

in relapse had serum acetylcholine concentrations varying from 15 to 18  $\gamma$ /100 cc. of serum. On the seventh or eighth day of treatment, when reticulocyte responses were near their peaks, each of the three patients was found to have about 6.5  $\gamma$  of acetylcholine/100 cc. of serum. Two normal human subjects also had about 6.5  $\gamma$  per cent in their sera, while two patients with pernicious anemia in remission, upon returning for maintenance treatment with liver, were found to have 8 and 10  $\gamma$  per cent of acetylcholine.

Each of the three cases of pernicious anemia in relapse was treated with a different therapeutic agent or preparation. One patient, severely ill, received 60 mg. of pteroyl glutamic acid intramuscularly per day; one received 40 grams of ventriculin daily; and one received 1 unit of liver extract, intramuscularly, per day. As a chemical result of these varied treatments, all three patients showed a reduction of approximately 60 per cent from their high serum acetylcholine levels.

A study of the serum cholinesterase will be reported later, but to date we have found that this activity is present in the serum of pernicious anemia patients during relapse, and is, in general, proportional to the erythrocyte count.

These experiments were performed in Detroit, Michigan. Grateful appreciation is expressed to the Anemia Laboratory of Parke, Davis and Company, and its director, Dr. E. A. Sharp, who made these cases available; to Drs. E. C. Vonder Heide, L. Berman, and Axelrod, who diagnosed and treated these cases; and to Dr. W. H. Seegers and the Department of Physiology, Wayne University, for the use of laboratory space and facilities.

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### On Virus Nomenclature

The chaotic state of virus nomenclature needs little elaboration. It is apparent that, with no rules to follow, a whim may result in the designation of a new agent after

a variety of entities—a host, a geographical location, a disease condition, a season of the year, or the discoverer thus forming a simple nomial or very involved polynomials. Unwieldy names like *Eastern-Russian-spring-summer encephalitis virus* now burden the worker, but even worse is the wealth of synonyms, often only the result of variation in word order, that are used for some virus agents.

This confusion is more likely to increase than decrease with time, since taxonomic classification may be a long way off, while newly discovered viruses continue to be reported in current publications.

A suggestion is offered here that might alleviate some of the confusion in the naming of new viruses by adapting systematically certain current practices, namely, the use of a trinomial such as *Equine encephalomyelitis (Eastern)* or *Mouse pneumonitis (Nigg)*—a system which has several points to recommend it. The first name indicates the apparent primary host; the second, the type of disease; and the third, the immunological strain, after the isolator or the region where it was recovered. If a number of virus agents were named in this manner, it would not be necessary to affix the word *virus* to the name, as that connotation would be carried by the form itself. At any rate, the agent would have a somewhat descriptive and rather precise name considerably easier to handle in writing and in speaking than one like *submaxillary gland virus of guinea pigs*, which may be written *guinea pig submaxillary gland disease* and another time *virus disease of the submaxillary gland of guinea pigs*—a variability that causes some difficulty when searching the literature and which might have been avoided by a trinomial like *Cavian submaxillitis (C. & K.)*.

However, this suggestion is offered not with the intention of altering well-established names but as a basis for reconsidering the current practices of coining names for virus agents.

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## Book Reviews

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**Scientists against time.** James Phinney Baxter, 3rd. Boston: Little, Brown, 1946. Pp. xv + 473. (Illustrated.) \$5.00.

This is a book for which American scientists have been waiting. It tells the official story of the Office of Scientific Research and Development. Within the limits of one volume it presents a clear, detailed, and yet stylistically most attractive account of the victory made possible by the civilian scientific research effort of our Nation during World War II.

The author, James Phinney Baxter, 3rd, is president of Williams College and a former professor of history at Harvard. His special field of distinction in historical

scholarship has included the consideration of the effect of the introduction of new weapons, such as the ironclad warship, in previous wars. His selection as official historian of OSRD was therefore most fortunate. The present book is not to be mentioned in the same breath with the drab and desiccated bureaucratic documents that are sometimes issued by Federal agencies as the story of the past.

Dr. Vannevar Bush, the director of OSRD, says in his foreword that the book is "the history of a rapid transition, from warfare as it has been waged for thousands of years by the direct clash of hordes of armed men, to a new type of warfare in which science becomes applied to