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Nota di contenuto	Part 1. Origin of Brown and Beige Adipocytes -- 1. Brown Adipose Tissue Development and Metabolism -- 2. Lessons from Cre-Mice and Indicator Mice -- 3. Aging of Brown and Beige/Brite Adipose Tissue -- 4. Adipogenesis in Primary Cell Culture -- 5. In Vitro Models for Study of Brown Adipocyte Biology -- 6. Brown-Like Adipocyte Progenitors Derived from Human iPS Cells: A New Tool for Anti-obesity Drug Discovery and Cell-Based Therapy? -- 7. Brown Adipose Tissue in Human Infants -- Part 2. Molecular Mechanisms of BAT Function and Signaling -- 8. Evolution of UCP1 -- 9. The Mechanism FA-Dependent H+ Transport by UCP1 -- 10. Role of cAMP and cGMP Signaling in Brown Fat -- 11. Fatty Acid Metabolites as Novel Regulators of Non-shivering Thermogenesis -- 12. Regulatory Small and Long Noncoding RNAs in Brite/Brown Adipose Tissue -- 13. Brown Adipokines -- Part 3

Detection of BAT in vivo -- 14. Infrared Thermography -- 15. In Vivo Detection of Human Brown Adipose Tissue During Cold and Exercise by PET/CT -- 16. Techniques and Applications of Magnetic Resonance Imaging for Studying Brown Adipose Tissue Morphometry and Function -- 17. Multispectral Optoacoustic Tomography of Brown Adipose Tissue -- 18. BAT Exosomes: Metabolic Crosstalk with Other Organs and Biomarkers for BAT Activity -- Part 4. Recruitment and Activation of human BAT -- 19. Activation of Human Brown Adipose Tissue (BAT): Focus on Nutrition and Eating -- 20. Translational Aspects of Brown Fat Activation by Food-Derived Stimulants -- 21. Translational Pharmacology and Physiology of Brown Adipose Tissue in Human Disease and Treatment.

Sommario/riassunto

The main focus of this book is on brown adipose tissue and its metabolic function. The book provides a timely update on the latest research and shows where the field is heading. Brown adipose tissue (BAT) dissipates energy and has received considerable attention in the last few years, having been re-discovered in adult humans in 2007/9. Moreover, BAT might offer a target for novel therapies to address obesity, a health condition that has reached pandemic dimensions.