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THE

CANCER LETTER

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House Panel Provides NCI \$1.7 Billion For 1991, Expects Greater Emphasis On Cancer Prevention

The House Appropriations Committee last week passed a spending bill that provides \$1.74 billion for NCI in FY 1991, a 15 percent increase over this fiscal year and \$91 million above the President's request. With the \$150.8 million increase, NCI is to give cancer prevention and control

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In Brief

Megastrol Acetate Still Under FDA Review; Mays Hired For NCI's Technology Office

GENERIC MEGASTROL acetate, marketed by Pharmaceutical Basics Inc. of Chicago, is still under review by FDA following reports that the drug may be more potent than the version marketed by Bristol-Myers under the trade name megace (*Cancer Economics*, March). "There are conflicting studies" about bioequivalence and FDA is "in the process of trying to sort them out," an FDA spokesman said. Though FDA "wants to get it resolved," the spokesman said he didn't think the possible disparity poses "a serious health problem." . . . **THOMAS MAYS** has been hired as acting director of NCI's Office of Technology Development. He was a patent examiner with the U.S. Patent & Trademark Office. . . . **JACQUES CROZEMARIE** has been named cancer research advisor to the director general of the National Center for Scientific Research in Paris. He is chairman of the Coordinating Council for Cancer Research and founder and president of the Association for Cancer Research, France's largest cancer organization. . . . **JOSEPH PAINTER**, vice president for extramural programs at Univ. of Texas M.D. Anderson Cancer Center, has been elected chairman of the American Medical Assn. Board of Trustees for 1990-91. . . . **MICHAEL JACKSON** has accepted the position of executive director of the Federation of American Societies for Experimental Biology. He is dean for research and professor of physiology at George Washington Univ. Medical Center. He will replace **John Rice**, who has been acting director of FASEB since **Robert Kraus** retired after serving as executive director for 10 years. Rice will continue as FASEB's comptroller. . . . **MARY HUMPHREY**, conference coordinator for the Arizona Cancer Center, retired last month to pursue a career as a full time grandmother. . . . **COUNCIL FOR TOBACCO** Research increased its research budget last year from \$12 million to \$14 million and will add another \$2 million this year, the organization said in its annual report. The Council, supported by the tobacco industry, awards grants to scientists around the country who "are assured of complete scientific freedom in conducting their research," the Council said.

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House Panel Provides \$1.7 Billion To NCI, Emphasizes Prevention

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"and all aspects of research on breast and cervical cancer" the "highest priority," the committee said in its budget report submitted to the House last week.

The bill provides NIH \$8.3 billion, a \$1 billion increase over FY 1990 and \$694 million above the President's request. The committee recommended \$1.7 billion to be spent on AIDS by the Public Health Service, FDA and the Indian Health Service, an increase of \$114 million, or 13 percent. Total government spending on AIDS would be nearly \$3.5 billion in FY 1991.

The committee report said the increase for NIH restores the number of new grants to about 6,000, provides for a larger increase in the size of grants than proposed by the President, and "addresses other specific program needs."

The report contained strong language criticizing recent financial management at NIH, including the practice of awarding grants for longer time periods. The committee made several recommendations to limit the time period for grants, increase the number of new grants, and eliminate the practice of "downward negotiation," or cutting grants that have been approved for funding.

A new NIH director should develop or modify the recommendations further, with the committee's review, as part of a four-year plan to promote "stability and predictability during a period of planned growth," the report said.

In its discussion of NCI, the committee said it has been "discouraged" by the increase in mortality rates for cancer, "despite substantial support for cancer research" and said it was concerned that "only 5 percent" of NCI's budget is spent on prevention and

control. The committee said it expects a "substantial increase" in funding for prevention and control, and directed NCI to transmit a spending plan to the committee outlining what it intends to do to increase prevention efforts.

The committee also directed the institute to spend \$7 million of the increase on proton beam therapy, and provided another \$7 million to be spent on construction.

