DCEG Linkage

Division of Cancer Epidemiology and Genetics

National Cancer Institute

September 1998
Number 4

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DIRECTOR'S REPORT

Advancing after the Retreat

A number of pressing issues confronting the Division were discussed by the Senior Advisory Group and other senior staff at the recent DCEG retreat, a summary of which is presented in the following article. The meeting was highly successful in generating ideas and achieving consensus on matters of vital importance to the future of the Division.

Joseph F. Fraumeni, Jr., M.D.

Building an infrastructure for molecular epidemiology was a major theme of the retreat. As the Division plans ahead, what is the appropriate scope and mix of population-based (cohort and case-control) studies with biomarker components? As studies get larger, more complex, and more expensive, how should the Division coordinate its activities with other NCI divisions and the extramural community? As we increasingly apply molecular technologies to epidemiologic studies, how can we best accommodate and process the vast quantities of biospecimens that will be collected? No definite conclusions were reached on all these questions, but the issues that remain to be settled are now much clearer than before.

DR. KNUDSON WINS LASKER AWARD

Dr. Alfred Knudson has been named a recipient of the 1998 Clinical Research Award given by the Albert and Mary Lasker Foundation. This highly prestigious award honors the pioneering work of Dr. Knudson, which revolutionized the field of cancer genetics and paved the way to the discovery of tumor suppressor genes. He theorized that two mutations occurring at different times were necessary to cause the hereditary and sporadic forms of retinoblastoma, an eye cancer that arises in children. Subsequent research showed that in the inherited form, the individual is born with one mutation in every cell. Retinoblastoma arises only after a second mutation (second hit) inactivates the other allele of the *Rb* gene. In the nonhereditary form, a mutation occurs in each allele as a result of exposure to environmental agents or to products of normal biological processes. Dr. Knudson is a Senior Member and former president of the Fox Chase Cancer Center in Philadelphia. He has been Acting Director of DCEG's Human Genetics Program since 1997.

High-visibility studies with major policy implications are of particular concern to the Division, since they require special attention to management issues. To guide our efforts at various stages, procedures were developed for planning, conducting, and obtaining oversight for the studies, and for communicating and coordinating the flow of information.

Training programs and recruitment efforts within the Division were discussed in detail, as were ways to enhance mentoring and career development. Plans are now under way for new NCI fellowship programs in molecular epidemiology, biostatistics, and radiation epidemiology.

Can the traditional model of young laboratory-based investigators, in which autonomy and independence are viewed as central to career advancement, be reconciled with the role of the epidemiologist or statistician, who is heavily involved in partnerships vital to the successful completion of a project? The recent article by Dr. Michael Gottesman in *The NIH Catalyst* (July-August 1998) showed that the models are not really in conflict and that it is possible to identify individuals with strong initiative who contribute intellectual sparks to the collaborative team approach.

Efforts are continuously being made to enhance communications within the Division and across NCI. Success in this area is due in no small part to the work of the DCEG Committee of Scientists, chaired by Dr. Sholom Wacholder, and the NCI Intramural Advisory Board, chaired by Dr. Peggy Tucker. These groups have been extremely effective in detecting and transmitting the concerns of scientists to the leadership of the Division and Institute and in suggesting corrective measures. Additional ways to improve communications were proposed, including plans to hold a Division-wide retreat in early 1999 which involves all members of the scientific staff.

By the end of the retreat, we had a clearer view of what is needed, at both the branch and the Division levels, to enhance the scientific life of all staff members, the stewardship of our resources, and the planning and development of research programs of the highest caliber and the greatest impact. ■

Joseph Fraumeni

DCEG Linkage
Published quarterly
Division of Cancer Epidemiology and Genetics
National Cancer Institute

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DCEG SENIOR ADVISORY GROUP RETREAT

The second annual DCEG Senior Advisory Group (SAG) Retreat was held July 23 at Glenview Mansion in Rockville, Maryland. While the research visions of the Division's branches and laboratory were the major topic at the 1997 retreat, the prime focus this year was on the best long-range (5 to 7 years) strategies for achieving those visions. With the growing potential of molecular epidemiology to help unravel perplexing questions involving cancer etiology, particularly gene-environment interactions, the morning session of the retreat was devoted to discussing the types of intramural studies that could best exploit this emerging field of research. Because these studies often require unusually large numbers of participants to obtain sufficient power to detect interactions, the agenda centered on the pros and cons of "rolling" case-control studies and a prospective, population-based cohort study.

Dr. Patricia Hartge served as the session's facilitator, guiding the discussion so that the advantages and

disadvantages of each approach were fully aired within the context of the Division's mission, current research activities, and future directions. Since the availability of biospecimens is essential for molecular epidemiology studies, Dr. Nat Rothman opened the session with a report of the DCEG Cohort Studies Group on the status of existing cohorts with and without these collections. Of particular interest was a projection of the number of site-specific cancers that would accumulate through the year 2010 from each study. Because the combined numbers for the major cancer sites are relatively large, an important question is whether there is sufficient scientific justification to invest the significant resources that would be needed to collect, process, and analyze biospecimens from all the studies. The answer to this question will affect decisions about the types of future research strategies that should be pursued.

The rolling case-control concept involves large sequential studies that focus first on the cancer types of highest priority. Dr. Robert Hoover took the lead in noting the advantages of this approach, which include the ability to:

- Identify a large number of cases over a short time;
- Obtain detailed history of exposures, family history, and potential confounders;
- Collect specimens for biomarker and genetic analyses;
- Move (roll) on to other cancer types, covering all sites of interest over time;
- Use all or parts of the same control group for multiple studies;
- Re-examine previous cancer sites as new hypotheses emerge;
- Oversample to address specific concerns;
- Study a variety of exposures in the general population; and
- Exert a high degree of control over both data and biospecimen collection.

Dr. Regina Ziegler noted some of the disadvantages of case-control studies, among which are:

- Certain exposures are not well assessed retrospectively;
- Recall bias is problematic for cases;
- Low response rates may cause interview and biospecimen collection biases;
- Some biomarkers may be compromised by disease and treatment effects;
- Metabolic data may not be obtainable to correlate with dietary information; and
- Significant resources must be committed to support the study infrastructure.

A large, prospective, population-based cohort study has generated a lot of interest from molecular epidemiologists. Its advantages were outlined by Dr. Kenneth Buetow, and include the capacity to:

- Measure predisease phenotypes;
- Test for multiple outcomes (i.e., pleiotropy);
- Assess polymorphic balance with respect to different disease states;
- Develop cumulative exposure profiles through multiple assessments over time;
- Examine exposures selected by metabolic profile;
- Assess the full range of intermediate endpoints over time with respect to genetic polymorphisms, exposures, and other variables of interest;
- Reduce recall bias;
- Focus on subgroups within the heterogeneous cohort to examine the role of ethnicity and other factors related to cancer susceptibility;
- Develop kin-based subcohorts for affected individuals and their relatives, using the family as the unit of assessment; and
- Address new hypotheses by embedding special studies.

The disadvantages of the cohort approach were enumerated by Dr. Louise Brinton, and include:

- A large cohort is needed to attain sufficient power to assess a specific outcome;
- A long time period is required in which to accumulate a sufficient number of events;
- Evaluating rare disease outcomes is difficult;
- Loss to follow-up over time may lead to selection bias;
- Collection of biological samples and their storage over an extended period raises complex issues;
- Informed consent is complicated by unforeseen uses of biospecimens;
- A lack of specific, targeted hypotheses diminishes the attractiveness of a large commitment of resources;
- Untenured investigators may not have sufficient time for substantive involvement; and
- A decade or more commitment of time by principal investigators (PIs) and resources by the Institute is required.

The discussion of these strategies was lively and informative, particularly as they related to the Division's ongoing research activities. A consensus

emerged that a balanced approach of focused cohort studies and hypothesis-driven case-control studies should continue within the context of DCEG's research mission. There was greater scientific enthusiasm for developing rolling case-control studies than for a large, prospective, population-based cohort study. Since implementation of either strategy would have repercussions for the entire community of epidemiologists and population geneticists, the SAG members recognized that this topic requires broader input from a national group of experts. Accordingly, DCEG, together with the Division of Cancer Control and Population Sciences, will convene a group of scientists from the intramural and extramural communities to explore the best research strategies for exploiting the potential of molecular epidemiology.

Three mini-sessions held in the afternoon covered multiple topics, including recruitment of postdoctoral and tenure-track investigators, training and mentoring, career advancement issues, high-visibility studies, and biospecimen repository resources. Serving as facilitators were Dr. James Goedert, Dr. Shelia Zahm, and Dr. Margaret Tucker.

Dr. Mitchell Gail discussed a survey he took among DCEG Branch Chiefs to determine reasons for the difficulty in recruiting postdoctoral and tenure-track investigators. For postdoctoral candidates, the main reasons noted were uncertainties about career track opportunities and offers of tenure-track positions elsewhere. The Branch Chiefs indicated that the lack of adequate information and support related to personnel issues were major structural hindrances in recruiting both postdoctoral and tenure-track investigators. The SAG members applauded the creation of a centralized NCI training office as a step in the right direction in addressing this problem. However, they agreed that greater efforts are needed to make the Institute more attractive to the best candidates for postdoctoral and tenure-track positions. Recommendations were made to recruit a staff scientist within the Division who would work full time to promote training opportunities in DCEG, and to utilize the internet to greater advantage in recruiting efforts.

Training and mentoring issues were of particular concern to the retreat participants. With the Division having almost 40 training fellows, it is critical that each fellow receives appropriate scientific and career mentoring. Dr. Aaron Blair addressed ways to improve the relationship between fellows and mentors and to better integrate them into the scientific and social life of their organizational units. Recommendations to improve training and mentoring include having Branch Chiefs meet with their fellows individually at least bimonthly, providing better orientation materials to new fellows, allowing fellows to compete for Intramural Research Awards, evaluating mentoring as part of a PI's performance appraisal, and providing training to PIs to improve their mentoring skills. Finally, the DCEG Committee of Scientists was asked to take a lead role in organizing an annual retreat for the entire DCEG scientific staff, including training fellows.

