Children's Inn Celebrates Fifth Anniversary
By Rich McManus

The Children's Inn at NIH marked its fifth birthday July 11 with a daylong outdoor gala on the hoedown/rodeo theme; kids, hope and home were the featured values and Merck & Co. Inc., as usual, brought the grandest gift—its second $500,000 challenge grant, atop a construction gift of $3.7 million that built the structure in the first place.

Taking advantage of the inn's woodsy seclusion on campus, the party—divided into a breakfast thank-you feast for NIH employees, a lunchtime cookout/carnival for pediatric patients and other youngsters, and an evening hoedown/barbecue, hosted by ABC-TV's Cookie Roberts (an inn board member) for corporate givers—took place under a large tent erected on a hillside overlooking the 36-room inn.

Reps. Richard Gephardt (D-Mo.) and Connie Morella (R-Md.) dropped in at noon to offer congratulations, as did NIH director Dr. Harold Varmus, who, quipping that the scene "looks like the set of Bonanza," said the inn "adds

New Pertussis Vaccines Shown Effective, Safe
By Jane Demouy

In two large clinical trials supported by NIAID, researchers in Italy and Sweden have shown that three new vaccines are highly effective in protecting infants against pertussis (whooping cough) and have fewer side effects than the currently used vaccine. Pertussis is an extremely contagious respiratory disease that worldwide afflicts more than 50 million people and causes about 500,000 deaths each year.

The new vaccines are known as "acellular" vaccines because they contain only the specific parts of the pertussis bacterium thought to be important for immunity, in contrast to "whole-cell" vaccines that employ whole, killed pertussis organisms.

In the two randomized, double-blind trials that coincided with severe pertussis epidemics in both countries, three acellular vaccines demonstrated efficacies of 84 percent, 84 percent and 85 percent, (See PERTUSSIS, Page 10)

NIDDK's Rall, Robbins Recall 40-Year Careers
By Jane DeMouy

When Jack Robbins first set foot on the Clinical Center's Eight North in 1954, he laid claim to one of only two working labs on the floor. The hospital was only a year old, and the soft-spoken young researcher had left Memorial Hospital and Sloan-Kettering Institute in New York to help establish the Clinical Endocrinology Branch (CEB) for the fledgling National Institute of Arthritis and Metabolic Diseases, now NIDDK.

His friend Ed Rall, who had shared his studies of thyroid function and thyroid cancer in Rulon Rawson's lab at Sloan-Kettering, joined him a year later to head the CEB. Rall recalls that his present office—a divided space the size of two walk-in closets—was then the library, conference room and lunch room. Eight North also was home to two animal rooms, "marvelously new at the time," Rall remembers.

The CEB would come to be known as "one of the most extraordinary labs in the world." But at the time, neither Rall nor Robbins suspected they were standing on the brink of an era.

"It was really just the beginning of the grand rise of American biomedical science," recalls NIH alumnus Jesse Roth, now director of geriatric medicine at Johns Hopkins Medical School. "The science was simpler, the times were simpler. There was a continuous flow of young minds coming through, and a growing NIH research budget," he adds. The two thyroid experts had already done groundbreaking work characterizing thyroxine-binding proteins and treating thyroid cancer with radioactive iodine by calculating a whole body radiation dose. Each enjoyed tremendous respect for his encyclopedic knowledge of his field. Each had an open, inviting mind fed by Bach, Brahms, and books outside the realm of science.

(See RALL AND ROBBINS, Page 4)

NCI's Stephen Katz To Direct NIAMS
Dr. Stephen I. Katz, an internationally known dermatologist and immunologist, has been appointed director of the National Institute of Arthritis and Musculoskeletal and Skin Diseases, effective Aug. 1. He succeeds Dr. Michael D. Lockshin, acting director, and Dr. Lawrence E. Shulman, the first and founding director of the institute, which marks its 10th anniversary in 1996.

In making the announcement, NIH director Dr. Harold Varmus said, "Dr. Katz's outstanding scientific and clinical credentials and effective leadership skills will bring the CEB to new heights.

(See NIAMS DIRECTOR, Page 5)
Program Trains Minority Students, Professors
By Bob Kuska

On college campuses across America, summer is usually reserved for rest and relaxation. But 29 college students and professors recently put their vacation plans on hold to visit the NIH campus and immerse themselves in cutting-edge science.

Their recent stay in Bethesda was part of an ongoing course called “Minority Faculty-Student Partnerships in Biotechnology.” Held twice each year, the program trains students and professors mainly from historically Black colleges in the latest topics and techniques in biotechnology.

With this intensive training seminar, program organizers say they hope to create “a ripple effect” when participants head back to campus in the fall. “Many historically Black colleges don’t have the financial resources to keep up with all of the advances in biotechnology,” said Freddie Brown, a retired NIH research chemist who coordinates the program through the Foundation for Advanced Education in the Sciences. “What we’re hoping is participants will learn a technique, go home and share their knowledge with others, establish laboratories, or just know where to collaborate with those who do have the resources.”

Launched in 1989, the Minority Faculty-Student Partnership already has brought 165 students and faculty to NIH from 70 different colleges.

According to Brown, roughly one-third of the students return to NIH for internships and seven have moved on to medical school. Yet, two-thirds of the students have never heard of NIH prior to enrolling in the course.

Dr. Ron King of the National Center for Human Genome Research, which cosponsored the latest session with the National Institute of Neurological Disorders and Stroke, said he isn’t surprised by these statistics.

“Coming to NIH for just 1 week opens the door to a world most would have never seen or heard about...”

NIH helped them better understand the scientific and ethical issues arising from the project. “Most of what I knew about the Human Genome Project came from reading Time and Newsweek, where they just talked about it in general terms,” said Augustus Billy of Florida Memorial College. “Hearing about the Human Genome Project here has really opened my eyes a lot. Hearing the talks has simplified it and helped me get an idea of how I can become a part of it.”

