

Detrick Birthday: Dispute Flares over Biological Warfare Center

A scientific symposium honoring the 25th anniversary of Fort Detrick, the Army's biological warfare research center in Frederick, Maryland, provoked sharp opposition in the biological community and suffered a boycott that is believed to be unparalleled in the recent stormy history of relationships between the military and the scientific community. At least 16 scientists refused to give papers at a Detrick-sponsored symposium on nucleic acids as part of a half-spontaneous, half-organized protest against the use of science for destructive military purposes. Some scientists rejected Detrick's invitation to speak shortly after it was received; others accepted the invitation, but then, after receiving letters and calls from their colleagues, decided to withdraw. Four scientists even withdrew after the final program had been printed, thus forcing Detrick to rearrange the program at the last minute.

The battle over the symposium generated considerable heat on both sides of the dispute. Pickets marched outside Detrick's main gate carrying signs that proclaimed "Fort Detrick Is NOT a Respectable Scientific Institution" and "Fort Detrick Scientists are Prostitutes." One sign asked "Want to Get Sick? Consult Your Local Physician at Fort Detrick"; and several signs were decorated with drawings of skulls.

Detrick scientists in return accused the protesters of using "outrageous pressure" and "poison pen letters" to force scientists to join the boycott. At least one scientist who spoke at the symposium says he received an anonymous threatening telephone call. And there is evidence that some scientists who joined the boycott did so less from personal conviction than from a desire to "take the heat off" by placating their vociferous antiwar colleagues.

The strife also split the American Institute of Biological Sciences (AIBS), which was brought in by Detrick to handle the administrative aspects of the symposiums. A minority on the

AIBS executive committee and governing board tried—unsuccessfully—to get the AIBS to back out of the affair at the last minute. The dispute has left AIBS executive director John Olive, who was instrumental in bringing his organization into the symposiums, rather annoyed. "Those are bona fide biologists at Fort Detrick," he says. "I haven't met any yet with two heads or a Frankenstein appearance. Had this same symposium been held anyplace else in the country there wouldn't have been an eyebrow raised."

Detrick's silver anniversary celebration included two scientific symposiums. One, dealing with the "entry and control of foreign nucleic acid," was held on 4 and 5 April. The other concerning "leaf abscission," was held 8 and 9 April. The symposiums dealt with basic science, the discussions were unclassified, and the papers are to be published in *Bacteriological Reviews* and *Plant Physiology*, respectively. The meetings were open to a substantial number of invited scientists—but not to the press or to picketing scientists.

Though the basic and unclassified nature of the material made the symposiums seem "clean" to many observers, Detrick encountered opposition in the scientific community almost from the minute it started soliciting speakers. Detrick was sending out letters inviting scientists to give papers at the nucleic acid symposium at least as early as July and August of 1967—and it was getting back some sharp refusals. Mark Ptashne, a junior fellow at Harvard, declined on the grounds that he found Detrick's work "highly repellant" and did "not want my name associated with Fort Detrick." Dean Fraser, professor of microbiology at Indiana University, acknowledged that "realistically" some one has to work on biological warfare, but he balked at "celebrating" the fact. "It seems at best a little like commemorating the creation of the electric chair and at worst like celebrating the establishment of Dachau," he wrote in declining the invitation.

Several researchers who were invited

to give papers told *Science* that Detrick sent out "misleading" invitations. The invitations generally mentioned the names of prominent investigators and either said or implied that these men would give papers when such was not always the case. Some letters indicated the program would include "such investigators as" the ones named. One letter sent out by Detrick in August also said the nucleic acid symposium "will include as speakers" six investigators, who are then named in the letter. Actually, three of the men named declined invitations to speak. A. Dale Kaiser, professor of biochemistry at Stanford University School of Medicine, declined because he didn't think Detrick was "an appropriate thing to honor"; Herbert W. Boyer, assistant professor of microbiology at the University of California's San Francisco Medical Center, refused to speak "because the research carried on at Fort Detrick is morally objectionable to me." David Denhardt, assistant professor of biology at Harvard, declined for lack of time, though he suggested a postgraduate student to replace him.

