

#### OUTLOOK AT THE NATIONAL INSTITUTE OF MENTAL HEALTH

The National Institute of Mental Health would fund nearly twice as many new and competing research project grants next year under the budget proposed by the Reagan administration. NIMH would fund 257 new and competing research grants totalling \$31.3 million in fiscal 1983, whereas the Institute supported 139 new and competing grants totalling \$17.7 million in 1982. NIMH would also award 108 small grants next year, 11 more than it is funding now, and the number of new research contracts would more than double. These proposed increases would still fall short of making up the cuts inflicted on the NIMH research programs by the 1982 budget. Overall, the Institute's budget would drop by about 13 percent in FY '83, from \$226 million to \$196 million. The cut would be achieved through a decrease in noncompeting continuation grants, a reduction in research training grants and the elimination of clinical training awards.

The agency hopes to replenish its supply of fundable proposals in major research areas during fiscal '83. To do so, NIMH has identified areas of research priority and has narrowed the categories of social research that can be funded. Proposals that do not bear directly on issues in mental health will be rejected. NIMH will no longer support research on large-scale social conditions or problems, social classes or groups and their interrelations, the structure and functioning of groups, social roles and career determinants, and cultural beliefs and values.

Research priorities include (1) studies on the basic biological, psychological and sociocultural processes underlying behavior, (2) research to improve mental health service programs and the development of new models, (3) support for studies of the physiological sites and mechanisms of action of psychoactive drugs, (4) clinical research on behavioral disorders, including schizophrenia, depression, psychosomatic disorders, psychoses, character and personality dysfunctions, (5) studies on the psychosocial consequences of racism, the improvement of service delivery systems and demonstrations of effective minority group mental health programs, (6) support for theoretical and applied research on mental disorders in later life, treatment and the delivery of mental health services to the aged, and social problem research in the mental health of aging, and (7) studies into the diagnosis, treatment, control and prevention of mental diseases in man. As a footnote, NIMH plans to reorganize its extramural research program in the near future.

(Health Grants and Contracts Weekly)

#### PAIN SOCIETY MEETING

The American Pain Society will hold its Third General Meeting on October 29-31, 1982, at the Konover Hotel in Miami Beach. The program will emphasize both basic and clinical aspects of pain mechanisms and control. For information about the meeting, write:

Kenneth L. Casey, M.D., Program Chairman  
Chief, Neurology Service (127)  
Veterans Administration Medical Center  
2215 Fuller Road  
Ann Arbor, Michigan 48105

#### OUTLOOK AT THE NATIONAL INSTITUTE ON ALCOHOL ABUSE AND ALCOHOLISM

The National Institute on Alcohol Abuse and Alcoholism fared better in the proposed Reagan budget for fiscal 1983 than any other health research agency, emerging from months of bureaucratic infighting with a proposed 19-fold increase in funding for new research grants. Overall, the Institute's budget would jump by nearly a third to \$43 million in FY '83; the agency's research budget would climb by 58 percent. NIAAA would fund 58 new research grants totalling \$6 million in FY '83 under the proposed budget, as opposed to only four grants totalling \$300,000 this year. The total number of NIAAA-funded research grants would increase by nearly 50 percent, from 83 grants totalling \$7.7 million this year to 123 grants totalling \$13 million in 1983. While new research grants would be increased under the proposed budget, research training programs would be cut and clinical training awards would be phased out entirely. NIAAA would support eight research training grants in fiscal 1983, the same number as this year, and 14 fellowships, about half as many as in 1982. Elimination of the clinical training grants would make good on the administration's promise to phase out these grants at NIAAA and its two sister Institutes at the Alcohol, Drug Abuse and Mental Health Administration.

While the number of new alcohol research grants would increase dramatically, the number of new and competing research grants at the National Institutes of Health would fall by about 14 percent under the budget proposal. The same agency officials who were able to convince the White House to sharply boost funding for alcohol research while cutting NIH research must now sell the increase to Congress. House and Senate appropriations subcommittees have completed their hearings on the NIH and ADAMHA budgets, the first step in the complicated appropriations process. The subcommittees must still hammer out their version of the appropriations bill at a "mark up" session, a process that must then be repeated by the full appropriations committees before the legislation can be considered on the floor.

