

TABLE 4
THE EFFECT OF CYSTEINE ON THE IONIC YIELD

Concentration of cysteine (Molar $\times 10^4$)	Concentration of product (Molar $\times 10^5$)	Ionic yield
0	8	40
0.8	5.2	26
2	2.9	15

ence of air. The ionic yield for the former was 9, for the latter, 103.

A study of the effect of cysteine on the linoleate system was considered timely in view of the many papers that have appeared recently dealing with the protective effects of sulphydryl-containing compounds *in vivo* against radiation injury. A further reason for testing this substance was the fact that, unlike more efficient chain terminators such as the hydroquinones, cysteine does not have a high or rapidly changing absorption at 220–240 m μ in the ultraviolet. This fact enables the change in absorption at 231 m μ to be measured more accurately. Three samples of a 1.08×10^{-2} M solution of linoleic acid in borate buffer, pH 9, were diluted with equal volumes of buffer, 1.6×10^{-4} M cysteine in buffer and 4×10^{-4} M cysteine in buffer, respectively. The solutions were irradiated with 1000 r at 25 r/min. Table 4 presents a summary of the results.

It is evident that even the low concentrations of

cysteine used in these studies exerted a profound effect on the yield. No attempt was made, however, to determine the exact relationship.

It can be assumed, in all probability, that the mechanism of the reaction of linoleic acid induced by x-irradiation is similar to that proposed by Farmer, Bergstrom, Holman, and co-workers (2) for the autoxidation reaction, since this latter reaction has been shown to be initiated by free-radical-producing substances and since the measurable effect is the same in both cases. However, no attempt has been made at the present time to interpret the kinetics of the irradiation-initiated reaction.

It is to be expected that the application of these studies to work *in vivo* will be attended by further complications. Naturally occurring inhibitors may be of great importance, and the measurement of these and other substances possibly destroyed in the reaction will have to be carried out. It is possible that in this case inhibitors will prevent this particular chain reaction from occurring. However, as a model for a type of reaction which may be of importance in irradiation effects, the present investigation may serve as a basis for future studies.

References

1. DUBOULOZ, P., DUMAS, J., and VIGNE, J. *Compt. rend. soc. biol.*, **144**, 1080 (1950).
2. BERGSTROM, S., and HOLMAN, R. T. *Advances in Enzymol.*, **8**, 425 (1948).
3. DAINTON, F. S. *Brit. J. Radiology*, **24**, 428 (1951).

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Comments and Communications

Biological or Psychological Warfare?

AS PRESIDENT of the National Academy of Sciences, I recently received the following cablegram from the president of the Hungarian Academy of Sciences:

We Hungarian scientists have been profoundly shocked to learn of the horrible fact contrary to all human feelings that the United States forces fighting in Korea have used bacteriological weapons to exterminate the peaceful Korean and Chinese peoples. We would most emphatically request you, sir, and all other American scientists in the name of the lofty ideals of science and of moral principles of mankind to raise your voices in protest against this ghastly deed and prevent this crime that is being committed in the name of the people of the United States and with the instruments of science.

ISTAVAN RUSZNYAK

President, Hungarian Academy of Sciences

On Mar. 31 I replied to Dr. Rusznyak as follows:

In your recent cablegram to me you say that the United States forces fighting in Korea have used bacteriological weapons. Many members of the National Academy of Sciences of the United States of America and of its Council are well enough informed to be certain that this as-

sertion is not true. No member of our Academy knows of evidence which supports your claim that the United Nations forces in Korea have waged bacteriological warfare. Therefore, as scientists we cannot accept as facts such unsubstantiated assertions. We regret that you of the Hungarian Academy have not likewise reserved your judgment concerning statements which, in their nature, cannot help but incite passions and hatred, until those statements have been proved or disproved by scientific investigation. We know that the United States has proposed that the International Committee of the Red Cross, a neutral and independent body, make such an investigation on both sides of the battle line in Korea. The ICRC has agreed to do this, provided the belligerents on both sides will cooperate, and has offered to include Asians from nonbelligerent countries in its commission. The Unified Command readily offered to cooperate fully. The Communists so far have rejected the proposal of the ICRC. Accordingly, we urge the Hungarian Academy of Sciences to request the Communist authorities to cooperate in such an impartial and objective investigation by the Red Cross.

Pending such a scientific inquiry we hope you will share our skepticism, as befits men of science. We are saddened by your message, which persuades us that you cannot do so now. This incident strengthens our conviction that only in an open world can men have access to

the facts which make possible our survival and enable us to live free of terror.

