Scientific Collaboration in the Middle East

With funding from AID, Egyptian and Israeli scientists are quietly collaborating on three projects

Although political relations between Egypt and Israel have had their ups and downs since the signing of the Camp David accord, scientific cooperation between the two countries has been quietly flourishing. Three major collaborative ventures, totaling some $15 million, are under way, and a fourth is in the works. In each case, the U.S. Agency for International Development (AID) is providing the funding and American universities are involved as full partners in the programs.

The establishment of scientific links between the two countries enjoyed strong personal support from the late President Anwar Sadat, and the new Egyptian administration continues to look favorably on the developments, according to American scientists involved in the programs. To begin with, scientific contacts between Egypt and Israel were made through the United States, which acted as an intermediary, but collaboration has evolved to the point that Egyptian and Israeli scientists are now cooperating directly.

This thaw in scientific relations has deliberately been given little publicity. But, with a few projects under way, and with obstacles seemingly cleared for Israel to return control of the Sinai Peninsula to Egypt in April, political sensitivity about the programs seems to have diminished.

The first steps were taken early in 1979, largely at the initiative of two American oceanographers at Texas A&M University, Robert Abel and Sayed El-Sayed. In the wake of the announcement that Sadat would visit Jerusalem to address the Israeli Knesset, Abel and El-Sayed began to explore the possibility of collaboration between scientists in Egypt, Israel, and the United States on a variety of marine science projects.

"I was sold on the idea of bringing people together to cooperate on scientific problems, and marine technology seemed to be a natural for this kind of effort," Abel recalls. In particular, the construction of the Aswan Dam had caused problems in the southeastern Mediterranean that affect both Israel and Egypt. By shutting off the supply of sediment to the Mediterranean, for example, the dam has drastically increased shoreline erosion and depressed the productivity of fisheries in the area. Abel and El-Sayed began to drum up support in the United States for a collaborative venture and both traveled to the Middle East to explore the possibilities.

After what several participants describe as difficult and protracted negotiations, a meeting was convened in August 1980 in San Diego at which delegates from Egypt, Israel, and the United States met to discuss proposals for a marine science program involving the three countries. It was a historic meeting, for it was the first time that Egyptian and Israeli scientists had collaborated in almost three decades.

The San Diego meeting resulted in a proposal for a research program involving 21 institutions in the three countries. Projects were agreed to in four chief areas: evaluation of the productivity of the southeastern Mediterranean, aquaculture, shoreline protection, and the management of freshwater resources. A request for funding was made to AID.

AID already had a pot of money available for such ventures, because Congress had written into its fiscal year 1980 appropriations bill a provision setting aside some $5 million a year to encourage scientific cooperation between countries in the Middle East. It agreed to provide $4.3 million over a 3-year period. For protocol reasons, the program is structured as a set of bilateral projects between the United States and the two countries, but the effort is in reality a tripartite arrangement, for it is being planned and carried out by representatives from all three nations. Abel, who is now managing the project—he left Texas A&M last year to head the New Jersey Marine Sciences Consortium—says that projects have been started in all four areas, and a recent planning meeting held in Cairo agreed that there should be free exchange of scientists and information between the 21 collaborating institutions.

A second major project has also begun in the health sciences. Following the decision by Congress to set aside funds for regional scientific cooperation in the Middle East, several U.S. scientists submitted proposals to AID for various health-related projects. Out of these evolved a program centered on three insect-borne diseases that afflict both Israel and Egypt: malaria, Rift Valley fever, and leishmaniasis.

The program is administered in the United States by the National Institutes of Health (NIH) and it is being carried out chiefly through the Hebrew University in Jerusalem and Ain Shams University in Cairo. Like the marine sciences program, it was planned by a series of joint meetings of scientists from all three countries. AID agreed to provide $6 million over a 5-year period, about 90 percent of which will be spent in Egypt and Israel, and the formal agreement was signed on 1 December last year. According to Carl Western, an NIH scientist who is managing the project, much of the collaboration between Israeli and Egyptian scientists is now taking place indirectly through U.S. scientists but, by the end of the project, direct exchange of personnel between the two countries may be possible.

Seeding cooperation

The jojoba plant is under study in a U.S.-Israel-Egypt program on arid lands.

While these two programs were taking shape, a third venture evolved in the area of dryland agriculture. The impetus for this came initially from the Fred J. Hanson Institute for World Peace, an organization linked to San Diego State University. The Hanson Institute provided funding for the 1980 meeting that resulted in the marine sciences program,

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Faculty v. OMB: One More Time

After widespread and bitter complaints from academic scientists, the Office of Management and Budget (OMB) has once again revised its infamous Circular A-21, which specifies in opaque detail how the universities must account for the way they spend government research grants. The proposed revisions meet some faculty objections, but they will certainly not put an end to the disputation.