Some of the research areas in which NIAAA will be awarding new grants in fiscal 1983 include the genetic factors of alcoholism, environmental factors of alcoholism, the effect of alcohol on the central nervous system, the effects of drugs on alcohol, prevention studies and epidemiology studies.

(Health Grants and Contracts Weekly)

#### FELLOWSHIPS IN ENVIRONMENTAL HEALTH SCIENCES

The Medical College of Virginia has an N.I.E.H.S. training grant with pre- and postdoctoral positions for this coming year. Predoctoral trainees generally are graduate students in pharmacology specializing in toxicology. Areas of research training include behavioral- and neuro-toxicology. Faculty on the training grant whose research interests include behavioral- and neuro-toxicology are Robert L. Balster, William L. Dewey, Robert L. Jordan, Mary Jeanne Kallman, Billy R. Martin and John A. Rosecrans. Information can be obtained from any of the above or from Albert E. Munson and Joseph F. Borzelleca, Pharmacology Department, Medical College of Virginia, Richmond, Virginia 23298.

## PERSPECTIVE ON THE TAUB INCIDENT

At the 1981 Business Meeting, the Society for Neuroscience voted in favor of a motion to establish an ad hoc committee to deal with a number of matters having to do with the use of animals in neuroscience research. Among the issues that led to the formation of the present Ad Hoc Committee on Animals in Research were the sudden increase in the activities of animal welfare activists and antivivisection groups, pending Congressional legislation to impose certain restrictions on the use of animals in research, inaccurate and seemingly biased press accounts of animal research, and the particular case of Dr. Edward Taub, a member of the Society who had been arrested in Maryland and charged with violation of the state's statute against cruelty to animals.

At its first meeting in November, 1981, the Committee decided to form a number of subcommittees to deal with specific aspects of its charge. Robert E. Burke, Robert K. Dismukes, Peter J. Hand, Frederick A. Miles and Adrian R. Morrison comprised the Subcommittee to Investigate the Case of Dr. Edward Taub. This subcommittee has prepared a report of events that occurred in Dr. Taub's laboratory before his arrest, his trial and his verdict, the effects of his arrest on his research support from NIH, and a series of recommendations to Council. The full text of their report follows.

### Subcommittee Charge

\*The charge to the Taub Subcommittee of the Ad Hoc Committee on Animals in Research was to gather information related to the police seizure of Dr. Edward Taub's monkey colony, and to provide the Council and the members of the Society for Neuroscience with a report of its findings. This report follows.

### Chronological Summary

\*On September 11, 1981, 17 monkeys comprising the entire animal colony at the Behavioral Biology Center (BBC) of the Institute for Behavioral Research, Inc., in Silver Spring, Maryland, were seized by the local county police. These animals were experimental subjects in an NIH-funded project under the supervision of the Administrative Director of the BBC, Dr. Edward Taub, a member of the Society for Neuroscience.

\*Ten of the monkeys had undergone cervicothoracic dorsal rhizotomies to interrupt somatic afferents from one or both forelimbs, as part of a long-term study on the role of somatosensory feedback in the control of movement. The seizure of the animals was pursuant to a search warrant issued at the request of a part-time volunteer at the BBC, who, unknown to Dr. Taub, was also an animal rights activist and chairman of an organization known as "People for the Ethical Treatment of Animals, Inc." (PETA). The warrant and seizure were approved by the court on the basis of allegations that various BBC personnel were inflicting unnecessary pain upon the monkeys and were failing to provide them with adequate food, water, air, space, shelter, and veterinary care. During his brief tenure at the BBC (May to September, 1981), the volunteer who initiated the complaint kept notes, took photographs (some admittedly staged) of the animal quarters and the monkeys, and examined Dr. Taub's files and records after working hours. On five separate occasions, the volunteer invited outside scientists who were sympathetic to his cause to inspect the premises at night. All of this was done without the knowledge of Dr. Taub or his staff, and much of this activity took place while Dr. Taub was on vacation.

