of what seemed like a whole chorus of frogs. Tiny eyes seemed to peer at him through the air holes as he drove the frogs to their destination.

Larry Key, Ray Stine, Camron Anderson, Calvin Brewster, Terry Lee, Ricky Cregger, and Wayne Bowie comprise the Warehouse Delivery Section. With a combined total of more than 100 years of experience, the team delivers, on average, 1,200 parcels per day, 225 of which are perishable items, to NCI-Frederick, as well as to off-site locations.

Deliveries Take Skill and Adaptability

That combined experience can be useful, since the drivers can help each other determine the best ways to make deliveries or handle equipment in challenging situations. For example, “Delivering compressed gas cylinders and liquid nitrogen to locations where it is hard to maneuver a fork lift poses a challenge,” said Mr. Anderson. In buildings without elevators, the team uses “carts or special equipment to pull the heavy boxes up the stairs,” Mr. Brewster added.

During the past 20 years the Delivery Section has seen some dramatic changes. Mr. Bowie explained: “In the old days in Building 248, we only had one door for loading parcels and one for unloading parcels. Today, in Building 1050, we have at least four doors for loading supplies, and there’s plenty of room for

the Receiving Section to receive freight. Also, the fork lifts are much easier to operate, compared to the old lifts from the past.”



Warehouse Specialists/Delivery Team: Wayne Bowie, Camron Anderson, Calvin Brewster, Larry Key, Terry Lee, Ray Stine and Ricky Cregger.

Neither Rain nor Wind nor Sleet nor Snow...

The Delivery Team agreed that one of the hardest aspects of their job is dealing with extremes of weather. “In summer’s heat, for example, unloading feed trucks can be uncomfortable because the heat, your own sweat, and all the dust from the feed bags combine. In the winter, when it’s very cold, delivering dry ice seems to intensify the cold,” Mr. Lee said.

Mr. Key added, “I have shivered in freezing rain. My hands and ears have ached from the cold. I have been soaked with sweat from the heat. I have fallen on the ice, and chased packages across the parking lot in strong winds.”

When asked what they liked best about their work, the team said it was the people they meet. “I like best...the countless brief interactions I have with my customers...a group with cultural diversity that is probably second to none. The opportunity to interact with such great cultural diversity is very rewarding. A subtle, friendly gesture, a quick smile, or a brief exchange of words while the latex gloves are being removed to sign my receiving document, always brightens my day,” Mr. Key said.

However, for Mr. Key, getting acquainted with people on his delivery route can also be a difficult aspect of the job, because “people I have established friendships with, move on to new horizons. I always say, ‘Maybe our paths will cross again,’ but I know they probably never will.”

The team expressed gratitude that they had been nominated for and received a Customer Relations award at SAIC-Frederick’s annual awards program last November.

Mr. Key went on to say, and his team agreed, that “the importance of the work being done here cannot be overstated. I don’t have to look any further than my own family to see how devastating the effects of cancer can be. Knowing that I play a small role in the effort to eradicate this indiscriminate disease is another rewarding aspect of the job.” ■

Coming Soon(er): 13th Annual Spring Research Festival

By Nancy Parrish

Mark your calendars now! The NCI-Frederick and Fort Detrick Spring Research Festival is April 29–30 this year, about two weeks earlier than it has been in the past. “We wanted to have it before the end of the school year so that students would have an opportunity to view the work that is done here. We hope this will generate a wider interest in science,” said Julie Hartman, chair of the event. The festival will be held at the corner of Ditto Avenue and Sultan Street.

Held in partnership with the National Interagency Confederation for Biological Research (NICBR), NCI-Frederick intends the festival to showcase “the nature of our research, the discoveries we have made, and the challenges we face in the fight against cancer, AIDS, and other infectious diseases worldwide,” according to its web site.

The theme for this year’s festival is “Charles Darwin and the Pathway to Evolutionary Medicine,” selected in honor of the 200th anniversary of the birth of Charles Darwin, the nineteenth century English naturalist who developed the concept of natural selection and evolutionary biology with his book, *On the Origin of Species by Means of Natural Selection*.

