FOSTERING COMMUNICATION AND COLLABORATION

The NIH CATALYST

A PUBLICATION FOR NIH INTRAMURAL SCIENTISTS

NATIONAL INSTITUTES OF HEALTH ■ OFFICE OF THE DIRECTOR ■ VOLUME 5, ISSUE 4 ■ JULY–AUGUST 1997

NIHers Play Multiple Roles In *BRCA* Study

by David Ehrenstein

On May 14, intramural researchers from NCI and NHGRI held a joint press conference here to announce the findings of their highly publicized study to determine cancer risk associated with *BRCA1* and *BRCA2* gene mutations in a general population of Ashkenazi Jews. That "general" population may have included a fair share of Ashkenazi Jews from NIH itself; it almost included two of the study's very own researchers.

First the findings: Among their study sample of of 5,318 Ashkenazi Jewish volunteers living in the Washington metropolitan area, NCI-NHGRI scientists Jeffery Struewing, Patricia Hartge, Sholom Wacholder, and their NIH and industry colleagues found a 56 percent risk of breast cancer by age 70 associated with any one of three specific genetic mutations—higher than the risk without such mutations but lower than previous estimates of 76 to 87 percent, based only on findings from families with high cancer rates. Similarly, the 16 percent elevated risk of ovarian and prostate cancer was lower than that observed in high-incidence families. The relatively high rate of these mutations among Ashkenazi Jews (2.3 percent of the 5,318 volunteers) allowed the researchers for the first time to study the mutation-associated

Janet Yee

Sholom Wacholder

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Build It, and They Will Come: NCI-Frederick's Field Of Dreams

by Fran Pollner

Donald Summers has visions of implosion when he glances up at the building just behind his office. Since Summers became the new scientific coordinator of the Frederick Cancer Research and Development Center last January, he has resented the looming tower that dominates part of the skyline at the NCI's "outpost" on the grounds of Fort Detrick, 37 miles from the Bethesda campus, in Frederick, Maryland.

And he wants the "tower," as the now-deserted building is indeed called, torn down. Not only does it cast a shadow over his personal workplace, it's a symbol of the past, a reminder that biological warfare was once the focus of the research conducted at the Army's Biological Defense Research Laboratories—the predecessor of the civilian FCRDC.

That image bears no resemblance to Frederick's face today or to the future Frederick evolving in Summers' mind.

"When people think basic science research in cancer and AIDS, they'll think

Fran Pollner

FCRDC's new Building 535, five floors of labs dedicated predominantly to AIDS research.

Frederick," he says, projecting a picture of the FCRDC as a "center of excellence that attracts the upper 0.001 % of internationally recognized scientists." That projection, he adds, merely builds upon Frederick's current, high-calibre research climate.

Fran Pollner

Donald Summers

Clinical research, however, is no longer on the Frederick agenda. With the changing of the NIH guard—the arrival of Harold Varmus as NIH director and the appointment of Richard Klausner as NCI director—"there was a decision to redirect the function, focus, and future goals, of the Frederick facility," Summers said in an interview with *The NIH Catalyst* during the first Frederick Research Festival (see photo spread, page 13). The Bishop-Calabresi report, released in June 1995, also recommended consolidating NCI's clinical

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Interinstitute Groups Spark Interest

Michael Gottesman

Over the past four years, the burgeoning diversity and vitality of NIH's specialized scientific interest groups have greatly enhanced the research climate here, and I am pleased to give you a status report on our interinstitute interest groups.

In addition to seven broadbased interinstitute interest groups (Cell Biology, Molecular Biology and Biochemistry, Genetics, Structural Biology, Immunology, Neurobiology, and Clinical Research), there are now 65 established, smaller specialized interest groups at NIH and another nine that are just coalescing (for a complete list, see pullout—pages 7–10). That means—since we have about 1,200 tenure-track and tenured scientists—that there's one interest group for every 15 or so principal investigators. Some of these smaller groups—like the venerable Lambda Lunch—date back 30 years or more; others deal with scientific subjects that didn't even exist a few years ago.

Most of our specialized interest groups meet regularly to share ideas, discuss papers, and listen to seminars of mutual interest. In so doing, they allow scientists in different intramural programs who share common techniques or who have common intellectual interests to exchange ideas and materials. Active web sites, listserve lists, and other electronic communications facilitate these exchanges. More and more, our interest groups are an important and impressive scientific face NIH shows the world, as they respond to queries from outsiders and provide points of contact for scientific collaborators.

There is probably no better way for an NIH scientist to keep in touch with new developments in biomedical research than to attend all of the Wednesday Afternoon Lectures.

Dr. Varmus and I have also relied on the interest groups as advisors on scientific matters. The larger interest groups each recommend and host three outside speakers (many of whom are initially nominated by the smaller groups) for the Wednesday Afternoon Lectures, and the smaller groups themselves recommend an additional six speakers. This nomination process has led to an outstanding and diverse lecture series. There is probably no better way for an NIH scientist to keep in touch with new developments in biomedical research than to attend all of the Wednesday Afternoon Lectures. Starting with the next round of nominations, the inter-

groups will also be proposing speakers for the prestigious NIH Director's Lectures, also held as part of the Wednesday Afternoon Lectures.

I depend on the interest groups to give me ad vice about new scientific projects for NIH, to provide reviewers for promotion and tenure actions at NIH, and to provide ideas and organizational skills for the workshops and symposia that make up our annual NIH Research Festival. This year, Structural Biology and Immunology will organize the Research Festival symposia, and 20 of the smaller groups will organize workshops and select presentations for the poster sessions. Dr. Varmus and I also meet annually with interest group leaders to explore other ways in which their work can be facilitated and their expertise tapped to advance NIH's missions.

We are now considering a new interest group advisory function, arising from planned changes in the Fogarty Scholars program. Currently, Fogarty Scholars are selected and supported by the Fogarty International Center. In the future, we would like scientists at NIH, through the interest groups, to have a much greater voice in choosing and hosting Fogarty Scholars. In this model, the interest groups would nominate Fogarty Scholars to come to NIH for a sabbatical period, with financial support from one or more intramural programs. This would allow scientists at NIH to select scholars whose work sparks their interest, guaranteeing a constituency of NIH intramural scientists eager to interact with the Fogarty Scholars. And since funds for the program would come from several different institutes, we might well be able to bring more scholars to NIH than is currently possible. I am working with the Fogarty International Center, the scientific directors, and some interest group leaders to develop a process to support this program.

Finally, one way to think of the larger interest groups is as faculties. Several have already taken action to help train colleagues and postdoctoral fellows in their discipline. Through the network established by the interest groups, fellows and students receive training, mentoring, and a perspective on their field that may not be available in their own laboratories. More formal programs to achieve these goals are encouraged. One obvious possibility would be to use the interest groups as faculties to support a graduate program at NIH. Although plans for such a graduate program are still embryonic, a program that builds on the strength of NIH in translational research is an enticing possibility. Whether NIH hosts student researchers from other degree-granting programs or develops its own graduate program, the expertise in the many disciplines represented by the specialized interest groups and the coursework available through the FAES graduate school are keys to a successful program.

I welcome other ideas you might have for using the interest groups at NIH. And if this discussion has encouraged you to establish a new interest group, please get in touch with the "Csarina of the Interest Groups," Celia Hooper, at <Csarina@nih.gov>.

Silence Is Not Golden: Making Collaborations Work

by Joan P. Schwartz, NINDS

What is a scientific collaboration? How can one set one up and keep it going successfully? And why do they occasionally go awry?

The NIH Guidelines for the Conduct of Research (just reprinted in a revised third edition and available from your scientific director) accentuate the positive—that "research collaborations frequently facilitate progress and generally should be encouraged." And to help eliminate the negative, the Guidelines suggest setting ground rules at the start and arranging to share reagents with collaborators outside NIH through MTAs (material transfer agreements).

But the disputes that can be generated during the course of an otherwise valuable scientific collaboration—disputes revolving around not only reagent sharing but also authorship and even mentorship—are common enough that they are among the central issues the new Ombudsman/Cooperative Resolution Center pilot project was designed to handle.

So what *is* a good collaboration? The NIH Committee on Scientific Conduct and Ethics recently discussed several cases of problem-plagued collaborations and came up with what we hope are useful guidelines. First, in these days of multidisciplinary science, since almost no one is trained in all the disciplines needed to complete a study, scientific collaborations clearly make a lot of sense, both intellectually and financially. The best collaborations form between scientists with complementary expertise—for example, a molecular biologist capable of generating knock-out mice with a neuroscientist who can measure changes in the behavioral activity of those mice; or an immunologist who wants to look at the effect on T lymphocytes of engineered mutants of a virus provided by a virologist.