Participants also were outspoken about the benefits of the Minority Faculty-Student Partnership. When asked about coming to NIH, the students responded in unison, “This program needs to be bigger.”

As Eba A. Ongele of Howard University explained, “The labs are well designed. You can actually do the techniques, finish them, and see the results. You see that it’s something you can do. You can take these techniques back home with you and use them.”

Participating colleges and universities included Cheyney, Howard, Florida Memorial, Morgan State, Puerto Rico, Southern, Morehouse, Tennessee State, Savannah State, North Carolina A&T, East Los Angeles, Tuskegee, Bennett, and Clinton.

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Conference Call Addresses Perinatal HIV Transmission

Dr. James Balsley, chief of the Pediatric Medicine Branch in the NIAID Division of AIDS, recently was a panelist on the 11th International State-of-the-Art HIV Clinical Conference Call series. This series, directed by Dr. Abe Macher, a PHS officer with the Health Resources and Services Administration, is designed to reach a wide audience of primary care providers with cutting edge clinical information about HIV.

The subject matter of the recent telephone conference, perinatal transmission of HIV and intervention strategies, gave Balsley and other expert consultants an opportunity to discuss and answer questions about the findings of the NIAID-sponsored AIDS Clinical Trials Group (ACTG) protocol 076. This study, completed last year, showed the effectiveness of zidovudine (AZT) in reducing the risk of transmission of HIV from infected pregnant women to their offspring by approximately two-thirds. According to updated analysis of the study data, transmission rates were 7.9 percent for the AZT group and 27.7 percent for the placebo group.

Primary care providers participated in the conference via telephone from all 50 states, the District of Columbia, Puerto Rico, St. Croix and St. Thomas, while Voice of America broadcast worldwide via satellite and short-wave radio to an audience of more than 1 million people.

Macher’s office conducts a needs assessment 3 months in advance of each conference call to gather questions from the primary care community on the discussion topic. A summary of those compiled questions is then mailed back to providers before the conference call so they know what will be discussed. They can also ask additional questions at the time of the call.

After finishing the conference call, Balsley praised the valuable service that Macher and his fellow panelists provide health care professionals. "I found the questions to be very practical questions that they [practitioners] find important in a real world setting." He noted the importance of transferring research findings into clinical practice and underscored that role "as one we should play. It is our responsibility to the public."

In addition to discussing the clinical application of the 076 regimen by health care practitioners, Balsley addressed the common side effects experienced by women and infants who take AZT, including minimal toxicity in both groups and a mild anemia in infants receiving the drug, which subsided after 6 weeks of age. He also described the follow-up studies that will evaluate any long-term effects on either the babies or their mothers.

Following the program, participants evaluating the conference call offered words of congratulations and encouragement. Karen Edge, an HIV/AIDS epidemiologist with the New Mexico department of health, remarked, “This was one of the best teleconference seminars that I have sat in on.” Reginald Finger of the Kentucky department of health services wrote, “Very interesting information, helpful for lecture presentations that I and our staff may be giving.”

And Nilson Toledo, a dental consultant with the Puerto Rico AIDS Education and Training Center, described the content of the conference as "very informative, state-of-the-art and usable...both for clinicians, primary health care providers and educators in HIV issues."

Other guest experts featured on the conference call panel included: Dr. Arlene Bardegeuiz of the University of Medicine and Dentistry of New Jersey in Newark; Mary Boland of the National Pediatric and Family HIV Resource Center in Newark; Dr. Eric Goosby of the HIV Policy Office, Office of the Assistant Secretary for Health; Dr. Cheryl Heaton of the Columbia University School of Public Health in New York City; and Dr. Martha Rogers of the Centers for Disease Control and Prevention in Atlanta.

To produce these programs, Macher collaborates with universities and medical centers, as well as with other federal agencies, including the Departments of Justice, Defense and State, the Indian Health Service and the Veterans Administration.

The next HIV Clinical Conference Call will focus on HIV viral load and will take place Sept. 28 at 1 p.m. ET. For more information about how to register, send a request via fax to Macher, 3-1719.

--Jack Hilovsky □

NIH deputy director Dr. Ruth Kirschstein recently received the Georgena Seeger Jones Women’s Health Lifetime Achievement Award. Sponsored by the Society for the Advancement of Women’s Health Research and Warner Wellcome Consumer Healthcare in cooperation with the National Health Council, the award was presented to Kirschstein on June 27 at the Third Annual Congress on Women’s Health held in Washington, D.C. Jones, a Johns Hopkins University School of Medicine professor-physician and first woman president of the American Fertility Society, pioneered in the area of infertility and helped establish it internationally as a credible field. She is credited with founding the first in vitro fertilization facility in the United States and in 1981 was responsible for delivering the first IVF baby in this country. The first woman director of an NIH institute (NIGMS in 1974) who also helped establish NIH’s Office of Research on Women’s Health in 1991, Kirschstein has been a scientist and administrator in the Public Health Service for more than 40 years.

Brown Heads NCI Office

Dr. Patricia Ann Brown has been named director of NCI’s Office of Laboratory Animal Science (OLAS).

She earned her V.M.D. from the University of Pennsylvania School of Veterinary Medicine in 1978 and has held a number of positions from director of the Laboratory of Animal Medicine to deputy director and acting director of the Office of Laboratory Animal Science. Her outstanding service has earned her the PHS Achievement Medal, and the PHS Commendation Medal.

“The OLAS occupies a critical position in NCI research and the institute is most fortunate to have Dr. Brown at its helm,” said NCI acting director Dr. Edward Sondik.
When Rall became the institute's scientific director in 1962, Robbins became chief of the CEB, a role he would play for nearly 30 years. They made a dynamic team that would help establish and nurture the scientific prowess of NIDDK for most of its 45-year history.

Rall and Robbins were known first for their scientific expertise. Building on earlier work, they formulated the free thyroxine hypothesis, which proposed that the concentration of free hormone in the blood is directly related to the hormone’s action on cells and metabolism. It is “a basic concept that has stood the test of time,” Robbins says modestly.