Week-Long Activities

The two-day festival is part of a week-long series of events, beginning April 27 with Distinguished Guest Speaker Stephen N. Jones, Ph.D.,

Department of Cell Biology at the University of Massachusetts Medical School. Dr. Jones’ laboratory creates mouse models of human cancer to study the regulatory pathways governing normal cell growth and development, with emphasis on the proto-oncogenes Mdm2 and Wnt5a.

On April 28, a Postdoctoral Symposium on Chemical Biology will be held in the Building 549 auditorium from 9:00 a.m. to 4:00 p.m. With speakers from NCI and other agencies at Fort Detrick, the symposium is an opportunity for postdocs to share research results with peers. Also on April 28, the Armed Forces Communications and Electronics

Association is sponsoring a golf tournament to raise funds for the Spring Research Festival poster grants, the Young Engineers and Scientists program at Fort Detrick, and other local educational programs.

A Higher Education Open House hosted by

NICBR on April 30 is designed to attract students with an interest in science. Speakers from each participating agency in NICBR* will present overviews of their work and missions. Tours are also being arranged.

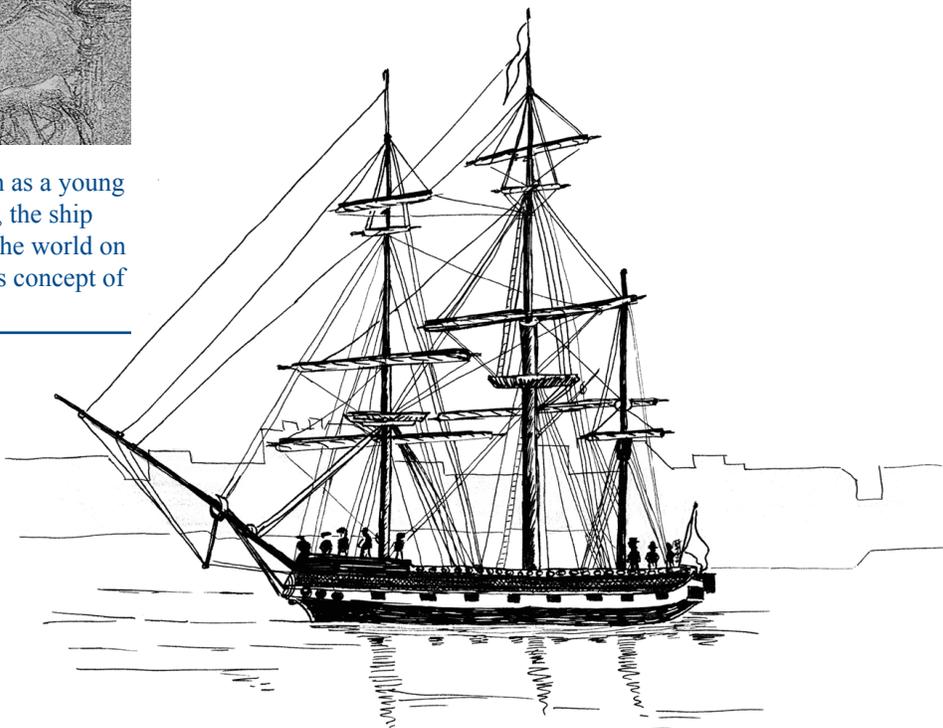
The poster presentations and commercial exhibits will be open from 10:00 a.m. to 2:30 p.m. on April 29 and 30. The festival includes a health and safety exposition, educational information, and safety and scientific displays, as well as the Biomedical Research Equipment and Supplies Expo, with exhibits of the latest scientific equipment and technology.

Deadline for registration is April 15. For information on all activities and events, visit the Spring Research Festival web site, <http://web.ncifcrf.gov/events/springfest/default.aspx>. The web site is updated regularly, so check back often. ■

*Participating agencies include the U.S. Department of Agriculture, the U.S. Army Medical Research Institute of Infectious Diseases, the Department of Homeland Security’s National Biodefense Analysis and Countermeasures Center, the National Institutes of Allergy and Infectious Diseases, and the Centers for Disease Control and Prevention.



Images of Charles Darwin as a young man and the *HMS Beagle*, the ship that took Darwin around the world on a voyage that triggered his concept of natural selection.



Biggest Turnout Ever for the Annual Chili Cook-off

By Ashley Hartman

In past years, chili cook-off winners were those who made the spiciest or most original types of chili. This year's winner took the more conventional route. "I tried to create a traditional chili taste with a little hint of heat,"

said Verna Curry, a Registered Nurse in Occupational Health Services (OHS) and winner of the seventh annual Chili Cook-off, sponsored by Protective Services.