> . . . DO NOT ASSUME THAT LONG PERIODS OF SILENCE INDICATE THAT. . . ALL IS WELL. IF YOU HAVE NOT COMMUNICATED WITH YOUR COLLABORATORS FOR A YEAR, THERE MAY NO LONGER BE A COLLABORATION!

To work well, though, certain parameters need to be discussed and defined up front: who is going to do what and when they will do it; who will supply reagents needed for certain aspects of the study; even who will write the paper and be first author. Defining order of authorship before doing the experiments can be tricky, however, since surprise results may completely change the focus of a study and thereby dictate a change in the order. Flexibility is thus a key ingredient in any collaboration.

The cases the Ethics Committee examined have convinced us that the single most important measure in successful collaboration is keeping the lines of communication open. Communicate with your collaborators, by phone, e-mail, or even letters, frequently. Tell them what you are finding and ask what their results are. Share data as well as problems. If a collaborator outside NIH is applying for an NIH grant, or is supported by an NIH grant, the granting agency should be informed of this collaboration. You will generally be asked to prepare a letter to be submitted with such a grant application; you should ask to see the relevant parts of the application before it is submitted so that you know whether the proposal accurately represents your part of the collaboration. Although you, as an NIH employee, cannot contribute to the writing of the application, make it clear that you want to be informed when the grant is funded and when it will start. Above all, do not assume that long periods of silence indicate that your collaborator is working away and all is well. If you have not communicated with your collaborators for a year, there may no longer be a collaboration!

Bear in mind that some forms of scientific exchange do not form an appropriate basis for collaboration. The Guidelines state clearly that "individuals . . . who have assisted the research [by providing] reagents . . . should not be authors." By the same criteria, providing someone with a plasmid, or an antibody, or even a transgenic mouse, does not establish a collaboration. In line with this thinking are Public Health Service regulations that state that any reagent developed with government funds (intramurally or extramurally) must be provided to those who request it once the results have been published. Intramural scientists use MTAs when giving such reagents to colleagues at universities or other extramural sites. Such input is often acknowledged in a published study, with thanks to the suppliers of materials used in the experiments—a way to give credit without conferring authorship.

Fran Pollner

Joan P. Schwartz

Probably the most difficult issue scientists grapple with in discussing collaborations is that of intellectual property. Is there such a thing as ownership of an idea? If there were, would anyone discuss science with anyone else? Would everyone feel that they deserved authorship or collaborator status because they had lunch with a friend, heard about new results, and suggested an interesting experiment? Conversely, are all conversations between scientists, even one-on-one, to be considered a sharing of privileged information? The members of the Ethics Committee felt overwhelmingly that no conversation between scientists could be considered "privileged and confidential" unless one of the scientists started the conversation by stating that what he or she was about to share was unpublished material and was not to be shared with others.

Many scientists believe that the constraints imposed by industry consultation and collaboration on free and open discussion of research projects are already having a deleterious effect on science. For many of us, the pleasure of doing science lies in formal and informal discussion and exchange of results and ideas with colleagues. That pleasure would be compromised or vanish entirely if each idea were fenced in as the exclusive intellectual property of one person. ■

The Design and Testing Of Recombinant Immunotoxins In Human Cancer

By Ira Pastan, M.D., Chief, Laboratory of Molecular Biology, National Cancer Institute. Pastan presented this at the Symposium in Honor of David Reginald Davies at NIH on April 25, 1997. These Seminar Highlights were prepared by Susan Chacko.

ABSTRACT

The goal of our research group is to develop a targeted therapy for human cancer. We do this by modifying a powerful bacterial toxin, *Pseudomonas* exotoxin A (PE), so that instead of binding to its own receptor, which is widely distributed on normal human cells, it will preferentially bind to antigens present on tumor cells. PE is a three-domain toxin in which domain I binds to the PE receptor, domain II catalyzes toxin translocation, and domain III catalyzes the ADP-ribosylation of elongation factor 2 that leads to protein-synthesis arrest and cell death. Removal of domain I generates a molecule (PE38) that has very low toxicity unless chemically attached to an antibody or fused to the Fv portion of an antibody that will target the toxin to tumor cells.

Initially, we made a recombinant toxin in which we deleted domain I; it is termed LysPE38 because it contains an extra lysine residue at the amino terminus of domain II. We used this lysine residue to couple LysPE38 to the B3 antibody. The antibody recognizes the LewisY (LeY) antigen, which is present on the surface of many epithelial tumor cells but very few normal cells. B3-LysPE38 (named LMB-1) kills cells bearing the LeY antigen, causes complete regressions of LeY-containing tumors growing in mice, and has been used in a Phase I clinical trial at NCI. In this trial, seven responses (tumor regressions) were obtained.

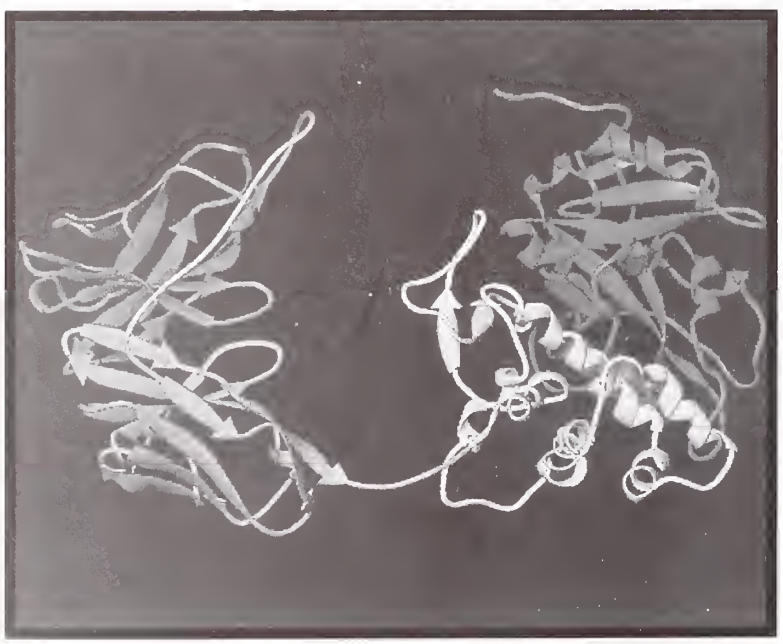
We next used recombinant-DNA techniques to make a smaller recombinant immunotoxin termed LMB-7.

This immunotoxin contains the Fv fragment of monoclonal antibody B3 in a single-chain form fused to PE38. B3(Fv)-PE38 (LMB-7) is produced in *Escherichia coli* as inclusion bodies. The protein is solubilized, renatured, and readily purified to homogeneity. LMB-7 is very cytotoxic to cancer cells bearing the LeY antigen. A Phase I clinical trial with LMB-7 is now being conducted at NCI.

Many single-chain immunotoxins, including LMB-7, are unstable due to dissociation of the Fv heterodimer, which is not prevented by the peptide linker. To overcome this difficulty, we have developed a general method of making immunotoxins in which the Fv heterodimer cannot dissociate because it is held together by a disulfide bond. LMB-9 is an improved form of LMB-7 in which the Fv fragment is disulfide-linked.

LMB-9 is stable at 37 °C for more than two weeks and shows excellent antitumor activity in mice. LMB-9 is currently being prepared for a Phase I clinical trial due to begin late in 1997.

The research described here is the result of a very productive collaborative effort to which many outstanding scientists have contributed. Among them are David FitzGerald, Mark Willingham, Lee Pai, Robert Kreitman, Ulrich Brinkmann, Vijay Chaudhary, and B.K. Lee.



LMB-7: B3(Fv)–PE38, Single-chain Immunotoxin

QUESTIONS

Q: What was your starting point in this research, and how have your questions evolved?

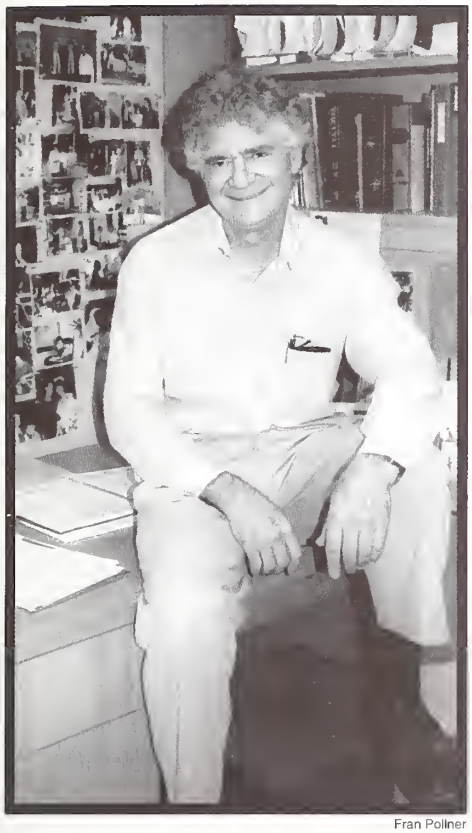
A: Our goal was to use what we knew about genetic engineering, the process of endocytosis of cell surface proteins, and the biochemical properties of *Pseudomonas* exotoxin to develop a targeted therapy for cancer by targeting the toxin to cancer cells. Initially, we did simple experiments in which we conjugated the whole toxin to antibodies or growth factors. Once the three-dimensional structure of *Pseudomonas* exotoxin was solved, we could use this information to determine the function of different parts of the molecule and combine this with genetic engineering to make sophisticated chimeric toxic proteins.