Excerpts from the committee report on what it termed "areas of concern" follow:

"Mortality rates--The committee is discouraged that despite substantial support for cancer research during the 20-year-old 'war on cancer,' cancer deaths and age-adjusted mortality rates continue to increase. In 1971, 336,000 Americans died of cancer and the age-adjusted death rate from cancer was 162 per 100,000. In 1990, 505,000 Americans will die and the mortality rate will have increased by 8 percent. While there has been a decline in deaths for certain cancers, particularly those affecting children, rates among the elderly, the poor and minorities continue to rise. The Cancer Institute each year is allocated more than 20 percent of the total NIH budget. Given this large commitment of resources, the committee will continue to express its impatience at the lack of overall progress. While it applauds those advances which have been made in basic research and in certain cancers, it believes that the American people expect more from their \$1.8 billion annual support of the national cancer program.

"Clinical trials--NCI-supported clinical trials continue to be an important part of the overall cancer program. The committee supports an expansion of this type of research and has added funds so that more trials may be initiated as a way to improve cancer survival and mortality. The committee is aware that there are a number of trials ready to begin and believes that the Institute itself should decide which of these have the greatest potential for success.

"Construction--While the committee has not yet acted directly on funding for construction, which is not authorized, it believes, based on testimony by the director, that a small construction program can be a useful part of the overall cancer program. It has, therefore, added \$7 million to the President's request which may be reprogrammed into projects which have been approved through the normal peer review system once construction is authorized. In making 1991 awards the committee believes that first priority should go to those projects on the currently approved but unfunded list from 1990.

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"Proton beam therapy--Proton beam therapy is a promising area of cancer treatment and warrants further research to establish its exact role. There is a demonstrated need for a small number of state of the art, hospital based, dedicated proton research and treatment facilities in the U.S. The committee has added \$7 million to be used to continue the program begun last year in this area. Funds from the fiscal 1990 bill were used to plan and develop this important area of research in a limited number of referral centers. From the hearings and the report received from the Institute, the committee is impressed with the potential this program can have on the effective treatment of certain tumors and vascular diseases. The committee expects these funds to be used to fund those programs receiving planning funds in 1990.

"Centers--Cancer centers are an important component within the National Cancer Program and the committee is pleased that NCI has recently strengthened the role of comprehensive cancer centers, further directing them to the issues which specifically affect the populations who experience disproportionately high cancer incidence and mortality rates. NCI has testified that primary emphasis should be placed on maintaining the demonstrated excellence of the centers grants portfolio rather than the support of a given number of centers grants per se. For this reason, NCI will continue to explore innovative ways to expand the geographic distribution of cancer centers while still maintaining standards of excellence and peer review. The committee bill provides additional funds to more adequately finance the centers program.

"The committee believes that federally funded cancer centers should provide a full range of support services to cancer patients and their families. This includes psychological services which may be critical for individuals suffering from cancer with its direct and indirect stresses. The committee fully supports this type of program and requests the Institute to report to the committee prior to next year's hearings on the degree to which the cancer centers provide psychological services.

"Cancer vaccines--The committee has heard testimony from various researchers that, as a result of scientific advances in molecular biology, many exciting research opportunities exist, including the potential development of cancer vaccines. The committee is particularly interested in this area of research and is pleased that NCI is planning to convene a consensus conference on this subject in the fall. The committee recommendation includes funds to enable NCI to follow up on research recommendations that emanate from the vaccine consensus conference....

"Breast cancer--NCI is actively involved in a cooperative effort with the Centers for Disease Control to promote breast cancer screening. This effort is expected to grow rapidly in 1991 with the enactment of new legislation to promote screening, particularly among poor women. The Institute's Breast Cancer Screening Awareness Initiative is a major effort to promote the use of mammography among women of appropriate age groups.

"It is believed that breast cancer death rates could drop by approximately one-third if women followed recommended guidelines for seeking mammography. An important component of this initiative is the motivation of primary care physicians to regularly refer their female patients who are age 40 and older for mammograms according to established guidelines. Along with expansion of the CDC program, the committee expects research on breast cancer to be a high priority when NCI allocates the increased resources provided by the committee in this bill.