Researchers find the current A-21 rules objectionable largely because they require faculty members to report in detail how they divide their professional time between research, teaching, administration, and other tasks. These so-called effort reports, which are supposed to account for 100 percent of a researcher's time, are required as documentation for both direct and indirect (overhead) costs associated with research projects. Faculty members complain, however, that the requirement fails to recognize that teaching and research are often inseparable, and they argue that the effort reports do not even provide useful accounting information. Since the effort reports were required by the last revision of A-21 in 1979, some 26 faculty senates have passed resolutions objecting to the rules.

The proposed revisions, which were published in the 7 January *Federal Register*, attempt to make the rules more palatable by providing the universities more flexibility in their cost accounting. In some cases, detailed effort reports may be required only for work directly related to government-funded projects, for example, and the new rules would permit persons "with suitable means of verification," rather than researchers themselves, to fill out the forms. As for the complex problem of documenting overhead such as faculty administration, the universities may be allowed to rely on statistical sampling.

All this depends, however, on how the revisions are interpreted, and therein lies a problem. The wording is so opaque and it contains so many apparent contradictions that even OMB officials admit to difficulties in interpreting how the proposed rules might work in practice.

Part of the difficulty stems from the unusual process by which the revisions were drafted. Last September, the Association of American Universities (AAU) and the Council of Scientific Society Presidents (CSSP) proposed a new version of A-21 that would have virtually eliminated the requirement for effort reports and would have allowed the universities great flexibility in documenting their costs. The proposal was rejected by OMB. In November, the two organizations came up with a compromise that accepted the need for effort reports, but attempted to limit the paperwork burden by requiring detailed documentation only for time spent on government-funded work. This version was more to OMB's taste, and OMB even included most of the language of the AAU-CSSP draft in its own proposal.

OMB did, however, change a few key sentences, and this has added some ambiguities. One change, for example, would, in some cases, require detailed documentation of faculty effort in areas not directly related to government grants, a requirement that would undermine the central thrust of the AAU-CSSP proposal.

Some of these problems may be cleared up before the revisions are finalized. (Interested parties have 60 days to comment on the proposals, and OMB will then rework them.) But some faculty members are already complaining that the whole thrust of the revisions is unacceptable. Shortly after the AAU-CSSP draft was sent to OMB last November, 12 prominent scientists from a variety of institutions signed a statement objecting to documentation based on detailed effort reports. Such accounting, the statement argued, is burdensome and meaningless in an academic setting.

Serge Lang, professor of mathematics at Yale University, who has been a dogged critic of A-21, was the instigator of the faculty statement. He argues that the proposed revisions do not help because they rest on the principle of effort reporting. By accepting that, he says, the AAU and CSSP have lost the battle. Asked what the organizations should have done instead, Lang argues that they should have stood by their September proposal and taken their case to Congress and the public.—COLIN NORMAN

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and in December 1980 it sent representatives to Egypt and Israel to look for other possible collaborative research projects. They found considerable interest among scientists in both countries in cooperating on the development of technologies for growing crops on arid lands.

The Hanson Institute's mission led to several meetings between Yousef Wally, then chief consultant to the Egyptian Ministry of Agriculture (he is now Minister of Agriculture) and his Israeli counterpart, Samuel Pohoryles. With the express approval of President Sadat, Wally and Pohoryles formally requested the Hanson Institute to convene a meeting of scientists from Egypt, Israel, and the United States to hammer out a joint proposal for submission to AID. This took place in June last year in San Diego.

The meeting came up with plans for a $10.5 million effort centered on three areas: the use of saline water in crop production, especially for growing tomatoes and melons; the development of species of plants such as guayule and jojoba that can be grown on arid lands and which yield products with industrial uses; and the development of drought-resistant plants that can be grown as fodder for sheep and goats.

AID has agreed to provide $5 million for the program over the next 5 years. It will be managed by the San Diego State University Foundation and, according to Hanson Institute director Robert Ontell, most of the work will take place at the Hebrew University and the Desert Research Institute of Ben Gurion University in Israel and at the universities of Cairo, Ain Shams, and Al-Azhar in Egypt. The University of Arizona and the University of California at Davis will participate from the United States. The project was approved in January.

Although these three projects are the only ones approved so far, AID officials say that another agriculture program is in the early planning stages.

Direct contacts between Egyptian and Israeli scientists working on these collaborative projects have generally been limited to the joint planning sessions. If the political climate warms up in the next few years, however, it may be possible for researchers from the two countries to work in each other's laboratories. "That could happen, and it would be desirable from our point of view," says Richard Burns, an AID official who is responsible for the programs. "We provide support where we can," he says, "but we are not actually going out and trying to drag scientists together into one room."

—COLIN NORMAN

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