Correspondence

Medvedev's Complaint

SIR,—The excerpt from Zhores (that is, Jaurès) Medvedev's book (*Nature*, **227**, 1197; 1970) strikes me as subtle communist propaganda. When I read in your editorial on page 1177 that a Russian scientist was not permitted to travel abroad, lost his job and was for some weeks kept in a psychiatric institution, I was duly incensed. Unfortunately, my indignation continued ebbing with every line of Medvedev's confession.

A few months ago, I was invited to give a lecture in France. I applied to the National Science Foundation for travel funds. After a long delay, my request was turned down. I did not complain to my Congressman, or to the senators from our state, or to the Head of the Foundation, or to the French Ambassador in Washington, or the US Ambassador in Paris, and so on. When the time of his lecture came, Medvedev read the latter to his friends; I did not. Why did I acquiesce in my defeat? Because the official who refused my application had, under the existing law, full right to reject my plea, as had the official who kept Professor Medvedev back.

It would be easy to clarify my position but, naturally, I do not want anyone to suffer from too much light.

Yours faithfully,

J. J. BIKERMAN

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Shaker Heights,
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Food for Thought

SIR,—The rapidly growing science of nutrition is at a stage at which accurately characterized standard reference materials are urgently needed to provide a common basis for the great number and variety of studies that are being conducted in all parts of the world. Dietary control in animal experiments[1] is only one of many applications to be made of such materials.

About twenty substances pertinent to work in nutrition are included among the standard substances issued by the World Health Organization and by various governmental and other agencies in different countries. These currently available reference materials are issued in specimens in the milligram-to-gram range; such quantities suffice for purposes of identification and analytical control, but are too small for many applications in nutrition where gram-to-kilogram quantities are required. Furthermore, the present materials are usually certified for only a small number of constituents, whereas for many critical nutritional studies it is essential to know the content of many residual and trace constituents, particularly trace elements.

Immediate application can be foreseen for about eighty-five standard reference materials in the following categories: (1) essential nutrients in pure form; (2) basic food products of both natural and synthetic origin; (3) actual or simulated plant and animal tissues and fluids; (4) products involved in or resulting from plant or animal metabolism.

The expense of producing so many standard reference materials in large specimens would be so great that the operation would be feasible only if undertaken on a world-wide basis. For this reason I propose that concerned individuals, scientific societies, and standardizing agencies join in requesting the logical international agencies—the World Health Organization and the Food and Agriculture Organization—jointly to undertake a programme of International Standard Reference Materials. I shall be glad to furnish specific suggestions regarding such a programme to anyone who may be interested.

Yours faithfully,

ARCHIBALD T. MCPHERSON

4005 Cleveland Street,
Kensington, Maryland 20795.

[1] *Nutrition Reviews*, 27, 299 (October 1969).

Misleading Units

SIR,—In a review of mycotoxins (*Economie et Médecine Animales*, **11**, 75; 1970) C. W. Hesseltine gives concentrations of mycotoxins "par billion". I am convinced that they should be written "par milliard". For example, the sentence: "La limite de sensibilité des analyses utilisées s'élevait à 2–5 par billion d'aflatoxine", was almost certainly understood by Hesseltine in the United States as 2–5 per 10^9, whereas in most of the world this French sentence would be read as 2–5 per 10^{12}. Therefore I would like to appeal to toxicologists, and in particular to American colleagues, not to use the misleading term parts per billion (p.p.b.). It is possible to express the same concentrations in parts per million (p.p.m.), which is equally understandable to toxicologists from all over the world.

Yours faithfully,

TEODOR JUSZKIEWICZ

Department of Pharmacology and Toxicology,
Veterinary Research Institute,
Puławy, Poland.

Radiation Hazards

SIR,—Baines (*Nature*, **227**, 869; 1970) quotes some of our data for Australia and New Guinea to support his views on radiation hazards to South Pacific communities. The quotation, however, is hardly relevant. In fact the results of our measurements on fallout from nuclear weapons tests in French Polynesia—the source of Baines's concern—have been assessed by the Australian National Radiation Advisory Committee and found to have no significance as a hazard to health of the Australian community[1].

Measurements on shorter-lived fission products in fallout over Australia and New Guinea[2] following the French nuclear weapons tests of 1966, 1967 and 1968 indicate that:

(1) the highest γ-radiation dose to the whole body estimated from measured fallout from all tests in the three series was 3·3 mrad;

(2) the highest radiation dose to thyroid for young children due to ^{131}I in milk consumed during any 12 month period between 1966 and 1968 was estimated at 226 mrad.

As we pointed out when reporting the measurements, these radiation doses are not only the highest but are also upper limits. Thus weathering, shielding and other effects would reduce whole body doses by a factor of 3 to 5, while decay of ^{131}I before the milk is consumed, and other factors, would result in substantially lower thyroid doses. In any case, these upper limits on estimated dose are far less than dose levels which would be expected to be of biological significance[3]. Although measurements are still in progress on fallout in Australia from the 1970 series of tests in Polynesia, the data accumulated up to the present indicate

levels of fallout which are lower than from previous series.