"I was certainly shocked that I even placed in the cook-off," said Ms. Curry, who admitted she was not even trying to win.

"I never thought my chili would get so many votes. There were many other good ones. My favorite was the turkey chili that took second place."

Ms. Curry found the recipe for her chili on the web site Recipezaar (www.recipezaar.com). She used a recipe called "Sarah's Best Chili" and added her own special touches. "I think making chili inspires the cook to be creative and a little risky in order to get the desired taste," Ms. Curry said.

A record number of people entered the contest this year, touting ingredients such as cinnamon, mushrooms, jalapenos, and sausage. Crock pots of spicy, sweet, vegetarian, turkey, and white bean chilies lined the tables of the Building 426 conference room. "We had 28 chili entrants, 10 more than last year," said Tom Gannon-Miller, Manager of Protective Services.

Cornbread Added to Contest

And for the first time ever, the cook-off included cornbread. Thirteen bakers brought in their cornbread for judging.

The winning entry was from Renée Kahn, Institutional Biosafety Committee Administrator, Environment, Health, and Safety (EHS). If you remember the cornbread that resembled mini bunt cakes, Ms. Kahn made those.

"I overheard several people talking around the cornbread



area that 'cornbread is not supposed to be sweet' and mine was definitely sweet! I even made sweet cream honey butter to go with it," said Ms. Kahn, who has a side business of cake decorating. She believes her cornbread stood out because of its presentation—in a basket with blue napkins.

Mr. Gannon-Miller especially wanted to thank the "team captains" who helped recruit participants. They were Stacie Pallipamula, Human Resources, Kathleen Groover, Fisher BioServices, Kandy Rahochik, OHS, and Jo Anne Barb, Office of the Associate Director.



Renée Kahn (right), winner of the cornbread-baking contest, and Verna Curry, winner of the chili cook-off, with Tom Gannon-Miller (center).

Winners Nab Reserved Parking

Both winners received 30-day reserved parking spaces. "To be able to park outside my building instead of hiking across campus—that will be great," Ms. Kahn said.

"When the weather is cold, dreary, wet, snowy, etc., it's always nice to know you have your own parking spot waiting for you for 30 days," Ms. Curry added.

Second-place winners in both contests received 10-day reserved parking spaces and third-place winners received 5-day reserved parking spaces. Second-place winners were Scott Keimig, EHS, for chili, and JT Moore, EHS, for cornbread. Third-place winners were Julie Hartman, NCI-Frederick Office of Scientific Operations, for chili, and Annie Rogers, Laboratory of Cancer Prevention, for cornbread. One hundred and eight people voted in the cook-off.

Event Promotes New Hotline

In addition to the chili and cornbread, the event also promoted the new Protective Services hotline, according to Mr. Gannon-Miller. NCI-Frederick now has its own number, 301-846-1444, for base closings, shuttle delays, power failure information, and other emergencies. ■

Protective Services

Verna Curry's Winning Recipe

(Adapted from "Sarah's Best Chili Recipe")

3 lbs coarse ground beef
1 (16 oz) can kidney beans, undrained
2 (16 oz) cans tomato sauce
1 (16 oz) can diced tomatoes, undrained
2 onions, chopped
1 (8 oz) can green chilies
1 jar chopped garlic
2 Tbs. chili powder
2 tsp. salt
2 tsp. pepper
¼ tsp. cayenne pepper
Shredded cheddar cheese

Cook ground beef in a skillet until browned; drain off fat. Pour into a slow cooker. Add the rest of the ingredients except shredded cheese. Cover and cook on low for 6–8 hours. Serve with diced onions, shredded cheese and fritos.

Renée Kahn's Winning Recipe

Golden Sweet Cornbread

3 cups flour
2 cups white sugar
3½ Tbs. baking powder
3 cups milk
Powdered sugar

3 cups yellow cornmeal
1 Tbs. salt
3 eggs
1 cup vegetable oil

Heat oven to 375°F. Spray or grease a cast iron or heavy metal pan(s). * Lightly flour the pan. Make sure all excess flour is tapped out. In a large bowl, combine flour, cornmeal, sugar, salt, and baking powder. Stir in egg, milk, and vegetable oil until well combined. Pour batter into pan. Bake in preheated oven for 20–25 minutes or until a toothpick inserted into the center of the loaf comes out clean. Flip onto a wire rack. Cool. Then sprinkle with powder sugar.