DETLEV W. BRONK

*President, National Academy of Sciences of the
United States of America*

International Code of Zoological Nomenclature: Proposed Amplification, Clarifications, and Extensions to be Considered by the International Congress of Zoology, Copenhagen 1953

ZOOLOGISTS and paleontologists are reminded that at its Paris meeting in 1948 the Thirteenth International Congress of Zoology decided that a number of general problems involving the text of the International Code of Zoological Nomenclature should be brought forward for decision at the next (Fourteenth) International Congress of Zoology at Copenhagen in 1953. The Paris Congress further decided that, preliminary to the submission of these problems to the Copenhagen Congress, the Secretary to the International Commission on Zoological Nomenclature should confer with interested specialists and, having done so, should submit comprehensive reports, with recommendations.

In pursuance of these duties, I have prepared papers on the problems remitted to me for report, in each of which I have set out the issues on which, as it appears to me, the Copenhagen Congress will need to take decisions. In these papers I have also submitted for consideration a number of suggestions based upon such preliminary consultations as it has already been possible to hold. The object of these papers is to elicit expressions of opinion on the issues involved from as wide a circle as possible of interested specialists. The subjects dealt with in the papers referred to are the following:

- 1) Emendation of zoological names; proposed substitution for Article 19 of simple, clear-cut rules capable of being easily applied (Commission's reference Z.N. [S.] 356);
- 2) Clarification and amplification of the rules relating to the naming of families and lower categories of supra-generic rank (Commission's reference Z.N. [S.] 357);
- 3) Proposed introduction of rules for regulating the naming of orders and higher taxonomic categories (Commission's reference Z.N. [S.] 360);
- 4) Acceptance of species as the type species of a nominal genus, the name of which was published in a generic synonymy, if names so published are to be treated as possessing nomenclatorial availability (Z.N. [S.] 387);
- 5) Application of a trivial name which, when first published, was applied to a particular species or specimen, but which is stated also to be a substitute name for some previously published name (Z.N. [S.] 361);
- 6) Question of official recognition of neotypes as type specimens and under what conditions (Z.N. [S.] 358);
- 7) The means to be devised for securing stability in zoological nomenclature (Commission's reference Z.N. [S.] 359).

A special volume (Vol. 7) of the *Bulletin of Zoological Nomenclature* has been allotted for the publication of the foregoing papers, which constitute an important installment of the agenda on nomenclature questions of the Copenhagen Congress next year. Parts 1-2 containing the first installment of the above papers were published on February 25, 1952, and the whole of the remainder within the ensuing six weeks.

The object of the present NOTICE is to draw the attention of zoologists and paleontologists to the arrangements being made for the consideration of the foregoing problems by the Copenhagen Congress next year, and to express the hope that nomenclature committees of museums and other scientific institutions and, also, individual specialists will furnish as soon as possible answers to the questions specifically asked in the concluding paragraph in each of the seven papers enumerated above, regarding the action which, in their opinion or, in the case of committees, in the opinion of their members, it is desirable that the Copenhagen Congress should take on each of the problems involved. It is particularly hoped that there will be a wide and representative response to the present appeal, so that the proposals to be submitted to the Copenhagen Congress may be such as will command the widest possible measure of support among the general body of zoologists and paleontologists, including those engaged in taxonomic work, those engaged in the teaching of zoology and geology, and those working in the various fields of applied biology.

Nomenclature committees and individual specialists who respond to the present appeal for assistance and advice will render a double service if they will be so good as to assist the International Commission by observing the following procedure when furnishing statements of their views: (1) Where comments are furnished on two or more of the general problems enumerated above, the comments furnished on each of those problems should be on separate sheets of paper. (2) Every comment furnished should be clearly marked with the Commission's reference number as indicated in the list given above. (3) Comments should be typewritten, on one side of the paper only, with wide margins, and should be furnished in duplicate.

In order that there may be sufficient time to prepare the reports called for by the Paris Congress—and thus to make those reports available well ahead of the Copenhagen Congress—it is particularly hoped that nomenclature committees and individual specialists responding to the present appeal will despatch their comments as promptly as possible. They should in any case reach me not later than July 31, 1952.

All communications relating to the foregoing matters should be addressed to me at 28 Park Village East, Regent's Park, London, N.W. 1, England.

FRANCIS HEMMING

*Secretary to the International Commission
on Zoological Nomenclature*

