opposite ends of the dimensional cosmos—nuclear energy as the microcosmos, and the adventure into space as the macrocosmos. While these activities, one sponsored by the Atomic Energy Commission and the other by the National Aeronautics and Space Administration, are highly practical in their end objectives, the pursuit of both of these objectives is an exciting adventure calling for the highest levels of dedication and intellectual achievement. Both are highly dependent on the research and educational output of our universities and upon the excellence of our national research centers."

In the fields of atomic energy and space the universities, despite massive federal support, still must resort to government facilities for some kinds of high-level research. AEC facilities such as Brookhaven, Argonne, and Oak Ridge have resources which even the best-endowed universities do not have, and the same is true with space research, since NASA, in short, has the boosters.

In Big Science, research involves graduate education, and it is the conduct of graduate education in the big federal laboratories which provides another source of contention.

The American Council on Education statement noted, "It has also been suggested, although unofficially, that other federal installations be given power to grant graduate degrees. For example the Oak Ridge Laboratory of the Atomic Energy Commission might conduct graduate programs leading to an advanced degree . . . ."

The reference to Oak Ridge was pretty clearly inspired by a lecture by Alvin M. Weinberg, director of the Oak Ridge National Laboratory, given in an NSF series in January 1962 (*Science*, 6 Apr. 1962) and still providing grist for discussion.

In the lecture Weinberg observed that the government, through its Big Science policies, had created a shortage of scientific and technical manpower and had a responsibility to help overcome the shortage.

His remarks were interpreted by many to mean that some federal labs should be converted into graduate schools, and this caused a considerable stir in the universities. What Weinberg says he was driving at was greater cooperation between the labs and the graduate departments for their mutual benefit.

Weinberg and others note that instances of collaboration—with the universities keeping control of their students—have been multiplying.

At the Oak Ridge Institute of Nuclear Studies, which serves a consortium of universities in the region, there are now about 80 students working on their Ph.D.'s. Forty of them are students from universities and 40 are Oak Ridge employees. A number of Oak Ridge scientists have faculty standing at the University of Tennessee. Effective collaboration, almost everybody seems to agree, has to be a two-way street. A Ford Foundation grant administered by the university helps make the program possible.

Argonne and Brookhaven have had strong ties with universities for years, and Argonne has even begun a program admitting undergraduates for part-time study. In California, scientists at the AEC's Livermore Laboratories have established such a strong link with the young Davis campus of the University of California that it is being facetiously called "Teller Tech" after physicist Edward Teller, who was a prime mover in establishing the relationship.

Much the same thing seems to be happening at NASA installations, although relations with universities do not seem to have advanced as far as in the case of the older AEC laboratories.

The principle of collaboration in the space and atomic energy fields seems to be firmly established, to the general satisfaction of the parties concerned. Doubts unquestionably persist—for instance, as to the possible erosion of university control over its graduate students, or on the question of whether a graduate student will fall into civil service hours at a time when he should be totally immersed in his work.

But the policy statements represent both an admission that the federal labs and the universities need each other and an attempt by the universities to protect their vested interests and their principles.—JOHN WALSH

Congress and Drugs: Political Interest in Drug Problems Is at Lowest Point in Five Years

In its studies of drugs Congress seems to be like the bear who climbed over the mountain only to be confronted with another one. Since the beginning of the Kefauver investigation in 1959, congressional investigators have accumulated thousands of pages of testimony, held searching hearings, and generally subjected the industry to a more intense examination than has been the lot of any other sector of American business. In the process, attention has shifted steadily from the concern with drug prices that initially motivated Kefauver to the questions of drug safety which came to preoccupy his successors. Now, however, the activity is drawing to a close, and though there are a variety of peripheral investigations both under way and contemplated, none of them is likely to have the impact or significance of the earlier work. For a number of reasons, Congress is showing no inclination to tackle the next mountain, and industry executives and lobbyists are anticipating their most restful season in years.

