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| Nota di contenuto | Molecular Nutrition and Genomics; Contents; PREFACE; ACKNOWLEDGMENTS; INTRODUCTION; Chapter 1-Defining Important Concepts; 1.1 Key Concepts in Molecular Biology for the Study of Human Nutrition; 1.2 The Inheritance of Genetic Packets of Information; 1.3 A Brief Overview of Evolutionary Biology and the Ascent of Man; 1.4 The -omics Revolution; Chapter 2-Molecular Mechanisms of Genetic Variation Linked to Diet; 2.1 A Brief History of the Human Diet; 2.2 The Role of Milk in Human Evolution; 2.3 Micronutrients and the Evolution of Skin Pigmentation<br>2.4 Micronutrients Optimize Gametogenesis and Reproductive Fecundity2.5 Direct Dietary Selection of a Human Metabolomic Profile; 2.6 The Evolution of Taste as a Survival Mechanism; 2.7 The Mystery of Alcohol Dehydrogenase Polymorphisms and Ethanol Toxicity; 2.8 Evolution of Xenobiotic Metabolism in Humans; Chapter 3-Essential Nutrients and Genomic Integrity: Developmental and Degenerative Correlates; 3.1 Micronutrients and Genomic Stability and Function; Chapter 4-Nutrients and Cerebral Function in Human Evolution<br>4.1 Human Encephalisation May be Linked to an Evolutionary Reduction |

in Gut Mass4.2 Weaning and Brain Development; 4.3 Micronutrients and the Cerebral Basis of Spirituality and Social Structure; 4.4 Pharmacotoxicology of Plants and Cultural Evolution; Chapter 5-The Evolution of Micronutrient Metabolism; 5.1 Antioxidants, Evolution, and Human Health; Chapter 6-Evolved Refinement of the Human Lifecycle Based on Nutritional Criteria; 6.1 Human Breast Milk-An Evolved Food; 6.2 Conflict between Parent and Offspring over Nutrient Requirements; 6.3 Natural Selection for Foraging Efficiency
6.4 Evolution of SenescenceChapter 7-The Evolution of Human Disease; 7.1 The Conflict between Agriculture and Ancestral Genes; 7.2 Obesity: A Chronic Plague of our Affluent Societies; 7.3 Prion Protein Locus and Human Evolution: The Link Between Variant Creutzfeld-Jakob Disease and Cannibalism; Chapter 8-Contemporary Dietary Patterns that Work: The Mediterranean Diet; 8.1 Tomatoes; 8.2 Olive Oil; 8.3 Red Wine; 8.4 Bioflavonoids; 8.5 Fish; Chapter 9-Some Non-Micronutrient Essential and Nonessential Nutrients with Molecular and Possible Evolutionary Impact; 9.1 Lecithins
9.2 Lipid-Derived First Messengers-The Eicosanoids9.3 Isoflavones-Genomic and Nongenomic Influence at the Estrogen Receptor; 9.4 Phytic Acid; Chapter 10-Natural Food Toxins and the Human Diet; 10.1 Dietary Zootoxins; 10.2 Dietary Phytotoxins; Chapter 11-Nutrigenomics; 11.1 What is Nutrigenomics?; 11.2 Genetic Buffering Underpins Nutrigenomic Relationships; Chapter 12-The Evolution of Protein Function; Chapter 13-Leading Edge Laboratory Tools in Nutrigenomics and Human Evolutionary Studies; 13.1 Denaturing HPLC; 13.2 DNA Sequencing; 13.3 Nucleic Acid Microchip Techniques
13.4 The Polymerase Chain Reaction

Sommario/riassunto

This fascinating book draws it subject matter from a range of relevant disciplines that extend from molecular nutrition, nutritional sciences, and nutrition dietetics through to genetics, genomics, and anthropology. It presents a vital portrait of the absolutely fundamental role that nutrition has played and continues to play in shaping who and what human beings are, as well as where they evolved from, and where they may be heading as a species. Molecular Nutrition: Nutrition and the Evolution of Humankind:Blends coverage of the molecular mechanisms that underpin nutrie