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Nota di contenuto	Nutrition and common diseases -- Human genomic variation -- Sensing nutrition -- Nutrigenomics: Adapting the human genome to dietary changes and personalized nutrition -- Nutritional epigenomics -- Nutritional signaling and aging -- Chronic inflammation and metabolic stress -- Obesity -- Glucose homeostasis, insulin resistance and cell failure -- Diabetes -- Hypertension, atherosclerosis and dyslipidemias -- Metabolic syndrome. .
Sommario/riassunto	The fascinating area of Nutrigenomics describes this daily communication between diet, food and nutrients, their metabolites and our genome. This book describes how nutrition shapes human evolution and demonstrates its consequences for our susceptibility to diseases, such as diabetes and atherosclerosis. Inappropriate diet can yield stress for our cells, tissues and organs and then it is often associated with low-grade chronic inflammation. Overnutrition paired with physical inactivity leads to overweight and obesity and results in increased burden for a body that originally was adapted for a life in the savannas of East Africa. Therefore, this textbook does not discuss a theoretical topic in science, but it talks about real life, and our life-long “chat” with diet. We are all food consumers, thus each of us is concerned by the topic of this book and should be aware of its

mechanisms. The purpose of this book is to provide an overview on the principles of nutrigenomicsand their relation to health or disease. We are not aiming to compete with more comprehensive textbooks on molecular nutrition, evolutionary biology, genomics, gene regulation or metabolic diseases, but rather will focus on the essentials and will combine, in a compact form, elements from different disciplines. In order to facilitate the latter, we favor a high figure-to-text ratio following the rule “a picture tells more than thousand words”. The content of this book is based on the lecture course “Nutrigenomics”, which is held since 2003 once per year by Prof. Carlberg at the University of Eastern Finland in Kuopio. The book is subdivided into three sections and twelve chapters. Following the "Introduction" there are sections on the "Molecular genetic basis" and the "Links to disease", which take a view on nutrigenomics from the perspective of molecular mechanisms or from the causes of metabolic diseases, respectively. Besides its value as a textbook, Nutrigenomics will be a usefull reference for individuals working in biomedicine.