Q: Which findings have been most surprising to you or to other scientists?

A: Our most surprising finding was that we could design molecules that would produce complete regressions of solid tumors growing in mice without damaging normal cells.

Q: What were the greatest stumbling blocks, and what new observations, techniques, reagents, or insights helped you get past them?

A: There were many scientific problems, including finding specific antibodies to target the toxin to tumor cells and figuring out how to make active proteins in *E. coli*. Currently, the greatest stumbling block is producing sufficient amounts of clinical–grade immunotoxin to carry out clinical trials. Unfortunately, trials in small animals, or even monkeys, do not accurately predict how the drug will behave in humans. So each clinical trial in patients is an experiment that teaches us how to im-



Fran Pollner

Ira Pastan

prove our immunotoxins. The difficulty is that each trial takes one to two years.

Q: How can basic and clinical scientists capitalize on this research?

A: Our research, which uses basic science techniques and approaches to develop drugs to treat cancer, is best characterized as applied or translational rather than clinical. We have within our own group basic scientists who design molecules, protein engineers who make these molecules, and clinicians who carry out our clinical trials. This combination of skills in one department enables us to carry our research into patient trials. We hope what we do will encourage others trained in nondirected basic science to try and translate what they do into clinical applications.

Q: How are you following up on this work, and what questions would you ultimately like to answer?

A: Our current goal is to produce regressions of solid tumors in patients on a regular basis. We believe we can do this by using protein modeling and genetic engineering to make molecules that are more active and have fewer side effects.

Catalytic Reactions

Below are comments we received in response to questions posed or issues raised in recent issues.

On Quality Issues

I am just reading the March/April *Catalyst* and saw the letters on telecommuting. I hope that NIH employees know that telecommuting or flexiplace arrangements are in place in some pockets of NIH. Some are formal programs where the employee works a regular schedule of days from home. Others are more ad hoc, where an employee might need to work at home for a particular day for whatever reason, such as the need for "quiet" without office disruptions or the need to care for a sick child. The NIH Quality of Work Life initiative calls for expansion of this program along with alternative work schedules and other flexible arrangements, where the work can be accommodated in that manner. I hope managers and their employees will work together to implement these programs and perhaps ease some of the parking problems on campus, as well as assist employees in balancing home and work demands as necessary.

—Marvene Horwitz
Chair, Quality of Work Life Committee

On Daycare

I saw the daycare suggestions in the *Catalyst*. I am a mother of two, ages 5 and 7, and married to an NIH scientist. We have used Mother's Aides in Virginia and, with the exception of one experience (which was more of a personality problem than a performance problem), they have been great. They are expensive but have found us sitters on as little as four hours notice.

—V. Hampshire, NCRR

On Cloning Ethics

I am surprised that no one in your May-June issue who discussed the perceptions of cloning by religious leaders made this observation—not Boston College theologian Lisa Cahill, not Protestant theologian Gilbert Meilaender, and not Elliot Dorff of the University of Judaism.

Nevertheless, this cannot go unsaid.

Before we decry the fact that the contribution of a male parent is an "essential reality," let us remember that [it is a central tenet of Christianity that] Jesus was born of the Virgin Mary.

—Sharon Ricks, NIDDK

Parking Problems?

Click on <http://www.nih.gov/od/ors/parking/parkpln.htm> to locate about 400 temporary employee parking spaces—and read about plans to create 1200 paid visitor spaces and other parking news.

Reweaving the Web

Did you miss DCRT's Web Information Day, or just didn't make it to a particular talk?

The presentations and handouts from the meeting are available online at <http://wid.dcrt.nih.gov/> under "Seminar Descriptions."

NIHers in *BRCA* Study
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Janet Yee

Sholom Wacholder

cancer risk in the general population.

Agreeing to be tested for mutations that confer cancer risk is no small matter, and since the advent of the ability to identify *BRCA* mutations, many people, especially women,have expressed great reluctance to submit to a test whose results might generate little more than health insurance discrimination and fear. Study designers avoided these issues by testing the subjects anonymously, not returning results to individuals, and destroying all information connecting identities with genetic data.

Although the study participants were anonymous, the investigators had put up notices on the NIH campus and at likely spots near campus asking for volunteers—and 58 percent of the participants turned out to have graduate degrees (in fact, the author of this article was one of them)—so we at *The Catalyst* wondered whether lots of NIH denizens had volunteered themselves for this study. Access to the study for NIHers was easy because the Clinical Center was one of the major blood-collection sites. After the findings were released at the press conference, *The Catalyst* put out a call over the NIH fellows e-mail list to see whether there were other NIHers who'd talk about participating in this or other NIH studies.

Fran Pollner

David Ehrenstein

Sholom Wacholder, one of the study investigators and an epidemiologist in the NCI Division of Cancer Epidemiology and Genetics (DCEG), was almost a subject in his own study. He signed up because he fit the profile. But it became clear that his anonymity could be lost in the process of analyzing the family histories of mutation carriers. "I knew that it would just be a lock that [a carrier with this particular family history] was me. And so I would know that I was a carrier . . . and I frankly didn't want to know." Based on such concerns, Wacholder and another investigator had their blood and questionnaires removed from the study.

Wacholder has been in other studies at DCEG, which often recruits its own employees for small-scale trials of techniques that might later be used on larger populations. He recalls participating in one study of methods for measuring caffeine metabolism. The effects of the study substance were stronger than he expected. "The rest of the day, I was too jumpy to really work. . . .it turned out that . . . caffeine stays with me for a long time."

Using NIH employees as study subjects has some definite advantages, according to Wacholder. "They're real convenient. They understand research. . . . If they're not interested, they don't show up. And you can do things economically." Joanne Colt of DCEG is using only NCI employees to test methods of measuring pesticides in household carpet dust. She explains that NIH people are willing to participate and easy to recruit.

Gloria Gridley is an NCI statistician who regularly volunteers for NIH and FDA studies, as she did for the one on *BRCA* mutations. She does it because "it's fun to be a part of it, and because I value scientific research. That's why I'm in research," she says. "If there weren't volunteers for these studies, how would they get the answers quickly?"

B. J. Stone, an NCI mathematician and another *BRCA* study participant and veteran human guinea pig, says she enjoys volunteering because she's had good interactions with doctors all her life. She had polio in college but found that "it was not an unpleasant experience. I met a lot of people I liked; it was socially interesting. And it didn't slow down my college career." But she understands why others might be hesitant. "I get the impression that lots of people don't want to take the time. And lots of people don't like needles. If [studies] don't involve needles, they involve urine collection—it's always something unpleasant." Gridley recalls the "hundred-pricks torture" in one study that tested her reactions to allergens.

Janet Yee

B. J. Stone

Wacholder remembers the *BRCA* questionnaire as painful in other ways. "They're asking questions about my grandparents and my uncle and my aunt. . . . Those are relatives whom I never met—because they died in the Holocaust. And so it was emotional, especially attached to the idea of health, and especially attached to the . . . questions about my children."

One of the study nurses found that many participants needed to talk about their feelings after filling out the questionnaire.

Participation as a human subject is not for everyone. One senior NIH employee, who asked not to be identified, kept her 10-year-old son out of an NICHD study on human growth hormone because of potential side effects. She believed the study was asking important questions, but her discussion with the investigator "couldn't allay all of my fears because participation in research is not risk free. Minimal risk, but not risk free."

She did put her son in another NIH protocol in which he became a patient at the Clinical Center. After many years as a working scientist here, observing NIH from the patient's point of view was a "revelation," as she puts it, and she appreciated NIH in a deeper way than she had as a researcher. "The part of you that is [praising NIH research] is brought to another level when you are a patient or a family member is a patient."