*will work in a glass pan, but will not have the crunchy outer layer

Serve with Sweet Cream Butter

Mix 1 stick of softened butter (not margarine) with 2 Tbs. of honey and ½ tsp. of cinnamon. Mix with a beater. Put in a dish or mold and return to refrigerator to harden.

Discovery Café Now Open

Discovery Café Unveiled

By Nancy Parrish

As the *Poster* went to press, the Discovery Café was being prepared for its grand opening in early March. With all new furniture, wall coverings, and carpet, and a completely overhauled serving area, the old café has morphed into a lively and colorful place to eat, meet, or just take a break.

In addition to a brand-new look, the hours have been expanded to accommodate just about anyone's schedule. If you haven't tried it, come see for yourself, in Building 549.



And the Winner Is... Jack Simpson, Ph.D., was the winner of the Name the Café Contest held last December. Dr. Simpson (left) recently joined Paul Miller, chair of the Café Users Group, in the new café, following the installation of the sign.

Hours of Operation

Hot breakfast

7:00 – 9:45 a.m.

Continental breakfast

9:45 – 11:00 a.m.

Lunch

11:00 a.m. – 2:00 p.m.

Snacks and beverages

2:00 – 4:00 p.m.

Grab 'n' Go items

available all day until 4:00 p.m.

Breakfast and lunch menus are issued each week, including hot entrees, specialty items, sandwiches, grill bar, salad bar, and unique entrees from the action station. Featured beverages include Starbucks coffee, self-served cappuccino, Coke, and a variety of fruit beverages.

Check the web site for details:

<http://web.ncicrf.gov/news/DiscoveryCafe.asp> ■

New Faces at NCI-Frederick

Seventy-six people joined our facility in October, November, and December 2008.

The National Cancer Institute welcomes...

Natalie **Baggett** ▪ George **Cutsail** ▪ Madushini **Dharmasena** ▪ Bridget **Dixon** ▪ Andrea **Galli** ▪ Theodore **Kamata** ▪ Adam **Kenney** ▪ Gina **Kim** ▪ Heather **Kopf** ▪ Patrick **Mahlon** ▪ Stephanie **Marcum** ▪ Natalia **Mercer** ▪ Alex **Peters** ▪ Carrie **Poethke** ▪ Venkateswara **Ramkrishnan** ▪ Steven **Smith** ▪ Jonathan **Spindler** ▪ Candace **Thompson** ▪ Koji **Tomaru** ▪ Christina **Walker** ▪ Masaki **Yamamoto** ▪ Yalong **Zhang** ▪ Qi **Zhao** ▪ Dongwen **Zhou** ▪ Ziqiang **Zhu**



Christopher Hester



Andrea Galli



Madushini Dharmasena



Valerie Letukas

SAIC-Frederick welcomes...

Nancy **Aprill** ▪ Maya **Banks** ▪ Sibaprasad **Bhattacharyya** ▪ Elizabeth **Buckheit** ▪ Kenneth **Carpenter, Jr.** ▪ David **Cerna, Jr.** ▪ De **Chen** ▪ K. Matthew **Cook** ▪ Lisa **Crummitt** ▪ Kelli **Czarra** ▪ Dagane **Daar** ▪ Marie **Dearmon** ▪ Jaai **Deodhar** ▪ Steven **Dove** ▪ Zhiguang **Gao** ▪ Angel **Gonzalez-Rodriguez** ▪ Thomas **Harvey** ▪ Christopher **Hester** ▪ Anthony **Iacovelli** ▪ Sarah **Jenkins** ▪ Vera **Jenkins** ▪ Renée **Kahn** ▪ Antonios **Katsounas** ▪ Shawn **Kelly** ▪ Justin **Kirby** ▪ Christopher **Kurcz** ▪ Valerie **Letukas** ▪ Peng **Li** ▪ Christina **Love** ▪ Steven **Marty** ▪ Qmonte **Matheny** ▪ Carl **Moore** ▪ Rachel **Newman** ▪ James **Perry** ▪ Lauren **Procter** ▪ Ashley **Reynolds** ▪ Holly **Riley** ▪ Stacy **Rosado** ▪ Frederick **Rowe** ▪ Rajagopal **Sriperumbudur** ▪ Timothy **Stroud** ▪ Karen **Sweeney** ▪ Scott **Wanrow** ▪ Christopher **Wolforth** ▪ Peter **Yan** ▪ Wuxing **Yuan** ▪ Xing **Zhang**

Data Management Services welcomes...