Detrick scientists say there was "no intent to hoodwink anybody—the letter makes it clear the program was tentative." However, some scientists claim the list of leading investigators who were supposedly going to speak enticed them to accept invitations. "That's what sucked me in," says Arnold W. Ravin, professor of biology at the University of Rochester. "I didn't think much about the implications of celebrating the 25th anniversary of Fort Detrick. My eyes just strayed to the topics and the people and it all looked great."

The AIBS was not brought into the picture until November, when Detrick asked for the organization's help in handling the managerial chores of the two symposiums, such as registration, lodging and travel arrangements, and the mailing of invitations to guests designated by Detrick. The Army made available to AIBS a \$14,000 fund to cover costs of the conference, of which AIBS received 25 percent for overhead costs (*Science*, 23 February). AIBS executive director John Olive says he and two or three officers of the organization decided AIBS would administer Detrick's conferences in accord with a resolution passed by the AIBS executive committee in March 1967, which states: "The AIBS participates in small and intense conferences and symposia on various topics of great



Pickers from New York and Maryland protest the Detrick symposium.

and current interest to biology." The AIBS had previously handled a conference for Detrick in 1959.

The timing of Detrick's approach to AIBS—coming after Detrick had already received some sharp refusals from potential speakers—has led some protesting scientists to assume that Detrick wanted to still the protests and brought in AIBS to "legitimize" the conferences. However, Riley Housewright, scientific director at Detrick, says Detrick intended from the start to ask AIBS to handle the managerial chores, and W. R. Romig of UCLA, who serves on an advisory board to Detrick, says that as early as March 1967 he understood AIBS would be asked to manage the symposiums. But regardless of the timing, many scientists feel Detrick has "used" the AIBS to add prestige to its operations. "They're trying to present a dirty business in a nice clean shirt," says D. MacDonald Green, professor of biochemistry at the University of New Hampshire, who withdrew from the program.

As the date for the symposiums drew near, the protest movement acquired a semblance of organization. In the early stages, scientists seem to have rejected Detrick's invitations largely as individuals, though many of them sent carbon copies of their letters denouncing Detrick to other colleagues known to have received invitations. But in the weeks before the symposiums, groups at the Public Health Research Institute

of the City of New York, Inc., a private organization that does contract work for the city, and at Rockefeller University cooperated in an organized campaign. They made telephone calls to persuade speakers to withdraw from Detrick's program, issued a press release publicizing the boycott, organized a picket line of 19 people at one session of the leaf abscission symposium, and drafted a general letter of protest that was signed by more than 30 scientists.

After a number of protests had been made by AIBS members, the AIBS governing bodies considered the possibility of withdrawing support from the symposiums. However, on 15 March the AIBS executive committee voted 6 to 2 to continue with the project, and on 16 March the AIBS governing board reached the same decision by a 35-to-10 vote with two abstentions. AIBS president William D. McElroy, of Johns Hopkins, says there was a "consensus" that any future AIBS participation in potentially sensitive projects should be brought to the full governing board for discussion.

The combined result of the organized drive and the numerous individual protests was that some speakers on the program were under persistent pressure to withdraw. Herman T. Epstein, of Brandeis, received six phone calls from four different people within 3 days. He decided to give his paper anyway. "I'm not against biological warfare in

principle," he said. "I'd use biological weapons and napalm and atomic bombs against Hitler, and since I feel that way I felt I should participate."

Some speakers, however, seem to have yielded to the pressure. Ekkehard Bautz, of Rutgers, withdrew largely because he found it "too bothersome and cumbersome to explain why I was on the program," though he says he also had some "second thoughts" about the morality of participating. Bautz received most of his pressure from "out west."

