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Nota di contenuto	Part I: Golgi and Centriole Structure, Assembly and Regulation -- Chapter 1: The Evolution of Centriole Structure: Heterochrony, Neoteny, and Hypermorphosis -- Chapter 2: The role of protein acetylation in centrosome biology -- Chapter 3: Formins, Golgi and the centriole -- Chapter 4: Role of intracellular transport in the centriole-dependent formation of Golgi ribbon -- Chapter 5: RhoA pathway and actin regulation of the Golgi/centriole complex -- Chapter 6: Multiple roles of Rab GTPases at the Golgi -- Part II: Golgi and Centriole Positioning, Interactions and Dynamics -- Chapter 7: Positioning of the Centrosome

and Golgi Complex -- Chapter 8: Centriole positioning: not just a little dot in the cell -- Chapter 9: The MTOC/Golgi complex at the T cell immunological synapse -- Chapter 10: Semi-intact cell system for reconstituting and analyzing cellular Golgi dynamics -- Part III: Role of Centriole and Golgi in the Organization of Cell, Embryo and OrganGeometry -- Chapter 11: The centrosome as a geometry organizer -- Chapter 12: Coordination of Embryogenesis by the Centrosome in *Drosophila melanogaster* -- Chapter 13: Centrosomes in branching morphogenesis -- Chapter 14: MTOC organization and competition during neuron differentiation -- Chapter 15: The Golgi apparatus in polarized neuroepithelial stem cells and their progeny: canonical and non-canonical features -- Chapter 16: Communication of the cell periphery with the Golgi apparatus - a hypothesis -- Part IV: Golgi- and Centriole- related diseases -- Chapter 17: Breaking Bad: Uncoupling of Modularity in Centriole Biogenesis and the Generation of Excess Centrioles in Cancer -- Chapter 18: Centrosome amplification and tumorigenesis – cause or effect? -- Chapter 19: Golgi structure and function in health, stress and diseases -- Chapter 20: Selected Golgi-localized proteins and carcinogenesis – what do we know?.

Sommario/riassunto

This volume takes a closer look how the cell organelles Golgi apparatus (also known as the Golgi complex or Golgi body), and centriole are structurally and functionally intertwined. Initially, it was believed that the role of Golgi complex is limited to the packaging and preparation for secretion of various cellular proteins, while the centriole participates in cell division and cilia formation. However, since their discovery nearly 200 years ago, it became clear that these two organelles are interacting, and that their functions are much more complex and far reaching than previously thought. Recent findings indicate that the Golgi–Centriole relationship may be important for directional protein transport, cell polarization and cell cycle progression. Current studies indicate that Golgi and centriole also participate in development and act as cellular and immunological sensors, and that their abnormalities lead to cell and developmental abnormalities, Alzheimer, cancer, various lipid disorders and neurological and immunological diseases in humans. This volume combines the latest information on the structure, molecular composition, and roles of Golgi and centriole in various cellular functions and diseases. The better understanding of the Golgi–centriole interactions may lead to the development of novel therapies for the treatment of various diseases, including cancer. .