\*Following the police seizure, the 17 monkeys were transferred to improvised cages in the private home of a member of the local Humane Society. Here they were examined by two outside veterinar-

ians, who recommended that four of the animals should receive immediate veterinary treatment. These veterinarians were brought into the case (one from Illinois and the other from California) by private individuals, including associates of the animal rights group, and not by judicial authorities. The monkeys were later examined by a veterinarian appointed by the court, who recommended that all 17 be returned to Dr. Taub. After a number of irregularities, including the disappearance of the monkeys for several days while in the custody of Humane Society officials and the death of one animal while under surgery by the court-appointed veterinarian, the monkeys were ultimately moved to the NIH Animal Facility in Poolesville, Maryland, where they remain as of this writing.

\*On September 21, 1981, 10 days after the police search, a committee representing the NIH Office for the Protection from Research Risks made their own inspection of conditions at the BBC. On October 8, 1981, NIH suspended Dr. Taub's grant, based on the observations of the committee and their review of the police evidence. The suspension remains in force as of this writing.

\*Dr. Taub was eventually indicted under the Animal Cruelty Law of the State of Maryland. Trial on the charges began October 27, 1981, and lasted for five days. The judge ruled that Dr. Taub was innocent of all charges of animal cruelty with respect to inflicting unnecessary pain upon the monkeys or failing to provide them with adequate food, water, air, space, and shelter. With regard to charges of failing to provide adequate veterinary care, Dr. Taub was found innocent in the case of 11 monkeys and guilty in the case of 6. These counts are classed as misdemeanors. It is the Subcommittee's understanding that Dr. Taub will appeal the decision.

### Issues that Require Further Discussion

\*The Subcommittee reviewed an extensive body of evidence, including the police record, the report of the NIH Special Committee, judicial briefs and summaries, and newspaper and magazine reports of the case. The members of the Subcommittee agree that Dr. Taub's unprecedented situation raises a number of very serious issues of importance to all of his colleagues in neuroscience, and in biomedical research generally. The following items are those deemed most pertinent.

\*1) Dr. Taub was targeted by a small but militant organization that is opposed to laboratory animal research and was prepared to use surreptitious methods, which the Committee feels are of questionable ethics, in order to secure material to bring legal charges. The volunteer never made known to Dr. Taub his concerns for the animals until, on returning from a vacation, Dr. Taub was confronted with television cameras and reporters who had been supplied with a press release from PETA, closely followed by police with a search warrant. All of this preceded a "National Mobilizing Conference for Animal Rights" (sponsored in part by PETA and held in Ocean City, Maryland, October 10-12, 1981) and a highly publicized hearing by the House of Representatives Subcommittee on Science, Research and Technology (Rep. Doug Walgren [D., PA], chairman, held October 13-14, 1981). This hearing dealt with the use of animals in research and included the volunteer in the Taub case as the lead-off witness.

\*It is the opinion of the Subcommittee that Dr. Taub was vulnerable to this attack, partly because of the nature of deafferentation research, and partly because his animal care facility was old and difficult to maintain. In addition, there were lapses in custodial care during the period immediately before the police raid, when Dr. Taub was on vacation. The unusual frequency of work absences by Dr. Taub's animal caretakers during this period remains unexplained.

"2) Dr. Taub's case suggests that the legal and judicial system cannot easily deal with complex scientific and technical issues that arise in a research setting. For example, the proper care and treatment of primates with deafferented limbs is a highly specialized issue familiar to few veterinarians or research scientists, let alone officers of the court and the general public. Much of the initial attention in Dr. Taub's legal case, and the reporting of it by the press, dealt with the side effects of deafferentation, which can be unpleasant in appearance and can therefore generate strong emotions in the absence of detailed understanding. These factors appear to have helped the animal rights activists to enlist the sympathies of the prosecutors and local law enforcement officials against Dr. Taub. Perhaps they might also account for the fact that the bizarre disappearance of the monkeys at the hands of "persons unknown", while in the custody of Humane Society officials, remains officially unexplained even though it may have involved felony offenses.

