

sparing also for the induction by radiation of mutations² and chromosome aberrations³, and for the erythematous reaction of human skin⁴. An important reason for eschewing the use of the word "recovery" is that this carries implications about mechanism which are not at present warranted by experimental observation, and which may well block a new approach.

It was agreed at the meeting that the same criticism could be levelled at the prevalent use of the word "repair", currently applied in any situation in which one set of post-irradiation conditions brings less damage to light than another, or in which effects on radiosensitive and radio-resistant variants of a cell line are compared. The positive implication of the word "repair" might, it was thought, influence the approach towards, and thus impede, the elucidation of the mechanisms at work. This word, like "recovery", should therefore be avoided unless there were evidence which justified its use. Processes at the biochemical level which result in a diminution of the effects of radiation would be better described by a word carrying less implication about mechanism, for example "rescue".

Yours faithfully,

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¹ Elkind, M. M., and Sutton, H., *Nature*, **184**, 1293 (1959).

² Abrahamson, S., *Genetics*, **44**, 173 (1959).

³ Wolff, S., *Radiat. Res.*, Suppl. 1, 453 (1959).

⁴ MacComb, W. S., and Quimby, E. H., *Radiology*, **27**, 196 (1936).

"Anomalous" Water

SIR,—The possible danger of nucleating the environment with "anomalous" water, mentioned in a recent letter to *Nature* (**224**, 198; 1969), assumes that failure to find this material in nature is due to a lack of polymer nuclei. This explanation appears unlikely given the variety of surfaces and conditions found on the Earth's surface and the widespread occurrence of water and water vapour.

Physical chemists rarely work under sterile conditions or in the total absence of protein contamination. An enzyme as ubiquitous as catalase and as heat stable as ribonuclease may well exist which rapidly depolymerizes polywater. Contamination may explain the variability observed between different capillaries during attempts to produce the material, and enzymatic breakdown would also explain failure to find polywater in natural waters. An extension of this view would suggest that polymeric water may be the natural state of all planetary water in the absence of life or of the early stages of organic chemical evolution.

The experimental problem is therefore the complete elimination of contaminants of biological origin from the experimental polywater production systems to see if this proposal is correct.

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International Conferences

SIR,—The letter by Dr F. H. C. Crick and his colleagues concerning international congresses (*Nature*, **224**, 93; 1969) discusses an important dilemma which, we fear, will face the international scientific community for some time to come. Because the issues to be considered by the individual scientist who has to decide whether to accept an invitation to a meeting or an honour bestowed by a foreign government are in principle often similar to those which concern the organizers or sponsors of international meetings, your readers may be interested in recent decisions by the council of the Federation of European Biochemical Societies concerning future meetings of FEBS.

The sixth FEBS meeting was held in Madrid in April of this year in the face of objections that had been made because of the declaration of a "state of exception" in Spain and the closure of some of the universities earlier in the year. Following a visit to Madrid by us, the executive committee of the federation decided that the Madrid meeting should be held as planned. This decision was endorsed subsequently by the council of FEBS at the meeting in Madrid on April 7, 1969, which was attended by delegates from all 24 constituent societies. At this meeting, there was a full discussion not only of the situation that had arisen in connexion with the Madrid meeting, but also of the principles that should be applied in considering similar problems in the future. It was agreed unanimously that the following four criteria should be a necessary and sufficient condition for holding an international meeting: (1) Freedom for all foreign participants to enter and leave the country concerned. This requires recognition of valid passports and the issue of visas without difficulty. (2) Complete freedom of speech on scientific matters at the meeting, both in the official sessions and in private discussions. As a tradition, political, religious or racial questions should not be discussed at official sessions. (3) Freedom of movement in the city where the meeting is being held. (4) As far as citizens of the host country are concerned at least, conditions (2) and (3) should apply.

These guidelines, if generally accepted, would provide a rational basis on which to judge whether a particular international meeting should be supported. They differ in several respects from those suggested by Dr Crick and his colleagues and we believe them to be more realistic. Scientific meetings take a long time to organize and the financial cost of the preparations is not negligible. Unfortunately, also, there are not many political regimes which place no restriction of any kind on the freedom of communication between scientists or on academic freedom in general. Conditions for meetings may therefore not always be perfect, yet cancellation should be a last resort. The criteria evolved by FEBS have been found useful in practice and we therefore commend them to other international scientific bodies and organizers of meetings.

In the last analysis, it is right that individual scientists must remain free to follow the dictates of their conscience, but international scientific organizations have to operate within a consensus of a wide spectrum of opinions. They should act in a way that preserves both their integrity and the opportunity to carry out their function. We hope that this contribution to the discussion will help to clarify the issues.

Yours faithfully,

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