As part of the training and mentoring topic, Dr. Sholom Wacholder raised the issue concerning the time at which a postdoctoral fellow might be considered for a tenure-track position. Postdoctoral investigators both within the intramural research program and at extramural institutions have expressed frustration with what they perceive to be an inordinate number of years that they must conduct research after their degree before considered qualified for a tenure-track opening within the Division. The SAG members agreed that highly qualified candidates with as little as 2 to 3 years' postdoctoral experience should be encouraged to apply for these positions, and that the period of tenure-track should be extended to give investigators sufficient time to compile a publication record for tenure consideration. (Since it usually requires several years to complete population-based studies, it often takes longer for an epidemiologist than for a laboratory scientist to develop an adequate bibliography.) The SAG members emphasized that supervisors must be candid with tenure-track investigators about their chances for tenure, so that they are better able to plan their career paths. In a similar vein, the retreat participants suggested that tenure-track investigators be nominated for tenure as soon as they are scientifically ready, which may occur at any time during their appointment. (Following the retreat, the NIH Board of Scientific Directors approved extension of tenure-track from 6 to 8 years for scientists engaged in population-based studies.)

Dr. Martha Linet spoke about the difficulty in leading high-visibility studies (e.g., exposure to electromagnetic fields and risk of brain tumors). The SAG members were unanimous in voicing the need

for more support to deal with the extraordinary demands placed on PIs by various interest groups and the media. They agreed that independent advisory groups of outside experts are valuable in providing scientific oversight as a study moves from the conceptual stage through completion. The members also suggested that PIs of high-visibility studies seek the scientific advice of other Division and Institute staff members through seminars and other forums, as well as using the resources of the NCI Office of Cancer Communications in dealing appropriately with interest groups and the media.

The processing and storage of biospecimens are a growing concern to the Division and the Institute, as more and more studies collect these materials for biomarker and genetic analyses. Dr. Neil Caporaso discussed a draft report of an NCI-wide committee that is reviewing the issue. Consideration is being given to centralizing repository activities at a new core facility at the NCI Frederick Cancer Research & Development Center. Among the specific areas being addressed by the committee are physical plant and equipment, facility management and operation, biospecimen processing requirements, and data management. Because of the specialized nature and scope of this undertaking, the retreat participants endorsed the recruitment of a staff scientist who could spearhead the implementation of a centralized core repository and oversee its operation.

Dr. Joseph Fraumeni, Dr. Alfred Knudson, and Dr. Hoover summarized this year's retreat and identified actions items that require follow-up. Everyone agreed that the retreat was highly successful in generating ideas and achieving consensus on matters of vital importance to the future of the Division. Follow-through on the action items will enhance the Division's scientific life for all its staff members, improve the stewardship of resources, and maximize the planning and development of outstanding research programs. ■

Jim Sontag

A RETREAT, OUR PROBLEMS, AND A VISION OF THE FUTURE

Alfred G. Knudson, Jr., M.D., Ph.D.

This year's DCEG Senior Advisory Group retreat very nearly coincided with the end of my 3 years at NCI under an Interagency Personnel Agreement with my home institution, the Fox Chase Cancer Center. It has been an exciting time, as Rick Klausner leads NCI into the 21st century, full of ideas and a new vision, and as Joe Fraumeni does the same for the newly (1995) created Division. It is clear to me, and I think to all of my friends and colleagues in DCEG, that this Division is unique in the world. The abundance, depth, and breadth of expertise and the record of accomplishments of this organization are known the world over. It has been a pleasure and a privilege to count you as colleagues and friends.

The deliberations at the retreat focused largely on issues related to this uniqueness: the scope of research, the quality of work life of those who labor here, and the training of the next generation of investigators. These are issues because there are no other institutions with this much talent and this many resources that are concerned with the study of such a feared disease as cancer in so large and diverse a population. There are no models to follow. We are obliged to think in the largest possible terms.

So it is not a surprise that we had such a searching examination of cohort studies—what they can and cannot do, the long time consumed in their execution, and their high cost. Here is where a heavy responsibility was felt, so many questions asked. What can cohort studies accomplish that case-control studies cannot? How can time and expense be optimized? In the end, we were all acutely aware of the ultimate question: Will something important be missed because no other collection of people can do these studies?

A second issue concerned the quality of work life of our staff. Of course, there are many facets to this

issue, but perhaps the most vexing and the one that consumed us most concerns the matters of promotion and tenure. Individual recognition of research accomplishments is sometimes difficult in this Division, because DCEG is heavily dependent on the collaboration of persons with diverse skills and experience. The published products are typically multi-authored, with meaningful participation by all involved. We cannot emphasize so much the special position of a young investigator in a list of authors. Perhaps the model of other scientists with large and rare resources, such as astronomers and nuclear physicists, is relevant. If we endeavor to work on important problems and to make only real contributors the authors, then all should benefit and be recognized. Here again we must realize the uniqueness of this Division and its work.

A third topic, and one again related to the special character of the Division, was that of fellowship training. We are in a position to offer training that is difficult to provide in most other institutions, including Cancer Centers. The mix of population sciences—epidemiology, genetics, and statistics—that we want for investigators of the future is difficult to supply in nearly all institutions. The long separation between schools of medicine and schools of public health has largely partitioned the clinic and the laboratory from the resources of epidemiology and statistics. Within DCEG, we have the opportunity to fuse them and to provide experiences across their boundaries to future scientists. We must think in large terms, and not just in training young persons who can become our own investigators at NCI. I advocate a drastic increase in the number of our trainees so that we can populate other institutions unable to provide such rich training opportunities. We must think ahead to when population studies, including programs of preventive and therapeutic interventions, realize their potential.

Afinal question asked at the retreat was, "What is missing in the Division?" I believe the answer is that there is very little that DCEG cannot provide. The most serious omission would be an unawareness of the Division's uniqueness, with its remarkable opportunity—indeed, obligation—to paint a very large canvas. ■

Alfred Knudson

A NEW HOME FOR A SEASONED PLAYER

Shelia Hoar Zahm, Sc.D.

In an era where individuals often question their lifestyle and career choices, Dr. Shelia Zahm, DCEG's new Deputy Director, is serving up a hearty dose of enthusiasm. She has a passion for science, thinks DCEG is a great place to work, and wants everyone to enjoy it as much as she does.

Dr. Zahm loves a challenge. That's why she is excited about her job as the DCEG Deputy Director. "It's a chance for me to help the Division in a new capacity," she says, "as well as an opportunity for me to learn. I felt the time was right for me to take on this new responsibility.

I was completely satisfied working with Aaron Blair, conducting research projects, and preparing scientific reports. I wanted to find things!" But in recent years, Dr. Zahm found that advising and service-related activities were occupying a major portion of her time, with little left for research. "That's when I began to think perhaps I could help the Division more by serving in an administrative capacity rather than by my little bits of research," she said.

During her transition from Deputy Chief of the Occupational Epidemiology Branch to Deputy Director of the Division, she will continue with some of her research projects, like a case-control study of non-Hodgkin's lymphoma, studies of cancer risks associated with pesticides, and initiatives dealing with occupational cancer among women. Dr. Zahm will also continue to chair several committees, including the DCEG Technical Evaluation of Protocols Committee and the Promotion and Tenure Review Panel, as well as serve on external committees, such as the National Toxicology Program's (NTP) Chemical Selection Working Group and the NTP Board of Scientific Counselors. In addition, Dr. Zahm is involved with personnel issues, manuscript clearance, and site visits.

Dr. Zahm hopes to help develop programs that will help enrich the lives of the people in DCEG. "For example," she says, "we need to better serve our fellows through improved mentoring, and we need to ensure that promotions and awards for staff members are carried through in a timely fashion. Everyone should feel appreciated and well-treated while doing a good job."

One of Dr. Zahm's short-term goals is to offer training to the senior staff who serve as mentors. "If we can improve how we mentor, we can improve the quality of life and science for the fellows." Dr. Zahm has obviously been very successful herself as a mentor, since she was a corecipient of the 1997 DCEG Mentoring Award. Every day she lives up to the citation on the plaque, which reads in part, "she willingly dispenses her wisdom with patience and enthusiasm."

Open and thoughtful, Dr. Zahm is confident and ready to handle any situation. Her confidence derives from her many years with NCI. She began her NCI career in 1980 as a Staff Fellow working with Dr. Robert Hoover in the Environmental Epidemiology Branch. Three years later, she gravitated to the Occupational Epidemiology Branch, where more and more of her studies were being done and where she achieved tenure in 1987. Dr. Zahm became Deputy Chief of the Branch in 1996.

Having grown up near the ocean in Massachusetts, Dr. Zahm's early career goal was to become a marine biologist, but she was deterred upon hearing that a graduate degree was required. "If I had known I was going to do graduate work anyway, I'd probably be scuba diving in the Caribbean now," says Dr. Zahm with a smile. "But having heard several of Peggy Tucker's lectures on skin cancer, I know I made the right career choice." She obtained an undergraduate degree in mathematics, taking many public health courses along the way. After college, she got a job in a hospital cancer registry, thinking of a future in hospital administration.

While working at the cancer registry, Dr. Zahm's supervisor, Dr. Philip Cole, encouraged her to undertake graduate studies in epidemiology. A professor at the Harvard School of Public Health, Dr. Cole not only put her on the right career path, but also provided her with a training grant. "Epidemiology was a perfect match for me. It combined my loves for math and biology, my interest in health, and my administrative skills, which are important in research."

After completing a masters program in epidemiology at the Harvard School of Public Health, Dr. Zahm stayed on for doctoral studies. Encouraged by her advisor, Dr. Brian McMahon, her dissertation involved an occupational cancer study at DuPont. "Occupational epidemiology has always appealed to me in part because it deals with potentially hazardous exposures that are largely involuntary and preventable. Other types of exposures, such as genes (involuntary but, generally, not preventable) or smoking (voluntary and preventable), are obviously important, but involuntary preventable exposures seem a moral and logical place to aim research and intervention. Over one-half of the agents classified as human carcinogens by the International Agency for Research on Cancer are occupational exposures. It is a fruitful area in which to do research."

