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Nota di contenuto	Part I. Basic Processes at the Cellular Level -- 1. Impact of dietary essential amino acids in man -- 2. Metabolism of BCAAs -- 3. The cytosolic and mitochondrial branched chain aminotransferase -- 4. Isoleucine, PPAR and uncoupling proteins -- 5. Leucine as a stimulant of insulin -- 6. Effects of leucine and isoleucine on glucose metabolism -- 7. Hypothalamic leucine metabolism in the regulation of liver glucose metabolism -- 8. Leucine and resveratrol: experimental model of sirtuin pathway activation -- 9. Branched chain amino acids and blood ammonia -- 10. Use of 2H3-leucine to monitor apoproteins -- Part II. Inherited Defects in Branched Chain Amino Acid Metabolism -- 11. Branched chain amino acid oxidation disorders -- 12. Branched chain amino acids and maple syrup urine disease -- 13. Mental retardation and isoleucine metabolism -- 14. Anorexia and valine-deficient diets -- Part III. Experimental models of growth and disease states: Role of Branched Chain Amino Acids -- 15. Leucine and fetal growth -- 16. Enteral leucine and protein synthesis in skeletal and cardiac muscles -- 17. Use of branched chain amino acids granules in experimental models of diet-induced obesity -- 18. Experimental

models of high fat obesity and leucine supplementation -- 19. Branched chain amino acids in experimental models of amyotrophic lateral sclerosis -- 20. Leucine and ethanol oxidation -- 21. Isoleucine, leucine and their role in experimental models of bladder carcinogenesis.

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## Sommario/riassunto

This is the first volume in a 2-volume compendium that is the go-to source for both research- and practice-oriented information on the importance of branched chain amino acids in maintaining the nutritional status and overall health of individuals, especially those with certain disease conditions. Over 150 well recognized and respected contributors have come together to compile these up-to-date and well-referenced works. The volumes will serve the reader as the benchmarks in this complex area of interrelationships between dietary protein intakes and individual amino acid supplementation, the unique role of the branched chain amino acids in the synthesis of brain neurotransmitters, collagen formation, insulin and glucose modulation and the functioning of all organ systems that are involved in the maintenance of the body's metabolic integrity. Moreover, the physiological, genetic and pathological interactions between plasma levels of branched chain amino acids and aromatic amino acids are clearly delineated so that students as well as practitioners can better understand the complexities of these interactions. Branched Chain Amino Acids in Clinical Nutrition: Volume 1 covers basic processes at the cellular level, inherited defects in branched chain amino acid metabolism, and experimental models of growth and disease states.

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