She thinks NIHers should try to participate in studies. "If you believe in the mission of NIH, then participating in clinical research should be something you should consider," she says. Gridley gives another motivation: "It's very rewarding to read the papers that result from these studies; you feel like you're a part of it, even if you're not a co-author." ■

Pullout

Interinstitute Interest Group Directory

Major Interest Groups

Cell Biology Interest Group
Meeting time: Varies, meetings restricted to NIH scientists
Meeting place: Building 18T, Room 101
Contact: Jennifer Lippincott-Schwartz, NICHD
Phone: 402-1010; 402-1009
E-mail: <jlippin@helix.nih.gov>
ListServ: subscribe to CELBIO-L

Clinical Research Interest Group
Meeting time and place: Varies
Contact #1: Cliff Lane, NIAID
Phone: 496-7196
E-mail: <clane@atlas.niaid.nih.gov>
Contact #2: Harry Keiser, NHLBI
Phone: 496-1518
E-mail: <keiserh@fido.nhlbi.nih.gov>

Genetics Interest Group
Meeting time: First or second Tuesday each month, 4:00-5:30 p.m.
Meeting place: Building 49, Conference Room A and B
Contact: Elliot Gershon
Phone: 496-3465
E-mail: <elliotg@helix.nih.gov>
Contact 2: Lynn Hudson
Phone: 496-9660
E-mail: <hudson@helix.nih.gov>
ListServ: subscribe to MAJORDOMO@NCHGR.NIH.GOV
post to GIG@NCHGR.NIH.GOV

Immunology Interest Group
Meeting time: Wednesdays, 4:15 p.m.
Meeting place: Building 10, Lipsett Auditorium
Contact: Larry Samelson
Phone: 402-1400
E-mail: <ls@nih.gov>
ListServ: subscribe to IMMUNI-L at Listserv@LIST.NIH.GOV
URL: <http://www.ncbi.nlm.nih.gov/Shaw/iig/>

Molecular Biology/Biochemistry Interest Group
Meeting time and place: Varies
Contact: Reed Wickner, NIDDK
Phone: 496-3452
E-mail: <wickner@helix.nih.gov>

Neurobiology Interest Group
Meeting time and place: To be determined
Contact: Chip Gerfen, NIMH
Phone: 496-4341
E-mail: <gerfen@helix.nih.gov>
ListServ: JLS@LSR.NEI.NIH.GOV

Structural Biology Interest Group
Meeting time and place: Announced to members by e-mail and regular mail
Contact: Alasdair Steven, NIAMS
Phone: 496-0132 Fax: 402-3417
E-mail: <steven@calvin.niams.nih.gov>
To register for e-mail announcements:
E-mail <cch@discus.niams.nih.gov>

Other Interest Groups

[Groups in brackets are just getting started]

[Acetyltransferase Interest Group
Contact: David Klein
Phone: 496-6915
E-mail: <klein@helix.nih.gov>]

AIDS Interest Group
Meeting time and place: Varies
Contact: Fulvia Veronese, OD/OAR
Phone: 496-3677
E-mail: <fv10X@nih.gov>
ListServ: subscribe to AIDSINTG-L

[Alternative Medicine Interest Group
Contact: Richard Nahin
Phone: 496-4792
E-mail: <nahinr@od31em1.od.nih.gov>]

Alzheimer's Interest Group
Meeting time: First or second Thursday, each month (except summer), 9:00 a.m.
Meeting place: Building 36, Room 1B13
Contact: Gerald Ehrenstein, NINDS
Phone: 496-3206
E-mail: <gerry@helix.nih.gov>

Apoptosis Interest Group
Meeting time: Once a month on Monday, 4:00 p.m.
Meeting place: Building 30, Conference Room 117
Contact: Yves Pommier, NCI
Phone: 496-5944
E-mail: <pommiery@box-p.nih.gov>

Behavioral and Social Sciences Interest Group
Meeting time: Does not meet regularly
Meeting place: See Calendar of Events
Contact 1: Jaylan Turkkan, NIDA
Phone: 443-1263
E-mail: <jaylan@nih.gov>
Contact 2: Ron Abeles, NIA
Phone: 594-5943
E-mail: <abelesr@gw.nia.nih.gov>

BSSR Methodology and Measurement Interest Group
Umbrella Group: Behavioral and Social Sciences
Meeting time: Irregular, often first or second Tuesday, 9:00 a.m.
Meeting place: Gateway, Room 525, or Natcher
Contact: Jared Jobe, NIA
Phone: 496-3137
E-mail: <Jared_Jobe@nih.gov>

[Bioethics Interest Group
Meeting time: First Monday each month, except August, 3-5 p.m.
Meeting place: Natcher, Room D
Contact: Miriam Kelty
Phone: 496-9322
E-mail: <mk46u@nih.gov>]

[Bioinformatics Inter-institute Interest Group
Meeting date: Sept. 9 (first meeting)
Meeting time: 3:00 p.m.
Meeting place: Building 37, Room 6B25
Contact: John N. Weinstein, NCI
Phone: 496-9571
E-mail: <weinstein@dtpax2.ncifcrf.gov>]

Bioinstrumentation Interest Group
Meeting time: First Tuesday, 2:00 p.m.
Meeting place: Building 13, Room 3W54
Contact: Paul D. Smith, NCRR
Phone: 435-1945
E-mail: <pdsmith@helix.nih.gov>

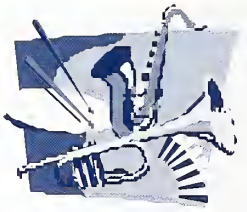
Biophysics Interest Group
Meeting time: Irregular
Meeting place: Building 10, Bunim Room
Contact: Peter J. Basser
Phone: 435-1949
E-mail: <pb12q@nih.gov>

Biotechnology Interest Group
Meeting Time: Second Tuesday, 4:00 p.m.
Meeting Place: Building 10, Room 11S235
Contact: Daniel M. Sullivan
Phone: 435-4570
E-mail: <dsul@helix.nih.gov>

Birth Defects and Teratology Interest Group
Meeting time and place: Varies
Contact: Dorothea de Zafra
Phone: 593-6516
E-mail: <dd128a@nih.gov>

Breast Biology Interest Group
Meeting time: Fourth Monday, 4:00 p.m.
Meeting place: Building 10, Room 13S235B
Contact: JoAnne Zujewski, NCI
E-mail: <Zujewski@nih.gov>

Interinstitute Interest Group Directory



Calcium Interest Group
Meeting time: Last Tuesday each month, 3:00 PM
Meeting Place: Building 30, Room 117, or Building 49, Room 1A/B.
Contact 1: Arthur Sherman
E-mail: <asherman@nih.gov>
Phone: 496-4325
Contact 2: Indu Ambudkar
E-mail: <ambudkar@yoda.nidr.nih.gov>
Phone: 496-1478
ListServ: Subscribe to CALCIUM-L

[Cancer Genetics Special Interest Group
Contact: Ruthann M. Giusti
Phone: 496-1611
E-mail: <giustir@epndce.nci.gov>]

[Carcinogenesis Interest Group
Contact: Umberto Saffiotti
E-mail: <saffiotu@dce41.nci.nih.gov>]

Cell and Molecular Neuroscience Interest Group
Umbrella group: Neurobiology
Meeting time and place: Varies
Contact: Chip Gerfen, NIMH
Phone: 496-4341
E-mail:<gerfen@helix.nih.gov>

Cell Cycle Interest Group
Umbrella Group: Cell Biology
Meeting Time: First Wednesday each month, 12:30 p.m.
Meeting Place: Building 37, Room 6B23
Contact: Patrick M. O'Connor, NCI/DBS
Phone: 435-2848
E-mail: <oconnorp@dc37a.nci.nih.gov>

Chemistry Interest Group
Monthly lecture or symposium; meeting time and place vary
Contact 1: Ken Kirk, NIDDK
Phone: 496-2619
E-mail: <kennethk@bdg8.niddk.nih.gov>
Contact 2: Ken Jacobson, NIDDK
Phone: 496-9024
E-mail: <kajacobs@helix,nih.gov>
Contact 3: John Schwab, NIGMS
Phone: 594-5560
E-mail: <schwabj@gml.nigms.nih.gov>

Chromatin and Chromosomes Interest Group
Meeting time: Every other Thursday, 11:00 a.m.
Meeting place: Building 32T, Conference Room
Contact: David Clark
Phone: 496-6966
E-mail: <djclark@helix.nih.gov>

Clinical Pharmacology Interest Group
Meeting time: Quarterly (with FDA, Johns Hopkins, Georgetown, University of Maryland)
Meeting place: FDA Building, Mod 1
Contact: William D. Figg, NCI
Phone: 402-3622
E-mail: <wdfigg@helix.nih.gov>

Cytokine Interest Group
Meeting time and place: Varies
Contact 1: Howard Young, NCI
Phone: (301) 846-5700
Contact 2: electronic, Mark Doherty, NIAID
E-mail: <Mdoherty@Atlas.niaid.nih.gov>

Developmental Biology Interest Group
Umbrella group: Cell Biology
Meeting time and place: Varies (see NIH Calendar of Events)
Contact 1: Igor Dawid, NICHD
Phone: 496-4448
E-mail: <idawid@nih.gov>
Contact 2: Joram Piatigorsky, NEI
Phone: 496-9467
E-mail: <joram@helix.nih.gov>