Dr. Zahm chose to come to NCI for additional training after completing her doctorate. "I felt I needed to learn a lot more about a lot of things before going off to either academia or a corporation, and I knew I would get the proper training at NCI. It is an amazing place, with so many notable scientists and so many research projects in progress." Dr. Zahm had originally planned to hone her skills and move on. But the longer she stayed at NCI, the harder it was to leave. "With the opportunities and resources available here, I have never regretted my decision to stay."

Her hard work has made Dr. Zahm an internationally acclaimed epidemiologist, and she is the recipient of several prestigious awards, including the American Occupational Medical Association's Merit in Authorship Award for a paper on job-exposure matrices, an NIH Merit Award and a PHS Special Recognition Award for work on the relationship between pesticides and the risk of non-Hodgkin's lymphoma, and an NIH Director's Award for cancer studies among migrant and seasonal farm workers.

Dr. Zahm says that cancer epidemiology is an exciting field, and has an important impact on health. "We look for causes with the ultimate outcome being cancer prevention." She compares epidemiology to a good detective story, in which one follows clues to solve the mystery. Good epidemiologists need a combination of skills: an understanding of science and

cancer biology; a knowledge of the exposures under study; statistical and computing skills; an administrative bent; and the ability to collaborate, write, and present well. Dr. Zahm emphasizes the need for scientists to learn how to write well early in their education, because they spend their lives writing.

Her advice to junior scientists is to participate in a balanced group of studies in different phases (ranging from study design to field work to analysis), learn about each phase in a short time, work with different people in the field, and resist the temptation to take on too many projects so as to ensure that those undertaken are completed in a timely way. "It is difficult to follow this almost contradictory advice," says Dr. Zahm, "but try!" Though she feels that working in epidemiology requires a dedicated, tireless worker, home life is always most important to Dr. Zahm. How and when she works is determined in large part by her family, especially her 10-year-old son, Mark. "I try to come to work early so I can leave early to be available for him. We do a lot of things together, especially homework! My family is my top priority."

In her spare time, Dr. Zahm attempts Chinese cooking, is active in church activities, and loves gardening. Though she is equally at home in all these venues, Dr. Zahm loves research too much to leave it any time soon. "I'm here for the duration."

"This is a very exciting time to be in DCEG," says Dr. Zahm. "The research opportunities are incredible, particularly in the area of gene-environment interactions. And, since becoming a Division, it seems there have been more resources along with more recognition and influence at the Institute level. The strength of the Division, however, is the amazing talent and creativity of the staff." ■

Patricia Evans

FY 1998 INTRAMURAL RESEARCH AWARD WINNERS

Congratulations to Drs. Thomas O'Brien, Angela Manns, and Ann Hsing for receiving Intramural Research Awards, the first to be given by DCEG under this new competitive funding mechanism. The award was established to encourage exciting interdisciplinary projects that are innovative and cross the usual organizational boundaries. The awardees were selected after an extensive review of their applications by the epidemiology contingent of the Board of Scientific Counselors and members of the Division's scientific leadership.

Dr. O'Brien, Viral Epidemiology Branch, intends to examine genetic determinants of susceptibility to infection by hepatitis B and C viruses in an ethnically diverse population of injection drug users. Insights into the genetic basis of infection by these viruses would be of considerable scientific and public health benefit, since they are important causes of chronic liver disease and hepatocellular carcinoma.

Dr. Manns, Viral Epidemiology Branch, will try to localize susceptibility genes associated with familial Burkitt's lymphoma through linkage analysis following a whole-genome scan with microsatellite markers. Burkitt's lymphoma is a high-grade diffuse form of non-Hodgkin's lymphoma, and is one of the most common malignancies worldwide, yet little is known about its etiology. By studying high-risk families, she hopes to identify shared genetic or environmental factors that predispose to Burkitt's lymphoma.

Dr. Hsing, Environmental Epidemiology Branch, plans to investigate intraprostatic variation in tissue levels of hormones and to determine their correlation with circulating levels of androgens and estrogens. This effort is important in evaluating whether epidemiologic studies will be able to use measurements of circulating levels of hormones in assessing prostatic cancer risk associated with metabolic activity within the gland. ■

Jim Sontag

FY 1999 INTRAMURAL RESEARCH AWARDS OPEN TO PRINCIPAL INVESTIGATORS AND FELLOWS

Fellows (pre- and postdoctoral) are now eligible to apply for a DCEG Intramural Research Award. In the past, only principal investigators could receive support for new initiatives through this competitive funding mechanism. Fellows now have the opportunity to develop their own studies, initiate collaborations, and take charge of the overall management of projects. We encourage fellows with good ideas and a collaborative spirit to apply.

November 1 is the deadline for FY 1999 applications. Flyers describing the award have been distributed to principal investigators and fellows throughout the Division. Information about the award is also available at *http://intranetdceg.ims.nci.nih.gov/award.html.*

SCIENTIFIC HIGHLIGHTS

Biostatistics Branch

Risk-based Methods to Determine Age for Beginning Mammogram Screening

In collaboration with the Division of Cancer Control and Population Sciences, methods have been developed to assist women in their 40's and their physicians in deciding when to initiate regular mammographic screening. The methods allow a woman in this age group to compare her risk of breast cancer with that of a woman aged 50 without risk factors, who would usually have regular mammographic screening. Screening is recommended if a woman in her 40's has any of the six strong risk factors for breast cancer:

- Previous breast cancer;
- A disease-causing mutation in either of the breast cancer susceptibility genes, *BRCA1* or *BRCA2*;
- A mother, sister, or daughter with breast cancer;
- Atypical hyperplasia on previous breast biopsy;
- Seventy-five percent dense tissue on mammogram at age 45-49; or
- Two or more breast biopsies, even if the results are benign.

Women without any of these risk factors can assess their need for mammographic screening by multiplying relative risks corresponding to three weaker risk factors of breast cancer:

- Age at which menstruation began;
- The number of previous breast biopsies (either 0 or 1); and
- Age at first live birth (the risk for breast cancer for a woman with no live births is the same as that for a woman who had a child at age 25-29).

Screening is recommended if the resulting product (the adverse relative risk) exceeds the favorable relative risk from being younger than age 50. Separate relative risk tables are used for black women and white women, since the incidence rate of breast cancer rises more rapidly among black women in their 40's than among white women in this age group. (Gail M, Rimer B. Risk-based recommendations for mammographic screening for women in their forties. *J Clin Oncol* 1998;16:3105-3114) ■

Environmental Epidemiology Branch

Endogenous Hormone Levels and Cancer Risk

In a cross-sectional study of 125 postmenopausal women in five regions of the United States, endogenous sex hormone levels were related to reproductive and lifestyle risk factors for breast and endometrial cancers. Androstenedione was positively associated with age at menopause, while androstenedione, estrone, estradiol, and bioavailable estradiol were inversely associated with age at menarche. Androstenedione and estrone decreased with increasing level of nonrecreational physical activity. (Madigan MP, Troisi R, Potischman N, Dorgan JF, Brinton LA, Hoover RN. Serum hormone levels in relation to reproductive and lifestyle factors in postmenopausal women (United States). *Cancer Causes Control* 1998;9:199-207)

Physical Activity and Risk of Breast Cancer

Dr. Joanne Dorgan was interviewed by CNN news about her editorial "Physical activity and breast cancer: Is there a link?" (Dorgan JF, J *Natl Cancer Inst* 1998;50:15) The editorial commented on the finding that nonoccupational physical activity was not related to breast cancer risk among young women in the Nurse's Health Study II. (Rockhill B, Willett WC, Hunter DJ, Manson JE, Hankinson SE, Spiegelman D,

Colditz GA. Physical activity and breast cancer risk in a cohort of young women. *J Natl Cancer Inst* 1998;90:1155-1160) Results of epidemiologic studies of breast cancer in relation to recreational and occupational activity are conflicting. Although inverse associations of physical activity with breast cancer are reported more often than are null or positive associations, risk estimates are often small and statistically nonsignificant, a dose-response relationship is not seen, or the association is limited to a subgroup of participants. In her editorial, Dr. Dorgan concluded that with the current evidence, recommendations to premenopausal women to increase their physical activity with the specific aim of preventing breast cancer would be premature. After menopause, however, obesity is positively associated with risk of breast cancer, and recommendations to postmenopausal women to increase physical activity as part of a program to achieve or maintain an ideal body weight seem reasonable. Dr. Dorgan also concluded that all women should be encouraged to increase their physical activity to prevent cardiovascular disease, osteoporosis, diabetes, and possibly colon cancer, as well as to improve their sense of well-being.

Montserrat Garcia-Closas

Physical Activity and Breast Cancer Workshop

A workshop was convened by the Etiology Working Group of the National Action Plan on Breast Cancer in November 1997 in Albuquerque, New Mexico, so that a multidisciplinary group could discuss the relationship between physical activity and risk of breast cancer, as well as directions for future work. The workshop, cochaired by Dr. Louise Brinton, Environmental Epidemiology Branch, and Dr. Leslie Bernstein, University of Southern California School of Medicine, involved over 90 researchers and advocates, including Drs. Joanne Dorgan, Christine Swanson, Susan Sieber, Shelia Zahm, and Regina Ziegler from DCEG. Evidence of an inverse relationship between physical activity and risk of breast cancer is mixed, but is sufficiently compelling to warrant further studies. Possible mechanisms discussed included changes in body size, endogenous hormones, reproductive system functions, and immunologic parameters. (Brinton LA, Bernstein L, Colditz GA. Summary of the workshop: Workshop on physical activity and breast cancer, November 13-14, 1997. *Cancer* 1998;83(Suppl): 595-599)

Dr. Patricia Freedson, Department of Exercise Science, University of Massachusetts, recently presented a DCEG seminar on the use of accelerometers in epidemiologic studies to more objectively measure physical activity. DCEG scientists plan to incorporate this approach in several studies. ■

Louise Brinton

p53 Codon 72 Polymorphism and Risk of Cervical Cancer

It is now understood that human papillomavirus (HPV) infection is causally linked to the development of pre-invasive and invasive cervical neoplasia via binding of its oncoproteins, E6 and E7, to the proteins of the tumor suppressor genes *p53* and *Rb*, respectively. The role of cofactors in the etiology of this disease, however, remains unclear. It has been suggested that *p53* polymorphisms are linked to cervical cancer pathogenesis. In fact, there is recent evidence that *p53* containing arginine at residue 72 (*p53Arg*) is more efficiently degraded by E6 than is *p53* containing a proline at this same position (*p53Pro*). To determine whether *p53Arg* carriers are at increased risk of cervical cancer, three independent studies were conducted using specimens collected as part of two large cohort studies in Portland, Oregon, and Guanacaste, Costa Rica, and a large, multicenter case-control study of adenocarcinomas and other rare histologic types of cervical cancer conducted in the eastern United States.