The key condition for the decline of congressional interest in drugs is the departure of Hubert Humphrey from his role as chairman of the subcommittee on reorganization of the Senate Government Operations Committee. Humphrey got drawn into drug problems in 1962 when his interest in the coordination of information between government agencies, together with his interest in drugs, led him to examine the drug information aspects of thalidomide. He quickly concluded that the information problem was not the central question in drug safety, and from 1962 to 1964 he held a series of hearings in which he examined other contributing factors, from the practices of the Food and Drug Administration (FDA) to the attitudes of the medical profession.

Although the hearings were brief, partly because of the press of Humphrey's other responsibilities as Democratic whip, much of the committee's work went beyond the visible surface, and it became a continuing forum for discussion of drug problems. Humphrey also used the committee to force FDA to account for its activities, making it a conscious counterforce to industry complaints that the agency was doing "too much." He also produced a stream of outspoken memoranda, giving an encouraging nod when he saw improvement in federal drug policies, a headline-making howl at evidence of bad management, lack of concern, or danger.

Two other activities deserve mention. First, each volume of hearings (the seventh and last volume, together with a final report, will be issued shortly)*

* The seven volumes, entitled *Interagency Coordination in Drug Research and Regulation*, are available from the Government Printing Office, Washington 25, D.C.

was used as a vehicle for the publication of vast quantities of information on drug issues outside the formal scope of the hearings, much of it retrieved from journals and trade publications with limited circulation, much of it original communications solicited by the committee. This material covers topics ranging from physicians' fees for drug testing to the propriety of drug advertising, and is a valuable supplement to the 26-volume encyclopedia on drugs produced by the Kefauver staff earlier. Second, Humphrey developed links with a large number of physicians knowledgeable about drugs, who became the committee's unofficial advisers and communicated freely with it. This relationship proved critical on at least one recent occasion when the committee, acting on information supplied by one of its correspondents, persuaded the White House to press the Food and Drug Administration for quick withdrawal from the market of a drug said to have caused at least 11 deaths in the Washington area alone.

Committee's Demise

With Humphrey's elevation to the vice presidency there was some talk that his job would be taken over by Ernest Gruening (D–Alaska), a trained physician who was one of the subcommittee members most interested in its drug work. Instead, the committee has been split in two, with Gruening now heading a new subcommittee on another of his chief interests, foreign aid, and Abraham Ribicoff (D–Conn.), a former Secretary of Health, Education, and Welfare and the only other likely candidate to succeed Humphrey, heading another new subcommittee, on executive reorganization. Ribicoff is reported to be still "interested" in drugs but planning to turn his attention to other matters. It also appears unlikely that Humphrey will use his new job to continue his interest in drugs. A crisis on the scale of thalidomide could change this, but as of now the Vice President is said to be inundated with other responsibilities and planning to leave drug questions pretty much alone.

While Humphrey took up where Kefauver left off—in the area of drug safety—unresolved economic issues remained in the province of Kefauver's literal successor, Philip Hart (D–Mich.). Hart became chairman of the Anti-Trust and Monopoly subcommittee of the Committee on the Judiciary, and was supported by the same staff of economists and lawyers who had masterminded the earlier studies and stood by while their proposed price-cutting reforms went down to defeat. Despite these influences, however, the committee has never plunged back into the center of the field. Last year it skirmished around the edges by holding hearings on doctor-owned pharmacies and drug repackaging operations, but it has not yet gotten out a report on its findings, and it is waiting to see whether the FDA and the Federal Trade Commission take an interest in its discoveries.

Clues to possible activities in the current session of Congress are found in a speech given by Hart in January to the Drug and Allied Products Guild in New York. Hart indicated that he was still concerned about the failure of FDA to encourage prescribing of generic (as opposed to brand-name) drugs, which he feels greatly reduce prices without compromising safety. And he also believes that certain provisions of the new drug law are working to the disadvantage of small drug companies, whose continued presence in the field would stimulate competition and also contribute further to the lowering of drug prices. Specifically, Hart is opposed to the FDA's practice of requiring reports of full clinical testing to accompany all new drug applications, whether or not the compound has already been tested and marketed by another company. The cost of duplicate testing, he feels, has barred smaller companies from entering the market, and he suggested that "once a drug has been approved by FDA and is on the market, subsequent applicants should need only to demonstrate that what they are offering is the same product, meeting the same requirements of the U.S.P. or other applicable standards."

