perature, low and high partial pressure of oxygen, etc. One wonders whether the term Applied Physiology should be allowed to be preempted for such a narrow field. The applications of physiology to medicine must not be forgotten and should form a topic for discussion in future reviews.

H. Evans gives his usual complete and lucid discussion of certain Endocrines—Gonads, Pituitary and Adrenals. In the great whirlpool of real and apparent contradictions, it is always refreshing to have Evans aid us in regaining another hold on the problems.

In conclusion, an ample index of authors and subjects covering 52 pages adds greatly to the value of the work as a reference medium. The sphere of usefulness of the Annual Review of Physiology should be large. A casual reading of any section—or of the whole volume for that matter—provides the reader with a good perspective of the trends that recent investigations are taking. The style is terse, crisp and pleasingly devoid of useless verbiage; but nevertheless reads like a connected narrative.

The reader who cares to delve deeper into particular problems is provided ample opportunity for doing so. The preface states that the aim is to furnish breadth rather than depth of information. But, correctly used, depth is there, too. Each section contains sufficient references to serve as leads for other work, past and present, so that the doubting reader need not necessarily accept the interpretations of contributors. However, the latter, on the whole, seems to be fair and impartial, but generally can not be regarded as overcritical. The question remains whether categorical statements of discoveries claimed or a little more separation of wheat from chaff is the more desirable form of review.

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REPORTS

SCIENTISTS AND THE PRESS

A COMMITTEE of the Boston and Cambridge branch of the Association of Scientific Workers, consisting of five scientists and three journalists, has examined in some detail problems of science news reporting. The following statement has been prepared in the hope of stimulating consideration of this matter, and eliciting comment and criticism.

Arrangements for reporting scientific work in the press are at present largely haphazard. The selection of science news is left almost wholly to journalists, who obtain it from a variety of sources, competent and otherwise. In these circumstances science reporting is inevitably scattered, superficial and centered about prominent personalities. Frequently it has been grossly inaccurate, or so poorly designed as to be almost certainly misleading.

Yet many scientists believe that wider and more dependable distribution of scientific information should benefit both science and the public. It should help to educate a large body of laymen in scientific objectives and accomplishments. It should mobilize aid for research, by interesting individuals and industrial organizations and by enlisting popular support for the governmental maintenance of science projects. Widespread and accurate news reports should help to counteract the flood of pseudo-scientific commercial propaganda in our newspapers; and equally the pronouncements of a few individuals who are popularly supposed, not always justly, to speak for science as a whole. Science is but one of many social activities, and particularly in a democracy the public should be kept well informed of its methods and purposes. Such knowledge constitutes a strong defense both of the public and of the future of free scientific activity.

Occasional scientists, however, feel that science should be withheld from newspapers, that they distort it in fact and spirit. In this light the recipients of newspaper publicity are sometimes regarded with suspicion and disapproval. Yet this position grows increasingly weaker. If only because the scientist can not control newspaper accounts of his work, which often appear without his knowledge or cooperation, the stigma sometimes associated with publicity is unreasonable and dangerous.

This is perhaps the crux of the matter. Scientists can neither suppress nor restrict science news. Usually they do not initiate it. Yet they are held responsible for it by the public and by many fellow scientists. A policy of passive resistance in the past has helped only to produce a chaotic press which seriously injures science and the individual worker.

A positive alternative is for scientists to recognize in the press a valuable agency for liaison with the public, and to attempt through active cooperation to improve its effectiveness. Such an approach admittedly offers difficulties. Important steps toward their solution already exist in Science News Service, the American Chemical Society News Service and similar institutions created by scientists; and the press has cooperated to a degree by employing specialists in science news, such as those who form the Association of Science Writers. But such agencies can use only what they are given. The general problems of initiation and critical supervision of science news can be solved by scientists alone.

As a first experimental approach to this situation we are testing the following plan at certain of the Harvard University science departments.