Results from these studies suggest that *p53Arg* does not increase risk of cervical disease. On the contrary, the findings raise the possibility that carriers of *p53Arg* are protected against cervical cancer development, whereas those who carry one or two *p53Pro* alleles are at increased risk of disease. Compared with control subjects, the relative risk associated with homozygosity to *p53Arg* ranged from 0.26 (95% CI = 0.09,0.70) to 1.8 (95% CI = 0.40,8.3) for precancerous cervical lesions and from 0.42 (95% CI = 0.13,1.3) to 0.75 (95% CI = 0.32,1.8) for invasive cervical cancer. Similar results were obtained when analysis was restricted to individuals positive for either HPV 16 or HPV 18 and when analysis was performed separately for cancers of different histologic types.

HPV Vaccine Development Efforts

Cervical cancer affects close to 500,000 women each year worldwide. Although rates of cervical cancer

have declined significantly in developed countries with well-established screening programs, rates of cervical cancer in developing countries have remained high. In fact, cervical cancer is the most common cancer diagnosed among women in developing nations; it is the second most common tumor worldwide.

HPV infection is now recognized to be closely linked to the development of cervical cancer. Reduction of cervical cancer incidence through vaccination against HPV infection is an attractive alternative to costly and hard-to-implement Pap smear screening programs. To this end, efforts are under way to develop vaccines effective in preventing HPV infection. NCI efforts have focused on developing a vaccine that would utilize as an antigen the conformationally correct virus-like particles developed by Dr. John Schiller and Dr. Doug Lowy in the Division of Basic Sciences. Phase I and II trials were initiated this summer in collaboration with investigators at Johns Hopkins School of Hygiene and Public Health. These trials will establish the safety and immunogenicity of the proposed HPV vaccine, and will establish the ideal vaccine delivery schedule and dosage for use in larger scale efficacy trials.

Because of the high incidence of cervical cancer in Costa Rica and current understanding of the underlying natural history of HPV and cervical neoplasia in its population (due to an ongoing natural history cohort study of 10,000 women there), Costa Rica has been selected as the site for the NCI-sponsored HPV vaccine efficacy trial. Several efforts are under way to prepare for the large-scale efficacy trial:

1) Methodologic studies are validating the systemic assay to measure immune induction following vaccination. Cervical secretion collection instruments are also being validated to allow comparison of local (cervical) HPV antibody levels with systemic (blood) antibody levels. Concordance between these two measures would confirm the adequacy of using the simpler systemic measures in the vaccine trial.

2) Analytic studies are evaluating the level of protection against re-infection provided by HPV antibodies. By testing sera from participants in the Costa Rican cohort study, it will be possible to determine whether women who are seropositive but uninfected are protected against reinfection with HPV. Both type-specific and cross-reactive protection will be assessed.

3) A pilot study of 300 women is being planned in Costa Rica for the year 2000. It will be conducted once phase I and II studies are completed in the United States and the safety and immunogenicity of the vaccine have been demonstrated. ■

Allan Hildesheim

Genetic Epidemiology Branch

APC Gene Mutation and Cancer Risk

A collaborative study of 5,081 Ashkenazi Jewish volunteers in the Washington, DC, area assessed whether a particular mutation in the adenomatous polyposis coli (*APC*) gene is associated with an increased risk of colon and other cancers. The study found that 7 percent of the study population carried the *I1307K* mutation, which is a common variant in the *APC* gene. A slightly increased risk of cancer was found among carriers, which was mostly due to nonsignificant increases in colon and breast cancers. It was estimated that by age 70, 5 percent of carriers, versus 3 percent of noncarriers, would develop colorectal cancer. Among women, 17 percent of carriers, versus 14 percent of noncarriers, would develop breast cancer. The *I1307K* mutation is thought to cause DNA instability, leading to subsequent mutations that may contribute to the development of cancer. Although the study provides information that may be useful in understanding how cancer develops, additional work is needed to clarify whether it has clinical relevance for Ashkenazi Jews. (Woodage T, King SM, Wacholder S, Hartge P, Struewing JP, McAdams M, Laken SJ, Tucker MA, Brody LC. The *APC I1307K* allele and cancer risk in a community-based study of Ashkenazi Jews. *Nat Genet* 1998;20:62-65) ■

Mary Fraser

Occupational Epidemiology Branch

Cancer Risk among Children Related to Parental Occupational Exposures

Arecent review paper evaluated the epidemiologic evidence on occupational exposures of parents and risk of cancer among their offspring. The strongest association was between childhood leukemia and parental exposure to solvents, paints, and employment in motor vehicle-related occupations, and between nervous system cancers and parental exposure to paints. (Colt JS, Blair A. Parental

occupational exposures and risk of childhood cancer. *Environ Health Perspect* 1998;106(Suppl 3):909-925)

Work Assignment and Occupational Exposures

In a comparison of initial job assignments for African American and white employees at eight facilities that used formaldehyde between 1940 and 1979, there was no evidence that African American workers were assigned to jobs with heavier exposure than were white workers. The finding is contrary to the perception that minorities typically hold jobs with heavier occupational exposures. (Figgs LW, Stewart PA, Blair A. The impact of initial job assignment on formaldehyde exposure among African American and white formaldehyde industry workers. *Am J Ind Med* 1998;34:57-64)

Acrylonitrile Exposure and Cancer Risk

An exhaustive epidemiologic study was carried out on cancer risks among 25,460 workers employed in plants producing or using acrylonitrile in the United States. There was no clear evidence of an increased risk for any cancer or other causes of death. However, workers with high levels of exposure to acrylonitrile had about twice the risk of lung cancer as unexposed workers approximately 20 years after initial exposure. This association lacked the strength or consistency necessary for a causal interpretation. (Blair A, Stewart PA, Zaebst DD, Pottern L, Zey JN, Bloom TF, Miller BA, Ward L, Lubin J. Mortality of industrial workers exposed to acrylonitrile. *Scand J Work Environ Health* 1998;24(Suppl 2):25-41) A companion study on occupational exposure assessment was also published. (Stewart PA, Zaebst D, Zey JN, Herrick R, Dosemeci M, Hornung R, Bloom T, Pottern L, Miller BA. Exposure assessment for a study of workers exposed to acrylonitrile. *Scand J Work Environ Health* 1998;24(Suppl 2):42-53)

Organic Solvent Exposure and Cancer Risk

In a study of 14,000 aircraft maintenance workers at the Hill Air Force Base in Utah, an elevated risk of non-Hodgkin's lymphoma and multiple myeloma was associated with the use of organic solvents, particularly among women. Women in certain jobs also experienced excess mortality from breast cancer. (Blair A, Hartge P, Stewart PA, McAdams M, Lubin J. Mortality and cancer incidence of aircraft maintenance workers exposed to trichloroethylene and other organic solvents and chemicals: Extended follow up. *Occup Environ Med* 1998;55:1671-1171)

Risk of Adenocarcinoma of the Esophagus and Gastric Cardia and H. pylori Infection

In an ongoing, collaborative case-control study of adenocarcinomas of the esophagus and gastric cardia, risks were observed to vary by strain of *Helicobacter pylori* infection. In contrast to previous observations for gastric noncardia adenocarcinomas, a significantly reduced risk of adenocarcinomas of the esophagus and gastric cardia was linked to carriage of the more virulent cytotoxin-positive strains (*cagA+*) of *H. pylori.* The apparent protection may be related to a lowering of gastric acidity and reflux due to severe atrophic gastritis induced by *cagA+* strains. If this finding is confirmed, it would suggest the need for careful examination of long-term risks and benefits with regard to recent proposals to eradicate *H. pylori* infection. (Chow W-H, Blaser MJ, Blot WJ, Gammon MD, Vaughan TL, Risch HA, Perez-Perez, GI, Schoenberg JB, Stanford JL, Rotterdam H, West AB, Fraumeni JF Jr. An inverse relation between *cagA+* strains of *Helicobacter pylori* infection and risk of esophageal and gastric cardia adenocarcinoma. *Cancer Res* 1998;58:588-590) ■

Ifetayo White

Radiation Epidemiology Branch

Cancer Risks among Daughters of Women Exposed to DES

Elevated cancer risks among women exposed *in utero* to diethylstilbestrol (DES) in the 1940's and 1950's have been of concern since reports 27 years ago that some experienced an increased risk of clear cell adenocarcinoma of the vagina and cervix as they entered their teens and 20's. However, in the first systematic follow-up study of a large group of these women under age 30, no increase in risk was found for any type of cancer except for these previously reported rare forms.

Among the 4,500 exposed daughters in the study, who were followed from 1978 through 1992, three cases of clear cell adenocarcinoma occurred, a rate 40 times greater than that for the general population. Their rate for other cancers over this period was similar to women not exposed to DES. Nevertheless,

continued follow-up of these women is warranted, since they are still relatively young and have not entered the age group where breast and other hormonally-related types of cancer are more common.