Reference to widely reported inventories of ^{90}Sr in the stratosphere of the Southern Hemisphere[4,5], and to measurements on monthly deposition of ^{90}Sr in Australia[6], indicates that:

(1) stratospheric burden of ^{90}Sr in the southern hemisphere decreased from some 1,200 kCi in 1963 to 50 kCi in mid-1968, with annual deposit of ^{90}Sr in Australia falling from 2·1 mCi/km^2 in 1964 to 0·4 mCi/km^2 in 1968;

(2) high yield nuclear weapons tests in Polynesia in August–September 1968 added some 130 kCi to a total stratospheric burden of 180 kCi ^{90}Sr and an annual deposit of ^{90}Sr in Australia of 0·6 mCi/km^2 in 1969.

As already reported[6,7], the 1968 test series in Polynesia contributed a substantial proportion of the total monthly ^{90}Sr deposit in Australia in late 1968 and early 1969 but the magnitude of the total deposit remained small.

When planning the Australian programmes for monitoring fallout from tests in Polynesia, consideration was given to possible problems of contamination of migratory fish and birds, which may enter the Australian diet. Evidence available to us on the migration habits of tuna caught in Australian waters suggested that only yellowfin, comprising less than 1 per cent of the total catch, might originate from the Tuamotu Archipelago. Measurements on yellowfin taken in Australian waters showed no change in concentration of fission products following tests series in Polynesia.

Yours faithfully,

W. J. Gibbs
J. R. Moroney
D. J. Stevens
E. W. Titterton

Australian Atomic Weapons Tests Safety Committee,
PO Box 50, Ascot Vale, Victoria 3032, Australia.

[1] Australian National Radiation Advisory Committee, *Report to the Prime Minister, March 1969, on Biological Aspects of Fallout in Australia from French Nuclear Weapons Explosions in the Pacific (July–September 1968).*
[2] Gibbs, W. J., *et al.*, *Austral. J. Sci.*, **29**, 407 (1967); **30**, 217 (1967); **31**, 383 (1969).
[3] Australian National Radiation Advisory Committee, *Report to the Prime Minister, November 1965.*
[4] Telegadas, K., *USAEC Report HASL-184*, 153 (January 1968).
[5] Krey, P. W., *et al.*, *USAEC Report HASL-210*, 145 (July 1969).
[6] Gibbs, W. J., *et al.*, *Austral. J. Sci.*, **32**, 238 (1969).
[7] Cambray, R. S., *et al.*, *UKAEA Report AERE-R 6212* (November 1969).

Obituary

Dr E. H. Rodd

Ernest Harry Rodd died on July 22, 1970. He was born in 1888, and educated at Christ's Hospital and the Central Technical College, South Kensington, which he entered in 1906 to begin his close association with Professor H. E. Armstrong until the latter's death in 1939. His main research work here, on crystal morphology in the benzene series, was of topical interest in connexion with the then recently published views of Barlow and Pope on valency volumes. On the final closure of the old Central laboratory and the dispersal of Armstrong's research students, Rodd worked for a while at the National Physical Laboratory before joining, in 1917, the research staff at Levinstein Ltd, Blackley, Manchester, later to become part of the British Dyestuffs Corporation and eventually the headquarters of the Dyestuffs Division of Imperial Chemical Industries Ltd. Here he took a full share in the work of the rapidly expanding research department, as emphasis passed from the manufacture of known products to the invention and eventual manufacture of new ones.

In order to promote closer relations between scientists working in the Dyestuffs Division and those working in the universities, in 1929 the Dyestuffs Group Research Committee was set up, the academic members being Sir Jocelyn Thorpe, Sir Robert Robinson and Sir Ian Heilbron, with Rodd as secretary. As the work of this and other liaison committees grew, Rodd became fully employed as academic liaison officer, a post he filled with distinction until he retired more than twenty years later. During this period he became well known in the laboratories of practically all the universities and technical colleges in the UK and several abroad.

After his retirement his name became familiar to a world-wide circle of chemists as the creator and editor of *The Chemistry of Carbon Compounds*, the ten volumes of which were published between 1951 and 1962, an outstanding achievement after a normal lifetime's work in industry. He was particularly pleased when it was decided to publish a revised edition, and right up to the day of his death he took a very active and constructive interest in its progress.

Announcements

University News

Dr N. Uri, a member of the Explosives Research and Development Establishment, Waltham Abbey, and **Professor E. M. Evans,** of British Resin Products Limited, have been appointed visiting professors in the Department of Chemistry of the **City University.**

Professor Malcolm B. Wilkins, University of Nottingham, has been appointed Regius professor of botany in the **University of Glasgow.**

Professor Olaf Rundquist, on sabbatical leave from Hamline University, St Paul, Minnesota, and **Professor J. G. Pike,** professor of mechanical engineering at the Royal Military College of Canada, have been appointed visiting professors at the **Heriot-Watt University.**

Professor M. S. Longuet-Higgins has been appointed visiting professor in the Department of Mathematics, **University of Surrey.**

Dr Paul S. J. Spencer, University of Aston in Birmingham, has been appointed professor of applied pharmacology in the Welsh School of Pharmacy, **University of Wales Institute of Science and Technology.**

Appointments

The following appointments have been made to the **MRC advisory boards:** *Biological Research Board,* **Professor P. M. B. Walker,** already a member of the board, will succeed **Professor R. A. Gregory** as chairman; **Professor C. I. Howarth** and **Professor R. R. Porter** have been appointed. *Clinical Research Board,* **Professor Charlotte M. Anderson, Professor Richard Doll** and **Professor O. L. Wade** have been appointed. *Tropical Medicine Research Board,* **Dr L. G. Goodwin** and **Professor J. N. Morris** have been appointed.