What Hart proposes to do about these problems is uncertain. He has evidently asked the Secretary of Health, Education, and Welfare for his reaction, and—barring the extremely unlikely event that satisfaction is obtained from that quarter—may undertake an investigation himself. At the moment, however, it seems improbable that any significant legislative inquiry will be forthcoming this session.

The only committee currently active in the field of drugs is that old bête noire of the National Institutes of Health, the House intergovernmental relations subcommittee headed by L. H. Fountain (D–N.C.). In the last session of Congress the committee's attempts to focus on drug safety by analyzing FDA's handling of several drugs which had had to be taken off the market ran into the constant refrain, "That was what things were like *then*; of course we'd do it much better *now*." This session the committee hopes to discover how the system is working now, though since many drugs now being approved were initiated or developed under the old regime this may be rather difficult. The committee is getting ready to resume hearings, probably in March. After that, following the pattern of its approach to NIH, it will probably write an analytical report suggesting changes, then wait to see how the agency follows through. But since the committee is both more mannerly and less prestigious than the old Humphrey group, and since it is prohibited from writing corrective legislation, it is not yet clear how great an impact its activities will have.

Action on "Pep Pills"

The only other drug activity in the House at the moment is a bill to put strict controls on the manufacture, compounding, possession, distribution, and processing of amphetamines and barbiturates and possibly other, related drugs. A bill on this subject passed the Senate last year (*Science*, 25 September) but died in the House when Chairman Oren Harris of the Interstate and Foreign Commerce Committee decided he wanted the opportunity to hold thorough hearings. Although certain points are still in dispute—particularly whether the HEW Secretary should have authority to bring under the controls similar drugs that have demonstrated a potential for abuse—there has been widespread concern over the quantities of the drugs transmitted through illicit channels, and the bill has the support of nearly every important interest group, including the Pharmaceutical Manufacturers Association and the American Medical Association. It is expected to pass both houses without much difficulty. In his health message to Congress on 7 January, President Johnson also proposed legislation that would give the FDA authority it now lacks to exercise premarketing controls over both cosmetics and therapeutic devices. Both these proposals have not received much serious attention as yet, and it appears unlikely that they will get a hearing in the near future.

Outside of Congress, both the Food and Drug Administration and the drug

industry are in better spirits these days. FDA is cheered by Johnson's proposal to increase the agency budget by about 25 percent, to a total of $50.4 million, much of which would support the agency's increasing medical and scientific activities. The industry is cheered by the presence in Washington of the new Secretary of Commerce, John Connor, a former drug executive whose new status contributes to the rehabilitation of the industry's long-suffering "image." And they are mutually cheered by the feeling that for the next few years the accusatory fingers will not be pointing in their direction.

—ELINOR LANGER

Announcements

The **University of Rochester** is the first university named to receive the newly created New York State Regents professorship in science. Designed to support a distinguished scholar, and to provide a staff and materials for his work, the professorship will be known as the Albert Einstein Chair in Science. It is to be filled by a physicist, appointed to the university's department of physics and astronomy, who will establish and direct an Institute for Fundamental Study. It is expected that the appointment will be announced before next September.

The University of California at Los Angeles has announced the establishment of a program in **gerontology**. It is designed to accelerate research in aging and to offer graduate instruction for preparation for careers in the field. Masters of Science and Public Health degrees are being offered under the program, and doctoral degrees will also be available. Working in cooperation with the School of Public Health are the School of Medicine and U.C.L.A. departments in the behavioral sciences. Further information on the program is available from Daniel M. Wilner, assistant dean of the School of Public Health at U.C.L.A.