"Cancer prevention and control--The committee is concerned that too little emphasis is being placed on prevention within the National Cancer Institute. Cancer prevention is crucial to our ability to reduce the incidence of prominent cancers, including cancer of the breast, colon and prostate. Current information indicates that specific emphasis should be placed on factors affecting the incidence of cancer in minority populations and women. For example, it has been estimated that specific dietary changes may be able to reduce total cancer mortality rates by as much as 35 percent.

"The committee is concerned that only \$78 million, or less than 5 percent, of the total NCI budget for 1990 is allocated to cancer prevention research efforts and expects a substantial increase in this area in 1991. The committee directs that within six months the Institute transmit a spending plan outlining specific initiatives it intends to undertake in the crucial area of cancer prevention and control.

"Prostate cancer--The committee is concerned over the high incidence rates of prostate cancer among men. Approximately one in 11 American men will develop the disease in his lifetime. Prostate cancer is the second leading cause of cancer deaths among men. Black men in the U.S. have the highest rate of prostate cancer in the world. The committee is pleased to learn of the testing and development of new drugs which may inhibit the spread of prostate cancer into bone and soft tissue. The committee encourages further expansion of NCI's research efforts in this area and would like to be brought up to date on the future opportunities in clinical and basic

research at next year's hearings.

Questions Financial 'Crisis'

The report's language on NIH financial management follow:

"During its review of the 1991 budget, the committee has heard from scientists throughout the United States that, despite large increases in funding for NIH during the last decade, the system of federal support for the health sciences is in crisis. While the committee believes that this crisis has been overstated, it recognizes that problems with low numbers of new grants, high levels of downward negotiation of grant awards, and the general lack of stability in government support for the biomedical sciences are critical problems which must be addressed if the vitality and the morale of the research community are to be restored. While there are many causes of the current problem, including less funding in recent years than the committee would have liked, it is clear that financial support for NIH as a whole is not the only issue....

"The committee believes that two specific problems appear to have contributed most directly to the current situation. First is the decision made by the NIH leadership to increase the average length of grants from 3.3 years to 4.3 years. The committee believes that this modification was made without sufficient attention to the impact on the number of new grants which could be awarded in future years. The committee notes that this decision was made without consultation with Congress. The second problem is the increasing cost of grants which has routinely exceeded all reasonable measures of inflation. NIH's inability or unwillingness to come to grips with this problem has resulted in an increase of 94 percent in the average cost of a grant between 1981 and 1990. This is almost double the general rate of inflation. Essentially, NIH has approved grant funding requests without regard to the amount of funds which are available in a particular year. Grant awards have then been arbitrarily reduced to stay within budget through so-called 'downward negotiations.' The committee does not believe that this approach, which might have worked during earlier times when NIH was smaller and the competition for funding was less intense, is adequate for the 1990s. The current system does not serve adequately either scientists or taxpayers.

"The committee bill increases funding for NIH by more than \$1 billion over the 1990 level. This increase will address current imbalances and support increased opportunities for improving human health through research. The committee believes that this increased

investment is fully justified by both the humanitarian and commercial potential of the biomedical sciences. In making this commitment of scarce resources, however, the committee expects NIH to implement more aggressive cost management and cost control measures. In this context, the committee has made its FY 1991 funding recommendations as the first step of a four year plan which NIH is expected to implement as it manages its 1991 appropriations. The committee, in developing this financial management framework, would have preferred to be responding to a plan formulated by the NIH leadership. In the absence of such a proposal, however, the committee believes that the following elements should form a basis for bringing more stability and predictability to NIH's current fiscal situation:

"--NIH should move over the next four years to a stable research grant pool of approximately 6,000 new and 24,000 total grants. This compares to approximately 4,600 new and 20,300 total grants in 1990. The 1991 bill includes sufficient funds to support approximately 6,000 new grants.

"--NIH is directed to provide necessary cost control on the research grant system by ensuring that the average length of a grant not exceed approximately 4 years and that the average cost of a grant not increase faster than the biomedical research deflator index. This can be accomplished by specific cost management strategies or by factoring cost into the grant selection process or both.

"--The total cost of a grant, including indirect costs, should be considered at all stages of the grant review process.