Known also for their expertise in radiation carcinogenesis, Rall and Robbins recruited and encouraged, challenged, and delighted a steady stream of brilliant young investigators and clinical associates who would themselves lend polish to NIDDK's reputation. Among their prize recruits were Nobelist Harold Varmus, Dan Federman, Mitchell Rabkin, Ira Pastan, Sheuwen Cheng, Harold Edelhoch, Bob Lefkowitz, Jan Wolff, Jesse Roth, Phillip Gorden, Saul Rosen, Ron Kahn, Henry Metzger, Vera Nikodem, Hans Cahnmann, Reed Larsen, Marvin Gershengorn, and Bruce Weintraub. Gaetano Salvatore and Mario Andreoli and many others came from Italy, along with notable organic chemists and incipient molecular biologists; in the CEB, the atmosphere was kinetic, and sparks flew.

“People were more formal everywhere else,” Roth adds, “but in that branch, everybody was equal. You said something, you had to be prepared to be challenged. Jack and Ed would get ourselves together, open up, quickly. Data counted, not who said it.”

Robbins was quieter, a man with an acute sense of humor, who loved puns. Rall was more given to repartee, the “quick hand grenade,” says Roth. They set a high scientific standard but criticized constructively. “They had opinions, thoughts, creative things to say,” remembers Gorden, and were comfortable raising questions outside their own field. “They were always interested, excited, and pleased by things,” adds Roth.

Gorden remembers a tremendous cross-fertilization among a mixed and uninhibited group of highly intellectual people, where core ideas abounded. Each person brought what he had to the group, and took away something new from the synergy that happened there. “Somebody would throw out something they had just read in PNAS [Proceedings of the National Academy of Sciences] and all of a sudden, something would click. Jack and Ed

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Rall, Robbins' 'Global Village'

Below is a partial list of scientists who were part of the Clinical Endocrinology Branch:

- From Belgium, Philippe de Nayer and Daniel Glijoer
- From Australia, Sam Rose
- From South Africa, Andreis Van Zyl
- From France, Pierre Freychet and Jacques Nunez
- From England, Rosalind Pitt-Rivers and Jamshed Tata
- From Finland, Panu Vilkki
- From Germany, Dankwart Reinwein
- From Japan, Nobuo Ui and Yoichi Kondo
- From the Czech Republic, Zdenek Kostouch and Marta Kostrouchova

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They were a part of everyone's scientific infancy, really parental figures,” says Phil Gorden, NIDDK director and host, with Nino Salvatore, of the symposium. “To me, those were the defining years of my career,” added Benoit de Crombughe, professor and chair of molecular genetics at the University of Texas.

“Ed thought his only job was to select excellent people, to encourage them and criticize them in positive ways, and let them go,” says Jesse Roth. Research dollars were readily available in the late 1950's and 1960's, and bright young investigators coming out of graduate programs often faced the choice of being drafted for military service in Korea or Vietnam or doing postdoctoral work at NIH. With few fully developed biomedical research centers in the country at the time, the best and brightest came to Bethesda. “We were drawing from the top 5 percent of the graduate programs at the best schools in the country,” recounts Earl Laurence, acting deputy director of NIDDK.

NIH was growing, but it was still small, informal, and free-wheeling. In journal clubs, biochemists rubbed shoulders with organic chemists and incipient molecular biologists; in the CEB, the atmosphere was kinetic, and sparks flew.

“People were more formal everywhere else,” Roth adds, “but in that branch, everybody was equal. You said something, you had to be prepared to be challenged. Jack and Ed would get themselves together, open up, quickly. Data counted, not who said it.”

Robbins was quieter, a man with an acute sense of humor, who loved puns. Rall was more given to repartee, the “quick hand grenade,” says Roth. They set a high scientific standard but criticized constructively. “They had opinions, thoughts, creative things to say,” remembers Gorden, and were comfortable raising questions outside their own field. “They were always interested, excited, and pleased by things,” adds Roth.
created a community where that sort of synergism could exist," says Gorden.

As vital as the scientific circle was, members of the CEB enjoyed as much becoming part of the Rall-Robbins social circle when Bethesda was still a small town. There were annual CEB picnics, Christmas day gatherings, and weekend trips to Antietam Meadows, the cattle farm near Sharpsburg, Md., owned jointly by Ed, Jack, Barry Blumberg, and Wil Rall. "They have the coldest shower you ever took; I think they have the water piped in from below the polar cap," quips Roth.

Postdocs from Italy, France, and elsewhere especially appreciated their welcome. "I always felt the CEB ought to be supported by the State Department," jokes Robbins, alluding to the international relations he and Rall carried on through the years.

Jean Robbins, Jack's wife and a professional cellist who played with the Washington Opera, the National Ballet, and the National Gallery Orchestra, loved to host musicales for CEB friends. The Robbins' New Year's Eve party, with four different quartets playing in different parts of the house, became a tradition. "There were enough people," recalls Jack with a smile, "to have octets and nonets."

From 1981 to 1991, Rall served as NIH deputy director for intramural research, where he continued to champion the freedom of the individual scientist. As an emeritus, he works now on thyroid/steroid hormone receptors and is excited by the insights provided by molecular biology.

He thinks NIH will continue to thrive. "Cross fertilization is one of the great strengths of the NIH," he asserts. He calls the juxtaposition of patient care units, clinical investigators and basic science labs "one of the geniuses" of the Clinical Center.

Robbins continues his work in thyroid cancer in children. Both men concede that scientific life today is much more complex.

In the beginning, "if we needed to do electrophoresis, we designed an instrument and built it over in the shop," Robbins says quietly. Today, they agree, kits for various procedures are convenient if pricey, and make many processes simple and efficient. Automation has accelerated the pace of discovery.

