

ITALY

Funding Reform Fights On Against Researchers' Apathy

TRIESTE—The end of June is an important time for researchers supported by Italy's National Research Council (CNR), the funding body for most of the country's basic research. It is the time when university research groups around the country submit funding proposals, and research groups present annual reports on their work. In addition, CNR institute directors are fine-tuning 1996 budgets to hand in next month. But this year more than most, the midyear deadline is tense—because the CNR is in the throes of reform.

Today, the CNR's chemistry committee meets to announce a new "national institute" to link seven scattered CNR research units, mainly in chemistry but also in biotechnology, into one body looking at the chemistry of biological systems. Italy's chemists are enthusiastic about reforming the CNR (this is the second national institute they have announced), but researchers in other disciplines are far less keen, and some are resisting the change. But CNR officials are keeping up the pressure to reform—and they have good reason: The government has threatened 20% budget cuts for the next 2 years if the CNR fails to sort out its current turmoil.

Although the incentive for change is great, CNR President Enrico Garaci has a big task ahead. The current CNR setup sprawls across the entire country with little organizational structure. The grand total of 350 research units—from institutes to individual research groups—situated in research centers, science parks, and universities, is overseen by 15 subject committees in different disciplines, committees that have little communication.

In recent years, this dispersed effort has been heavily criticized for duplication of effort, hampering interdisciplinary research, and preventing researchers from forming larger collaborations. According to Marcello Fontanesi, head of the science faculty at the University of Milan and chair of the physics committee, "One of the criticisms of the CNR is the subdivision into disciplinary committees, which makes it difficult to work together." He adds that better coordination is needed "to obtain financial support outside the CNR, for example from various ministries or at the European level." Maurizio Conti, head of the Turin-based CNR Institute for Applied Phytovirology, agrees: "Without the critical mass, research groups are unable to apply for [European Union] grants."

There is also continuing concern over the CNR's inability to make the necessary tough

decisions about who will receive its increasingly strained pot of research money. The tradition has always been to give a lot of groups a small amount of funds. For 2 years, CNR has been committed to financing fewer deserving projects more adequately, but the policy appears not to be working. Paolo Liberti of the biological and medical sciences committee says the committee will still fund some 700 of 2500 applications for the next year—as a result, each project will receive around 10 million lire (\$6000). "With sums of this kind, it is doubtful whether any meaningful research can be done," says Pierangelo Gepetti of Florence University's medical faculty.

Although the idea of imposing a more



No turning back. CNR head Enrico Garaci is intent on sprucing up the council's image.

coherent structure on the CNR's institutes is 10 years old, there is little consensus on what path to follow among the many interest groups in Italy's scientific community. Many researchers believe the national subject committees are doing an adequate job. "Why change what works?" asks Conti. And there is particular reluctance to embrace change by the powerful contingent of university-based scientists who sit on each subject committee. Until the early 1980s, CNR had a role in coordinating university research, and university scientists want to avoid any return to those former times. As one CNR director comments on the opposing ranks within the physics subject committee: "There are university physicists and CNR physicists."

Despite this opposition, Garaci is pressing ahead with reform. His central committee expects to approve four or five new national institutes per subject committee, each involving 100 or so researchers and technicians from a handful of existing research units. These institutes are designed as coordinating bodies within each scientific disci-

pline, to rationalize spending, improve efficiency, and create the critical mass needed to attract funds. Garaci launched the reform program a year ago, and proposing new institutes is expected to take until 1997. "We are adopting a 'bottom-up' strategy, pragmatic and spontaneous," he says.

But Garaci's bottom-up approach has meant that reform is progressing piecemeal, with some disciplines far ahead of others. "Every committee decides for itself what it wants to do," says chemistry committee chair Romano Cipollini. The chemists are leading the field at the moment. They have already decided on four national institutes: polymers and macromolecules; chemistry of biological systems; innovative technologies in chemistry; and materials, a collaboration to involve the technology, innovation, and engineering committees, and possibly the physicists as well.

In stark contrast, the biotechnology committee is lagging behind. "There are no specific plans yet as far as I know," says Silvano Riva, director of the Biochemical Genetics Institute in Pavia. The physicists too are dragging their feet: Their committee has yet to propose any new national institutes. One reason is that physicists in Italy are already well coordinated, with established large-scale projects. What's more, plans for an astrophysics institute have become mired in organizational changes at the Italian Space Agency, with whom they would have to collaborate.

The plans of the biological and medical sciences committee are in a similar state of uncertainty. That committee, says Liberti, is torn between the advantages of clustering centers from the same discipline or using a giant research center to draw different fields together. Emilio Albino, director of CNR's Applied Mathematics Institute in Rome, believes the plan is too artificial, as do biologists such as Conti, who maintains that the existing centers are too diverse and specialized to be united. "Combination at the administrative level is fine, but not for research," he says, fearing that his plant viruses "will probably end up grouped with the environment or molecular biology."

Although Garaci seems confident that the reforms will work, progress so far has been slow. While there is consensus, even from the critics of the current reforms, that something should be done about the inefficiencies of the CNR, few are happy about the formation of national institutes. "It is necessary to give a signal outside the CNR that it is involved in new schemes, but it's not sufficient for me," says Fontanesi. Adds Anna Maria Marabini, head of the Minerals Institute in Rome: "If done well, [the reforms] should allow the CNR to grow internationally. But we had more freedom before."

—Susan Biggin

Susan Biggin is a writer in Trieste, Italy.