David Denhardt, of Harvard, asserts that his postdoctoral student Lorraine Larison withdrew from the program "after considerable pressure." Denhardt feels that "some behavior of the people who tried to pressure people into not going is as contemptible as what they are criticizing." Larison herself says she was under "very heavy attack" from colleagues at Harvard for about a month, some of it of the "Oh-you're-the-kind-who-would-build-gas-ovens-too" variety. She says she originally considered participation in Detrick's symposium as "lacking moral implications," but ultimately concluded her participation would have "propaganda value."

Many speakers who attended the symposium have heard rumors that there were threats of reprisals—scientists who attended were supposedly going to be "sabotaged" when their grants came up for consideration or when they submitted papers for publication. However, *Science* called all outside speakers on the program and found only one report of a threat. Jacques J. Pène, assistant professor of developmental biology at the University of Colorado, Boulder, said he received an anonymous phone call from someone who threatened to spark a boycott of a conference Pène is organizing unless Pène dropped out of the Detrick symposium. Pène found the call "clumsy" and "amusing" and delivered his paper at Detrick anyway.

The full extent of the boycott of Detrick may never be known, for Detrick has refused to reveal either the names or the total number of scientists who were invited to speak. Nevertheless, it is clear that the boycott was widespread. *Science* has been able to identify 20 scientists who declined to give papers, and at least 16 of these declined for reasons related to the protest. The 16, some of whom rejected Detrick's original invitation and some of whom agreed to speak and then changed their minds, include the fol-

lowing: Ekkehard Bautz, Rutgers; Herbert W. Boyer, University of California's San Francisco Medical Center; Royston C. Clowes, Southwest Center for Advanced Studies, Dallas; Stanley Falkow, Georgetown University School of Medicine; Dean Fraser, Indiana University; Saul Goodgal, University of Pennsylvania; D. MacDonald Green, University of New Hampshire; Donald R. Helinski, University of California, San Diego; A. Dale Kaiser, Stanford University School of Medicine; Lorraine L. Larison, Harvard; Mark Ptashne, Harvard; Arnold W. Ravin, University of Rochester; Helene Smith, Princeton; Ray Wu, Cornell; Frank E. Young, Scripps Clinic; and Norton Zinder, Rockefeller University.

A 17th scientist, Yvonne T. Lanni, of the Southwest Center for Advanced Studies, Dallas, was scheduled to speak but withdrew after the final program was printed. Other protesting scientists count Lanni as one of their number, but all she would tell *Science* was: "I'm simply fed up with the whole business and I don't want to talk about it."

A number of scientists who were invited to attend the symposium as guests also boycotted, but the extent of this boycott is not known. A total of 141 persons attended the nucleic acid symposium, about half from Detrick and half from outside.

The withdrawal of four speakers at the last minute forced Detrick to rearrange the nucleic acid program somewhat. In its final form the program included nine papers by outside scientists, one by a Detrick scientist, and a round-table discussion that was organized to fill the void left by the four late withdrawals. The nine outside scientists who gave papers included Louis Baron, Walter Reed Army Institute of Research; Kenneth F. Bott, University of Chicago; Werner Braun, Rutgers, who formerly worked at Detrick; James C. Copeland, Argonne National Laboratory; Ray Curtiss III, Oak Ridge National Laboratory; Herman T. Epstein, Brandeis; Yu-Chih Hsu, Johns Hopkins; W. R. Romig, UCLA; and Curtis B. Thorne, University of Massachusetts, who also formerly worked at Detrick. The speakers were virtually unanimous in proclaiming the program a scientific success, though some were disappointed that one or more of the boycotters had not delivered papers. Ironically, the round-table discussion that replaced the boycotters turned out to be one of the most popular parts of the symposium.

