

three animals in group 3 gained weight equal to the optimum response of the control group 1.

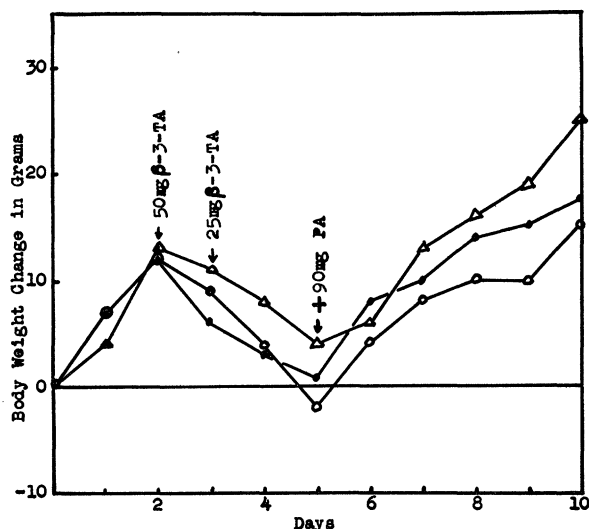


FIG. 2. Curves showing the changes in body weight of each rat in group 3, illustrating the uniform response of each animal.

When 200 mg of β -3-TA was incorporated into the daily diet of each rat in group 4, the loss in weight was very dramatic. The loss was much greater than would result from removal of all phenylalanine. After two days of

200 mg of β -3-TA, the three animals of group 3 were returned to the MEA diet without antagonist. All three rats recovered weight rapidly, indicating that this level of β -3-TA did not produce an irreversible toxic effect. On the sixth day of the experiment the animals of group 4 were again offered a diet containing 25 mg of β -3-TA. The addition of the antagonist at this time again resulted in a loss of weight.

The data plotted in Fig. 1 clearly demonstrate that β -3-thienyl-DL-alanine inhibits the metabolism of phenylalanine during the recovery of the protein-depleted rat.

In Fig. 2 the response of each animal in group 3 is plotted to show that all animals responded quantitatively in a uniform manner. The same consistent data were obtained in each group.

In summary, β -3-thienylalanine inhibited the weight restoration of the protein-depleted rat; this inhibition was completely prevented by additional amounts of phenylalanine.

The results of this experiment indicate the suitability of the protein-depleted rat for the study of amino acid antagonists. Complete results can be obtained in ten days.

References

1. FERGER, M. F. and DU VIGNEAUD, V. *J. biol. Chem.*, 1949, **179**, 61.
2. FRAZIER, L. E. *et al. J. Nutrition*, 1947, **33**, 65.
3. PAGE, E., GAUDRY, R., and GINGRAS, R. *J. biol. Chem.*, 1948, **171**, 831.
4. STEFFEE, C. H., JR. *et al. Fed. Proc.*, 1949, **8**, 369.
5. WISSLER, R. W. *et al. J. Immunol.*, 1946, **52**, 267.

Book Reviews

Fishes of the Western North Atlantic: Lancelets, Cyclostomes, Sharks. (Memoir, Sears Foundation for Marine Research, No. 1.) Henry B. Bigelow, Isabel P. Farfante and W. C. Schroeder. New Haven, Conn.: Sears Foundation, Yale University, 1948. Pp. 576. (Illustrated.) \$10.00.

This is the first volume of the *Fishes of the western North Atlantic* and the first attempt in half a century of American ichthyologists to cooperate in preparing a comprehensive descriptive account of fishes. The present work covers the western half of the North Atlantic, including gulfs, seas, and bays, from Hudson Bay southward to the Amazon River. Brackish water species are included, and others close to the borders, when they make for a more adequate understanding of the group. The reports on the three groups of fishes treated may be classed as critical reviews or revisions. Under each species is found a detailed description, including distinctive characters, color, developmental stages, size, habits, abundance, range, relation to man, and occurrence in the Western Atlantic. Each species (with one or two exceptions) is illustrated by an accurate outline drawing. As complete a list of synonyms and references as possible is found under each species.

During the past decade, while this study has been in preparation, I have been in touch with the authors and have observed their careful methods of study, and deliberate and painstaking care in the preparation of this big volume. There are few typographical errors and only minor inconsistencies. This indicates a great amount of work and careful editing. Thus ichthyologists may place much confidence in the work.

The classification and nomenclature is conservative. The authors are to be highly complimented in not accepting or changing scientific names of sharks in general zoological use for a century or more. In preparing keys to the genera and species they have included genera outside the North Atlantic and have based their judgment on a world-wide basis. Many of the keys include all of the known species of that particular genus, with the range given for each species.

The volume is beautifully prepared from the point of view of bookmaking in regard to size and style of type, arrangement, and organization. If future volumes are as well done, the committee in charge may justifiably be very proud.

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