William **Bonde** ▪ Daniel **Matias** ▪ Kenneth **Mowery**



Kenneth Mowery



Rajagopal Sriperumbudur

Charles River Frederick welcomes...

Cindy **Mahoney** ■

Data Management Services (DMS)

Racheff Named CEO

By Stephanie Halling



Jim Racheff was recently named Chief Executive Officer of Data Management Services (DMS), Inc. In addition to his new responsibilities, Mr. Racheff continues as the Principal Manager of Computer and Statistical Services under DMS' contract with NCI-Frederick.

"This is an exciting time for DMS, and I'm excited to be a part of it," Mr. Racheff said. "As a service organization, our success is predicated on the strength of our employees; it's my job to create an environment that allows them to thrive. I count myself fortunate to have the opportunity to help our organization continue to improve our ability to contribute to the success of our customers."

Mr. Racheff noted that "DMS provides a wide range of information services to support the important work performed at the facility. During the course of a day our staff may be collaborating with an investigator on a specific statistical analysis, managing web sites, testing and evaluating new technologies, developing new policy and guidelines, helping users with purchasing decisions, providing desktop computer support and training, and administering essential information systems.

"One happy side effect," he continued, "is that we end up working with people from every part of the organization,

helping them meet their goals. We get great satisfaction from seeing them succeed, and then watching those successes translate into progress in the fight against cancer and HIV/AIDS; it's an honor to be a small part of those efforts."

For the past 19 years Mr. Racheff has served in roles of increasing responsibility for DMS at NCI-Frederick. He began his career at NCI-Frederick as a scientific programmer, working closely with investigators to develop analyses and computer programs in direct support of research activities. Mr Racheff helped introduce novel technologies, such as innovative uses of personal computers, local area networks and the World Wide Web, to the NCI-Frederick community.

Mr. Racheff has more than 25 years of experience in developing and managing enterprise information systems and technology infrastructures. He holds graduate degrees in both computer science and business administration, where his research interests centered on systems engineering, project management, leadership, and organizational behavior. ■

SAIC-Frederick, Inc.

\$5,000 in Services to Be Awarded at the ATP Expo

By Nancy Parrish

The Advanced Technology Program (ATP) will host its first-ever Technology Expo on March 27 from 11:30 a.m. to 1:30 p.m. in Building 549.

Attendees will have an opportunity to receive \$5,000 worth of ATP services by filling out a simple form describing what services they would use and how they would use them. A panel of judges will award the "mini-grant" based on scientific merit.

The purpose of the Expo is to attract potential clients and collaborators from NCI-Frederick and Bethesda by showcasing the various technologies and services that ATP laboratories offer. "We hope to make some new contacts or

generate some new projects from current clients," said Ken Michaels, chair of the event.

Attendees can browse posters and other materials that the ATP labs, as well as the Laboratory Animal Sciences Program, have prepared. Posters describe the services each group provides.

ATP includes the Genetics and Genomics Group (Core Genotyping Facility and Laboratory of Molecular Technology); Proteins and Proteomics Group (Protein Chemistry Laboratory, Protein Expression Laboratory, and Laboratory of Proteomics and Analytical Technologies); Imaging and Nanotechnology Group (Electron Microscopy Laboratory, Optical Microscopy Analysis Laboratory, and Nanotechnology Characterization Laboratory); Information Technology Group (Advanced Biomedical Computing Center and caBIG—Cancer Bioinformatics

Grid); and Visual Communications (Scientific Publications, Graphics & Media, Conferences, Conference Planning Services, and Central Glassware).

The Expo opens 30 minutes after the Distinguished Scientist Lecture by George Vande Woude, Ph.D. Dr. Vande Woude, a former NCI-Frederick colleague, is Director of the Van Andel Research Institute, Grand Rapids, Michigan, where he is a Distinguished Scientific Investigator and head of the Laboratory of Molecular Oncology. His laboratory focuses on the role of the Met protein in a variety of cancers and whether Met expression or anti-Met antibodies may be used as detection or prognostic tools in the treatment of cancer.