"--The practice of downward negotiation should be eliminated. Grants should be approved at the most economical level compatible with the science being proposed and then the average cost should be controlled through which grants are actually chosen for funding. The institutes, through their study sections and advisory councils, should aggressively eliminate any costs which they believe are unnecessary. Once this is done, a grant should be funded at the full level without arbitrary reductions. This system would apply to both project grants and centers beginning with new grant awards in 1991.

"--NIH is encouraged to modify the peer review system to require that 'approval' reflect a decision by a study section about whether a project merits funding based on its inherent value to biomedical research as well as meeting technical standards. This would eliminate the situation where 95 percent of applications are approved of which only half are really considered as deserving of support.

--Research training should be funded at the numbers recommended by the National Academy of Sciences with programmed cost of living adjustments for trainees.

--The number of center grants should not exceed approximately 640 (15 more than the 1990 level) with new center grants to be funded in future years by turnover within this base number. The director should control an allocation system for centers with as many as 10 to 15 center slots reallocated each year. The overall budget for centers should be increased each year to reflect inflation. If center costs increase faster than inflation, the number of center grants should be reduced in order to adequately fund those which remain.

--Funding for other mechanisms should be increased to reflect inflation.

--The director of NIH should have a reasonable contingency reserve to respond to emergencies or unanticipated opportunities. In 1991 this is allocated entirely to the new director. In future years this should be divided equally between the Office of the Director and the individual institutes.

--The budget should provide adequately for maintenance and repair of NIH facilities.

The committee recognizes that NIH may wish to modify this plan based on its experience and its judgement of the best way to accomplish common goals. In this context, the new director of NIH is invited to submit revisions to this plan as part of the 1992 budget, or earlier if he deems it necessary. The committee will only consider modifications, however, which are compatible with the goal of stability and predictability during a period of planned growth.

"Finally, the committee recognizes that there may be unique problems or initiatives which will need to be considered outside of the funding framework established by this plan. AIDS is an example of a public health emergency which clearly required a commitment of resources which could not be handled under normal patterns of growth. The committee believes, however, that these situations are unusual and that this plan would provide sufficient levels of resources to deal with all but the most extreme problems. These exceptions will need to be clearly presented to the committee and justified before they would be approved."

The bill's provisions for the other institutes: National Heart, Lung & Blood Institute--\$1.13 billion; National Institute of Dental Research--\$149 million; National Institute of Diabetes, Digestive and Kidney Disease--\$613 million; National Institute of Neurological Disorders and Stroke--\$545 million;

National Institute of Allergy & Infectious Diseases--\$945 million; National Institute of General Medical Sciences--\$693 million; National Institute of Child Health & Human Development--\$488 million; National Eye Institute--\$254 million; National Institute of Environmental Health Sciences--\$244 million; National Institute on Aging--\$278 million; National Institute on Deafness & Other Communication Disorders--\$125 million.

NCI Formally Announces Designation Of Lineberger As Comprehensive

NCI formally announced this week that the Lineberger Cancer Research Center at the Univ. of North Carolina (Chapel Hill) School of Medicine has been recognized as an "NCI designated comprehensive cancer center."

Brian Kimes, director of the Centers, Training, & Resources Program in the Div. of Cancer Biology & Diagnosis, had announced the Lineberger/UNC designation at last month's meeting of the Assn. of American Cancer Institutes (*The Cancer Letter*, June 29).

Lineberger is the second center to achieve comprehensive status under the new guidelines which went into effect last January, the Arizona Cancer Center being the first.

It is also the second NCI designated comprehensive cancer center in North Carolina. The Duke Univ. Comprehensive Cancer Center in nearby Durham has been so recognized since the mid-1970s.

North Carolina may soon become only the second state with three comprehensive cancer centers (New York is the other). The center at Bowman Gray School of Medicine, in Winston-Salem, has applied for recognition.

"The state of North Carolina and many of its citizens have now joined with us to build a comprehensive coordinated program spanning clinical, basic, and cancer control research," said Joseph Pagano, who has been director of the Lineberger center since it was established in 1975. "We plan further growth and continuing excellence to meet the challenge of cancer."

Lineberger's cancer center support (core) grant was renewed in August, 1989, and continues through May, 1984. Current annual funding in direct costs is \$1.5 million.