DNA Repair Interest Group
Umbrella group: Molecular Biology
Meeting time: Third Tuesday, 12:30 p.m.
Meeting/Videoconference Locations: Natcher Building Room H; GRC (Baltimore) Room 1E03; FCRDC Building 549, Conference Room A; NIEHS (Research Triangle Park, NC) Building 101, Room B200
Contact 1: Kenneth Kraemer, NCI
Phone: 496-9033
E-mail: <kraemerk@nih.gov>
Contact 2: Vilhelm Bohr, NIA
Phone 410-558-8162
E-mail: <vbohr@nih.gov>

[Domestic Violence Research Interest Group
Contact: John Umhau
Phone: 496-7515
E-mail: <JohnU@LCS.NIAAA.nih.gov>]

Drosophila Interest Group
Umbrella group: Developmental Biology
Meeting time: Third Tuesday, 1:15–2:30 p.m.
Meeting place: Building 6B, Room 4B429
Contact: Sue Haynes, NICHD
Phone: 496-7879
E-mail: <sh4i@nih.gov>

Drug Discovery Interest Group
Meeting time: Monthly, on Thursdays, 3:00 p.m.
Meeting place: Building 37, Room 6B25
Contact: John Weinstein, NCI/DCT
Phone: 496-9571
E-mail: <weinstein@dtpax2.ncifcrf.gov>

Economics Interest Group
Umbrella Group: Behavioral and Social Sciences
Meeting time and place: Irregular; announced by e-mail and in NIH Calendar of Events
Contact 1: James A. Schuttinga
Phone: 496-2229
E-mail: <schuttij@od1tm1.od.nih.gov>
Contact 2: Agnes Rupp
E-mail: <ar24f@nih.gov>

Epidemiology and Clinical Trials Interest Group
Meeting time: Monthly
Meeting place: See Calendar of Events
Contact 1: Martina Vogel-Taylor, OD
Phone: 496-6614
E-mail: <MartinaV@nih.gov>
Contact 2: Bob Hoover, NCI, or Tricia Hartge, NCI
Phone: 496-8153
ListServ: subscribe to Epidem-L at listserv@list.nih.gov

Extracellular Matrix Interest Group
Meeting time and place: As announced
Contact 1: W. Stetler-Stevenson, NCI/DCBDC
Phone: 496-2687
E-mail:<stetler1@helix.nih.gov>
Contact 2: Larry Wahl
E-mail: <wahl@yoda.nidr.nih.gov>

Fluorescence Interest Group
Meeting time: Fridays, 4:00 p.m.
Meeting place: Building 10, Room 5D21
Contact: Jay Knutson, NHLBI
Phone: 496-2557
E-mail: <jaysan@helix.nih.gov>

Gene Therapy Interest Group
Meeting time: Second and fourth Thursdays, 2:00 p.m.
Meeting place: Lipsett Auditorium
Contact: R. Michael Blaese, NCHGR
Phone: 496-5396
E-mail: <mblaese@nchgr.nih.gov>

Glia Club
Meeting time: Bimonthly on second Wednesday, 4:00–5:30 p.m.
Meeting place: Building 36, Room 1B
Contact 1: Vittorio Gallo, NICHD
Phone: 402-4776
E-mail: <vgallo@helix.nih.gov>
Contact 2: Joan Schwartz, NINDS
Phone: 496-4049
E-mail: <jps@helix.nih.gov>

Glycobiology Interest Group
Meeting time and place: Varies
Contact: Diana Blithe, NICHD
Phone: 496-1661
E-mail: <blithed@hd01.nichd.nih.gov>
ListServ: subscribe to GLYCO-L@LIST.NIH.GOV

Hard Tissue Disorders Interest Group
Umbrella group: Clinical Research
See: <http://128.231.106.172/hardtissue/htdigin.html>
Meeting time and place:Varies
Contact: Pamela Robey, NIDR
Phone: 496-4563
E-mail: <probey@yoda.nidr.nih.gov>

Head and Neck Biology Interest Group
Meeting time: 3:30 p.m.
Meeting place: Building. 10, Room. 9C401
Contact: Frank G. Ondrey, NIDCD
Phone: 435-2072
E-mail: <fondrey@pop.nidcd.nih.gov>

Human Development Across the Lifespan Interest Group
Umbrella Group: Behavioral and Social Sciences
Meeting time and place: Electronic
Contact: Kim Roberts
Phone: 496-0420
E-mail: <roberts@ssed.nichd.nih.gov>

Human Retrovirus Interest Group
Meeting time: Third Wednesday, noon
Meeting place: Natcher, Conference Room B
Contact: Fatah Kashanchi, NCI
Phone: 496-0987
E-mail: <kanshancf@dce41.nci.nih.gov>

Image Processing Interest Group
Meeting time and place: Varies
Contact: Bonnie Douglas, DCRT
Phone: 496-2847
E-mail: <douglasb@magic.dcrt.nih.gov>

Integrative Neuroscience Interest Group
Umbrella group: Neurobiology
Meeting time: Alternate Thursdays, 4:00 p.m.
Meeting Place: Building 49, Conference Room
Contact: Robert Desimone
Phone: 496-5625
E-mail: <jcg@cu.nih.gov>
ListServ: subscribe to JLS@LSR.NEI.NIH.GOV

Lambda Lunch (Bacterial and Phage Genetics)
Meeting time: Thursdays, 11:00 a.m.
Meeting place: Building 36, Room 1B13
Contact: Susan Gottesman, NCI/DCBDC
Phone: 496-3524
E-mail: <susang@helix.nih.gov>
Anonymous FTP site:FTP.CU.NIH.-GOV
directory "LAMBDA_LUNCH"

Lymphoma and Leukemia Interest Group
Meeting time: Third Thursday, 4:00 p.m.
Meeting place: Building 10, 13S235A/B
Contact 1: Larry W. Kwak
Phone: 301/846-1607
E-mail: <kwak@ncifcrf.gov>
Contact 2: Charles Zacharchuk
Phone: 496-4514
E-mail: <cmz@box-c.nih.gov>
ListServ: llig-l

Mass Spectrometry Interest Group
Umbrella group: Structural Biology
Meeting time: First and third Thursdays, 10:30 a.m.
Meeting place: Building 10, Room 7C101
Contact: Lewis Pannell, NIDDK
Phone: 402-2196
E-mail: <Pannell@nih.gov>

[Mitochondria Interest Group (MIG)
Meeting time: First Monday of month; 3:00-4::00 p.m.
Meeting place: Varies
Contact: Dr. Steve Zullo
Phone: 435-3576
E-mail: <zullo@helix.nih.gov>]

Molecular Modeling Interest Group
Meeting time and place: Monthly; see <http://cmm.info.nih.gov/MMIGnet/events>
Contact: Robert Pearlstein, DCRT
Phone: 402-3043
E-mail: <staff@cmm.dcrt.nih.gov>

Molecular Psychiatry Interest Group
Meeting time: Varies
Meeting place: Building 10, Medical Board. Room
Contact person: Julio Licinio
Phone: 496-6885
E-mail: <licinio@nih.gov>

Motility Interest Group
Meeting time: First Monday (except July and August), 4:00 p.m.
Meeting place: Building 10, Bunim Room
Contact: Leepo Yu, NIAMS
Phone: 496-5415
E-mail: <lcyu@helix.nih.gov>

Mouse Club
Umbrella group: Developmental Biology
Meeting time: Once a month on Tuesday, 4:00–5:30 p.m.
Meeting place: Building 31, Room 2A-52
Contact: Heiner Westphal, NICHD
Phone: 402-0545
E-mail: <hw@helix.nih.gov>

Multisensory Interest Group
Meeting time: Alternate Thursdays, 4:00-6:00 p.m.
Meeting place: Building 15K, ground-floor conference room
Contact: Peter Grossenbacher
Phone: 496-7672
E-mail: <pc99s@nih.gov>
URL: <http://www.nih.gov/sigs/mig>

Nerve Growth Factor (NGF) Club
Meeting time: First Tuesday, 2:00 p.m. lecture and 3:30 discussion
Meeting place: Building 49, Room 1A59 (lecture) and Room 5A46 (discussion)
Contact: Gordon Guroff, NICHD
Phone: 496-4751
E-mail: <gordong@helix.nih.gov>

Nerve-Muscle Interest Group
Meeting time: Every other Wednesday, 8:45 a.m.–9:45 a.m.
Meeting place: Building 36, Room 1B07
Contact: Matt Daniels, NHLBI
Phone: 496-2898
E-mail: <mdaniels@codon.nih.gov>

Neuroimmune Interactions Interest Group
Meeting time: Once a month on Tuesday, 4:00 p.m.
Meeting place: Building 10, Room 11S-235
Contact: Esther Sternberg, NIMH
Phone: 402-2773
E-mail: <ems@codon.nih.gov>