At our suggestion each of these departments has appointed an informal representative to deal with press problems. These men aid in preparing news reports from their departments and act as clearing agents for press inquiries. About once every month they meet with representatives of the University News Office and Science Service to discuss common problems and anticipated news situations.

The usual spot news report is handled as follows. The departmental representative discusses a potential science story with his directly interested colleagues. If the latter decide to issue a report, a trained journalist from the University News Office is introduced for an interview. He writes the story and returns it for correction and criticism.

The completed story is distributed by the University News Office to local papers, Science Service and the national press services.

In this way an accurate account written in newspaper style is made generally available. A complete record of the scientist's connection with it also exists within the university. Of course the story as finally issued may be changed by individual newspapers. We have urged that any serious inaccuracy or distortion of a science report be corrected in a letter to the responsible editor. Such letters are frequently published, and in any case tend to decrease the further garbling of science news.

However, in our short experience there has been little occasion for such action. The stories which we have sponsored, scientifically authoritative and written in newspaper fashion, have appeared with remarkably little distortion, usually almost verbatim. By issuing such reports more promptly and comprehensively than newsmen alone could possibly prepare them, scientists rather than reporters can select the news which issues from science departments.

It is hoped that these procedures may possess some general interest and validity. Communications may be addressed to the committee secretary, Mrs. B. J. Bok, care of Harvard College Observatory, Cambridge, Mass.

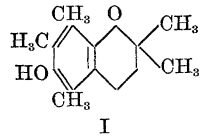
COMMITTEE ON PUBLIC RELATIONS OF SCIENCE, A.A.S.W., BOSTON AND CAMBRIDGE BRANCH

SPECIAL ARTICLES

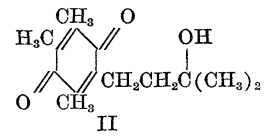
THE STRUCTURE OF THE RED OXIDATION PRODUCTS OF TOCOPHEROLS AND RELATED SUBSTANCES[1]

WHEN tocopherols, 2,2,5,7,8-pentamethyl-6-hydroxy chroman (I) and similar substances are oxidized under suitable conditions, the products are yellow para quinones (II).[2] When, however, silver nitrate or nitric acid is used as the oxidizing agent and the action of the reagent is prolonged, brilliant red solutions are obtained[2a, 2b, 3] and Furter and Meyer[4] have developed a photometric method of analysis for tocopherols based upon the reaction with nitric acid.

We have obtained the same red crystalline compound, m.p., 109–110°, from the chroman I using either silver nitrate or nitric acid as the oxidizing agent. Photometric examination of solutions of this substance and of solutions obtained from I by the procedure of Furter and Meyer shows that this red substance is responsible for the color developed in the latter case.

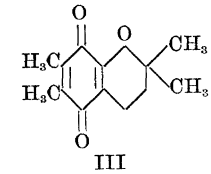


I

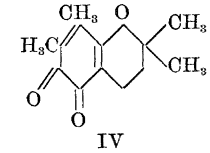


II

John and his associates[2a] established that the red compound $C_{13}H_{16}O_3$ from I differed in composition from the quinone II by one carbon and four hydrogen atoms; and Karrer and his associates[2b] showed that a similar difference in composition resulted when 2,5,7,8-tetramethyl-6-hydroxy chroman was converted into the analogous red compound $C_{12}H_{14}O_3$. Karrer also showed that the red compound was a quinone, and a tentative structure was proposed, which by analogy would become III when applied to the red



III



IV

[1] This communication is paper XVI in a series on "The Chemistry of Vitamin E." Paper XV, *Jour. Org. Chem.*, 4: in press, 1939.

[2] (*a*) John, Dietzel and Emte, *Zeitschr. physiol. Chem.*, 257: 173, 1939; (*b*) Karrer, Fritzsche and Escher, *Helv. Chim. Acta*, 22: 661, 1939.

[3] Evans, Emerson and Emerson, SCIENCE, 88: 38, 1938.

[4] *Helv. Chim. Acta*, 22: 240, 1939; see also ref. 2*b*.