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Nota di contenuto	ADVANCES IN ENZYMOLOGY; CONTENTS; Probleme des Energietransportsinnerhalblebender Zellen; I. Ubersicht (Definitionen); II. Warmeleitung; A. Thermodynamische Gesichtspunkte; B. Energietransport unter Mitwirkung vieler Freiheitsgrade; III. Energieuberfuhrung; A. Das ATP-System; 1. Freie Energie des ATP-Systems; 2. Modell fur die Beziehungen des ATP-Systems zu Energie anlicfernden und aufnehmenden Prozessen; 3. Oxydative Phosphorylierungen (P/O-Quotient); 4. Energie aufnehmende Systeme (besonders solche mit hohem "Gruppenpotential") B. Energieuberfuhrung als Energie-Quantitaten uberfuhrender ProzessC. Diffusionsprobleme; IV. Energieleitung und Energiestrahlung; A. Physikalische Modelle und Theorien; 1. Umlagerungstheorien (kooperierende Wasserstoff-Brucken-Systeme); 2. "Kontinuum-Theorie" (Halbleiter-Eigenschaften von Proteinen?); 3. Wanderung von Excitations-Energie (Perrin-Foerstersche Theorie); B. Biochemischc Beobachtungen und Probleme; 1. Photochcmische Versuche mit Hamin-Proteiden; 2. Zerstorung von Proteinen durch Strahleneinwirkung; 3. Funktionelle Verbindung der strukturgebundenen Fermente der

Atmungskette

V. SchrlussbemerkungenLiteraturverzeichnis; Pantethine and Related Forms of the Lactobacillus bulgaricus Factor; I. Introduction; II. Isolation Procedures; III. Chemical Nature of LBF; IV. Synthesis of Pantethine; V. Derivatives of Pantetheine; VI. Relationship of Pantethine to the Multiple Naturally Occurring Forms of LBF; VII. Relationship of Pantethine to Coenzyme A; VIII. Activity of Pantetheine and Its Derivatives for Various Organisms; IX. Assay and Distribution; References; Metabolism of Phenylalanine and Tyrosine; I. Introduction; II. Melanin Formation; A. Melanin Producing Cell

B. Chemical Reactions in Conversion of Tyrosine to MelaninC. Nature of the Enzymic Process; D. Dopa Accumulation; E. Nature of Tyrosinase; F. Function of Tyrosinase; G. Factors Controlling the Activity of Tyrosinase; H. Nonspecific Enzymic Oxidation of Dopa; I. Melanin; J. Endocrine Control of Melanin Formation; K. Factors Controlling Melanin Formation in Man; 1. Normal Variations in Pigmentation.; 2. Inhibition of Melanin Formation; III. Fumarate and Acetoacetate Formation; A. Chemical Reactions in Conversion of Phenylalanine and Tyrosine to Fumarate and Acetoacetate

1. Phenylalanine to Phenylpyruvie, Phenyllactic, and Phenylacetic Acids2. Phenylalanine to Tyrosine; 3. Tyrosine to p-Hydroxyphenylpyruvic, p.-Hydroxyphenyllactic, and p-Hydroxyphcnylacetic Acids; 4. p-Hydroxyphenylpyruvic Acid to Homogentisic Acid; 5. Homogeritisic Acid to Fumarylacetoacetic, Fumaric, and Acetoacetie Acids; B. The Enzymes and Coenzymes Required for the Reactions; 1. Transaminase; 2. Phenylalaninase; 3. Hydroxyphenylpyruvase and Dihydroxyphenylpyruvie Decarboxylase; 4. Homogcntisase and Fumarylactoacetase; 5. Other Enzymes; C. Abnormal Metabolism of Phenylalanine and Tyrosine

1. Phenyluria

Sommario/riassunto

Advances in Enzymology and Related Areas of Molecular Biology is a seminal series in the field of biochemistry, offering researchers access to authoritative reviews of the latest discoveries in all areas of enzymology and molecular biology. These landmark volumes date back to 1941, providing an unrivaled view of the historical development of enzymology. The series offers researchers the latest understanding of enzymes, their mechanisms, reactions and evolution, roles in complex biological process, and their application in both the laboratory and industry. Each volume in the series featu