Characteristically, Rall says, "It's certainly the most exciting time in the world to be alive, if you're in science."
inn board, recalled a dark moment in 1972 when their son Matt, then an infant, was diagnosed with terminal cancer in their home city of St. Louis. "Matt is now 24," Gephardt beamed, "and will be attending law and business school in the fall."

Also bearing cancer was lunch-hour emcee Craig Kline, 26, of Freehold, N.J., who came to the inn in October 1990 suffering from Burkitt's lymphoma. A recent graduate of the University of Virginia law school now headed for practice in Manhattan, he underwent 4 months of treatment at NIH and has recently been in remission.

"Words alone can't express how wonderful it is...just to be here on this most precious day," he said. "I came here 5 years ago a tired, weak, frightened person, and I met some of the finest people I have ever known. You understand the minute you come through that front door that you're at home."

He called the inn "a place to learn, to live, to love, and to laugh. It's a place to grow up. I found out at the inn that I didn't have just two parents. I had 10 parents, 100 parents."

Standing well over 6 feet tall and sporting a Hugh Grant hair-do, Kline was upstaged by little Brian Scholl, age 13, whom Kline described as his "roommate, friend and mentor."

"When I first met Craig, he was in pretty bad shape," confided Scholl, bearing a large doll and speaking with such crowd-pleasing assurance that Gephardt later hoped never to face him in a political race. "I figured I'm just not going to let this guy die." Scholl was similarly blunt on the value of the inn: "It's like love, basically, everywhere. Everything you need is donated. It's just wonderful here."

Love was nowhere more palpable than in the bearing of Naomi Thornton of Baltimore, who sat at the far edge of the festival tent eating a hamburger with her foster child Kweisi Woods, 8, who was born both HIV-positive and with cerebral palsy.

Having lost both a son and a cousin to AIDS, Thornton, a nursing assistant who has cared for both geriatric patients and children, arranged through Baltimore's Kennedy-Krieger Institute to take in little Kweisi, a big-eyed, gentle child who demonstrated personable fluency with his foster mother but would venture not a syllable to an interviewer.

"He likes coming out here," said Thornton, who had to take classes to become a foster parent and who now attends twice-weekly counseling sessions at NIH to help parents of ailing youngsters cope. "Right now, he's my job."

A stoic woman with eyes undimmed by pain, Thornton observed, "A lot of people don't want to take children [Kweisi's] age. He's grown quite a bit since he's been with me."

The growth has been both literal and metaphoric.

"He's gone from a size 2 1/2 to a size 4 1/2 shoe. And he's gained quite a bit of weight, which is good. He's been very healthy. Never sick once during the winter."

Having grandchildren who span ages 2-22, Thornton says Kweisi fits right in. "We're just family. He's part of the family. Our whole family has grown from having him around—my sisters, my mother, aunts, church people. He has a big brother at our church (Pleasant Zion Baptist Church). And he sings in the choir. Got a pretty voice."

Though his legs are in braces and he occasionally uses a walker when he can manage to bridle his natural enthusiasm, Kweisi is quite active. "Anything his legs will allow, he'll do," says Thornton. "He likes to ride his Big Wheel; he can't ride a bike. He loves to read."

Finally, Kweisi abandons his silence when asked his favorite activities: "Play anything," he blurts pleasantly before
immeasurably in her fight against cancer.

9th grader who has been coming to NIH for a 10 o'clock appointment. "By 3 and the inn since July 1993. "It's like ambling off to spend his allotment of carnival tickets.

Moore, 14, of Harrisburg, Pa., a rising years ago when they visited their surgeon at the Clinical Center, culminating in the relief of a warm welcome at the inn.

"It was just incredible," enthuses Casey. "They gave me a big welcome, we got a tour of the inn, and they made sure we were comfortable. They make you feel totally at home."

Now in the maintenance phase of her protocol, which requires only two nights a month at the inn, Casey recalls with pleasure an ice storm that once kept the Moores inn-bound for a week: "A lot of the kids couldn't fly out, so we all ran around together, playing Nintendo, watching TV, doing whatever we wanted. It was great."

Asked what's best about the inn, she declares, "All the other kids that are there. The kids have been through treatment, they know how I'm feeling. It's just the greatest thing."

Her parents concur that it's the camaraderie of families facing similar crises that gives the inn its special character.

"That is an undervalued part of the whole process of dealing with childhood illness," said Mike Moore. "It's very important to fight this thing mentally as well as physically, and the inn provides this help. It's a whole new subculture, with a new vocabulary that you have to learn, and a new environment. The inn serves as a link between your old way of living and the new one that is very important."

"We have made many friends here," adds wife Linda. "And it doesn't stop when you leave here. There are constant calls to other patients, keeping in touch. The support continues."

Both credit the inn staff with strong support, and with brokering relationships between parents in similar binds.

"Sometimes they'll just direct you to a parent in the same circumstance," said Linda. "And that's important because no one really knows how you're feeling unless you've been through it—not even your family at home. Everyone looks out for everyone else's child—it's like Craig (Kline) said—there's not one mom, there's 10."

The hope, good wishes and support of parents help the Moores get through each day, one day at a time.

Mike puts in a special word for Clinical Center caregivers: "They provide so much love, so much safety and security. Casey didn't want to go home, she became so attached to them. We couldn't possibly give back what we've gotten from them."

He said the 2 years that have elapsed since that fateful morning of diagnosis have passed "like 2 weeks. We feel like these anniversary parties they throw in July are parties for our being here."

Concludes Linda Moore, "The most important thing to remember is that the inn is not a place to sleep. It's much, much more than that, and those are the things that make the inn special."

Helping preserve and nourish that sense of caring is Dolores Dalomba, the inn's resident manager for the past year and a half. She came to the inn having held a similar post in a high-rise luxury building with many elderly residents.

"I didn't know what to expect when I got here," she admits. "In my previous job, I had to deal with disabilities such as Alzheimer's disease and broken hips," she said. "But with older people, you know the end result. Here, you know some will get well, which balances the knowledge that some you will lose. If it were only constant loss, it would be very, very difficult. I've seen many recover."