Courses

The Institute of Acarology will offer courses in general, medical-veterinary, and agricultural **acarology**, 21 June to 9 July at Ohio State University, Columbus. Applicants for participation in the program must be qualified for admission to the university's graduate school. Some NIH training stipends are available to U.S. citizens who will not receive other government educational help during the period of the course. Deadline for applications: *15 April.* (Secretary, Institute of Acarology, Ohio Agricultural Experiment Station, Wooster)

A course in **comparative pathobiology** will be held in Aspen, Colorado, 9–20 August, sponsored by the National Academy of Sciences–National Research Council, University of Colorado, and the Aspen Biological Institute. The first week will be devoted to advances in nucleic acids, proteins, lipids, and carbohydrates in relation to specific disease processes. The second week will cover comparative genetics, including bacteria, phage, plants, insects, and mammals. Attendance will be limited to 75 persons, including advanced graduate students and senior investigators. Deadline for receipt of applications: *1 April.* (D. W. King, Department of Pathology, University of Colorado Medical Center, 4200 E. Ninth Ave., Denver 20)

A course in **biomedical telemetry** will be given 28–30 May at the University of California extension center in San Francisco. It is intended to provide an introduction to the field for scientists, physicians, and others engaged in research in the biological and health sciences. The program will cover fundamental electronic concepts and circuitry, systems and components, case studies illustrating the present applications, salient research problems, and areas of future applicability. The tuition is $125; graduate students, $60. Deadline for enrollment: *24 May.* (Letters and Science Extension, University of California, Berkeley 94720)

Applications are being accepted for a laboratory course in **histochemistry and cytochemistry**, scheduled 6 July to 13 August at the University of Pennsylvania. The program will include methods of fixation; tests for RNA, DNA, proteins, enzymes, lipids, inorganic substances, and for water soluble and insoluble substances tagged with tracers by autoradiography; and demonstrations of possibilities for the use of the electron microscope in cytochemistry. Two course credits will be given. Participation is limited to ten advanced students. Deadline for applications: *15 April.* (I. Gersh, Laboratories of Anatomy, University of Pennsylvania, Philadelphia 19104)

A course in **histochemistry** for college-level zoology teachers will be held at Vanderbilt University 1–21 August. No tuition or fees will be charged. In addition, living and travel funds will be provided for 20 participants through an NSF grant. Applicants for the course must teach at least one course in zoology at an accredited college or university, and be interested in teaching or research in histochemistry. Deadline for receipt of applications: *1 April.* (B. J. Bogitch, Box 1733, Station B, Vanderbilt University, Nashville, Tenn. 37203)

The National Science Foundation will sponsor a postdoctoral research participation program in **psychology** at the University of Michigan 7 June to 16 August. Participants must be full-time college science teachers of psychology in U.S. institutions. They will receive travel allowances and stipends of $100 a week, plus $15 a week for dependents. They will devote full time to research as a member of a team in one of the following areas: human short-term memory, form perception in humans, probabilistic information processing, effects of subcortical lesions on learning and retention in the rat and the cat, or neural correlates of visual and auditory perception and of problem solving in primates. Deadline for receipt of applications: *8 March.* (D. J. Weintraub, Department of Psychology, University of Michigan, Ann Arbor 48104)

Meeting Notes

The third international **pharmacological congress** will be held 24–30 July 1966, in São Paulo, Brazil. The emphasis of the meeting is to be on the pharmacological basis of therapy: papers may be presented on all phases of pharmacology and experimental therapeutics. Persons interested in attending the congress are requested to notify the president by 1 July. (M. Rocha e Silva, Department of Pharmacology, Faculty of Medicine, University of São Paulo, Ribeirão Prêto, São Paulo, Brazil)

The annual meeting of the **Medical Library Association** will be held in Philadelphia 30 May to 3 June. The program will include personnel administration; the various problems of medical libraries; local, regional, and national medical library cooperation; evaluation of information and indexing services; library technology; and courses