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Nota di contenuto	Culture of Animal Cells; Contents; List of Figures; List of Color Plates; List of Protocols; Preface and Acknowledgements; Abbreviations; 1. Introduction; 1.1. Historical Background; 1.2. Advantages of Tissue Culture; 1.2.1. Control of the Environment; 1.2.2. Characterization and Homogeneity of Samples; 1.2.3. Economy, Scale, and Mechanization; 1.2.4. In vitro Modeling of In vivo Conditions; 1.3. Limitations; 1.3.1. Expertise; 1.3.2. Quantity; 1.3.3. Dedifferentiation and Selection; 1.3.4. Origin of Cells; 1.3.5. Instability; 1.4. Major Differences In vitro; 1.5. Types of Tissue Culture 2. Biology of Cultured Cells2.1. The Culture Environment; 2.2. Cell Adhesion; 2.2.1. Cell Adhesion Molecules; 2.2.2. Intercellular Junctions; 2.2.3. Extracellular Matrix; 2.2.4. Cytoskeleton; 2.2.5. Cell Motility; 2.3. Cell Proliferation; 2.3.1. Cell Cycle; 2.3.2. Control of Cell Proliferation; 2.4. Differentiation; 2.4.1. Maintenance of Differentiation; 2.4.2. Dedifferentiation; 2.5. Cell Signaling; 2.6. Energy Metabolism; 2.7. Origin of Cultured Cells; 2.7.1. Initiation of the Culture; 2.7.2. Evolution of Cell Lines; 2.7.3. Senescence 2.7.4. Transformation and the Development of Continuous Cell Lines3. Laboratory Design, Layout, and Equipment; 3.1. Layout, Furnishing, and

Services; 3.1.1. Requirements; 3.1.2. Services; 3.1.3. Ventilation; 3.2. Layout; 3.2.1. Sterile Handling Area; 3.2.2. Laminar Flow; 3.2.3. Service Bench; 3.2.4. Quarantine and Containment; 3.2.5. Incubation; 3.2.6. Preparation Area; 3.2.7. Storage; 4. Equipment and Materials; 4.1. Requirements of a Tissue Culture Laboratory; 4.2. Aseptic Area; 4.2.1. Laminar-Flow Hood; 4.2.2. Service Carts; 4.2.3. Sterile Liquid Handling-Pipetting and Dispensing  
4.2.4. Inverted Microscope  
4.2.5. CCD Camera and Monitor; 4.2.6. Dissecting Microscope; 4.2.7. Centrifuge; 4.2.8. Cell Counting; 4.3. Incubation and Culture; 4.3.1. Incubator; 4.3.2. Humid CO2 Incubator; 4.3.3. Temperature Recorder; 4.3.4. Roller Racks; 4.3.5. Magnetic Stirrer; 4.3.6. Culture Vessels; 4.4. Preparation and Sterilization; 4.4.1. Washup; 4.4.2. Preparation of Media and Reagents; 4.4.3. Sterilization; 4.5. Storage; 4.5.1. Consumables; 4.5.2. Refrigerators and Freezers; 4.5.3. Cryostorage Containers; 4.5.4. Controlled-Rate Freezer; 4.6. Supplementary Laboratory Equipment  
4.6.1. Computers and Networks  
4.6.2. Upright Microscope; 4.6.3. Low-Temperature Freezer; 4.6.4. Confocal Microscope; 4.6.5. PCR Thermal Cycler; 4.7. Specialized Equipment; 4.7.1. Microinjection Facilities; 4.7.2. Colony Counter; 4.7.3. Centrifugal Elutriator; 4.7.4. Flow Cytometer; 5. Aseptic Technique; 5.1. Objectives of Aseptic Technique; 5.1.1. Risk of Contamination; 5.1.2. Maintaining Sterility; 5.2. Elements of Aseptic Environment; 5.2.1. Laminar Flow; 5.2.2. Quiet Area; 5.2.3. Work Surface; 5.2.4. Personal Hygiene; 5.2.5. Reagents and Media; 5.2.6. Cultures; 5.3. Sterile Handling  
5.3.1. Swabbing

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## Sommario/riassunto

This is the sixth edition of the leading text in the basic methodology of cell culture, worldwide. Rigorously revised, it features updates on specialized techniques in stem cell research and tissue engineering; updates on molecular hybridization, somatic cell fusion, hybridomas, and DNA transfer; new sections on vitrification and Organotypic Culture, and new chapters on epithelial, mesenchymal, neurectodermal, and hematopoietic cells; germs cells/stemcells/amniocytes; and non-mammalian/avian cells. It is written for graduate students, research and clinical scientists, and technicians and la

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