Interinstitute Interest Group Directory

Pain Interest Group
Umbrella Group: Neuroscience
Meeting time: Second Monday, 3:00 p..m.
Meeting place: Building 49, Conference Room A
Contact: Maryann Ruda, NIDR
Phone: 402-4980
E-mail: <ruda@yoda.nidr.nih.gov>
ListServ: subscribe to: PAINGROUP-L@LIST.NIH.GOV

PET Interest Group
Umbrella group: Neurobiology
Meeting time: Fridays, 2:00 p.m.
Meeting place: Building 10, Room 1C520.
Contact: Peter Herscovitch, CC
Phone: 402-4297
E-mail: <peter@nmdhst.cc.nih.gov>

Pigment Cell Research Interest Group
Meeting time: Third Monday, 3:00 p.m.–4:30 p.m.
Meeting place: Building 49, Conference Room A
Contact: Vincent Hearing, NCI/DBS
Phone: 496-1564
E-mail: <hearingv@dc37a.nci.nih.gov>

Prostate Cancer Interest Group
Contact: W. Marston Linehan
Phone: 496-6353

Protein Folding Interest Group
Meeting time: Thursdays, 4:00 p.m.
Meeting place: Building 12A, Room 3026
Contact: Joe Bryngelson, NCI/DCRT
Phone: 496-1135
E-mail: <jdb@helix.nih.gov>

Protein Trafficking Interest Group
Umbrella group: Cell Biology
Meeting time: Second Tuesday, 3:30
Meeting place: Building 10, Room 9S-235 (Bunim Room)
Contact: Harris Bernstein, NIDDK
Phone: 402-4770
E-mail: <harris_bernstein@nih.gov>

Reactive Oxygen Species Interest Group
Meeting time: Second Friday (Sept.-May), 4:00 p.m.
Meeting place:Building 49, Conference Room A-B
Contact 1: Daniel Gilbert
E-mail: <dangil@helix.nih.gov>
Contact 2: Chuang C. Chiueh
E-mail: <chiueh@helix.nih.gov>

RNA Club
Umbrella group: Molecular Biology
Meeting time: First Tuesday, 4:00-6:00 p.m.
Meeting place: Building 41, Room C509
Contact 1: Carl Baker, NCI/DBS
Phone:496-2078
E-mail: <ccb@helix.nih.gov>
Contact 2: Susan Haynes, NICHD
Phone: 496-7879
E-mail: <sh4i@nih.gov>

[Sensory Interest Group
Contact: Don Coling
E-mail: < dcoling@pop.nidcd.nih.gov>]

Signal Transduction Interest Group
Meeting time: Alternate Fridays, 4:30 p.m.
Meeting place: Building 36, Room 1B07, and NIDCD off-campus, 5 Research Court
Contact 1: John Northup, NIMH
Phone: 496-9167
E-mail: <drjohn@codon.nih.gov
Contact 2: Jim Battey, NIDCD
Phone:402-2829
E-mail: <jbattey@pop.nidcd.nih.gov>

Social Structure & Demographic Issues in Health Interest Group
Umbrella Group: Behavioral and Social Sciences
Meeting time and place: Varies
Contact 1: Laura E. Montgomery, NCHS/CDC
Phone: 436-3650, ext 177
E-mail: <lem3@nch07a.em.cdc.gov>
Contact 2: Julie Reid, NHLBI
Phone: 435-0410
E-mail: <Julie_Reid@nih.gov>

Therapeutic Oligonucleotides Interest Group
Umbrella Group: Clinical Research
Meeting time: Last Thursday each month, 4:00 p.m.
Meeting place: Building 30, Room 117
Contact : Yoon Cho-Chung, NCI
Phone: 496-4020
E-mail: <yc12b@nih.gov>

Transcription Factors Interest Group
Meeting time: First Thursday (except July-Sept.), 2:15 p.m.
Meeting place: Building 49, First-floor Conference Room
Contact 1: Stoney Simons, NIDDK
Phone: 496-6796
E-mail: <steroids@helix.nih.gov>
Contact 2: U. Siebenlist, NIAID
Phone 496-7662
E-mail: <us3n@nih.gov>
ListServ: subscribe to TFACTORS

Viral Hepatitis Interest Group
Meeting time: Third or second Monday, 3:30 p.m.
Meeting place: Building 10, 1C726
Contact: Jake Liang
E-mail: <jliang@nih.gov>

Virology Interest Group
Meeting time: Thursday (usually third or fourth), 3:30 p.m.
Meeting place: Building 4, Room 433
Contact: Peter Collins, NIAID
Phone: 496-4205
ListServ: <CBuckler@nih.gov>

Washington Area Yeast Club
Umbrella group: Molecular Biology
Meeting time: Second Wednesday, 5:15–7:15 p.m.
Meeting place: Building 6B, Room 4A-05
Contact 1: Reed Wickner, NIDDK
Phone: 496-3452
E-mail: <wickner@helix.nih.gov>
Contact 2: Alan Hinnebusch, NICHD
Phone: 496-4480
E-mail: <ah8j@nih.gov>

WorldWideWeb Interest Group
Meeting time: Second Tuesday each month, 2:30 p.m.
Meeting place: Building 10, Lipsett Auditorium
Contact: Dale Graham, DCRT
Phone: 402-1805
E-mail: <degraham@helix.nih.gov>

Xenopus/Zebrafish Interest Group
Umbrella group: Developmental Biology
Meeting time: Last Friday each month (except summer), 4:00 p.m.
Meeting place: Building 6B, Room 429
Contact: Tom Sargent, NICHD
Phone: 496-0369
E-mail: <tsargent@nih.gov>

X-ray Crystallography Interest Group
Umbrella group: Structural Biology
Meeting time: Sporadic; announced by e-mail
Meeting place: Building 5, Room 231
Contact: James Hurley, NIDDK
Phone: 402-4703
E-mail: <hurley@tove.niddk.nih.gov>

To make additions or changes, contact* The NIH Catalyst *(fax: 402-4303; e-mail: <catalyst@nih.gov>.

Frederick's Fields
continued from page 1

research activities in Bethesda.

With the aid of an advisory committee of preeminent scientists from across the country and a "space" committee a little closer to home, Summers is reconceptualizing Frederick's programs and facilities to better advance the basic-research directive. His quest for internationally recognized scientists is already amply satisfied by the individuals now on the FCRDC roster, he observed, citing: "Steve O'Brien, whose work on AIDS and evolutionary mammalian genetics is world-renowned; Steve Hughes, who's worked out the X-ray crystal structure of an HIV protein; John Coffin, who we've recruited and who'll be coming here from Tufts August 1—spending 40 percent of his time here—to conduct his research on resistant mutants of HIV. We're wooing a smart, young scientist who has a spectacular way to look at human genetics. . . . ."

Summers pointed with pride to Building 535, visible in the distance from his administrative enclave. "We built that new building—completed last year, with five floors of laboratories for AIDS research. That's the building where Larry Arthur is doing his great AIDS vaccine research; that's the building we had for John Coffin to come to."

"That modern, research-lab building is giving John Coffin the facilities to expand his research, a place to have close interactions with other molecular biology experts in the HIV field. If you have facilities, you have scientists; if you have scientists, you get ideas. I'd like to have visiting scientists come here and spend a year—to give them a lab and a place to live," Summers asserted, dismissing a question about whether it is duplicative to have both Building 535 in Frederick and the projected new center on the Bethesda campus mentioned by President Clinton as home to an expanded AIDS-vaccine research effort.

Fran Pollner

"If you have facilities, you have scientists; if you have scientists, you get ideas"—Donald Summers

"It's not overkill, and it's not greed. It will create an atmosphere to heighten the dialogue—scientific dialogue, hard to define but an incredibly important part of science. There will be lots of cooperation between David Baltimore (president of CalTech and chairman of the NIH AIDS Vaccine Research Committee) and people like Steve Hughes and John Coffin," Summers said (see related story, page 12).

Even in the realm of clinical research, even with no patients at FCRDC, there will be ties between Bethesda and Frederick. For instance, Summers said, the latter will be the site of DNA-sequence libraries in connection with cells taken from cancer patients by use of the laser-capture microdissection technique invented by NCI's Lance Liotta and colleagues (see *The NIH Catalyst*, March-April 1997, page 8). Analysis of materials from patients in clinical trials will also continue to be performed at Frederick, and research that uses human materials, such as O'Brien's use of serum samples in tracking down a genetic locus that conferred resistance to HIV, will certainly proceed. There is still a place for "clinically related translational research," as well as programs to screen natural products for therapeutic potential, Summers said, observing that there is "now such a close relationship between basic, translational, clinical, and applied research."

