or read elsewhere. All of the papers are well referenced and illustrated with diagrams and tabulated data. As this was a workshop of specialists, the Materials and Methods section in some of the papers is very short and hardly intelligible for a non-specialist.

On the whole this is a very interesting book illustrating the point of intersection of different research lines. The intensity of the workshop would have become even more evident if the editors had had the possibility to publish the discussions too.

Klaus-D. Gerbitz

Amino Acid Metabolism and Sulphur Metabolism

Comprehensive Biochemistry; volume 19A

Edited by A. Neuberger

Elsevier Biomedical; Amsterdam, New York, 1981
xviii + 482 pages. $85.00

This book contains 5 authoritative reviews, each of which attains such a high standard, that the book is even better than the sum of its parts. It would be difficult to find such a wealth of interest and information in this subject area in any other single volume.

H.E. Umbarger's review concentrates this time on the mechanisms of regulating amino acid biosynthesis and degradation in bacteria and is a valuable complement to the author's other reviews of recent years. The chapter by H. Reinbothe, J. Miersch and K. Mothes entitled 'Special problems of nitrogen metabolism in plants' demonstrates an astonishing coverage in its 102 pages. The subject matter ranges from NH_4^+ production from N_2 and NO_3^- to the physiological significance of some non-protein amino acids in higher plants. An enormous amount of information has been presented in a readable form, with extensive tables providing valuable data for the research worker. No less impressive is the review on the 'Metabolism of simple sulphur compounds' by P.A. Trudinger and R.E. Loughlin, which discusses this subject in a wide taxonomic range of organisms at an admirable intellectual level. Readers who have not kept up to date with this topic, or who are new to the subject, will be surprised at the extent of the coverage, to which more than 700 cited references attest.

On perhaps more familiar ground the review of glycine and serine metabolism by A. Neuberger reminds us of the metabolic complexity of these chemically simple amino acids and directs us to recent developments concerning the importance of glycine and serine in the metabolism of higher plants and the metabolism of methane in bacteria. Finally, W.L. Nyhan's 'Inheritable abnormalities of amino acid metabolism' supplies an extensive coverage (165 pages) on the molecular and clinical bases, and rationale of treatment, of the well-established human disorders of amino acid metabolism. The sole reservation here is that most references pre-date 1978, but the style, readability and comprehensive coverage are commendable.

The reviewer greatly enjoyed reading this volume, which is strongly recommended.

P.B. Nunn

Abnormality of sulfur-containing amino acids. HPO: HP:0004339. Definition. Any deviation from the normal concentration of a sulfur amino acid in the blood circulation. [from HPO]. Term Hierarchy. GTR. MeSH. CClinical test, RResearch test, OOMIM, GGeneReviews, VClinVar. CROGVAbnormality of sulfur amino acid metabolism. Phenotypic abnormality. Abnormality of metabolism/homeostasis. Abnormal circulating metabolite concentration.Â Persistent homocysteine metabolism abnormality accelerates cardiovascular disease in hemodialyzed patients--the Nishinomiya Study. Hasuike Y, Hama Y, Nonoguchi H, Hori K, Tokuyama M, Toyoda K, Hazeki S, Nanami M, Otaki Y, Kuragano T, Nakanishi T J Ren Nutr 2012 Jan;22(1):12-8.e1. Epub 2011 Jul 12 doi: 10.1053/j.jrn.2011.04.005. Amino acid metabolism in Chlamydomonas has not been studied extensively, with most work having been performed by geneticists in search of auxotrophy markers or specifically interested in nitrogen nutrition.Â Amino acid metabolism is highly limited in Orientia. The genes for the biosynthetic pathways for aromatic amino acids like tryptophan, tyrosine and phenylalanine as well as histidine are lacking â€“ these amino acids must be provided externally by the host cell or the culture medium. In contrast to Rickettsia, Orientia lacks the alanine racemase (Alr), which converts L-alanine to D-alanine, a key component of peptidoglycan [13].Â The complete oxidation of sulphur-containing amino acids (cysteine, methionine) generates hydrogen ions, for example for methionine: (26). 2. Amino Acid Metabolism Disorders. On this page. Basics. Summary. Start Here. Diagnosis and Tests. Learn More. Specifics. Genetics. See, Play and Learn. No links available. Research.Â One group of these disorders is amino acid metabolism disorders. They include phenylketonuria (PKU) and maple syrup urine disease. Amino acids are "building blocks" that join together to form proteins. If you have one of these disorders, your body may have trouble breaking down certain amino acids. Or there may be a problem getting the amino acids into your cells. These problems cause a buildup of harmful substances in your body. Sulfur amino acid metabolism is regulated through the balance of production and disposal of cellular homocysteine and cysteine. Therefore, the release of homocysteine and H2S by the gut depends on the methionine utilisation by the gut, which then may have an impact on peripheral physiology. For example, a recent study in rats demonstrated that liver endothelial dysfunction caused by hyperhomocysteinaemia was reversed by exogenous H2S(Reference Distrutti, Mencarelli and Santucci77). Metabolism is the set of life-sustaining chemical reactions in organisms. The three main purposes of metabolism are: the conversion of food to energy to run cellular processes; the conversion of food/fuel to building blocks for proteins, lipids, nucleic acids, and some carbohydrates; and the elimination of metabolic wastes. These enzyme-catalyzed reactions allow organisms to grow and reproduce, maintain their structures, and respond to their environments. The word metabolism can also refer to the sum