"The need for accurate and balanced scientific information, and the inevitable ambiguities in it, are well understood by people in research but are difficult to convey to the public, especially in the midst of a crisis situation or in a court of law. For example, the two veterinary members of the Subcommittee, based on their own extensive experience with deafferented preparations, were of the opinion that conventional veterinary treatments are usually ineffective in ameliorating the secondary effects of deafferentation, and can sometimes make the situation worse. They agree with Dr. Taub's position that the chance of good recovery from incidental injury to a deafferented limb is best when treatment is kept to a minimum.

"There is a continuing need for scientists to educate the public as to the rationale and benefits of their research, to maintain their own ethical standards, and to adhere to the spirit as well as the letter of regulations and guidelines that may apply. While it seems unlikely that research scientists can have a productive dialogue with the most militant of the animal rights organizations, it is necessary to demonstrate to the public that scientists who use animals in research do, in fact, agree with many of the concerns voiced by advocates of animal welfare. Most biologists share Schweitzer's "reverence for life" --that is why they are biologists. The Society and its membership must expand channels of communication on this issue, in the face of what promises to be an increasingly aggressive and organized animal rights campaign. Unfortunately, the debate over the welfare of research animals has often been conducted in a combative and dogmatic fashion. There is an urgent need for forums in which scientists, philosophers, lawyers, animal welfare advocates, and other concerned citizens can discuss ethical issues and develop guidelines that can be widely accepted.

"3) The treatment of the Taub case by the media, primarily by the press, demonstrated a lack of understanding of animal research and its goals. The highly regarded Washington Post, for example, handled the story only as a regular news item, with coverage written entirely by the local news staff. There was no attempt to balance the treatment of this complex case with background information from outside experts. The Post's own professional science writers were never involved. Letters to the editor were in the main highly critical; few were supportive of Dr. Taub or of animal research and its impact on human and animal health. Review of the newspaper coverage suggests that reporters and editors had considerable sympathy for the activists, who were at times portrayed almost as modern-day Robin Hoods. This is an ominous picture for research scientists.

"4) The swift suspension of Dr. Taub's grant by

the NIH raises certain issues of concern for all research scientists. Immediately after the police raid, the NIH convened a special ad hoc committee to review the police evidence and make a site visit to the BBC premises. Notwithstanding positive comments by an NIH Peer Review site visit in 1979 and repeated Agriculture Department inspections, the NIH committee concluded that: a) veterinary care at the BBC was inadequate, evidenced in part by the description of the monkeys in the police report by the two outside veterinarians; b) the BBC Animal Care Committee was not properly constituted; c) the existing animal holding facility was inadequate; and d) the BBC did not have an adequate occupational health program. The NIH committee recommended immediate rectification of these problems, as well as withdrawal of the then-current Animal Care Assurance by NIH. The latter was the critical decision which, when acted upon, required suspension of Dr. Taub's NIH grant. The NIH committee based its recommendation on a detailed reading of the NIH Guide for the Care and Use of Laboratory Animals. Dr. Taub was notified of this and of the procedures for appeal of the decision. The NIH actions were taken amid intense publicity about the case. As of this writing, a final decision awaits completion of an interim scientific and financial report by Dr. Taub, as well as evidence of satisfactory compliance with the recommendations of the NIH committee.

"These events re-emphasize the necessity for all who use animals in laboratory research to be thoroughly familiar with the contents of the NIH Guide and to be in continual compliance with all aspects of the applicable regulations.

#### Conclusion

"It is apparent that the neuroscience community and the Society for Neuroscience were unprepared to react effectively in this situation. We have been informed that a number of letters prepared by neuroscientists defending the use of animals in research were sent to various newspapers, but few appeared. The neuroscience community was unable to assist Dr. Taub publically because of a lack of information about the case and the absence of a consensus of opinion. In the opinion of this Subcommittee, Dr. Taub was singled out by a highly-organized, militant group of activists who are opposed to laboratory research with animals and wished to develop a situation that would advance their cause. The activists displayed considerable skill in handling the media, and most press reports of the case portrayed Dr. Taub in an unfavorable light. Concerning the issue of veterinary care for the deafferented monkeys, the two veterinary members of the Subcommittee, both of whom have had extensive experience with deafferented limb preparations, felt strongly that if they had been responsible for the care of the affected limbs, they would have followed the same procedures as had Dr. Taub. Moreover, the long-term history of Dr. Taub's animal colony suggests that animal health was generally well maintained. On the other hand, the evidence available indicates that there were some shortcomings in the BBC facility, which made Dr. Taub vulnerable. It is the view of the Subcommittee, however, that the total disruption of his scientific career imposed burdens on Dr. Taub that are incommensurate with the deficiencies cited by the authorities passing judgment on his case.