He's a bit circumspect discussing some of the specific relocation recommendations in the Bishop-Calabresi report, as well as the status of Frederick's support services (such as mass spectrom-

Moving Gains Far Outweigh the Pains

It took Larry Kwak one month to move his clinical cancer-vaccine protocols and his patients from Frederick to the Clinical Center in Bethesda.

"There are always moving pains, but basically, we have reproduced everything from up here to down there, and things are running very smoothly," Kwak, a principal investigator in NCI's Medicine Branch, told *The NIH Catalyst*. He has been conducting clinical tests of vaccines against lymphoma and multiple myeloma since 1992.

The transition involved a loss of clinical nursing and administrative staff expertise in Frederick, which was unfortunate, and the training of Bethesda-based personnel was required to meet the needs of the protocols, a process that took about six months. In no way, however, did it discomfort any patients, Kwak said.

"All 80 patients, without exception, have been accommodated, and there is great intellectual and scientific advantage in our being there, both for our program and for the Clinical Center," he said. "I really am very satisfied with this transition and what it means for our patients and our program."

Kwak spends one day a week at the Clinical Center and the rest of his time in Frederick, running his research lab in the Department of Experimental Transplantation and Immunology in the Division of Clinical Sciences. His research focuses on second-generation cancer-vaccine development and human tumor immunology. ■

–F. P.

etry, high-performance supercomputing, amino acid sequencing, and many others). "There's a reevaluation across the board of what NCI is all about," he said.

The recommended relocation of the clinical research branch of the former Biological Response Modifiers Program has already occurred, but Summers was not so sanguine regarding another suggestion—that the Applied BioSciences Laboratories also be moved.

"ABL is an outstanding group of scientists assembled here by George Vande Woude, on contract. I hope it's not going to happen; I think it's much too valuable a resource to mess with it," he said, adding that cooperation among NCI, ABL, and SAIC (Science Applications International Corporation), the contractor that runs ABL, is increasing.

The distance between Frederick and Bethesda—indeed, between Frederick and anywhere in the world—however, is shrinking, Summers said, thanks to such technologic capabilities as the computer-television—"picture-tel"—he had installed in his office two weeks earlier.

"I can punch a button and talk to John Coffin in Boston, see him, show him data, and transfer his data to Munich, Germany. It's a picture communications system hooked up through a p.c., and now there's a network available through a master server at NIH. I'm installing these in offices in Building 31 and in another federal building where the special biotech assistants to Rick Klausner have their offices."

Summers wants nothing short of FCRDC's becoming "*the* most predictive biotech operation. We want to be a year ahead of the state-of-the-art. So we're asking people from industry and the universities to come here and talk to us. We're working with them to rebuild this place in the right way. Should we have a supercomputer to study the structure of proteins and genes and chemicals? Absolutely. Francis [Collins] will sequence the human genome. We're going to do mouse, fly, and worm. That's an overwhelming amount of information. If we need core facilities, we'll get core facilities, if we need people with certain expertise, we'll work to recruit them."

"Come back in another half-year or year," he suggested, "and see how we look." ■

NIH Intramural Forces Coalescing Against AIDS

Some of NIH's anti-AIDS forces converged at Building 31 in June for the semiannual meeting of the advisory committee of NIH director Harold Varmus. AIDS wasn't the only issue on the committee's agenda, but it was the only one etched in urgency by a presidential directive: that NIH spearhead the development of a vaccine against AIDS within 10 years.

The multilayered discussion on this topic elaborated not only plans for a new building on campus dedicated to AIDS-vaccine research—initially one "without walls"—but also the ways in which the activities of the Office of Aids Research, the National Institute of Allergy and Infectious Diseases, the National Cancer Institute, and NCI's Frederick-based research arm would be woven together into an AIDS-research quilt.

Varmus specifically invited Tufts University molecular biologist John Coffin, newly recruited to Frederick on a part-time basis to pursue his research on HIV drug-resistant mutants (see "Frederick's Field of Dreams," page 1), to apprise the advisory committee of the program he's establishing at FCRDC.

Varmus recapped the rationale for the newly created AIDS Vaccine Research Committee, chaired by CalTech's president, David Baltimore, and for the establishment of a Vaccine Research Center (VRC) within the NIH intramural research program, a collaborative NCI-NIAID venture.

"Ultimately," he said of the VRC, "this will be a physical presence, a separate building that includes at least some manufacturing capacity. For now, we are trying to assemble a center without walls of interested NIAID and NCI intramural researchers."

Increased funding for AIDS-vaccine research at NIH (33 % over the past two years) has not been secured at the price of diminished funding in the AIDS budget as a whole, OAR Director William Paul assured the group. The budget for his program at Frederick, John Coffin told *The NIH Catalyst*, "is big enough to keep me happy."

"Clearly, my work in diversity and mechanisms of variation is related to vaccine development, but I'll leave [vaccine research, per se] to him," he said, turning to David Baltimore, "and to Larry Arthur," whose AIDS vaccine-related research continues at Frederick in Building 535, where Coffin will reside.

Fran Pollner

Conferring at NIH director's advisory committee meeting are (left to right) John Coffin, William Paul, and David Baltimore.

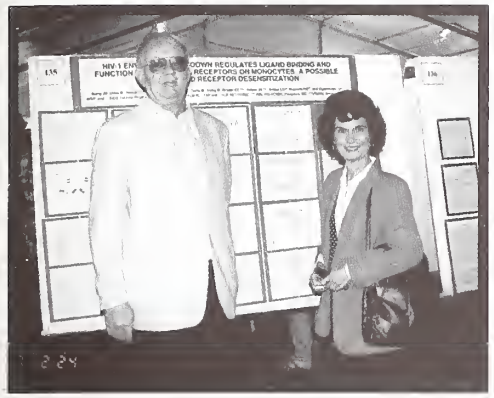
Baltimore sees a "formidable challenge" in designing an HIV vaccine. "We have tested almost nothing that might work because all candidates thus far have been based on laboratory strains of the virus—and they need to be tested against wild-type virus. What was [Robert] Gallo's enormous advance—adapting HIV to high-titer growth in the lab by altering the envelope glycoproteins—now constitutes the problem. These altered glycoproteins are much more easily neutralized by antibodies. We need to determine their crystal structures," he said.

Coffin outlined his program for the advisory group: it will encompass a wide array of disciplines, from viral enzymology and crystallography to in vivo studies of how HIV evolves in individuals. "Clinical virology," he said, "includes such issues as the dynamics of HIV replication in humans, detecting in patients the presence of resistant virus, preventing transmission of resistant virus, and ascertaining whether we can incorporate resistance to resistance in drug design. Some clinical issues may be difficult to bring in at the Frederick site," where clinical protocols have been discontinued, he added.

"This will not be a problem for you," Varmus promised. "You can use the Clinical Center resources." ■

—Fran Pollner

All's Fair At Frederick



NCI-FCRDC associate director Donald Summers and program analyst Jeannette DeLawter ambled through the poster aisles, trying to view all 276 scientific presentations. "This is out of sight!" Summers said.

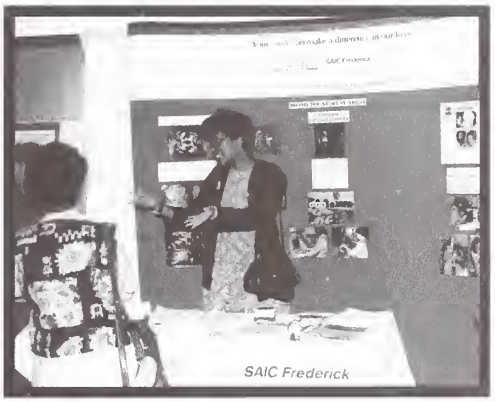
The 80 acres of the FCRDC that now holds close to 100 buildings and 2,000 people were turned over to NCI in 1972, when the "international community [repudiated] bacterial warfare," NCI-FCRDC Associate Director Donald Summers said in an interview at the Frederick campus in May, on the occasion of the Frederick Spring Research Festival.

He observed that the festival—the first of its kind and a joint effort of the FCRDC and its military landlord, Fort Detrick's U.S. Army Medical Research and Materiel Command—reflects new collaborative research directions, as well as an evolving camaraderie and respect for each other's expertise. A faculty seminar program in concert with the Army is proving to be extremely popular, he said.

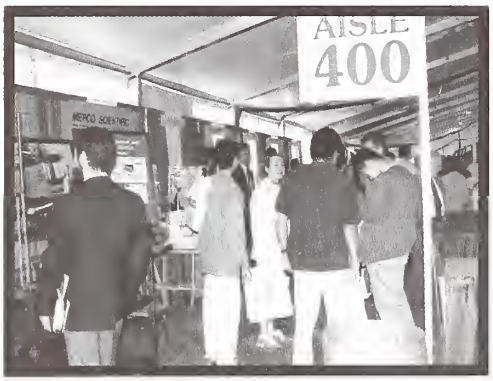
He recalled a "lunch with three colonels" shortly after his arrival and their remarking on the rarity of such get-togethers. "We've got a lot to share with each other—outstanding scientists, ideas, equipment."