Dalomba says the strength of the kids is most impressive to her. "The kids are great—they have a great deal of courage and fortitude. You learn a lot from them."

Parents, too, she said, need all the strength they can muster. "They cope with burdens differently. Some take it real, real hard. Some are sick themselves. But we all pull together and support the kids and each other. The kids make friends with each other and the parents make friends with each other."

What parents most provide one another is hope, she observes. "You see parents with kids at different stages of illness. It's important for the ones just starting out to realize [from more experienced parents] that there is hope, there is another side at the end of this ordeal."

Since April, Dalomba reports, the inn

(Continued on Page 8)
has experienced a surge of requests for rooms that it is not always able to accommodate. "The hardest part of the job is saying there's no room at the inn," she said. "At least another 10 rooms would be nice. But anything that helps make the family more comfortable would be high on my list of priorities."

The emotional costs of this kind of work are high, she allows, but such stakes attract a very caring sort of staff. "The inn attracts wonderful people," she said. "If we can help ease [families'] pain, it helps, whether it's a happy ending or not."

Dalomba, who is off duty on Fridays and Saturdays, has a retreat to which she repairs in the mountains of West Virginia, near Martinsburg. "It's very quiet, peaceful and rural. I come back refreshed."

The inn has grown from four full-time staff to six in the past 5 years, and a cadre of some 275 volunteers—many of them NIH'ers—pitch in as well. Still, holiday weekends, particularly religious holidays such as Easter, can be hard to staff, said DaLomba.

"The D.C. metro area has a constantly changing population," she acknowledged, "so we have a lot of volunteer turnover. Life circumstances change—jobs change, people go back to school. Some come back to us after being away for a while."

"We are truly blessed to have the continued support of a wonderful staff," said Kathy Russell, past president of the inn, present board member, and chair of the inn governance committee. "We have also been blessed by the support of Merck," which has pledged almost $5 million in support of the inn since 1990.

The challenge in the next decade, she said, "will be to sustain the mission of the inn in the face of cutbacks in NIH funding and in the economy, which is not as successful as when we built the inn."

She viewed the birthday gala as an opportunity "to draw attention to the fact that we can only survive with continued financial support. CFC and NIH support is just critical," she emphasized. "We need the institutional support of NIH—the in-kind services such as landscaping and interior and exterior maintenance. It's an exciting time. It keeps us focused on being able to sustain the dream."

The inn's goal has always been to acquire so generous an endowment that it could sustain itself from year to year on interest income alone. Russell said an endowment of $12 million is needed.

Conflicting trends have made the future hard to map, she suggested: not long ago, patient census was high and the inn was "turning away two and three families a day, which put us in a crisis mode." Plans were drafted to add 18 rooms to the existing facility, which had been built with eventual expansion in mind. But then came federal downsizing and, now, "NIH pediatric programs are shrinking, and the census is coming down. But the inn is generally full these days. If pediatric programs continue to shrink, expansion won't be necessary."

But maintenance and operation costs will continue, and one day the inn will need physical improvements such as a new roof or other replacements, she reported.

In other words, the inn is like most 5-year-olds: it has weathered growth pains, developed a personality and is maturing despite a menu of obstacles. And, like the patients, it has so many "parents" in the form of dreamers, benefactors, and caring people that future milestone birthdays seem all but assured.

Concluded another of the inn's founding fathers, NCI Pediatric Branch chief Dr. Phil Pizzo: "I believe that the inn's greatest success has been in providing a family-centered environment that has supported children and families facing the challenge of serious illness, empowering them to participate in the clinical research mission of the NIH. Without the inn, it is hard to believe that we could conduct intensive outpatient-based research protocols in childhood cancer, AIDS and other important areas of pediatric research. In my opinion, the Children's Inn serves as a partner in the clinical research mission of the NIH. It provides comfort for children and their parents, helps keep siblings and other family members together, and provides a beacon of hope for the future. The Children's Inn continues to serve as a symbol to the NIH and its community that improving the lives of children is important and that the NIH is dedicated to comforting the spirit while seeking new ways to heal the body."

The Children's Inn at NIH—CFC#1007—is a private, nonprofit charitable organization dependent on private contributions for its operating needs.

The Kapitol Klowns visited during lunch and bestowed hugs and humor on party guests.

The NIH Life Sciences Education Connection

Come to Poster Day 1995 on Aug. 4 to find out what young scientists at NIH are learning and discovering. This year, 370 high school, college, and medical students will be presenting their summer's work. Stop by and show your support. The poster session will be held in the Bldg. 10 lobby area and Visitor Information Center from 10 a.m. to 1 p.m. For more information, call Deborah Cohen, 2-2176.

The Speakers Bureau, sponsored by the Office of Research on Women's Health, needs volunteers. This is a great opportunity to increase your visibility in the community by speaking to students, government employees, or civic groups. Speakers typically discuss their research specialty. Popular topics requested are breast cancer, Alzheimer's disease, cardiovascular disease, fitness, nutrition, and osteoporosis. The bureau also needs speakers on careers in science, women in science, and the scientific process. Requests for speakers are screened and facilitated through the NIH Office of Science Education. If you are interested in becoming a member of the Speakers Bureau, call Gloria Seelman, 6-0608.
NIAMS' Stephen Gordon Retires After 30 Years

By Barbara Weldon

Dr. Stephen L. Gordon, the first chief of the Musculoskeletal Diseases Branch, NIAMS, recently retired after 30 years of government service. "Dr. Gordon is the definition of the best in public service. No one has had a warmer, more productive association with the grantee community. He developed fields of research in the musculoskeletal arena that didn't exist before," said Dr. Michael D. Lockshin, NIAMS acting director.