NEWS IN BRIEF

● **HEW REORGANIZATION:** Health, Education, and Welfare (HEW) Secretary-designate Wilbur J. Cohen has announced a reorganization of the health activities of HEW which include enlarging and strengthening the National Institutes of Health (NIH). Under the plan, NIH will encompass the Bureau of Health Manpower and the National Library of Medicine—thus placing NIH's educational activities on an equal footing with its research functions. James A. Shannon, director of NIH, will continue to head the expanded agency until his retirement in the fall. Cohen also announced the formation of a new agency, the Health Services and Mental Health Administration, which will include the National Institute of Mental Health and such programs as chronic disease control, disease prevention, health statistics, and some aspects of regional health planning. Robert Q. Marston, director of the division of regional medical programs on heart, cancer, and stroke, was named acting director of the new agency. Cohen's reorganization announcement was made in early April and followed his previous statement, some 3 weeks earlier while he was still acting secretary, that Philip Lee, HEW assistant secretary for Health and Scientific Affairs, would be given direct authority over the Public Health Service. Under the reorganization plans, the Public Health Service is enlarged to include the Food and Drug Administration, the new Health Services and Mental Health Administration, and NIH.

● **TIDAL WAVE DATA:** The United States, Russia, and Japan have agreed to increase their exchange of tidal wave data in an effort to improve the effectiveness of the Tsunami Warning System in the Pacific Ocean. The agreement was reached in late March during the closing session of the United Nations Intergovernmental Oceanographic Commission Conference in Hawaii.

● **MEDICAL SCHOOL FINANCES:** The Committee on Medical Education, an ad hoc committee of medical school deans and other medical school educators, urges, in a published report, that the federal government provide more direct support for medical education in the United States. The report notes

that although research support, primarily by the National Institutes of Health, "has been decisive and realistic, the educational functions of the schools have been allowed to languish for lack of funds." The report adds that "there are no financial resources to enable the schools to undertake essential new roles." Lewis Thomas, dean of the New York University School of Medicine, is chairman of the Committee on Medical Education.

● **SHARED COMPUTER STUDY:** The National Science Foundation has awarded three grants totaling \$735,000 to finance studies on the costs and benefits to educational institutions of sharing computers on geographical bases. Grant recipients are Cornell University, Dartmouth College, and Oregon State University.

● **MATHEMATICAL GEOLOGY ASSOCIATION:** Plans have been announced for the formation of the Association for Mathematical Geology. The association will be affiliated with the International Union of Geological Sciences (IUGS) and will work closely with the International Association for Statistics in the Physical Sciences. A 13-member ad hoc committee with international representation is working on the organization of the association and the election of officers. Elections are scheduled to take place during the IUGS annual meeting, which will be in Prague next summer. Additional information may be obtained from Richard Reymont, Paleontologiska Institutionen, Uppsala Universitet, Fack, Uppsala 1, Sweden.

● **NEW PUBLICATIONS:** A directory of the organization and members of the National Academy of Sciences, National Academy of Engineering, and the National Research Council, *Organization and Members 1967-1968*, is available in limited supply, without charge, from the National Academy's Printing and Publishing Office, 2101 Constitution Ave., NW, Washington, D.C. 20418.

Goals of Engineering Education, the final report of the Goals Committee of the American Society for Engineering Education, is available, at \$2 a copy, from the ASEE, 2100 Pennsylvania Ave., NW, Washington, D.C. 20037.

The protest movement seems to have developed almost entirely among the scientists invited to the nucleic acid symposium, leaving the leaf abscission symposium relatively untouched. Detrick scientists assert they know of no scientists who refused to speak at the leaf symposium as a sign of disapproval of Detrick's work. If there were any protests among those invited to the leaf abscission symposium, they were too muted to attract attention. The final program included papers by one Detrick scientist and seven outside investigators. The seven included F. T. Addicott, University of California, Davis; S. P. Burg, University of Miami; W. C. Cooper, USDA; W. P. Jacobs, Princeton; A. C. Leopold, Purdue; D. J. Morre, Purdue; and Barbara D. Webster, University of California, Davis. In all, 81 persons attended the conference.