The center received its first core grant in 1975 and has been listed as an NCI clinical cancer research center. It has 128 faculty members based in 15 departments. These faculty are involved in eight

programs: cancer cell biology, chemical carcinogenesis, epidemiology, clinical research, drug development, immunology, prevention and control, and virology.

More than 70 associate faculty members associated with the center are drawn from five schools in UNC's Div. of Health Affairs, from departments in the College of Arts and Sciences, and from institutions in nearby Research Triangle Park.

The latest recognition brings the total of NCI designated comprehensive cancer centers to 21. In addition to the possible recognition of Bowman Gray's center, which is headed by Robert Capizzi, there may be several more before the year is out. Pittsburgh Cancer Institute and the Univ. of Michigan Cancer Center also reportedly have submitted their applications. The Univ. of California (San Diego) is reportedly preparing its application, if it has not already done so.

One center formerly recognized by NCI as comprehensive, Georgetown Univ.'s Vincent Lombardi Cancer Research Center, may be back. NCI withdrew that recognition earlier this year because the center's core grant was not renewed two years ago, and Georgetown chose not to submit an amended application last year.

Under the new guidelines, comprehensive recognition is withdrawn automatically when a center's core grant has lapsed.

However, Lombardi, under new director Marc Lippman, put in a new application this year, received a good priority score, and will be funded. That makes the center once again eligible for consideration as comprehensive.

Two other comprehensive centers which had been in some jeopardy because of problems with their core grants also came through with fundable applications this time. Roswell Park Cancer Institute had not succeeded in getting its own core grant renewed last year, but Grace Cancer Drug Center, which is part of RPCI, had a separate core grant. A combined application has been funded.

Ohio State Univ. Comprehensive Cancer Center failed last year to get its core grant renewed. An amended application this year was funded, for four years.

During the two year incorporation period for the new comprehensive center guidelines, which will end Dec. 31, 1991, administrative and peer review processes are being used to grant interim comprehensive status to qualifying institutions.

Both the Arizona and Lineberger applications utilized administrative review. That consisted of review

by Joseph Simone, director of St. Jude Children's Research Hospital, who is chairman of the Cancer Center Support Grant Review Committee; John Durant, vice president/health sciences of the Univ. of Alabama, who is chairman of the National Cancer Advisory Board's Centers Committee; and the NCI Executive Committee.

Centers whose core grants will be reviewed from the present until the end of 1991 may choose either the administrative review or peer review for comprehensive status. After that time, review for comprehensiveness will be carried out by peer review (the Cancer Center Support Grant Review Committee, probably with additional consultants) at the time of core grant review.

Institutions with NCI designated comprehensive status must have that status peer reviewed each time they apply for renewal of their core grant.

The current lineup of NCI designated comprehensive cancer centers:

Univ. of Alabama (Birmingham) Comprehensive Cancer Center; Arizona Cancer Center, Univ. of Arizona, Tucson; Norris Comprehensive Cancer Center, Univ. of Southern California; Johnsson Comprehensive Cancer Center, UCLA; Yale Comprehensive Cancer Center; Sylvester Comprehensive Cancer Center, Univ. of Miami Medical School; Illinois Cancer Council; Johns Hopkins Oncology Center; Dana-Farber Cancer Institute; Meyer Prentis Comprehensive Cancer Center of Metropolitan Detroit; Mayo Comprehensive Cancer Center; Memorial Sloan-Kettering Cancer Center; Roswell Park Cancer Institute; Columbia Univ. Cancer Center; Duke Comprehensive Cancer Center; Lineberger Cancer Research Center; Ohio State Univ. Comprehensive Cancer Center; Fox Chase Cancer Center/Univ. of Pennsylvania Cancer Center; Univ. of Texas M.D. Anderson Cancer Center; Fred Hutchinson Cancer Research Center; and Univ. of Wisconsin Clinical Cancer Center.

Columbus CCOP Forms New Entity To Independently Administer CCOP

The Columbus Community Oncology Program, which is a consortium of six hospitals plus affiliates, has been reorganized as an independent, nonprofit entity to administer the program. Jerry Guy remains as principal investigator for the CCOP.