Gordon came to NIH in 1978 as a grants associate to gain insight into funding, management, and public policy issues in biomedical research. In 1979, he joined what was known as the National Institute of Arthritis, Metabolism, and Digestive Diseases, as the first director of research on orthopaedics. When NIAMS was created in 1986, he became the first chief of its Musculoskeletal Diseases Branch. In that capacity, he is credited with spurring biomedical research and interventions in low back pain, osteoporosis, osteoarthritis, sports medicine, and repetitive motion disorders. He was responsible for more than 150 grants and contracts with a budget in excess of $26 million.

Gordon says that NIH is an exciting, invigorating environment and there are many opportunities to have an impact on a national level. "One of my greatest accomplishments has been to play a key role in biomedical research and interventions in osteoporosis," he said. He added that, years ago, most women thought that osteoporosis was a general consequence of old age and the disease was not well understood. The 1984 Consensus Development Conference on Osteoporosis encouraged research into the disease and brought to the attention of the American public that medication, diet, and exercise could alter the course of the disease.

Dr. Lawrence E. Shulman, former NIAMS director, said, "We have accomplished much together over the years, consensus conferences on osteoporosis and on total hip replacement, scientific workshops on back pain, initiatives in space research on bone and muscle with NASA, and successful initiatives in sports (and ballet) medicine both here and in the USSR."

Gordon has served on several congressionally mandated task forces. He has been an advisor to the President's Council on Physical Fitness and Sports, a panelist on the surgeon general's workshop on health promotion and aging, an advisor to the FDA on osteoporosis and to the World Health Organization committee on osteoporosis, and a consultant to NASA on robotics and space station programs.

A native of Philadelphia, Gordon received a B.S. in mechanical engineering in 1967, an M.S. in biomedical engineering in 1970, and a Ph.D. in biomedical engineering in 1973, all from Drexel University in Philadelphia. During his graduate years, he was an independent research investigator for the Naval Air Development Center in Pennsylvania. His research centered on mathematical and computer analyses of large crash simulation studies. From 1973 through 1977, he was chief of a biomedical engineering group analyzing simulated car crashes for the Safety Research Laboratory, National Highway Traffic Safety Administration.

Gordon is the recipient of many awards and honors, including the NIH Director's Award and special recognition awards from NIAMS, the Academic Orthopaedic Society, and the Osteoporosis Foundation. He is a member of many scientific, professional, and public organizations including the Orthopedic Research Society, the American Society of Bone and Mineral Research, and the American Running and Fitness Association. He is a founding fellow of the American Institute of Medical and Biological Engineering.

Medical and Biological Engineering, Gordon has coauthored numerous articles and books on bone formation, low back pain, total hip replacement, effects of space travel on the musculoskeletal system, and effects of exercise. His latest endeavor is a book in progress on Repetitive Disorders of the Upper Extremity.

"Unlike many retirees who are eager to hang out a sign 'Gone Fishing,' I would rather continue my efforts on making people better. I am looking forward to a second career in the private sector, working in the biomedical fields of injury prevention and orthopaedic treatments," Gordon said.

Lunch Hour Dance Class

Still haven't figured out the Electric Slide? How about the Boot Skootin' Boogie or the Achy Breaky Heart? Now you can learn these popular country western line dances and many more—here at NIH during your lunch hour.

Every Tuesday, from noon to 1 p.m., in the 14th floor gymnasium of the Clinical Center, the R&W Country Western Dance Club holds open-to-all classes to learn and practice the latest line dances. No experience needed. No "pards" needed. A few more men would be nice. Written instructions are available. Wear soft-soled shoes to protect the floor. Voluntary donations to the club of $1-$2 per class are accepted. Dennis Askwith, 6-5031, has more information.

'Science of Business' Session

NIH will be presenting a poster session entitled, "The Science of Business," on Thursday, Oct. 12, in the Visitor Information Center, Bldg. 10. The purpose is to publicize reinforcement and reengineering efforts throughout NIH. If you wish to participate as an exhibitor, call Carl Lucas, 6-6752, Elmer Sembly III, 4-4935, or Bob Schaller, 4-4923. Participation will be limited to 30 posters, and deadline for registration is Aug. 15.

Performance Study Recruits

The USUHS department of medical and clinical psychology needs healthy male, nonsmoking volunteers, ages 29-45, for a 2½-hour study of the effects of noise on performance. A $30 payment is provided. Call Laura or Martha, (301) 295-3263.
respectively, in protecting vaccinated children against pertussis, and caused significantly fewer side effects than did a whole-cell vaccine currently used in the United States. A fourth acellular vaccine also had fewer side effects than the whole-cell vaccine, but was less effective (58 percent efficacy). In both the Italian and Swedish studies, the whole-cell vaccine was less protective than the acellular vaccines, with efficacy rates of 36 percent and 48 percent, respectively.

The two large-scale efficacy trials began in 1992 and together enrolled more than 25,000 children. The four acellular vaccines previously underwent extensive safety and immunogenicity testing in infants in the U.S. in NIAID's Vaccine and Treatment Evaluation Units.

"While whole-cell pertussis vaccines have saved tens of thousands of lives and have long been the cornerstone of childhood immunization programs in the U.S., acellular vaccines promise to become the new gold standard in pertussis immunization," said NIAID director Dr. Anthony Fauci. "These results mark important progress toward the eventual NIAID goal of developing acellular combination vaccines that can protect children against numerous diseases with a minimum of vaccine shots and a minimum of side effects."

"These trials, the culmination of more than 15 years of NIAID efforts in the development of acellular pertussis vaccines, represent a critical step toward licensure of these vaccines for young infants in the U.S.,” added Dr. John La Montagne, director of NIAID’s Division of Microbiology and Infectious Diseases, which supported the two trials. “NIAID is working closely with the Food and Drug Administration and the vaccine manufacturers to ensure that these acellular pertussis vaccines become available as soon as possible.”

To expedite approval of new acellular pertussis vaccines, NIAID is making available the testing facilities of its Vaccine and Treatment Evaluation Units to assist manufacturers in collecting any additional necessary data.

