

# Protest at Nobel omission of Moncada

*Sir*— The University of El Salvador and its Faculty of Medicine and the National University of Honduras and its Faculty of Medical Sciences wish to express their deep regret and strong protest at the exclusion of Salvador Moncada from the 1998 Nobel Prize in Physiology or Medicine<sup>1</sup>.

The first demonstration that nitric oxide is a biological mediator in the cardiovascular system was made by Moncada and his group in *Nature*<sup>2</sup> in 1987. This paper provided the first direct and unequivocal evidence for the hypothesis that endothelium-derived relaxing factor (EDRF) might be nitric oxide or a related substance. Moncada also showed that the biosynthetic pathway for the generation of nitric oxide in the cardiovascular system was from the amino acid L-arginine<sup>3</sup>. Without these two seminal papers the field of nitric-oxide research would not exist. Moncada went on to make some of the most significant contributions to the field.

To distinguish earlier research, which can only be deemed part of this field with hindsight and in the light of Moncada's work, without recognizing his work, is tantamount to an attempt to rewrite the history of this discovery.

We would like to believe that this is only the result of a regrettable mistake. We expect that the Nobel committee will repair the damage to its credibility.

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*Sir*— The Nobel committee's decision to award the prize in physiology or medicine to Robert Furchgott, Louis Ignarro and Ferid Murad has aroused controversy. I think it important to point out that, although Ignarro's 1987 paper in the *Proceedings of the National Academy of Sciences*<sup>4</sup> is more widely recognized, in fact he submitted in 1986 the first publication to conclude that Furchgott's endothelium-derived relaxing factor is nitric oxide (*Circulation Research*<sup>5</sup>).

Although I do not want to quibble about the one month's difference in submission date between this and Moncada's *Nature* paper<sup>2</sup>, which appeared in print before Ignarro's paper, it is inaccurate to conclude that Ignarro's findings came six months after Moncada had already made this conclusion, as stated in your report<sup>1</sup>.

**Jack R. Lancaster Jr**

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*Sir*— Your article describing this year's prize in physiology or medicine starts "The Nobel committee has once again sparked controversy..."<sup>1</sup>, as if there were one Nobel committee<sup>1</sup>. There are, in fact, five committees, one for each prize — physics, chemistry, physiology or medicine, literature, and peace. Another common misunderstanding is that the prize for economics is not a Nobel prize, but is donated by the Bank of Sweden in memory of Alfred Nobel.

The Nobel Foundation has nothing to do with the selection process but just administers the funds. The prize-awarding institutions and their committees are autonomous. They are the Swedish Academy

of Sciences for chemistry and physics; the Nobel Assembly of the Karolinska Institute for physiology or medicine; the Swedish Academy for literature; and the Norwegian Parliament for peace.

**Bo G. Malmström**

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Our article<sup>1</sup> was written in the belief that *Nature* readers are aware that there are several committees, but we are glad to clarify matters. The most troublesome aspect of the Nobel process is the apparently unchangeable fact that the prizes are distributed according to the terms of Nobel's will, which states that the number of recipients in each category shall be limited to three. We have received several letters protesting at the fact that Moncada was not awarded a prize. In relation to Lancaster's point, the *Circulation Research* paper<sup>5</sup> appeared in December 1987, six months after Moncada's paper in *Nature*<sup>2</sup>. In that paper Ignarro and colleagues tentatively concluded that "EDRF from artery and vein is either nitric oxide (NO) or a chemically related radical species". The earlier paper from Moncada's group was also cautious in suggesting the identity of EDRF and NO on the basis that the release of NO was sufficient to account for the former substance's biological activity. — Editor, *Nature*

1. Howlett, R. *Nature* 395, 625–626 (1998).

2. Palmer, R. M. J., Ferrige, A. G. & Moncada, S. *Nature* 327, 524–526 (1987).

3. Palmer, R. M. J., Ashton, D. S. & Moncada, S. *Nature* 333, 664–666 (1988).

4. Ignarro, L. J. et al. *Proc. Natl Acad. Sci. USA* 84, 9265–9269 (1987).

5. Ignarro, L. J. et al. *Circ. Res.* 61, 866–879 (1987).

## Bitter pill to swallow over medical education

*Sir*— Three years after a review committee evaluated biomedical research in Austria, another external expert committee has presented equally disastrous findings on the quality of Austrian medical training (*Nature* 377, 468; 1995 & 395, 832; 1998).

In 1995 a research evaluation committee organized by the European Molecular Biology Organization strongly urged certain improvements. No action was taken. Indeed, the opposite of the recommended changes has been achieved. Lifetime tenure is now being granted automatically to all assistant professors, who are required to teach; institutes are merged without

evaluation; and none of the assessments of groups or institutes has led to any change in their levels of funding.

Perhaps our authorities consider that external advice (after objective evaluation) is unnecessary. The failure to act upon the previous committee's recommendations suggests that the latest report, a Dutch committee's assessment of university medical education in Austria, will be met with the same attitude of 'intelligent neglect'.

As professors of pharmacology in Austria, with considerable experience of teaching in other countries, we feel that the problems facing medical training in Austria and the consequences for other European countries demand greater coverage.

Access to medical study is unlimited, examiners can be chosen freely by students

from any of the three medical faculties, examinations can be repeated up to four times, and there are few compulsory lectures. Many teaching staff lack an MD qualification and do not know the basic requirements of clinical work. Many students qualify — on average after nine years — without having been trained to solve even the simplest clinical problem.

Responsible European Union committees must analyse this unsatisfactory situation because Austrian doctors will be able to work freely in any other country of the union.

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