Other aspects of DES under investigation are its effects on fertility and pregnancy among the daughters, cancer risks among sons exposed *in utero* to the drug, and the effects of DES on mothers who were treated during pregnancy. (Hatch E, Palmer J, Titus-Ernstoff L, Noller K, Kaufman R, Mittendorf R, Robboy S, Hyer M, Cowan C, Adam E, Colton T, Hartge P, Hoover R. Cancer risks in women exposed to diethylstilbestrol *in utero*. *J Am Med Assoc* 1998;280:630-634)

Cancer Risks Related to Hyperthyroidism and I-131 Treatment

High-dose I-131 is the treatment of choice in the United States for most adults with hyperthyroidism. Neither hyperthyroidism nor I-131 treatment was found to significantly increase risk of total cancer mortality in a cohort of 35,000 patients with a hyperthyroid condition. Although an elevated risk of thyroid cancer mortality occurred among I-131-treated patients, only a small number of excess deaths was noted, and the underlying thyroid disease (nodular goiter) appeared to play an etiologic role. Overall, the authors concluded that I-131 appears to be a safe therapy for hyperthroidism. (Ron E, Doody MM, Becker DV, Brill B, Curtis R, Goldman MB, Harris BSH, Hoffman DA, McConahey WM, Maxon HR, Preston-Martin S, Warshauer E, Wong FL, Boice JD Jr. Cancer mortality following hyperthyroidism treatment for adult hyperthyroidism. *J Am Med Assoc* 1998;280:347-355)

Ruth Kleinerman

Viral Epidemiology Branch

Viral Load: Measures of Exposure and Disease

Branch members were among the first to discover that the precise measurement of human immunodeficiency virus type 1 (HIV-1) in serum or plasma is a strong determinant of acquired immunodeficiency syndrome (AIDS)-free survival. This measurement, commonly known as *viral load*, varies widely between individuals, but tends to be relatively stable or slowly increased over the course of a decade of HIV-1 infection. Viral load measurement has been incorporated into standard clinical practice for monitoring anti-HIV therapies, and has proven valuable in understanding the natural history of HIV-1 infection.

The roles of route of infection, age, pregnancy, human genetics, and other determinants of HIV-1 viral load are being investigated. The effort is being undertaken using data and biospecimens from the Multicenter Hemophilia Cohort Study, the Washington and New York Men's Research Study, the Mothers and Infants Cohort Study, and the Malawi Perinatal Interventions Project. Results thus far indicate that HIV-1 viral load does not vary with pregnancy, is substantially higher among infants than among children or adults, and is slightly lower among persons who are heterozygous for the *del32* polymorphism in the CC-chemokine receptor 5, which is required for HIV-1 to infect macrophages.

Also being investigated is the viral load for hepatitis C virus (HCV) by using the branched-DNA technology from Chiron Corp. HCV viral load in serum or plasma is markedly higher (10- to 100-fold) than is HIV-1 viral load, which is undoubtably related to the higher infectivity of HCV with inoculation. Despite such high viral load, however, HCV is transmitted much less efficiently than is HIV-1 by the sexual and perinatal routes.

Viral load assays are also being developed and evaluated for human T-lymphotropic virus types I and II (HTLV-I/II), Epstein-Barr virus (EBV), and human herpesvirus 8 (HHV8). These assays do not currently have obvious clinical applications and thus are of limited commercial interest. Nonetheless, because these three viruses are major causes of human cancer, their accurate measurement is essential to understand, prevent, and treat their associated diseases. All three of these viruses, unlike HIV-1 and HCV, are highly cell-associated. Thus, the approach is to determine the number of blood cells that are infected, using "real-time Taq-Man" PCR technology to measure the number of HTLV-I/II, EBV, and HHV8 copies of DNA, standardized to an accurate measure of the number of DNAcopies of the human endogenous retrovirus 3 in the specimen. Preliminary results indicate that HHV8 viral load is extremely low in peripheral blood cells and that HTLV-I/II viral load is increased with primary transfusion-associated HTLV-I infection and with the two HTLV-I diseases, adult T-cell leukemia/lymphoma and tropical spastic paraparesis.

The Syndrome of AIDS-related Cancers

Kaposi's sarcoma and non-Hodgkin's lymphoma are two major manifestations of AIDS, but many other malignancies have been reported in persons with AIDS (PWAs). To clarify which types of cancer result from AIDS, the cancer experience among PWAs was compared with that among the general population by matching population-based cancer and AIDS registries in the United States and Puerto Rico.

A probabilistic matching algorithm was used to compare names, birth dates, and (where available) social security numbers of 98,336 AIDS case subjects and 1,125,098 cancer case subjects under age 70. Compared with U.S. cancer prevalence and incidence data and with use of the initial life-threatening opportunistic illness as the moment of AIDS, AIDS-related cancers were defined as those with both significantly elevated incidence post-AIDS and increasing prevalence from 5 years pre-AIDS through 2 years post-AIDS.

The matching process found 7,028 cases of Kaposi's sarcoma, 1,793 cases of non-Hodgkin's lymphoma, and 712 other histologically defined cancer cases linked to PWAs. The respective incidence rates among PWAs were increased 310-fold, 113-fold, and 2-fold. Of the 38 malignancies other than Kaposi's sarcoma and non-Hodgkin's lymphoma, only angiosarcoma (37.0-fold), Hodgkin's disease (7.6-fold), multiple myeloma (4.5-fold), brain cancer (3.5-fold), and seminoma (2.9-fold) had elevated risks that also rose significantly ($P < 0.02$) from pre- to post-AIDS. Anal and cervical cancer had high risks more than 2 years before AIDS, but the risk post-AIDS only doubled for anal cancer ($P = 0.085$) and declined for cervical cancer ($P = 0.37$).

The interpretation of whether some cancers are causally related to AIDS is complicated by screening and shared risk factors, such as sexual behavior and cigarette smoking. Despite this complexity, the data indicate that AIDS leads to a significantly increased risk of Hodgkin's disease, multiple myeloma, brain cancer, and seminoma. As with Kaposi's sarcoma and non-Hodgkin's lymphoma, immunologic failure to control herpes or other viral infections may contribute to these malignancies.

Currently, the matching has been extended to several additional areas of the country by using a commercially available linkage program (AutoMatch). With the increased number of PWAs (approximately 350,000) and additional years of surveillance, the hope is to clarify cancer risks for specific subgroups of PWAs, particularly women and children. (Goedert JJ, Cote TR, Virgo P, Scoppa SM, Kingma DW, Gail MH, Jaffe ES, Biggar RJ. Spectrum of AIDS-associated malignant disorders. *Lancet* 1998;351:1833-1839)

Jim Goedert

Li-Fraumeni Syndrome: Quantification of Multiple Tumors

Li-Fraumeni syndrome (LFS) is a dominantly inherited disorder characterized by early-onset breast cancer, sarcomas, and other cancers in children and young adults. Among members of LFS families, there is a high frequency of multiple primary cancers. With the Dana Farber Cancer Center, the risk of developing multiple cancers was quantified among 24 Li-Fraumeni kindreds. Two hundred LFS family members originally diagnosed with cancer between 1968 and 1986 were prospectively followed through October 1995. Thirty individuals (15 percent) developed a total of 42 additional tumors, most of which were component cancers of LFS. Anumber of the tumors appeared to be radiotherapy-induced, which suggests gene-environment interaction. With Kaplan-Meier analysis, the cumulative probability of second cancer occurrence was 57 percent at 30 years after diagnosis of a first cancer, with the greatest risk occurring among survivors of childhood cancers. No differences in risk were found among those with and without *p53* germline mutations. The exceptional risks suggest that cancer survivors in these families should be closely monitored for early manifestations of new cancers and that chemoprevention regimens be considered. (Hisada M, Garber JE, Fung CY, Fraumeni JF Jr, Li FP. Multiple primary cancers in families with Li-Fraumeni syndrome. *J Natl Cancer Inst* 1998;90:606-611) ■

Michie Hisada

REFLECTIONS ON THE SITE VISIT TO THE BIOSTATISTICS BRANCH

The Biostatistics Branch (BB) was site visited on April 21 and 22. This visit marked the culmination of more than 6 months of preparation by BB staff and will influence Branch activities in coming years.

An important element of the preparation was thinking broadly and strategically about the goals and vision of the Branch. BB staff engage in activities ranging from serving as statistical consultants and collaborators on DCEG studies to leading research in descriptive epidemiology, selected field studies, and statistical methodology. The vision we evolved encompassed these diverse activities and stressed the strong connections between BB research efforts and the overall scientific opportunities and needs of DCEG.

Tactical considerations included defining the types of site visitors that would be appropriate for the review and shaping the nature and purpose of the written and oral presentations. Although few of the individuals we suggested turned out to be members of the site visit team, the reviewers had the expertise in applied statistics, descriptive statistics, and gastrointestinal epidemiology needed to evaluate our program.

BB staff discussed the nature and purpose of written materials and oral presentations and how the presentations could best complement or reinforce the write-ups. The 25-page written report from each principal investigator (PI) offered us an opportunity to review Branch accomplishments since the last site visit in 1993 and to define future research plans and resource needs. One of the most challenging issues for many PIs was how to categorize their multifaceted research activities into a few major topics; nevertheless, this categorization is crucial in advantageously presenting research accomplishments and in assessing resource requirements. A few PIs outlined their need for additional computing resources and their desire to mentor postdoctoral fellows. Some PIs used their oral presentations to describe a comprehensive research theme that unified previous accomplishments and set out future goals; others presented a limited aspect of their research in detail. Both approaches worked well.

Close coordination was required to ensure that the written overview of the BB reinforced the individual PI reports and that it provided a unifying framework. In addition to conveying the Branch philosophy and vision agreed upon by BB staff, the overview showed how the activities of PIs and other staff members collectively met broad Branch and DCEG objectives, as it was not always obvious.

The BB overview also highlighted research accomplishments. A few statistics summarizing the Branch bibliography provided impressive evidence of productivity. In addition, the overview outlined DCEG programmatic needs and Branch research plans, which led naturally to a discussion of changes affecting resources and allowed us to request additional personnel and resources. Although the overview did not agree in every detail with individual PI requests, it summarized resource requests with justifications and discussed some of the discrepancies between Branch and individual PI requests. This discussion helped the site visitors make the decisions they were responsible for, including resource allocation.

Site visit preparations require a team effort. All Branch staff were involved, though the heaviest burden fell on PIs. Ms. Jennifer Donaldson played a major role in coordinating information flow and reports, providing quality control, and assembling a comprehensive bibliography. Many others provided help and advice, including Mrs. Catherine McClave, Dr. Robert Hoover, and Dr. Patricia Hartge in DCEG and Dr. Judy Mietz in the NCI Intramural Review Office. PIs found it useful to give their reports to each other and to extramural scientists familiar with grant review processes to get feedback on their write-ups.