An unexpected finding in both studies was that the whole-cell vaccine widely used in the U.S. was only moderately protective against pertussis in Swedish and Italian infants. However, the epidemic conditions in Sweden and Italy, where pertussis vaccines are not as widely used as here, differed markedly from those normally found in the U.S., where pertussis is much less common.

National surveillance data and observational studies clearly indicate that the pertussis vaccines currently licensed in the U.S. are safe and effective. These vaccines have reduced the annual number of reported cases in the U.S. by more than 95 percent. In addition, the few vaccinated persons who develop pertussis generally have milder disease than unvaccinated persons who have pertussis. Children in the U.S. generally receive a whole-cell pertussis vaccine as part of a diphtheria-tetanus-pertussis (DTP) formulation at 2, 4 and 6 months of age, with additional shots at 12 to 18 months and before entering school. The whole-cell pertussis vaccine, or one of two licensed acellular pertussis vaccines, can be used for the fourth and fifth doses. No booster doses were given in the trials in Italy and Sweden.

"Until the new vaccines are available," noted Fauci, "the Public Health Service recommends that parents continue to have their infants immunized against pertussis with the current vaccine, which for many years has safely and effectively controlled this disease in the United States."

Whole-cell pertussis vaccines are composed of killed *Bordetella pertussis* bacteria. Acellular pertussis vaccines consist of purified components extracted from the organism. All of the acellular vaccines in the two trials contained an inactivated form of pertussis toxin, either native or recombinant.

## DCT Training Classes

- **Introduction to Computer Security** 8/7
- **Getting Started with Windows** 8/8
- **CURE - PC Network Group** 8/8
- **QMF Access to Human Resource** Data for Personnel 8/9-10
- **PC Topic Session** 8/10
- **Managing & Optimizing DB2 Tables Workshop** 8/11
- **Introduction to HTML** 8/14
- **Getting Started with Windows** 8/14
- **NIH SQL-Processor Workshop** 8/14
- **Netscape for the Macintosh** 8/15
- **Windows NT and NTS Hands-on Workshop** 8/16
- **ENTER MAIL** 8/17
- **Learn the Power of PUNET Using Windows** 8/17
- **Learn the Power of PUNET Using the Mac** 8/17
- **Database Technology Seminar** 8/18
- **Client/Server Database Connectivity Workshop** 8/21
- **USENET News** 8/22
- **BRMUG - Apple Macintosh Solution** 8/22
- **LISTSERV Electronic Mailing Lists** 8/24
- **Perspectives in Groupware** 8/25
- **Embedding SQL in a Host Language** 8/29
- **QMF Access to Human Resources Data for EEO** 8/30-31

All classes are on the NIH campus and are given without charge.
Christian B. Anfinsen, NIH Nobel Laureate, Dies

By Alan N. Schechter

Christian B. Anfinsen, winner of the Nobel Prize for chemistry, died of an apparent heart attack on May 14, at the age of 79. In 1972 he shared, with Stanford Moore and William H. Stein of Rockefeller University, the Nobel Prize for studies conducted in the NIH intramural research program. The Swedish Royal Academy of Sciences cited him for his “studies on ribonuclease, in particular the relationship between the amino acid sequence and the biologically active conformation.”

At the time of his death, Anfinsen was professor of biophysical chemistry at Johns Hopkins University. Originally recruited to NIH in 1950 by James Shannon to the newly created intramural research program of the then National Heart Institute, Anfinsen was chief of the Laboratory of Cellular Physiology there until 1962. He went to Harvard for a year, but was recruited back to NIH by J. Edward Rall, scientific director of the then National Institute of Arthritis and Metabolic Diseases, now NIDDK.

Anfinsen was chief of that institute’s Laboratory of Chemical Biology from 1963 to 1981, when he “retired” to Hopkins.

In 1956, while working with Fred White and Michael Sela to determine the entire amino acid sequence of ribonuclease (RNase), Anfinsen noted that the disulfide crosslinks in bovine pancreatic RNase could reform, with restored enzymatic activity, after chemical disruption.

Later, he demonstrated that the secondary and tertiary protein structure also reformed, as did the disulfide bonds. Anfinsen quickly realized that the unexpected reversibility of the process implied that the primary amino acid sequence contains the information necessary for the correct folding of a protein.

Over the next 6 years, Anfinsen and his heart institute colleagues, including Ed Haber, Charles J. Epstein and Robert F. Goldberger, supplied the detailed experimental analyses of the refolding of RNase and other proteins. This work led to a full “thermodynamic hypothesis” of protein folding, which stated “that the native conformation is determined by the totality of interactions and hence by the amino acid sequence in a given environment.”

Although it was greeted with enormous skepticism by the scientific community at the time it was proposed, this elegant principle has become part of the fundamental paradigm of molecular biology as well as the basis of vast biotechnology efforts.

In subsequent work, Anfinsen and his colleagues isolated the first protein of the group now called chaperones, the protein-disulfide isomerase. They helped develop the technique of affinity chromatography in biochemistry. Their protein folding studies, done largely with staphylococcal nuclease, determined the mechanism of folding for this protein, and their use of chemical synthesis allowed the investigation of the role of specific amino acid residues in the folding process. This work anticipated much that is now being done with recombinant DNA technologies.

After the award of the Nobel Prize, Anfinsen and his colleagues concentrated on isolating human interferon, and during his years at Johns Hopkins University, on highly thermostable enzymes.

He made other notable contributions to science and NIH. In 1959, the Darwin centennial year, Anfinsen published The Molecular Basis of Evolution, a monograph that did much to refocus evolution research on molecular structure. This work remained a major resource for more than a decade. From 1957 to his death, he was an editor of Advances in Protein Chemistry.

Anfinsen was one of the creators of the Foundation for Advanced Education in the Sciences (FAES), designed to provide university-level courses for the NIH community. In the early 1960’s he introduced intensive participatory seminars to the Research Associate Program for young physicians coming to NIH in the Commissioned Corps. These seminars markedly broadened the program as a research training experience, and spread recognition of it nationally and internationally.

