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Specification and Differentiation through Cellular Interactions and Interactions with the Local EnvironmentCompetence and Histogenesis; The Interplay of Intrinsic and Extrinsic Influences in Histogenesis; Interpreting Gradients and the Spatial Organization of Cell Types; Summary; Chapter 5: Axon Growth and Guidance; The Growth Cone; The Dynamic Cytoskeleton; What Do Growth Cones Grow On?; What Provides Directional Information to Growth Cones?; Cell Adhesion and Labeled Pathways; Repulsive Guidance; Chemotaxis, Gradients, and Local Information; The Optic Pathway; The Midline
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How Many Differentiated Neurons Die?

Sommario/riassunto

Development of the Nervous System, Second Edition has been thoroughly revised and updated since the publication of the First Edition. It presents a broad outline of neural development principles as exemplified by key experiments and observations from past and recent times. The text is organized along a development pathway from the induction of the neural primordium to the emergence of behavior. It covers all the major topics including the patterning and growth of the nervous system, neuronal determination, axonal navigation and targeting, synapse formation and plasticity, and neuronal