"The Subcommittee makes the following recommendations:

"1) That the Council of the Society for Neuroscience publically reaffirm the commitment of the Society and its members to the highest ethical standards for the treatment of animal and human subjects involved in neuroscience research.

"2) That the Council establish a mechanism for dealing explicitly with ethical issues raised by the use of animal and human subjects in neuro-

science research, and for responding to problems arising from the practices of individual members.

\*3) That the Council consider establishing a mechanism to provide information, advice and, possibly, appropriate assistance to a member who is challenged on animal welfare issues.

\*4) That the Council mandate the development of a suitable set of explicit and detailed guidelines for the care and use of animals, and the treatment of human subjects, which are specifically tailored to the area of neuroscience research. This would be published as the official view of the Society and would serve as a standard for membership and for evaluation of papers considered for publication in The Journal of Neuroscience or presentation at the Annual Meeting.

January 31, 1982  
Robert E. Burke, Robert K. Dismukes,  
Peter J. Hand, Frederick A. Miles,  
Adrian R. Morrison\*

(Neuroscience Newsletter)

#### WHITE HOUSE ADVISOR REVEALS PLAN

Carlton Turner, new senior drug policy advisor at the White House, recently outlined the drug abuse policy of the Reagan administration to the Senate subcommittee on alcoholism and drug abuse. He indicated that the Reagan policy for fighting drug abuse is very basic and comprises law enforcement, prevention and education, treatment and rehabilitation, and research. Turner indicated that the plan calls for a balance of these areas with none receiving more importance than the others. The public activities of Ronald and Nancy Reagan and of George Bush in appearing before community groups were cited as evidence that the administration is serious about the drug abuse problem in this country. Turner feels that Nancy Reagan's interest has especially helped to convince parents' organizations of the administration's commitment.

The keys to the Reagan program will be the National Institute on Drug Abuse (NIDA), the National Institute on Alcohol Abuse and Alcoholism (NIAAA) and ACTION, the federal agency coordinating volunteer work. Regional and state drug abuse volunteer coordinators will be developed and given responsibility for encouraging volunteer efforts in drug and alcohol prevention programs. NIDA and NIAAA will continue major emphasis on research efforts and will be responsible for transmitting the results to the public and Congress in terms they can understand. Turner feels it is particularly important for scientists to come down from their "ivory towers" and to communicate on a level parents and drug-prevention groups can comprehend.

Part of the Reagan plan will include increased emphasis on reducing the demand for drugs in society. Turner believes prevention must be directed primarily at young people of school age, those who seem especially vulnerable to the problems of drug and alcohol use. Drug abuse can be attacked in the context of the range of ills which threaten young people, including health hazards, deterioration of family structure and alienation from community authority. A long-range strategy that includes prevention and education, international initiatives, proper enforcement and control of drugs flowing into the country can help reduce the demand and reduce the supply of drugs. Turner sees the problem as requiring a dedicated long-term approach instead of short-term efforts involving the expenditure of large amounts of money. Prior to moving to the White House position, Turner was in charge of the government program to grow marijuana in Mississippi for use in research projects.

#### DEVELOPMENTAL PSYCHOPATHOLOGY

Papers are invited for a special section of Child Development which will focus on developmental psychopathology. The special section will be edited by Dante Cicchetti, Department of Psychology, Harvard University, and will appear in the December, 1983, issue of Child Development. It will emphasize the contribution that the study of deviant forms of development can make to the understanding of developmental theory. Moreover, papers in this section will demonstrate how the developmental perspective can enhance our understanding of psychopathological processes and outcomes.

