

1. Record Nr.	UNINA9910811046903321
Titolo	Traditional herbal medicine research methods : identification, analysis, bioassay, and pharmaceutical and clinical studies / / edited by Willow J. H. Liu
Pubbl/distr/stampa	Hoboken, N.J., : John Wiley & Sons, c2011
ISBN	9786612904851 9780470922668 0470922664 9781282904859 128290485X 9780470920824 0470920823 9780470921340 047092134X
Descrizione fisica	1 online resource (490 p.)
Altri autori (Persone)	Liu Willow J. H <1963-> (Willow Jiang Hua)
Disciplina	615/.321072
Soggetti	Herbs - Therapeutic use - Testing Materia medica, Vegetable - Research
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Traditional Herbal Medicine Research Methods: Identification, Analysis, Bioassay, and Pharmaceutical and Clinical Studies; Contents; Preface; Contributors; Abbreviations; Chapter 1: Introduction to Traditional Herbal Medicines and Their Study; 1.1 DEFINITION AND TRENDS OF TRADITIONAL HERBAL MEDICINES; 1.2 RESEARCH AND DEVELOPMENT OF HERBAL MEDICINES; 1.3 COMMON MISTAKES SEEN IN RESEARCH ON TRADITIONAL HERBAL MEDICINES; 1.4 RESEARCH ON TRADITIONAL HERBS SHOULD REFER TO THEORIES AND CLINICAL APPLICATION OF TRADITIONAL MEDICINE; 1.5 BRIEF INTRODUCTION OF DIFFERENT SYSTEMS OF TRADITIONAL MEDICINE 1.6 REGULATION OF HERBAL MEDICINES AND THEIR PRODUCTS 1.7 ACHIEVEMENTS AND CHALLENGES OF RESEARCH ON CHINESE HERBAL MEDICINES; REFERENCES; Chapter 2: Collection and Identification of

Raw Herbal Materials; 2.1 COLLECTION OF HERBAL MATERIALS; 2.2 METHODS FOR SPECIES IDENTIFICATION OF HERBAL MATERIALS; REFERENCES; Chapter 3: Extraction and Isolation of Compounds from Herbal Medicines; 3.1 COMPOUNDS IN PLANTS AND THEIR STRUCTURES AND PROPERTIES; 3.2 METHODS FOR EXTRACTION OF HERBAL MEDICINES; 3.3 METHODS FOR ISOLATION OF COMPOUNDS FROM HERBAL EXTRACTS

3.4 AN EXAMPLE OF EXTRACTION AND COMPOUND ISOLATION FROM HERBAL MEDICINE REFERENCES; Chapter 4: Identification and Structure Elucidation of Compounds from Herbal Medicines; 4.1 STRUCTURAL CHARACTERISTICS AND CHEMICAL IDENTIFICATION OF COMPOUNDS IN HERBAL MEDICINES; 4.2 BRIEF INTRODUCTION OF UV, IR, NMR, MS, AND OTHER SPECTRA; 4.3 IDENTIFICATION OF COMPOUNDS BY HPLC AND TLC; 4.4 IDENTIFICATION OF COMPOUNDS BY SPECTRA; 4.5 STRUCTURE ELUCIDATION OF UNKNOWN COMPOUNDS BY HYPHENATED TECHNIQUE; REFERENCES; Chapter 5: Bioassays for Screening and Functional Elucidation of Herbal Medicines

5.1 HISTORY OF SCREENING COMPOUNDS FROM NATURAL PRODUCTS FOR DRUG DEVELOPMENT

5.2 BRIEF INTRODUCTION OF ENZYMES, RECEPTORS, CELLS, AND GENE EXPRESSION; 5.3 SELECTION OF BIOASSAY; 5.4 EVALUATION OF BIOASSAY RESULTS OF HERBAL SAMPLES; 5.5 ENZYME BINDING ASSAY; 5.6 RECEPTOR BINDING ASSAY; 5.7 GENE EXPRESSION ASSAYS; 5.8 NEW TECHNOLOGIES AND OTHER BIOASSAYS FOR SCREENING AND MECHANISM STUDY; 5.9 KEYS TO FUNCTIONAL MECHANISM STUDY OF HERBAL MEDICINES; 5.10 EXAMPLE 1. SCREENING AND EVALUATION OF ESTROGENIC ACTIVITY OF HERBAL MEDICINES

5.11 EXAMPLE 2. FUNCTIONAL ELUCIDATION OF BLACK COHOSH FOR MENOPAUSE SYMPTOMS REFERENCES; Chapter 6: Functional Evaluation of Herbal Medicines by Animal Experiments; 6.1 PURPOSES AND SIGNIFICANCE OF PHARMACOLOGICAL RESEARCH FOR HERBAL MEDICINES; 6.2 CHARACTERISTICS OF PHARMACOLOGICAL RESEARCH OF HERBAL MEDICINES; 6.3 DESIGN OF PHARMACOLOGICAL STUDY ON HERBAL MEDICINES; 6.4 EXAMPLES OF IN VIVO EXPERIMENTS FOR HERBAL EXTRACTS; REFERENCES; Chapter 7: Safety Pharmacology and Toxicity Study of Herbal Medicines; 7.1 SAFETY PHARMACOLOGY; 7.2 ACUTE TOXICITY STUDY; 7.3 CHRONIC TOXICITY STUDY

7.4 SPECIAL TOXICITY STUDY

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#### Sommario/riassunto

This book introduces the methodology for collection and identification of herbal materials, extraction and isolation of compounds from herbs, in vitro bioassay, in vivo animal test, toxicology, and clinical trials of herbal research. To fully understand and make the best use of herbal medicines requires the close combination of chemistry, biochemistry, biology, pharmacology, and clinical science. Although there are many books about traditional medicines research, they mostly focus on either chemical or pharmacological study results of certain plants. This book, however, covers the

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