The scientists who attended the Detrick conference, and the AIBS officials who supported the conference, cited a variety of reasons for their action, including the following:

- The symposiums were unclassified and relatively open. As AIBS president McElroy expressed it: "Open scientific meetings should be endorsed whether they be held in Cuba, Russia, Spain, China, or Johns Hopkins University."

- Participation does not imply endorsement of biological warfare.

- The work was basic, not applied,

and would have been available to Detrick scientists through the open literature anyway. Moreover, the basic researcher can't control the applications others make of his work and can't be certain whether his work will relate to weapons development. "Can we place the blame for Hiroshima on Einstein?" asks McElroy.

- A boycott of the symposiums harms the very people at Detrick who are most deserving of support—namely, the civilian scientists who are engaged in basic research. If these people are undermined, Detrick will become even more secret and defensive.

- Outside scientists should maintain contact with Detrick in accord with the principle of civilian control over the military.

- Detrick has done work that most scientists would agree is "worthwhile," such as work on the detection of infectious diseases before the onset of clinical symptoms.

- Biological weapons are a necessary part of the nation's arsenal in today's world and someone has to work on them, so it's not fair to ostracize Detrick.

- Where do you draw the line in boycotting? If you boycott Detrick, why not boycott other defense agencies, universities, and institutions that perform defense work, scientists who hold defense grants, and so on?

On the other side, the boycotters

also cited a variety of arguments, including the following:

- Biological weapons are immoral and destructive of life and should be opposed by life scientists.

- Even if scientists accept the need for biological weapons, they should not celebrate the anniversary of an institution devoted to destructive purposes.

- Participation in Detrick activities by outside scientists provides an aura of respectability for work on biological weapons.

- Participants who discuss their work at a Detrick conference may directly contribute to development of biological weapons. Detrick scientists profit more from a meeting, where they can question scientists and learn of work in progress, than they would by waiting for results to be published.

The boycott was surprising to almost everyone involved. The Army and the AIBS had not anticipated such sharp opposition to the program. And most of the protesters had not anticipated that such a sizable number of their colleagues would refuse to speak. The episode probably reflects the mood of a nation that is tired of warfare in Vietnam and in the cities. But whatever the underlying cause of the protest, it provides an intriguing glimpse into the dynamics of a moral crusade, and into the ways in which moral feelings are awakened—or bent into shape, as the case may be.—PHILIP M. BOFFEY

Federal Labs: Daddario Committee Holds Probe on Their Utilization

Representative Emilio Q. Daddario's subcommittee on Science, Research, and Development last month took up the question of how well the nation is served by the federal government's own laboratories. The question is an important one, for these laboratories, numbering several hundred, cost around \$3.5 billion a year to operate, and it is widely contended that many of them uselessly survive long after the problems for which they were created have been discarded or solved.

This contention gives rise to the image of costly research centers tinkering

with trivial or obsolete problems while the nation that pays the bills suffers misfortunes that easily could be routed with a good dose of science and technology. Obviously it would be worth knowing if such, in fact, is the case, but the hearings,* which ran for 6 days, unfortunately did not provide very much illumination. The witnesses, with few exceptions, were government officials who are directly or indirectly responsible for the federal laboratories, and they confidently assured the subcommittee that everything either is in good shape or is rapidly en route to

becoming so, except for those cases in which the best is being made of a difficult situation. The subcommittee, never noted for skepticism toward the statesmen of science, asked few hard questions.

As outlined by Daddario in a statement in the 25 March *Congressional Record*, the object of the hearings was to determine "how we can make the best use of our existing Federal laboratories," with emphasis on such matters as finding new roles for laboratories that have completed their missions; the handling, by laboratories of one agency, of jobs for other agencies; the use of discretionary funds by laboratory directors; and the role that the laboratories might play in dealing with national problems such as crime, housing, and transportation.

* A transcript of the hearings, titled "Utilization of Federal Laboratories," will be published next month, and may be obtained without charge from the subcommittee's parent group, the House Committee on Science and Astronautics, Rayburn Building, Washington, D.C.