

**Ascorbic Acid and the Metabolism of the Aromatic Amino Acids, Phenylalanine and Tyrosine.** BY ROBERT RIDGELY SEALOCK, JESSE D. PERKINSON, AND HANNAH E. SILBERSTEIN. *From the Department of Vital Economics, The University of Rochester, Rochester, New York*

In the recent demonstration that vitamin C prevents the excretion of homogentisic acid resulting from the feeding of tyrosine to guinea pigs, qualitative tests indicated that other metabolites were also excreted on the ascorbic acid-deficient diet. With daily supplements of 0.5 to 1.0 gm. of *l*-tyrosine approximately 30 per cent is present in the urine as homogentisic acid and 30 per cent as the *p*-hydroxyphenylpyruvic acid. With similar amounts of *l*-phenylalanine comparable levels of the corresponding metabolites are present. In addition, traces of the lactic acid derivatives and the unchanged amino acids are also excreted. Administration of 5 to 10 mg. of ascorbic acid daily inhibits within 24 to 72 hours the excretion of the catabolites and subsequent removal of the vitamin causes their prompt reappearance in the urine. That the state of vitamin saturation of the animal body is an important factor is indicated by the fact that animals exhibiting scorbutic symptoms require larger doses of vitamin than those with no symptoms. These findings with experimental animals furnish evidence that ascorbic acid is essential to the normal oxidative breakdown of these aromatic amino acids and are in agreement with the recent experiments of Levine, Marples, and Gordon,\* who find that vitamin C will prevent the excretion of the same metabolic substances by premature infants.

In addition to the above results, similar feeding experiments with the unnatural isomers of phenylalanine and tyrosine and the corresponding keto acids will be reported.

**Studies on the Chemical Treatment of Tumors. V. Separation of the Hemorrhage-Producing Fraction from *Bacillus prodigiosus* Filtrates.** BY M. J. SHEAR AND FLOYD C. TURNER. *From the National Cancer Institute, United States Public Health Service, Bethesda, Maryland*

The method used\* for separating, from broth cultures of *Bacillus*

\* Levine, S. Z., Marples, E., and Gordon, A. H., *Science*, **90**, 620 (1939).

\* Shear, M. J., and Andervont, H. B., *Proc. Soc. Exp. Biol. and Med.*, **34**, 323 (1936).