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Nota di contenuto	Part1.Introduction 1.1 Rules of laboratory safety in a pharmacology laboratory 1.2 Common instruments and their uses used in a pharmacology laboratory Part2.General aspects of Pharmacology laboratory 2.1 Safety and Risk assessment 2.2 Use and Handling of laboratory animals 2.3 Experimental design 2.4 Essential statistics 2.5 Cumulative Dose Response Curve 2.6 Toxicology 2.7 Basic instruments and techniques in Pharmacology Laboratory Part3.Isolated tissues and organs 3.1 Basic instruments used for isolated tissue experiments 3.2 Organ baths 3.3 Smooth muscle preparations 3.4 Skeletal muscle preparations 3.5 Cardiac muscle preparations Part4.Isolated tissues for screening of drugs 4.1 Evaluation of antidiabetic agents 4.2 Evaluation of antidepressants 4.3 Evaluation of antihypertensive agents 4.4 Evaluation of antiulcer agents 4.5 Evaluation of hepatotoxicity 4.6 Evaluation of Antioxidant agents 4.7 Evaluation of local anaesthetics Part5. Genotoxicity and Toxicological studies 5.1 The Mouse Lymphoma Assay 5.2 The Comet Assay 5.3 In vitro Genotoxicity assay 5.4 In vitro Teratogenicity Testing 5.5 Histopathological studies of animal tissues 5.6 Drug poisoning Part6.Experimental Animal studies 6.1 Pyrogen testing 6.2 Collecting blood from mice 6.3 Studies on different parameters of blood 6.4 Experiment on

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	central nervous system 6.5 Evaluation on cardiovascular system 6.6 Experiments on GI tract Part7.Clinical trials 7.1 Clinical Pharmacology and its genesis 7.2 National and International agencies and their role in Clinical pharmacology 7.3 Stages in drug development and clinical trials 7.4 Ethics in Clinical research 7.5 Safety assessment in Clinical trials Part8.IPR and ethics in animal studies 8.1 Intellectual property rights and its different categories 8.2 Importance of IPR in drug development 8.3 Patenting cells, cell lines and animals 8.4 Ethics in laboratory animal studies 8.5 Risk assessment and management 8.6 Good laboratory practices.
Sommario/riassunto	Pharmacological biotechnology is applied to and used to study drug development, working mechanisms, diagnosis, and therapies. This manual is the textbook covering the whole range of experiments related to pharmacology. It also contains basic laboratory safety guidelines along with the basic calculations and formulas used in a laboratory. Each chapter starts with an introduction/theory into the basic approach followed by detailed methods sections with easy-to- follow protocols and comprehensive troubleshooting, calculations and possible questions for examination. The target group is researchers who are studying pharmacological biotechnology in the laboratory.