The most beneficial aspects of the site visit arose from preparing for it. The preparation allowed us to review and refine the philosophy and vision of the BB and to increase mutual awareness of ongoing research within the Branch. The preparation also fostered long-range planning, highlighted changes in resource allocation, and exposed concerns and discontent with respect to Branch functioning, which led to improvements. Of course, the site visitors offered valuable criticism, advice, and perspectives that strengthen research activities, and they supported scientifically justified Branch requests for

further resources. The preparation took time and effort, and some PIs found it stressful to try to present 4 years of work and future plans in 25 pages and 25 minutes. But the process helped chart a course for the future, and it sure felt good when the visit was over. ■

Mitch Gail

A MEETING REPORT: USE OF EPIDEMIOLOGIC EVIDENCE TO CREATE HEALTH POLICY

The Symposium on the Translation of Epidemiologic Evidence into Public Health Policy was held on July 29 in Washington, DC. The conference, sponsored by the Center for Epidemiology and Policy in the Risk Sciences at Johns Hopkins School of Hygiene and Public Health and by the Public Policy Institute of the American College of Preventive Medicine, was attended by 250 epidemiologists, physicians, lawyers, students, public health officials, analysts, and policy makers. Invited speakers discussed how public health policy is created and what the epidemiologist's role is in this process, focusing on issues of data interpretation and the development of scientific consensus. Dr. Moyses Szklo, Professor of Epidemiology at Johns Hopkins School of Hygiene and Public Health, highlighted weak associations that lead to a large attributable risk estimate due to high exposure prevalence as one of the fundamental limitations to using observational epidemiology as a tool for creating optimal strategies to prevent disease. Difficulty in interpreting the significance of small relative risk/large attributable risk effects is often due to imprecision of the estimates, confounding factors, bias, heterogeneity of effects, and collinearity. Emphasis was placed on obtaining complementary sets of epidemiologic evidence and on developing objective methods for recognizing a critical mass of scientific evidence to help assess the appropriateness of a proposed risk reduction strategy. All of the speakers stressed the importance of epidemiologists as key participants in the political process that endeavors to turn objective scientific evidence into public health policy. Cochairs of the symposium were Dr. Leon Gordis, Professor of Epidemiology, and Dr. Jonathan Samet, Chairman of the Department of Epidemiology, Johns Hopkins School of Hygiene and Public Health. ■

Tamara Zemlo

COMMITTEE OF SCIENTISTS

Amajor theme of the DCEG Committee of Scientists (COS) since its inception is the importance of feedback for scientists about their career path. We have encouraged more frank discussion between individual scientists and Branch Chiefs about strengths and weaknesses and about areas needing attention.

Each spring, Dr. Joseph Fraumeni holds a Division-wide Personnel Review, where he meets with each Branch Chief to discuss the work of every DCEG staff member, scientific and administrative, permanent or temporary. This review allows Dr. Fraumeni and his office to make decisions about all personnel actions (e.g., tenure, promotion, awards, tenure-track slots) for the coming year in a way that fosters comparability across DCEG. Over the next few months, I want COS to discuss how well the annual review process is working from the scientists' perspective, including:

- How the DCEG review fits in with other feedback mechanisms, such as the Employee Performance Management Plan for General Schedule employees, the Commissioned Officers Efficiency Report for PHS Commissioned Officers, the annual written evaluation of tenure-track investigators, and the annual budget review that takes place each fall;
- Whether scientists have ample opportunity to make their Branch Chief aware of their accomplishments, plans, and ideas in preparation for their annual personnel review (as well as at other times); and
- Whether scientists are receiving appropriate feedback about the evaluation and the decisions made at the annual review.

Dr. Fraumeni and Dr. Shelia Zahm have been very responsive to ideas from the COS about similar issues. Please let me or another COS member know how you think these mechanisms are working and if you have any suggestions for change.

Other members of the COS are Michael Alavanja (OEB), Dalsu Baris (OEB), Rochelle Curtis (REB), Allan Hildesheim (EEB), Tom O'Brien (VEB), Dilys Parry (GEB), Sandra Petralia (OEB), and Chris Swanson (NEB). ■

Sholom Wacholder (BB)
Chair, COS

POSTDOCTORAL FELLOWS REPORT

The NIH Fellows Committee has invited Drs. Michael Zigmond and Beth Fischer, both of the University of Pittsburgh, to present a series of monthly seminars on "Survival Skills" for fellows, which will begin in September. The series, which was last presented in 1995-96, focuses on the nonacademic side of life as a postdoctoral fellow in biomedical research, offering useful tips on written and oral presentations, job search and negotiating skills, preparing a curriculum vitae, etc. It is a good place to go for answers to all those questions you are embarrassed to ask your mentor or colleagues! Tentative dates and seminar topics are as follows:

- September 28, 1998: The Job Hunt (part 1)
- October 19, 1998: The Job Hunt (part 2)
- October 26, 1998: Negotiating Skills
- January 11, 1999: Oral Presentations
- February 8, 1999: Writing Research Articles
- March 8, 1999: Grantspersonship
- May 5, 1999: Personnel Skills ■

Frank Groves and Sandra Petralia
NIH Fellows Committee Representatives

PREDOCTORAL FELLOWS REPORT

The NIH pre-Intramural Research Training Award (pre-IRTA) Committee was established in July by Dr. Michael Gottesman. The Committee consists of a representative from each Institute and meets to discuss issues of common concern to predoctoral fellows. In addition to students in doctoral programs, pre-IRTAs include individuals who are between college and matriculation in graduate school. The Committee acts as a liaison with the NIH leadership via the Office of Education. The Committee organizes the pre-IRTA lecture series, interest groups, a web page, and other campus-wide activities. Individual Institute representatives also coordinate pre-IRTA events within their Institutes.

The pre-IRTA picnic, attended by approximately 150 students at the Foundation for Advanced Education in the Sciences Social Center on July 29, was successful in facilitating networking between fellows and students currently enrolled in graduate, medical, and dental school programs, and pre-IRTA trainees from the various NIH Institutes. Dr. Gottesman gave a presentation on mentorship, the process of becoming a pre-IRTA recipient, and the goals of the training program. Mock interviews for graduate school admissions were also conducted. The Committee plans to hold similar events every few months, and has already scheduled the next one for mid-October. The monthly seminar series for pre-IRTA trainees consist of 20- to 30-minute presentations by pre- and postdoctoral students. It is a great opportunity for fellows to discuss their projects and to get feedback from other fellows.

The fellows in each Institute are notified of Committee activities through their representative. In addition, a listserv has been created for pre-IRTA trainees, which can be subscribed to by sending an e-mail message to *listserv@list.nih.gov*, with "subscribepreirta_l" (without quotes) typed in the body of the message. A web page will also soon be available, and will provide information on taxes, medical benefits, transportation, and expectations: a history of the pre-IRTA program; and other items of interest.

DCEG fellows who have ideas for the pre-IRTA web page, are interested in giving a talk at the seminar series, can help with the mock interviews, or have any concerns, please contact Ms. Rebecca Schiller, the new DCEG representative on the pre-IRTA Committee. Ms. Schiller is located in EPN/431 and can be reached at 496-4155. ■

Neely Kazerouni

NEWS FROM THE TRENCHES

Environmental Epidemiology Branch

Ms. Aliya Tejpar, a summer student from Brown University, is working with Dr. Joanne Dorgan to collect data for the Women's Alcohol Study, which is being conducted jointly with the U.S. Department of Agriculture to evaluate the metabolic effects of alcohol in postmenopausal women. Ms. Tejpar also has been assisting in preparing a manuscript on alcohol consumption and serum hormone levels in premenopausal women; she presented her work at the NIH Clinical Center for Poster Day in August. ■

Montserrat Garcia-Closas

Genetic Epidemiology Branch

In May, the NCI and the Fred Hutchinson Cancer Research Center sponsored a workshop on innovative study designs and analytic approaches in the genetic epidemiology of cancer. The purpose of the workshop was to examine new study designs in gene discovery and characterization, and the integration of these two research areas. Among the participants were Drs. Mitchell Gail, Sholom Wacholder, Alisa Goldstein, Neil Caporaso, Nathaniel Rothman, and Kenneth Buetow of DCEG. Various investigators presented views on new techniques for mapping cancer genes; characterizing them once they have been identified and cloned; and incorporating novel molecular, genetic, statistical, and epidemiologic approaches into multidisciplinary study designs. A paper on the workshop proceedings has been submitted for publication. ■

Mary Fraser

Nutritional Epidemiology Branch

Dr. Rashmi Sinha chaired a session on "Diet and Genetic Susceptibility" at the annual meeting of the Federation of American Societies for Experimental Biology in San Francisco in March, and a session on "Genetic Metabolic Variation as an Epidemiologic Variable" at the annual meeting of the Society for Epidemiologic Research in Chicago in June. She also spoke on "Colorectal Cancer Susceptibility Polymorphisms" at the Digestive Disease Week in New Orleans in May, which was organized by several societies.

Dr. Ellen Velie, a Cancer Prevention Fellow, presented a paper at the Society for Epidemiologic Research meeting entitled "Dietary Fat and Breast Cancer: The Breast Cancer Detection Demonstration Project Follow-Up Study, 1987-95." Dr. Velie's talk was on the potential association between dietary fat intake in adult women and breast cancer risk. The association varied depending on the method used for adjustment for total energy intake: it was seen with two methods but not with two others. These findings are consistent with most published reports from cohort studies, and with those of the Iowa Women's Health Study. Since different energy adjustment methods measure different nutritional factors, the varying results are not unexpected. Nevertheless, the interpretation and reconciliation of these findings require additional study.

Dr. Stephanie Weinstein, a Cancer Research Training Award Fellow, recently completed her Ph.D. in nutritional sciences at Cornell University, where she delivered the graduate student address at her department's graduation ceremony. The title of her dissertation was "Serum and Red Blood Cell Folate in Relation to Invasive Cervical Cancer Risk in a Multicenter Case-control Study of U.S. Women." She found that low serum and red blood cell folate levels were associated with an increased risk of invasive cervical cancer. ■

Occupational Epidemiology Branch

Congratulations to Dr. Nathaniel Rothman, who was awarded tenure by the NIH in May. Congratulations also to Dr. Bu-Tian Ji, who completed his Dr.P.H. requirements at Columbia University School of Public Health. In July, he successfully defended his dissertation, "Population-based Case-control Study of Pancreatic Cancer in Shanghai, China."