Born in Monessen, Pa., on Mar. 26, 1916, Anfinsen received a B.A. from Swarthmore College in 1937 and an M.S. in organic chemistry from the University of Pennsylvania in 1939. He received his Ph.D. in biological chemistry from Harvard Medical School in 1943.

He subsequently taught at Harvard Medical School and the Weizmann Institute of Science in Rehovot, Israel. He held visiting professorships at the Carlsberg Laboratory, the Nobel Medical Institute, and Oxford University.

At the time of his death, he was overseeing a project funded by the National Science Foundation to develop thermostable enzymes for remediation of environmental contamination.
NCI's Fraumeni Receives Cancer Research Award

This year's General Motors Cancer Research Foundation award winners included NCI's Dr. Joseph F. Fraumeni, Jr., director of the Epidemiology and Biostatistics Program, Division of Cancer Etiology. He and Dr. Frederick P. Li of the Dana-Farber Cancer Institute, Boston, and a former NCI employee himself, shared GM's Charles S. Mott prize for outstanding research in cancer causation and prevention.

The two scientists are recognized for the discovery of Li-Fraumeni syndrome, a familial cancer syndrome that involves at least six types of cancer affecting children and young adults, and for their pioneering research on genetic testing that identifies gene carriers for early intervention. Over three decades of research, they helped create the field of molecular epidemiology for the study of cancer causation and further classified the importance of genes as risk factors for cancer.

In 1969, the doctors published their first description of a familial disorder of diverse and apparently inherited cancers. At the time, most forms of cancer were thought to have distinct causes, and genetic and familial susceptibilities were not believed to play an important role in cancer causation. The doctors helped to "break the mold" and bring new thinking about genetic susceptibility in cancer.

"Our work seemed like a hopeful sign. We used to believe that every cancer had a separate pathway. However, if different cancers share pathways, as they seem to do, then prevention could be simplified," said Fraumeni.

Their work subsequently led to collaborative molecular studies that related Li-Fraumeni syndrome to an inherited alteration in p53, a tumor suppressor gene that in a mutated form is now recognized to be associated with a wide variety of sporadic as well as heritable cancers.

The discovery of p53 mutations in many families with Li-Fraumeni syndrome provided an opportunity to identify unaffected carriers of the gene for early cancer detection, treatment, and counseling. The doctors realized, however, that genetic data might expose carriers to psychological stress, social stigmatization, and barriers to employment and health and life insurance. A p53 predisposition testing program was delayed until a research program to assess risks and benefits could be established.

In 1991, at two international workshops, the doctors and their colleagues authored a set of recommendations for predictive genetic testing. A testing program was then developed and is now available for families with Li-Fraumeni syndrome and is used to identify carriers for early intervention.

Fraumeni gave a lecture describing the evolution of research and discovery about the family cancer syndrome recently at the annual GM Awards program at NIH. The GM prizes are considered by many to have the most rigorous jury selection process of any major biomedical research prize. The award includes a cash prize and a medal.

In addition to his position at NCI, Fraumeni is also an adjunct professor of epidemiology at the Harvard School of Public Health and the Uniformed Services University of the Health Sciences. He received his undergraduate degree from Harvard College and his medical degree from Duke University. He completed his residency at Johns Hopkins Hospital and Memorial Sloan-Kettering Cancer Center. He also has a master's degree in epidemiology from Harvard School of Public Health.

Sailing Lessons Offered

Join the fun with the NIH Sailing Association. Basic training classes start Wednesday evening, Aug. 23. Cost is $110 plus $35 membership dues. Course includes six evening classroom sessions, a Saturday morning orientation at the marina and three or four weekday afternoons on South River near Annapolis, with two students and one instructor in the club's Flying Scots (19-foot sloop-rigged centerboard daysailers). Students successfully completing the training qualify to charter these boats at low rates.

Students must be NIH or NOAA employees, patients, or contractors, as well as R&W members. Application forms (class and membership) and more information on the Sailing Association are available at the R&W activities desk in Bldg. 31, Rm. B1W30.

Sign Up for AIDS Walk

The Washington AIDS Walk is scheduled to take place Saturday, Sept. 23, sponsored by the Whitman/Walker Clinic. The R&W and NIH Gay & Lesbian Employee's Forum are working to organize all NIH groups to march together. Each group is encouraged to wear NIH logo shirts, lab coats, or something unique to their institute. NIH walkers are being asked to specify Whitman/Walker of Suburban Maryland on their pledge registration form.

A grant has been applied for through Suburban Maryland so that a portion of the proceeds are donated to Camp Funshine, Special Love Inc.'s weekend family camp for children diagnosed HIV-positive.

Registration forms are available at all R&W locations. Needed are team leaders and walkers from last year who would like to help or participate in this year's event. In previous years, there has been great participation from NIH'ers in the walk. R&W is looking forward to having the groups join together with first-time walkers to make a statement on behalf of "the world's premier center for AIDS research."

For more information or to volunteer, call Jodi DeOms at R&W, 6-6061.

PC Topic Session, Aug. 10

DCRT's Distributed Systems Branch holds regular PC Topic Sessions designed to keep NIH'ers up to date on rapidly advancing PC technology. Featured Thursday, Aug. 10, 9:30-11 a.m. in Bldg. 10's Lipsitt Amphitheater will be Systems Compatibility Corp.'s Outside In for Windows.

Windows users today have an incredibly wide assortment of software applications to choose from. The downside of this blessing is the profusion of incompatible file formats. What do you do when someone sends you a file created with an application you don't own? If you're smart, you reach for Outside In, the premier file viewer. Outside In not only lets you view and print—with original formatting intact—files in dozens of word processor, spreadsheet, database, and graphics formats, but it also integrates with Microsoft Mail and Windows File Manager for one-click access to its features. Come see for yourself the closest thing to an indispensable Windows utility we know of, and find out what SCC has in store for Windows 95.