"They're smart folks," Summers said. "We live on their field. We've got to work together." ■

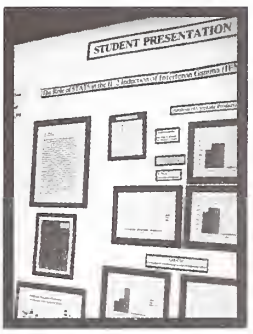
Military medical research is exemplified in Department of Defense exhibit (above) on its breast cancer research program.



SAIC (Science Applications International Corporation) is the FCRDC's major contractor.



Crowds of NIH scientists peruse posters (above) and exhibits sponsored by private industry (left).



Alma Bracete (right), of the Experimental Immunology Laboratory, answers questions about her own poster and the poster (above) of her high school student intern. (See related story, page 14.)

High-School Science Hits New High For Frederick Intern

Eighteen-year-old Philip Roessler graduated from two programs this spring: Middletown High School in Frederick County, Maryland, and the Werner Kirsten Student Intern Program at NCI's Frederick Cancer Research and Development Center. He met his high-school science requirement his senior year by working in a lab on the FCRDC campus every school day from noon on—as well as all summer between his junior and senior years—doing plasmid work, cell cultures, PCR, Northern and Western blots, and anything else that needed doing in pursuit of his research on in vivo expression of interleukin-12 by plasmid DNA.

He liked the experience so much, and the people there liked him so much, that he'll be working at the lab this summer, before he heads off for Indiana University to sort out the relative merits of his current loves: biology, political science, and history. Or perhaps he'll blend them.

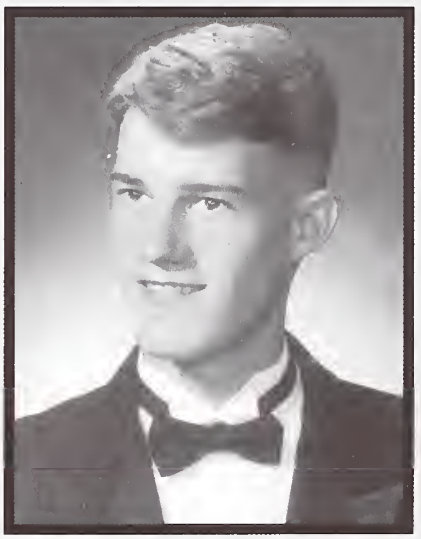
Roessler interned under William Fogler and Mori Watanabe in the Laboratory of Experimental Immunology; his supervisor was Robert Wiltrout, head of the Experimental Therapeutics Section. Howard Young has served as scientific advisor to the student intern program since its inception nine years ago.

Roessler was asked to address this year's crop of 26 interns at a reception in May for them and their families. Below is what he said.

The Voice of Experience

On the third of January of this year, I wrote: "I have come to find the difficulties of science. Science is not a field that can be rushed, or hurried, or quickened, for the answers are always elusive, always hidden, never obvious. Yet is that not what makes science so exciting, so intriguing, so stimulating: the element of discovery, the ability to reveal what has never before been discovered by any human being?"

I wrote this in the midst of frustration—frustrated by science. I was tired of working long hours; I was tired of working on nonschool days; I was tired of failing. But I could not stop. I was driven by the personality of Dr. Watanabe; I was driven by the element of discovery; I was driven by science. What was frustrating me was driving me. Science is paradoxical: it creates, but it also destroys; it vaccinates, but it also infects. Fascinated by this paradox, I continued to work. Soon Northern blots were no longer blank; soon data were produced. Frustration turned to satisfaction; failures turned to successes.These are the emotions and the thoughts that you are going to have in the next year. You will truly, for the first time in your life, find out what science has to offer: the excitement, the drudgery; the revelations, the disappointments; sound results; the slaying of a hypothesis. But none of this will happen if you became an intern only to strengthen your high-school résumé, if you became an intern only to leave school early, if you became an intern only for summer employment, for then your experience will be limited, your perspective distorted. To procure as much out of this internship as you possibly can, you must have a love for science. You must want to work late and on nonschool days; you must want to experiment—with the risk of failure; you must not hesitate to ask questions. The people with whom you will work have dedicated their lives to this field. They are extremely intelligent, some PhDs, some MDs, some both. They are from all over the world, all with an overriding passion for scientific discovery. Because you will be working and associating with these learned people, you must absorb as much as you can from them. Do not, however, limit this only to science. From this internship, acquire appreciation for the culture and language of another country; from this



internship, acquire reverence for the many scientists who are trying so hard to fight cancer and AIDS, who are sacrificing their lives for the betterment of society; from this internship, acquire direction and wisdom for the future; from this internship, acquire a wealth of knowledge on techniques, assays, and protocols.

Will you have this kind of experience? Will you acquire all of this in a year? I think you will. You will find yourself driven by science, by the element of discovery; you will find yourself wanting to work as much as you can; you will find yourself refusing to stop. Discovery is the impetus for the people working on this base, for the principal investigators, for the laboratory chiefs, for the doctors who have devoted their lives to science, and I think it will be the driving force for you, too.

I wish you the best of luck and hope that you have a wonderful experience!

—Philip Roessler

Interest Group Gazette

The **Lymphoma and Leukemia Interest Group (LLIG)** was "reinvented" this past May and has expanded its mission to stimulate exchange of ideas, information, and reagents among lymphoma/leukemia investigators within the NIH community. The group will host seminars featuring leading extramural speakers. (See page 9 for pertinent details.)

The new **Bioethics Interest Group** held an organizational meeting in June.

Examples of members' wide-ranging interests are the participation in research of children, cognitively impaired and demented people, and other defined groups; reproduction issues; genetics research (stored samples, genetics of behavior, discrimination regarding health and life insurance and other uses of genetic information, consent, testing and screening for single-gene disease, genetic diversity); IRB issues; privacy and confidentiality; and consent issues, including advance directives for research.

The group is defining the scope of its interests and activities and welcomes new members. (Details, page 7.) ■

PRAT Sponsor Preapproval Dropped

Prospective sponsors of PRAT (Pharmacology Research Associate) postdoctoral fellows no longer need to apply beforehand for inclusion on the list of accepted mentors, although their credentials will continue to be examined as part of the fellows'application process. Additionally, tenure-track scientists are now considered qualified to sponsor applicants for the PRAT fellowship.

Accordingly, the PRAT program will no longer produce a brochure listing all of the preapproved PRAT preceptors and their research interests. Instead, interested applicants can find a listing of all the research laboratories at NIH, along with recent journal citations, at the NIH Office of Education web page at <http://helix.nih.gov:8001/oe/laboratory> under "NIH Research Labs and Projects."

These changes are meant to simplify the process for participation in the PRAT Program. Current PRAT fact sheets describing the program for the upcoming recruiting year are available from the PRAT office (telephone 594-3583, fax 480-2802, or e-mail at <PRAT@GM1.NIGMS.NIH.GOV>).

The deadline for applications for fellowships beginning in the fall of 1998 is Jan. 2, 1998. ■

National Institutes of Generic Whining and Complaining

Choose a set of dialogue balloons to create your own personalized "Dent" cartoon

Call for Catalytic Reactions

In this issue, we are asking for your reactions in four areas: Frederick's mission, interest group dynamics, collaboration and confidentiality, and NIH's role in AIDS research.
Send your responses on these topics or your comments on other intramural research concerns to us via e-mail: <catalyst@nih.gov>; fax:402-4303; or mail: Building 1, Room 209.

In Future Issues...

- Just Saying 'Yes' (and 'No') to NIDA
- Nursing's New Scientific Director
- Portrait of the Cartoonist as a Young Postdoc

1) Do you see Frederick as a desirable destination for scientists doing basic cancer and AIDS research? What would you like to see at Frederick six months from now?

2) Are you satisfied with the scope and organization of the current roster of NIH interest groups? What have you gotten out of your participation in an interest group?

3) What have been your most serious problems in your scientific collaborations? How do you resolve the conflict between wanting to discuss your research in progress and not wanting to let any potential patents out of the bag?

4) We plan to report on some NIH AIDS studies in our promised and forthcoming "Hot New Clinical Trials" section. Do you think NIH is paying the right kind and amount of attention to AIDS-related research?

The NIH Catalyst is published bi-monthly for and by the intramural scientists at NIH. Address correspondence to Building 1, Room 209, NIH, Bethesda, MD 20892. Ph: (301) 402-1449; fax: (301) 402-4303; e-mail: <catalyst@nih.gov>

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