Reykjavik, Iceland, was the location for the recent International Conference on Women's Health: Occupation, Cancer and Reproduction. The conference, cosponsored by DCEG, was a sequel to the first international meeting on this topic, which was organized by the Branch 5 years ago, in Baltimore. The President of Iceland opened the Reykjavik meeting, which was attended by scientists from 27 countries across four continents, including a number of Branch members. Dr. Shelia Zahm, a member of the organizing committee, gave opening remarks; Dr. Aaron Blair presented an overview on

occupational cancer among women in his keynote address; Dr. Mustafa Dosemeci reported on a twofold increase in the risk of renal cell carcinoma among women in association with exposure to organic solvents; Dr. Ellen Heineman presented data on the risk of glioma following agricultural exposures among Nebraska women; Dr. Capri-Mara Fillmore reported on gender differences in mortality among workers exposed to silica; Dr. Sandra Petralia presented data on cancer mortality among healthcare workers; and Dr. Gigi Cocco reported on occupational risk factors for brain tumors among women. The proceedings of the conference will be published in the *American Journal of Industrial Medicine.*

Ms. Ifetayo White, a secretary in the Branch, received a $500 scholarship from the Center for Body Mind Medicine to attend the conference Comprehensive Cancer Care: Integrating Complementary and Alternative Therapies, sponsored by the NIH Office of Alternative Medicine and the University of Texas-Houston Health Science Center Medical School and School of Nursing. The conference presented information on the most recent trends in integrating alternative therapies and conventional medical treatment in cancer care and on various nutritional and supplemental therapies.

In May, Dr. Wong-Ho Chow gave a presentation on "Tobacco, Obesity and Risk of Adenocarcinoma of the Esophagus and Gastric Cardia" at the Conference on Health Development in Central and Eastern Europe after Transition in Warsaw, Poland.

As part of a 2-week course in Epidemiology in Public Health held in Prague, Czech Republic, sponsored by the World Health Organization European Centre for Environment and Health, Dr. Ken Cantor organized a workshop on epidemiologic studies of health effects associated with water quality and drinking-water contaminants. Emphasis was placed on studies of cancer and other diseases associated with chemicals and microbiologic agents in drinking water. ■

Radiation Epidemiology Branch

Dr. Elaine Ron was an invited speaker and panel discussant at the International Seminar on Radiation and Thyroid Cancer, Cambridge, England, in July. The title of her presentation was "Thyroid Cancer following Exposure to Ionizing Radiation." Along with Drs. Andre Bouville and Bruce Wachholz in the Division of Cancer Biology, she also participated on a panel discussing the U.S. experience of population exposures to nuclear radiation.

Dr. Ethel Gilbert was an invited participant in a workshop entitled, "From Epidemiology to Policy." The workshop was sponsored by Johns Hopkins University, and employed a case study approach to address the use of epidemiology in policy development. Dr. Gilbert participated in a case-study on ionizing radiation and risk of cancer.

Ms. Ruth Kleinerman, Dr. Elaine Ron, and Dr. Charles Land were invited speakers at the American Statistical Association Conference on Radiation and Health, San Diego, California, in June. Ms. Kleinerman's talk was entitled, "Cancer after Radiotherapy for Retinoblastoma: Evidence for Gene-environment Interaction?" Dr. Land took the adversarial position in a debate on whether epidemiologic studies are useful in addressing radiation health effects at low doses; Dr. Ron and Dr. Andre Bouville (Division of Cancer Biology) collaborated to deliver the keynote address, "I-131 Exposure from Atmospheric Testing—The Problem and Its Significance."

Ms. Rochelle Curtis was invited to speak at the Radiation Research Society annual meeting in Louisville, Kentucky, in April. Her talk, "Second Cancers following Radiotherapy for Cancer," reported new results describing an increased risk of solid cancers following total body irradiation as part of the conditioning regimen for allogeneic bone marrow transplantation.

Dr. Catherine Metayer presented a poster entitled, "Continued Risk of Solid Tumors among Long-term Survivors of Hodgkin's Disease," at the American Association for Cancer Research annual meeting, New Orleans, Louisiana, in March. Excesses of subsequent solid tumors were observed in Hodgkin's disease patients up to 25 years after diagnosis, with especially high risks among patients treated in childhood and adolescence.

Dr. Martha Linet participated recently in an Advisory Working Group to the International Agency for Research on Cancer to prepare a monograph on the carcinogenic risks of physical agents. ■

DCEG NEWS BYTES: INFORMATION TECHNOLOGY

Biospecimen Inventory System II Nears Implementation: 10-Year-Old Biorepository Technology Upgrade Scheduled for October

Biospecimen Inventory System II (BSI-II), a portable, real-time data collection, quality control, requisition, and reporting system, is scheduled to be implemented in five biospecimen repositories that participate in the DCEG research program. The system, which was developed by Information Management Systems, Inc., will control 4.5 million biospecimen samples and provide access for more than 175 users through DCEG's site on the internet.

BSI-II employs state-of-the-art computer technology based on a graphical user interface and uses World Wide Web features to provide cross-platform access from various physical locations in the United States. The system is interactive and executes on multiple platforms. The central database server is internet-capable, provides real-time data updates, has a Structured Query Language interface, and is able to communicate with Java applications. BSI-II employs a three-tier client/server architecture to support real-time data manipulation. The system also contains a fully relational database structure that can be modified to meet the specific needs of new users.

The BSI-II system records and maintains a history of the total life cycle of each biospecimen entry. The system accommodates repository-specific data and study-specific data. Repository-specific data includes sample identification number (ID), data received, freezer location, and hemolysis status. Study-specific elements include study ID, subject ID, sample ID, data specimen collected, date tested, and type of test performed. BSI-II system functions are as follows:

- Track total inventory;
- Track returned vials;
- Collect information on specimen processing (e.g., aliquotting);
- Provide a search capability and standard reports module;
- Extract specimen records for external analysis;
- Track requisitions and requested tests;
- Provide quality control edits;
- Provide data entry mechanisms to update inventory information;
- Employ a utilities module to generate labels, set user profiles, and other functions; and
- Set specific levels of access for individual users.

For additional information about BSI-II or user training or to arrange for a system demonstration, contact Mr. Mike Stump at 496-1606. ■

Call for Small Business Innovation Research Concepts

November 15 is the deadline for submitting concepts for the December 1998 publication of the *NIH Omnibus Solicitation for Small Business Innovation Research*. This program is designed to support innovative research conducted by small business concerns that could commercialize their research products. DCEG investigators are encouraged to submit concepts that can take advantage of this funding mechanism. Please contact Mr. Mike Stump (496-1606) for further information about this program. ■

DCEG Informatics Study Under Way: Is It Time for a Common DCEG Database?

ADCEG working group is being created to determine the need and requirements for database management software in the Division. The group will consist of staff members from DCEG, representatives from relevant support contractors, and outside consultants.

A Data System Survey is collecting baseline data on systems currently used to support DCEG research efforts. Survey information (e.g., platform usage, storage requirements, access methodology, and Center for Information Technology storage and processing costs) will form the basis for recommendations on how the Division should bring a measure of standardization and increased efficiency to managing research data. If you have any ideas or if you would like to be a member of the working group, contact Mr. Mike Stump at 496-1606. ■

ADMINISTRATIVE UPDATES

Administrative Resource Center

The DCEG Administrative Resource Center (ARC) recently hired a Personnel Management Specialist, Ms. Karen Webb (EPN/316, 594-7510), as well as a Personnel Assistant, Ms. La-Donna Daniels (EPN/316, 402-4375). ARC Administrative Officer (AO) staff has changed as well. The arrival of Ms. Denise Stoneman in June from the former NCI Office of Intramural Management and the departure of Ms. Mary Kaczaniuk in late July warranted the following Branch reassignments:

Branch	Primary AO	Backup AO
DCEG OD	Charlotte Mercanti	Lori Henry
HGP OD	Charlotte Mercanti	Mary Jude Jacobs
GEB	Charlotte Mercanti	Mary Jude Jacobs
LPG	Patrick Miller	Lori Henry
EBP OD	Mary Jude Jacobs	Charlotte Mercanti
EEB	Lori Henry	Roberto Minutillo
NEB	Charlotte Mercanti	Denise Stoneman
OEB	Denise Stoneman	Charlotte Mercanti
BB	Roberto Minutillo	Denise Stoneman
REB	Lori Henry	Denise Stoneman
VEB	Charlotte Mercanti	Roberto Minutillo
NCI OD	Mary Jude Jacobs	Lori Henry

Although the assignments above indicate a primary AO and a backup AO, feel free to contact any ARC staff member with questions or concerns. All the AOs work together to provide quality administrative support and advice to the entire Division as well as to the NCI OD branches in Executive Plaza supported by the DCEG ARC.

For up-to-date administrative information, consult the *Administrative Newsletter*, a publication of the NCI Office of Management, at the following web site: *http://dino.nci.nih.gov/admin/news/admin.* ■

Mary Jude Jacobs

Research Contracts Branch

NIH policy now requires that children be included in all studies conducted or supported by the NIH, unless there are scientific or ethical reasons not to include them or an exception applies. The policy is applicable to both research and nonresearch studies, whether domestic or foreign. The requirement is effective for all contract proposals received after October 1, 1998.

This new policy adds the following requirements to the contracting process:

- Project Officers must address the inclusion of children in the statement of work and evaluation factor sections of Project Plans. For studies in which the inclusion of children is not appropriate, Project Officers must document this in their Project Plans;
- Requests for Proposals must include language relating the new policy to offerors and explain how the inclusion of children will be evaluated in contract proposals;
- Offerors must address the inclusion of children in a separate section of their contract proposals;
- Technical Review Panels must include a person who can evaluate issues regarding the inclusion or exclusion of children;
- Technical review minutes must document that the reviewers discussed the inclusion of children and how proposals were evaluated in this regard. Technical Review Panels may not consider the increased costs associated with the inclusion of children or budgetary constraints when recommending the selection of an offeror for award of a contract; and
- Contractors must report annually on whether children are involved in the study and how the study has relevance for conditions affecting children. The NIH staff will review progress reports and take appropriate action as necessary to ensure compliance with policy.