Each of the CCOP's hospital components will continue their contributions to the program but administrative activities will be carried out by the new

entity, under the direction of Administrator Karen Donovan.

The new organization, which is called "Columbus CCOP," is governed by a board of directors consisting of four representatives from each of the consortium's member institutions.

The members are Grant Hospital, where the CCOP offices had been located; Mt. Carmel Medical Center, Saint Anthony Medical Center, Doctors Hospitals, Mercy Medical Center, and Community Hospitals of Springfield.

The Columbus CCOP offices are located at 1151 S. High St., Columbus, OH 43206, phone 614/443-2267.

Garfinkel To Retire After 43 Years At ACS; Clark Heath To Succeed Him

Lawrence Garfinkel, vice president for epidemiology and statistics and director of cancer prevention, will wrap up 43 years service with the American Cancer Society Aug. 31.

Clark Heath, who has been working with Garfinkel since 1988, will take over his duties. Heath had been with the Centers for Disease Control, and for three years was with the South Carolina Dept. of Health.

Among Garfinkel's responsibilities has been publication of the annual "Cancer Facts and Figures," widely distributed by ACS. Most of his work with the society has been with the prospective followup studies inaugurated by his department using volunteers: the Hammond-Horn study of smoking (1952-55); Cancer Prevention Study 1 (1959-1972); and Cancer Prevention Study 2 (1982-90), which he directs.

Garfinkel is an internationally known authority on smoking and disease, and has been recognized for his studies on involuntary smoking. Among his other contributions have been studies of trends in morbidity, mortality and survival of cancer, dietary factors and cancer; obesity; asbestos exposure; and oral cancer and breast cancer and drinking habits.

Garfinkel has no particular retirement plans, and will be available as a consultant to organizations which may have a need for his expertise.

Fox Chase Biochemist Develops Method Automating DNA Production

A streamlined new technique for automated manufacture of synthetic DNA fragments used to study genes can save the nation's biomedical researchers and taxpayers millions of dollars a year, according to biochemist Anthony Yeung of Fox Chase Cancer Center.

Yeung's procedure, reported in the May issue of "Analytical Biochemistry," reduces the amount of chemicals needed to make DNA by as much as two thirds, takes less time, and makes quality control easier and more precise, he said. Fox Chase's DNA synthesis facility, directed by Yeung, has used the new approach for the past year and has saved nearly \$100,000.

A university or research institute typically uses more than \$50,000 worth of chemicals a year to make DNA, Yeung and coauthor Glenn Miller, a scientific technician at Fox Chase, reported. Research grants to individual scientists, awarded by government or other publicly funded agencies, usually pay for such laboratory expenses.

If Yeung's method is widely adopted by the nation's DNA synthesis facilities, "it would benefit the researchers and taxpayers substantially," the report says, saving more than \$3 million a year nationally on chemicals alone.

To illustrate potential savings, Yeung cited the Human Genome Project launched by NIH last year. Requiring millions of DNA fragments as tools, this 15 year, \$3 billion program aims to create a genetic map locating virtually all 100,000 genes on the 23 pairs of human chromosomes. Yeung's anticipated 90 percent reduction in DNA costs would save many millions of tax dollars during this project, which will help pinpoint genes with important roles in disease and birth defects.

Containing all the body's genetic information in the nucleus of every living cell, DNA is virtually identical in all forms of life. The long chainlike molecule consists of four chemical bases--adenine, thymine, guanine, and cytosine--forming repeated subunits called nucleotides that make up individual genes. In humans, the entire genetic code includes about three billion nucleotides, an average of 30,000 per gene.

Synthetic DNA lacks the complexity of the real thing and cannot reproduce itself. But genetic research has benefited greatly in the past two decades from the ability to use specific DNA sequences made to order. The amount of DNA needed for an experiment could range from 20 bases for a small gene to hundreds of bases or more.

The usual cost to make just one DNA base averages from \$5 to \$6, including \$2.50 to \$3.50 for chemicals, Yeung said. Comparing the current standard procedure to gas guzzling cars, he explained that his procedure can double or triple the "mileage" per chemical and achieve savings of more than 85 percent.

