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Nota di contenuto	Chapter 1. Koku Perception and Kokumi Substances -- Chapter 2. Kokumi substance as an enhancer of koku: its definition -- Chapter 3. Biochemical studies on kokumi -glutamyl peptides -- Chapter 4. Kokumi substances from garlic; Discovery of glutathione (GSH; -Glu-Cys-Gly) as a kokumi substance -- Chapter 5. Kokumi substances in soybean seeds -- Chapter 6. Kokumi substances in Thai-fermented freshwater fish, ‘Pla-ra’ -- Chapter 7. Identification and quantification of the kokumi peptide, -Glu-Val-Gly, in foods -- Chapter 8. Mechanism for perceiving kokumi substances: Involvement of calcium-sensing receptor (CaSR) in the perception of kokumi substances -- Chapter 9. Molecular mechanism of enhancement in basic tastes by kokumi substances: A potent calcium-sensing receptor (CaSR) agonist, g-glutamyl-valinyl-glycine, amplifies sweet-induced ATP secretion via cell-to-cell communication in a mouse taste bud -- Chapter 10.

Enhancement of Combined Umami and Salty Taste by Glutathione in the Human Tongue and Brain -- Chapter 11. -Glutamyl-valyl-glycine (-Glu-Val-Gly) and glutathione (-Glu-Cys-Gly) as kokumi substances in rodents -- Chapter 12. Effects of the potent kokumi peptide, -glutamyl-valyl-glycine, on sensory characteristics of foods and beverages -- Chapter 13. Perceptual and nutritional impact of kokumi compounds -- Chapter 14. Amino acids, -peptides, and their related kokumi substances -- Chapter 15. Biochemical studies on lipid-related kokumi substances -- Chapter 16. Involvement of GPR120 in perception of fatty oral sensations in humans -- Chapter 17. Overview and future prospectives of studies on kokumi substances.

Sommario/riassunto

This book provides the basic concepts and latest findings on kokumi substances. It covers not only the topics related to food chemistry, but also the biochemical and physiological mechanisms of the perception of kokumi substances. Food palatability is determined by many factors, including taste, aroma, texture, color, physiological condition, and circumstances. The attribute called “koku” is used in Japan to express delicious foods. The definition of koku attribute was previously proposed to be caused by the sensation of richness, body, lingering (continuity), and mouthfulness in terms of taste, aroma, and texture. Kokumi substance is one of the taste-related koku enhancers and is defined as a substance that enhances complexity, richness (body), and lastingness (continuity), although it has no taste itself at the dose. The topics in this book cover physiological studies, including the receptor mechanism, taste nerve recording, and human brain responses using functional MRI. It also discusses the sensory characteristics of kokumi substances when added to foods and the effect of kokumi substances on the satiety. The intended readers are university students, researchers and technologists in food science, food chemistry, nutritional sciences, taste physiology, and neuroscience. Non-expert readers interested in food palatability and the deliciousness of foods may also find this book useful. .