NIH employees were provided with mandatory training on this subject. Specific information on the NIH policy is found at the Office of Extramural Research web site, *http://odoerdb2.od.nih.gov/oer/policies.htm#children.* ■

Sharon Miller

COMINGS . . . GOINGS . . .

Congratulations and farewell to **Ms. Patricia Evans.** Pat left DCEG in September to become a Senior Meeting Planner with Tascon, Inc. Although Pat joined DCEG only a little over a year and a half ago, she has become a valuable member of the Division's support team. She served as Executive Secretary of the DCEG Senior Advisory Group, the Technical Evaluation Panel for non-R&D contracts, tenure-track search committees, and the DCEG Biospecimen Repository Committee. In addition, Pat coordinated a number of activities, including interviews for fellowship candidates, DCEG seminars, and the Division's web site. She was also responsible for coordinating and editing *Linkage*, a time-consuming and underappreciated task. We thank Pat for all her efforts in supporting the Division, and we wish her well in her new job.

Dr. Capri-Mara Fillmore has transferred from the Nutritional Epidemiology Branch to the Occupational Epidemiology Branch, where she will participate in occupational studies involving exposure to diesel exhausts and silica. Dr. Fillmore is currently completing the requirements for Preventive Medicine Board Certification at Johns Hopkins University. She is located in EPN/415 and can be reached at 402-3278.

Mr. Andrew Flood recently joined the Nutritional Epidemiology Branch as a Cancer Research Training Award Fellow. He expects to receive his Ph.D. this month from the Division of Nutritional Sciences at Cornell University. His dissertation focuses on the emergence of chronic diseases in China in the context of evolving diet and lifestyle practice, and offers future projections of disease rates and their public health and policy implications. During his fellowship, Mr. Flood will work with Dr. Arthur Schatzkin on the American Association of Retired Persons cohort to explore further the role of dietary patterns in the causation of cancer. His office is temporarily located at 6100 Executive Blvd., Room 7B07, and he can be reached at 496-1073 (ext. 281).

Dr. Lynn Goldin has joined the Genetic Epidemiology Branch as a tenured investigator. She received her Ph.D. from the University of North Carolina at Chapel Hill with a major in genetics and a minor in biostatistics. Most of her career has been spent at National Institute of Mental Health as a research geneticist, and she is internationally known in the genetics of complex diseases, particularly psychiatric disorders. Since the 1980's, Dr. Goldin has been a valuable collaborator and consultant with DCEG staff, and we are fortunate that she is bringing her expertise to NCI. Her major research interests are detection of susceptibility genes for complex diseases by linkage and association methods. Dr. Goldin is located in EPN/400 and can be reached at 402-9656.

Dr. Peter Inskip has returned to the Radiation Epidemiology Branch as a tenure-track investigator. After receiving his Sc.D. in epidemiology from Harvard School of Public Health, Dr. Inskip joined the Branch in 1987 as a postdoctoral fellow. In 1995, he accepted a position as Associate Professor of Epidemiology at Texas A&M University. Among other projects, Dr. Inskip will be working on the case-control study of brain tumors and studies of Chernobyl cleanup workers. He is located in EPN/408 and can be reached at 594-7515.

Ms. Mary Kaczaniuk recently left the Administrative Resource Center team to join her husband, who has taken an academic position in New Jersey. She will be working as a Program Coordinator at the Francois-Xavier Bagnoud Center at the University of Medicine and Dentistry at New Jersey, which is located in Newark.

Dr. James V. Lacey, Jr., recently joined the Environmental Epidemiology Branch as a Cancer Research Training Award Fellow. Dr. Lacey completed his M.P.H. and Ph.D. in epidemiology at the University of Michigan. His doctoral dissertation focused on identifying risk factors for scleroderma and undifferentiated connective tissue disease, including analyses on relationships with reproductive history, oral contraceptive use, and estrogen replacement therapy. During his fellowship, Dr. Lacey plans to extend his interest in these exposures to a variety of cancer sites. His office is located in EPN/443, and he can be reached at 435-3985.

Dr. Mary Lou McMaster has joined the Genetic Epidemiology Branch as a fellow in the Cancer Genetics and Epidemiology Training Program. She received her M.D. degree from the Bowman Gray School of Medicine in Winston-Salem, North Carolina, and completed a residency in internal medicine and a fellowship in medical oncology at

Vanderbilt University School of Medicine in Nashville. Dr. McMaster recently completed a clinical genetics fellowship in the NIH Medical Genetics Program. Her primary research interest is in familial cancers. In the Genetic Epidemiology Branch, Dr. McMaster is working on studies of families with chordoma and Waldenström's macroglobulinemia. She is located in EPN/439 and can be reached at 402-9726.

Dr. Maria Sgambati recently joined the Genetic Epidemiology Branch as a fellow in the Cancer Genetics and Epidemiology Training Program. She received her M.D. degree from the Bowman Gray School of Medicine in Winston-Salem, North Carolina. She completed a residency in internal medicine at Pennsylvania State University/Hershey Medical Center and a fellowship in hematology/oncology at Bowman Gray School of Medicine. Dr. Sgambati is completing requirements for a M.S. in epidemiology from Wake Forest University. Her thesis involved the study of vitamin D consumption and risk of prostate cancer. Dr. Sgambati's primary research interests include the genetics of familial cancers and defining further the genetic and environmental risk factors for familial leukemias and lymphomas. She is located in EPN/439 and can be reached at 496-4378.

Professor Hans van Houwelingen, Head of the Department of Medical Statistics at Leiden University Medical Center, is visiting the Biostatistics Branch as a Guest Researcher from September 2 to December 31. His research interests include empirical-Bayes methods, meta-analysis, prognostic models, logistic regression, survival analysis, mixed models, and statistical models for family data. Professor Houwelingen is located in EPN/403 and can be reached at 402-6207.

Ms. Tara Vogt has returned to the Nutritional Epidemiology Branch after completing her second year of study in the doctoral program in chronic disease epidemiology at Yale University. She received her M.P.H. in epidemiology and biostatistics from George Washington University in 1996. Ms. Vogt is analyzing data collected in a case-control study of prostate cancer, with emphasis on its relation to serum levels of vitamin E, lycopene, and other carotenoids. She is temporarily located at 6100 Executive Boulevard, Room 7B07, and can be reached at 496-1073 (ext. 280).

Mr. Barry Waddell will be working in the Occupational Epidemiology Branch through May 1999 as a Howard Hughes Research Scholar. He is a medical student at Stanford University and previously spent 6 years in the U.S. Air Force as a aircraft fuel system specialist. Mr. Waddell will be analyzing data on the risk of non-Hodgkin's lymphoma in relation to agricultural exposures, especially organophosphate pesticides. Mr. Waddell is located in EPN/415 and can be reached at 496-9093.

Ms. Nora Jansen recently began working with the Occupational Epidemiology Branch as a stay-in-school. Ms. Jansen is a senior at Covenant Life High School under its Home School Satellite Program. She plans to enroll in Montgomery College's R.N. program in 1999. ■

ASTUTE CLINICIAN LECTURESHIP

The annual Astute Clinician Lectureship was recently established by Dr. and Mrs. Robert Miller to honor scientists who have observed an unusual clinical occurrence through which laboratory research has led to important new understanding of disease. The inaugural speaker will be Dr. J. Bruce Beckwith, Professor of Pathology and Human Anatomy at Loma Linda University; he will speak on "The Link between Teratogenesis and Carcinogenesis: Lessons from the Wilms' Tumor Model." In 1964, Dr. Beckwith and Dr. Hans Wiedemann independently identified the syndrome named for them. The lecture will take place Thursday, October 15, at 3:00 pm, in Masur Auditorium. ■

Robert Miller

DCEG PEOPLE IN THE NEWS

Congratulations to Dr. Hartge, Dr. Zemlo, and Ms. Kiesewetter for awards they recently received for outstanding achievements.

Dr. Patricia Hartge received the NIH Quality of Work Life Award for her endeavors to enhance the scientific skills of DCEG fellows and to provide them with a forum for addressing problems of common interest. She initiated and led monthly seminars to improve the fellows' epidemiologic and biostatistical expertise, provided advice to the fellows as a group and individually about scientific issues and career paths, and assisted in mentoring-related matters. Dr. Hartge's efforts in these and other areas have clearly raised the quality of the fellows' work life within the Division.

Dr. Tamara Zemlo, a Cancer Prevention Fellow working in the Environmental Epidemiology Branch, received the 1998 NIH Fellows Award for Research Excellence. Her winning abstract described the analysis of a natural history study of cervical neoplasia in relation to human papillomavirus infection. Dr. Zemlo's findings suggest that this infection is a necessary component for progression of lowgrade squamous intraepithelial lesions to highgrade forms. The $1,000 award can be used toward domestic travel and other costs associated with a scientific meeting.

Ms. Virginia Kiesewetter received the Customer Service Award from the NCI Office of Management for her improvements in service and communication since becoming Manager of the DCEG Administrative Resource Center. She was also cited for her efforts to improve morale within the Center and to ensure that staff members receive appropriate training. ■

CALENDAR OF EVENTS

Following is a schedule of upcoming events of particular interest to DCEG.

Date	Event
October 7-9	NIH Intramural Research Festival Natcher Conference Center
October 15	DCEG Seminar 10:30-11:00 am, EPN/J
October 15	Astute Clinician Lectureship by Dr. J. B. Beckwith 3:00 pm, Masur Auditorium, Bldg. 10
October 16	DCEG Senior Advisory Group 1:00-4:00 pm, EPN/G
October 19	Radiation Epidemiology Branch Site Visit
November 12	DCEG Senior Advisory Group 1:00-4:00 pm, EPN/H
November 16	Board of Scientific Counselors-A
November 18	Environmental Epidemiology Branch Site Visit
December 8-9	National Cancer Advisory Board
December 10	DCEG Senior Advisory Group 1:00-4:00 pm, EPN/H
January 7-8	NCI Combined Intramural Retreat

NATIONAL CANCER INSTITUTE