For more information about the Expo, contact Ken Michaels, 301-846-1057; michealskv@mail.nih.gov. ■

The Year of Darwin

By Robin Meckley

Did you know that 2009 is being proclaimed the “Year of Darwin”? Charles Darwin’s 200th birthday is February 12 and the 150th anniversary of the publication of his book *On the Origin of Species* is November 24. Many scientific organizations are recognizing 2009 as the “Year of Darwin” because of these two anniversaries.

The Scientific Library is planning various programs throughout the year to honor the author and naturalist. We will show documentaries and movies, create bulletin boards, provide library materials, discuss relevant books, and display an informational web site.

To learn more about our Darwin programs, visit <http://www-library.ncifcrf.gov/darwin.aspx>. If you have suggestions about additional activities to celebrate Charles Darwin, please e-mail your ideas to NCIFredLibrary@mail.nih.gov. ■

For more information about Charles Darwin, visit the following web sites:

2008–2009 Year of Darwin and Evolution (Case Western Reserve University):
<http://www.case.edu/darwin/>

About Darwin: Dedicated to the Life & Times of Charles Darwin:
<http://www.aboutdarwin.com/>

Beyond the Origin: Darwin 200: Celebrating the Man and the Book (Nature issue; access restricted to NCI-Frederick):
<http://www.nature.com/nature/journal/v456/n7220/>

Charles Darwin Quotes:
http://www.darwin-literature.com/l_quotes.html

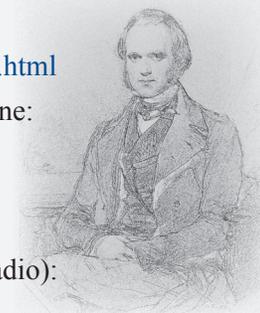
Complete Works of Charles Darwin Online:
<http://darwin-online.org.uk/>

Darwin Day Celebration:
<http://www.darwinday.org/>

Darwin: The Genius of Evolution (BBC Radio):
<http://www.bbc.co.uk/radio4/darwin/>

Darwin's Gifts (special issue of the *Lancet*; access restricted to NCI-Frederick):
<http://www.thelancet.com/journals/lancet/specialissue>

The Charles Darwin Foundation:
<http://www.darwinfoundation.org/en>



Poster's New Look

Take a Closer Look

By Maritta Perry Grau

Notice anything different about the *Poster* today? That’s right; everything from the nameplate at the top of the front page to the masthead on the bottom of the last page has changed.

This issue begins the seventh volume of the *Poster*, and as we’re entering the second half of our first decade, we’re celebrating with a new design, thanks to Scientific Publications, Graphics & Media’s (SPGM’s) Tammy Schroyer, lead designer for the *Poster*.

The nameplate’s (that’s where you see the name of our newsletter, the *Poster*, on the front page) background photographs, taken by SPGM’s Jon Summers and Marti Welch, will change with each season. All depict colorful scenes at NCI-Frederick.

The front page also sports a new vertical bar and attendant information, in keeping with the National Cancer Institute’s graphic identity standards. On the interior pages, you’ll see that our headlines are bolder, and our URLs are brighter.

The masthead (the box on the bottom of the back page), which gives our publishing and contact information, has been redesigned so that it’s easier for you to see the names of those you might want to contact with your article ideas.

So browse through this issue and take note of all the changes. Drop us a line and let us know what you think. You can contact us via e-mail (check out that masthead!) at ncispgm@mail.nih.gov, on the web at <http://web.ncifcrf.gov/ThePoster>, or jot a comment on one of the forms you can pick up at the front



Tammy Schroyer, Senior Illustrator at SPGM for the past 22 years, designed both the award-winning original and the new *Poster* layouts. Ms. Schroyer is the lead designer for the *Poster*.

of any of our four news stands outside Protective Services and OHS in Building 426; or outside the Scientific Library and the Discovery Café in Building 549. ■

On Effective Communication

How Abe Lincoln Got It Right...and Wrong!