Yeung's technical advance modifies the widely used

DNA synthesizers manufactured by Applied Biosystems. As an adaptation of existing equipment and techniques, the approach does not qualify for patent protection, so research organizations around the world are free to adopt the Fox Chase method.

"We are continuing to refine our DNA synthesis procedure and are planning further publications," said Yeung, who also conducts basic research on DNA repair mechanisms. Within the next few months, he expects to reduce the cost to 50 cents per DNA base—a 90 percent savings—and shorten the synthesis cycle to half the standard time.

Broder Explains Where RO1 Money Has Gone, Says More Is Needed

Changes made since 1985 in NCI's mechanisms for funding basic research have addressed some needs of the scientific community, but they have brought with them some new problems and complexities, Director Samuel Broder points out in an article in the Public Issues section of "Cancer Research," June 15 issue.

In "Where Have Traditional Competing RO1 Grants Gone?" Broder noted that before 1985, research project grants, the primary vehicle for supporting basic research, consisted principally of investigator initiated RO1s and program project PO1s. Both were normally awarded for three year periods.

After 1985, in response to scientific needs expressed by members of the research community, new grant mechanisms were established: Outstanding Investigator Grant (OIG), Method to Extend Research in Time (MERIT), and First Independent Research Support and Transition (FIRST). Among the features of some of the new awards is a longer award term.

The OIG, a seven year grant, was developed to provide the more established researcher with greater security of funding and alleviation from the administrative burden of the shorter term grant renewal process.

Historically, RO1 grants have represented the largest portion of the research project pool. However, since the development of the new mechanisms, RO1s have come to encompass a decreasing segment of the pool, while the new mechanisms in the aggregate represent a steadily increasing percentage. Thus, while the work of experienced investigators is being given some desirable financial stability, there is a diminishing availability of funds for those submitting competing renewal or new applications.

More funds must be added to NCI's budget if the institute is to maximize support for newer, innovative grants while still providing funding security and release

from unnecessary administrative details to the proven, experienced investigators in basic research, Broder wrote.

Carlo Croce, editor in chief of "Cancer Research," wrote in an accompanying editorial that unless this challenge can be met, the U.S. would be in danger of losing "its preeminent position in the biomedical sciences, with major negative consequences in areas ranging from patient care to the pharmaceutical and biotechnology industries."

AACR Honorary Memberships To Elion, Wynder; Foti Acclaimed

The American Assn. for Cancer Research recognized two of its most illustrious members by awarding them honorary life memberships at the association's recent annual meeting.

Gertrude Elion, Nobel laureate and a past president of AACR; and Ernst Wynder, who has received countless awards for his role and leadership in cancer prevention and health promotion, were honored by their fellow scientists during the meeting.

AACR also gave an award to Executive Director Margaret Foti, recognizing her 25 years on the staff of the association's journal, "Cancer Research," as well as for her service in management of the association itself. Foti was presented with a wristwatch by President Harris Busch.

ASCO Young Investigator Awards Presented To 11 At Annual Meeting

Eleven Young Investigator Awards by the American Society of Clinical Oncology, funded by pharmaceutical companies, were announced at the society's annual meeting:

Nikhil Munshi, Indiana Univ. School of Medicine, AMGEN Inc. Randolph Christen, Univ. of California (San Diego), Bristol-Myers Oncology Div. Camille Bedrosian, Duke Univ. Medical Center, Burroughs Wellcome Fund. Thomas Coyle, SUNY Health Science Center (Syracuse), Cetus Corp. Mark Brunvand, Fred Hutchinson Cancer Research Center, CIBA-GEIGY Corp. Eric Radany, Univ. of California (San Francisco) Medical Center, Genentech Inc. Kirk Schultz, Wayne State Univ., Glaxo. Kent Robertson, Fred Hutchinson Cancer Research Center, Hoffmann La-Roche Co. Luba Dumenco, University Hospitals of Cleveland, Lederle Laboratories. Peter Emanuel, Univ. of Alabama (Birmingham), Schering Corp. Wilson Miller, Memorial Sloan-Kettering Cancer Center, Sterling Drug Inc.