All papers, including reviews and original research reports, submitted for inclusion in this special section will be reviewed through the regular editorial process of the Journal. They must be received before October 30, 1982. Papers should be submitted to: E. Mavis Hetherington, Special Section on Developmental Psychopathology, Department of Psychology, University of Virginia, Charlottesville, Virginia 22901.

#### RECENT PUBLICATIONS

Martinez, J. L., Jr., Jensen, R. A., Messing, R. B., Rigter, H. and McGaugh, J. L. (eds.): Endogenous Peptides and Learning and Memory Processes. Academic Press: New York, 1981, 608 pp.

Hemmings, G. (ed.): The Biochemistry of Schizophrenia and Addiction. University Park Press: Baltimore, 1981, 360 pp.

Palmer, G. C. (ed.): Neuropharmacology of Central Nervous System and Behavioral Disorders. Academic Press: New York, 1981, 688 pp.

Prasad, K. N. and Vernadakis, A. (eds.): Mechanisms of Actions of Neurotoxic Substances. Raven Press: New York, 1982, 236 pp.

Bourne, J. R.: Laboratory Minicomputing. Academic Press: New York, 1981, 320 pp.

Julien, R. M.: A Primer of Drug Action, 3rd Ed. W. H. Freeman: San Francisco, 1981, 306 pp.

Green, A. R. and Costain, D. W.: Pharmacology and Biochemistry of Psychiatric Disorders. John Wiley & Sons: Somerset, N.J., 1981, 200 pp.

Scriabine, A. (ed.): Pharmacology of Antihypertensive Drugs. Raven Press: New York, 1980, 472 pp.

Littauer, U. Z. (ed.): Neurotransmitters and Their Receptors. John Wiley & Sons: Somerset, N.J., 1981, 570 pp.

Wood, W. G. (ed.): Alcoholism and Aging: Advances in Research. CRC Press: Boca Raton, FL, 1982, 208 pp.

Collu, R., Ducharme, J. R., Barbeau, A. and Tolis, G. (eds.): Brain Neurotransmitters and Hormones. Raven Press: New York, 1982, 425 pp.

Shah, N. S. and Donald, A. G. (eds.): Endorphins and Opiate Antagonists in Psychiatric Research: Clinical Implications. Plenum Publ. Co.: New York, 1982, 425 pp.

Klee, M. R., Lux, H. D. and Speckmann, E.-J. (eds.): Physiology and Pharmacology of Epileptogenic Phenomena. Raven Press: New York, 1982, 430 pp.

Leavitt, F. I.: Drugs and Behavior, 2nd Ed. John Wiley & Sons: Somerset, N.J., 1982, 528 pp.

Auld, J.: Marijuana Use and Social Control. Academic Press: New York, 1981, 238 pp.

## A FRIEND IN CONGRESS

Strong support for federal funding of basic research programs was expressed in the Congressional Record last fall by Rep. Vic Fazio (Cal.). "I firmly believe", Fazio said, "that if this nation is to retain its position as a major industrial and social force throughout the world, we can ill afford to neglect basic essential research programs. We are not talking of frivolous and meaningless activities. We are speaking of in-depth studies which go to the core of problems which plague us as a nation and a society, and which must be resolved if we are to continue to advance." Fazio cited several social and economic issues that we must fully understand in order to formulate sound and intelligent public policies, including the national decline in productivity, monumental breakthroughs in technology and society's ability to adapt and progress, methods of improving innovation in small business, and women and minorities in the workforce.