By Ken Michaels

On November 19, 1863, President Abraham Lincoln gave an oral presentation at the dedication of the Soldiers National Cemetery a few miles north of here. The *Gettysburg Address*, as we now know it, is an elegant example of oratorical excellence; arguably the most famous speech in American history. On that crisp November day in southern Pennsylvania, Honest Abe got it right.

He got it right by being brief. Lincoln was not the featured speaker, and not a particular favorite of Pennsylvania Governor Andrew Curtin, who sponsored the event. Edward Everett, one of the nation's foremost orators, was the principal speaker, and he held forth nonstop for two hours. When it came time for Lincoln's turn at the lectern, he delivered his message in less than two minutes. It's hardly a wonder that his speech was more appreciatively received than Everett's, which is long forgotten.

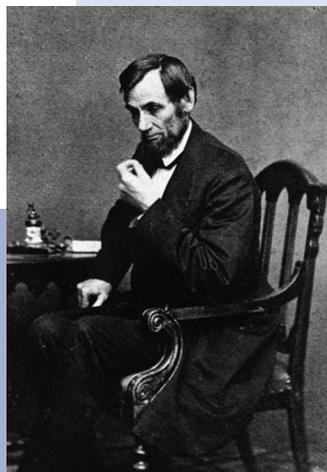
As someone once said, if you want your speech to go over well, always remember the "Three Bs" ... be sincere, be brief, and be seated.

He got it right by using language that the audience understood. Seventy-six percent of the 267 words in Lincoln's short speech are of five letters or less. Plain talk, in my view, is an underrated tool for effective communication. Jargon, technospeak, and (especially in government) acronyms can act as "speed bumps" on the pathway to understanding, particularly when overused. True, in a gathering of scientists, it makes more sense to say "DNA" than "deoxyribonucleic acid," because it's a virtual certainty that all present recognize that very common acronym. Caution, however, is advised in

the use of less well-known abbreviations.

He got it right by situating his main message between an interesting opening and a powerful conclusion. "Four score and seven" is infinitely more interesting to the ear, and the brain, than "eighty seven." And his concluding line packed one heckuva punch: "... government of the people, by the people, for the people shall not perish from the earth." Wow.

But he also got one thing wrong, when he said, "The world will little note nor long remember what we say here ..." As senator Charles Sumner commented a year-and-a-half later, "The world noted at once what he said, and will never cease to remember it." That November day, Abe Lincoln really got it right. ■



Web Sites of Note

By Ashley Hartman

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

March:

Twenty-first Annual American Diabetes Alert Day, March 24, 2009:

<http://www.diabetes.org/communityprograms-and-localevents/american-diabetes-alert.jsp>

National Nutrition Month: http://www.eatright.org/cps/rde/xchg/ada/hs.xsl/NNM_2007_home.htm

April:

National Public Health Week, April 6–12: <http://www.nphw.org/nphw09/default.htm>

Walk for Lupus Now, Washington, D.C., April 18, 2009:

<http://www.walkforlupusnowdc.kintera.org/faf/home/default.asp?ievent=287190>

May:

National Cancer Research Month:

www.aacr.org/home/public--media/public-policy--legislative-affairs/national-cancer-research-month.aspx

HIV Vaccine Awareness Day, May 18: www.niaid.nih.gov/news/events/HVAD

Lupus Awareness Month:

http://www.lupus.org/webmodules/webarticlesnet/templates/new_newsroomawareness.aspx?articleid=1726&zoneid=62

Upcoming Events and Dates to Note

March 27

ATP Expo
11:30 A.M. – 1:30 P.M.
Building 549

April 17

Poster Puzzler Entry Deadline

April 29 and 30

Spring Research Festival 2009

May 12

Fourth Annual Cancer Biology Think Tank,
Building 549 Auditorium

May 25

Memorial Day–NCI-Frederick closed

Save the Date!

It's not too early to think about Take Your Child to Work Day. Mark your calendars for **July 15**. Program registration will run **April 22–June 1** and registration for children will run **June 15–July 1**. Watch your e-mails for more information!

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.
www.saic-frederick.com

Wilson Information Services Corporation
www-library.ncifcrf.gov

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

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Comments or suggestions for *The Poster* may be directed to poster@ncifcrf.gov.

Need a large-print format of the *Poster*? Call 301-846-1055.

web.ncifcrf.gov/ThePoster

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