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LETTERS

Italy's Role in EMBL

The European Molecular Biology Laboratory (EMBL), the offspring of the European Molecular Biology Organization (EMBO), was launched by European scientists, including Italians, who believed that their national resources ought to be combined for a proper development of molecular biology in Europe and in their own countries. Their model was CERN (the European Organization for Nuclear Research), which, since 1953, has provided a successful response to the overwhelming costs of nuclear physics.

Now EMBL is 20 and some crises are occurring (see articles in ScienceScope, 29 Jan., p. 587 and News & Comment, 18 June, p. 1740). The director-general and the executive-secretary are changing; Italy, the third contributing country (after Germany and France) may step out; Spain is also unhappy (*1*). Italy's move may deprive EMBL of 16% of its budget and Italy of a valuable link to modern biology.

Given the scope and nature of EMBL, the concept of "just returns" to single countries is arguable; that some get more than others is not. Italy's investment in bioresearch at EMBL is substantial, proportionally much higher than at home. In the past, our returns have been low: now they are just too low. In 1992, the EMBL staff of close to 800 included five Italians (*1*). EMBO fellowships, courses, and gold medals are shared mostly by the United Kingdom, Germany, and France. For all that, Italy is the most responsible; it is up to her to find proper remedies, outside and inside. She has to improve the EMBL cost-benefit ratio: reducing the costs to zero would reduce the benefits to zero also, waste her past investments, and put the survival of EMBL at risk. For Italy to continue to support EMBL, we would like to see that its research quality is optimal and that ours gets significantly better. A yearly output of one paper per two staff members and 0.2 million Deutsch marks can be improved, and so can EMBL's marginal presence in the various genome projects and in the instrumentation sector.

In general, closer links with member countries, better if achieved through scientific societies, could make EMBL more effective. In detail, an outstation, such as those now in Germany, France, and the United Kingdom, should be considered for Italy: It could fill EMBL needs and raise members' standards (funds and salaries included—what a blessing) closer to EMBL's. If EMBL would establish, support, and supervise a few centers in Italy, their impact on our provincial research system would be great. Either outstations or centers could help; neither should distract us from strengthening our presence at EMBL.

If CERN is *necessary*, EMBL is *optional*: Its present projects can be carried on by member countries. To exist, EMBL has to be special and its primacy of quality undisputed. But even at CERN, the issue of "returns" is surfacing (*2*).

EMBL must contribute to fostering molecular biology in all member states, and possibly beyond. The new director, Fotis Kafatos, has epitomized this in his "three principles for the next decade: excellence, cooperation, and inclusiveness" (*3*). Italy can, and wants to, work for the goal of reconciling all three, but does not accept that the precious resources she has sacrificed in the last two decades for reducing the gap be used to widen it.

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References

1. E. Montoya and C. Martínez-A., *Nature* **365**, 201 (1993).
2. A. Abbott, *ibid.* **366**, 7 (1993).
3. F. Kafatos, *EMBO J.* **42**, 2587 (1993).

*Co-signers: Umberto Bertazzoni, Pietro Calissano, Francesco D'Amato, Giovanni Giudice, Gabriele Milanesi, Silvano Riva, and Andrea Melandri, EMBO members, Italy.

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Environmental Management

As the editor of a journal that deals with ecological restoration, I was disappointed to read the letter from Roger C. Anderson and his colleagues (1 Oct., p. 14) criticizing Illinois Nature Conservancy's Stephen Packard's work on oak savanna restoration.

While we all recognize the importance of careful documentation and responsible publication of scientific work, it is important to keep in mind that much excellent work is done and *valuable insights*

are achieved by practitioners working under conditions that make formal research and publication difficult. This is true in varying degrees in all disciplines and is especially true in a field such as ecology, where the subjects of study tend to be highly variable and insight often depends on the kind of intimacy that is readily available to the craftsman but may elude the researcher.

This is actually a common situation in the area of environmental management. I deal almost daily with restorationists who in the course of their work have developed an understanding of the systems they are working with that is richly detailed and insightful and that occasionally challenges the conventional wisdom of some established discipline.

Packard's work is a case in point. It is well documented and reflects not only meticulous attention to the outcome of innumerable experiments but also a close relationship with large numbers of projects carried out under a variety of conditions and over considerable periods of time.

These circumstances are notoriously difficult to achieve in a conventional research setting, and this alone should make Packard's results and the ideas he has put forward exceptionally interesting to anyone who is seriously concerned about the ecology or the restoration of the ecosystems he is working with.

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Michigan Support for Faculty Member

In Christopher Anderson's 1 October article about Carolyn Phinney's lawsuit against the University of Michigan ("Michigan gets an expensive lesson," New & Comment, 1 Oct., p. 23), I am quoted as saying that the university was not indemnifying faculty member Marion Perlmutter. At the time that was true.

Since then, the university has agreed to pay Perlmutter's legal expenses and to indemnify her, because the university has concluded that Perlmutter was acting in good faith in her dealings with Phinney.

Moreover, both the university and Perlmutter have filed motions for new trial or judgment notwithstanding the verdict because of errors committed during the trial of the case, and will appeal in the event that these motions are not granted by the trial court.

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Trot and Pace

The handsome schematic illustration of the trotting dog on pages 155 and 196 of the 8 October issue is very helpful for understanding R. M. Alexander's accompanying Perspective on "Breathing while trotting" (p. 196). Note, however, that this dog is not trotting! A trotting animal, shown in figures 1 and 6 of the report by Bramble and Jenkins (8 Oct., p. 235), moves its legs in diagonally opposed pairs, right front together with left back, then left front with right back, efficiently keeping its weight centered near the midline at all times. A walking person similarly tends to swing the right arm and left leg forward in synchrony.