"If we are to improve the quality of life", Fazio continued, "we must increase our understanding of biological and behavioral matters. But this is basic research, as opposed to applied research, and must be funded at least in part by the federal government. We cannot expect the private sector to bear the full cost of such studies, nor would it be in our overall best interest for that to occur. The results of basic research are too unpredictable and require a large investment in time. Private firms cannot afford these risks. But more importantly, the successes are of such enormous consequences that no single firm should be allowed a monopoly on this knowledge. Thus, it becomes a necessary and legitimate governmental role to fund biological and behavioral studies." Noting that institutions of higher education are responsible for 80% of the basic research done in this nation, Fazio concluded that "the men and women who conduct these studies... must be allowed to continue their vital work without necessary restrictions being placed upon them due to unsound budgetary constraints."  
(Federal Research Report)

## ADMINISTRATIVE REQUIREMENTS DRAIN RESEARCH RESOURCES

Researchers who complain that government grants require too much paperwork will find ammunition in a major National Science Foundation report on U. S. research. The fifth annual NSF "Science Indicators" report declares, "There is a growing concern that research resources available to scientists are being affected more than ever by administrative requirements that draw on available time and money." The report cites an NSF-sponsored survey at an unnamed university indicating that between one-quarter and one-third of the time allotted for research by science and engineering faculty was actually devoted to administrative tasks such as proposal writing and assembling staff and equipment. While the report cautions against drawing general conclusions from the survey because of its small size, it notes that "the sample was representative of a large major U. S. research university and the full professors were well established."

A broader study cited by the NSF report, which involved 6,385 faculty members in 20 teaching and research fields, concluded that science and engineering faculty spend about one-quarter of their total work hours on research, including research-related administration, and 11 percent of their time on administrative matters that are not research-related. "Unanswered by these data is the question of whether these responsibilities are more extensive or time consuming than in previous years", the report says. But the authors of the report suggest that administrative burdens on researchers have increased, citing such new

requirements as human subjects review, biological safety and waste disposal.

The report also listed the major federal agencies funding basic research projects. HHS was responsible for about a third of all basic research spending by federal agencies. NSF provided about 15 percent of the total, while the Departments of Defense and Energy and the National Aeronautics and Space Administration comprised about 10 percent. About half of the money goes to academic researchers, while industry receives only about 15 percent. Twenty years ago, these two sectors received roughly the same proportion of federal basic research funds.

The largest increases in basic research funding over the period 1977-1981 occurred in HHS, Defense and the Agriculture Department. Overall, federal dollars account for about two-thirds of all basic research expenditures. Federal spending in this area between 1975 and 1979 outpaced the inflation rate after several years of decline.

Despite the increase in federal spending for basic research, employment in scientific fields in the late 1970s grew more slowly than overall U.S. employment. This suggests that society may be giving a higher priority to nontechnical activities at the expense of technical ones. A more optimistic explanation, according to the report, is that increased productivity in these fields has reduced employment opportunities. The growth areas in science and engineering employment were computer sciences, environmental sciences and engineering. The number of scientists and engineers engaged in research activities increased nearly eight times as fast as the number involved in development. The report noted that approximately one-third of all postdoctoral science and engineering students were foreign, including 62 percent of the engineering students.

(Health Grants and Contracts Weekly)

## MINORITY STUDENTS AWARDED APA FELLOWSHIPS

Forty-one minority students of outstanding ability have been awarded fellowships by the Minority Fellowship Program which is funded by the American Psychological Association and the National Institute of Mental Health. The students were selected from 315 applicants, the majority of whom were Cuban, Hispanic, Latin American, Asian American and Puerto Rican, for this nationwide competition which awards fellowships on the basis of academic ability, interest in behavioral science and mental health issues, and motivation.

The Minority Graduate Fellows come from a cross-section of the United States, including Puerto Rico and Hawaii. Of the 41 awards, 29 were made to women and were distributed among the following ethnic groups: American Indian, 5; Latin American, 1; Black, 17; Cuban, 5; Hispanic, 1; American Asian, 8; Puerto Rican, 4. By specialty, there were 28 clinical fellowships and 13 in research. In addition to the 41 new awardees, 107 individuals who previously received minority fellowships are being considered for continued support for the 1982-83 fellowship year.

The APA/NIMH Minority Fellowship Program is aimed at supporting full participation by ethnic minorities in the development of psychology as an art and a science. The Program assists students who have demonstrated their commitment to the field. Fellowships are granted through a cost-sharing arrangement with graduate departments to cover tuition, allowance for books and materials, a living maintenance stipend and other related expenses. Individual fellowships are awarded for one year and are renewable for two additional years, pending availability of federal funds.

