

1. Record Nr.	UNINA9910488702303321
Titolo	Cannabinoids and pain / / Samer N. Narouze, editor
Pubbl/distr/stampa	Cham, Switzerland : , : Springer, , [2021] ©2021
ISBN	9783030691868 3-030-69186-1
Descrizione fisica	1 online resource (xix, 339 pages) : illustrations (black and white)
Disciplina	615.7827
Soggetti	Cannabinoids - Therapeutic use Pain - Chemotherapy Cànnabis Ús terapèutic Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Part I: Introduction to Cannabis -- 1: History of Cannabis -- 2: Cannabis Regulations -- Introduction -- Federal Regulations -- State Cannabis Laws -- Research Expansion -- Conclusion -- 3: The Demand for Medical Cannabis Education -- 4: Pain Physicians and Medical Cannabis: Attitudes, Believes, Preparedness and Knowledge -- Introduction -- Development and Description of the Applied Questionnaire -- Statistical Analysis -- Results -- Discussion -- Summary -- Medical Cannabis Questionnaire -- 5: Cannabis Terminology -- Introduction -- General Aspects of the Cannabis Plant -- Differences Between <i>C. sativa</i> and <i>C. indica</i> -- Cannabis Versus Hemp -- The Endocannabinoid System (ECS) -- Key Terminology -- Cannabis Products and Accessories -- Conclusion -- Part II: Cannabinoids Pharmacology -- 6: The Endocannabinoid System -- Introduction -- Brief History of Cannabis and Hemp -- Components of the Endocannabinoid System (ECS) -- eCBs and Their Signal Transduction Pathways -- Complexity of the Endogenous Cannabinoid System -- CB1 and CB2 Receptor -- Other Receptors -- Transporters -- Enzymes -- Physiological Actions of ECS -- 7: Cannabinoid Receptor

1 (CB1) -- CB1 Receptors -- CB1 Receptor Physiology, Pathology, and Pharmacology -- CB1 Signaling -- CB1 Receptor Distribution -- Neocortex -- Hippocampus -- Hypothalamic -- Midbrain
Periaqueductal Gray -- Brain Stem Rostral Ventromedial Medulla -- Tolerance -- CB1 Receptor Ligands -- References -- 8: Cannabinoid Receptor 2 (CB2) -- Cannabinoid 2 Receptor -- CB2 Receptor Physiology and Pharmacology -- CB2 Receptor Distribution -- CB2 Signaling -- CB2 Chronic Pain Models -- Tolerance -- CB2 Receptor Ligands.

9: Endocannabinoids: Anandamide and 2-Arachidonoylglycerol (2-AG) -- Introduction -- Biosynthesis and Breakdown Pathways -- Anandamide -- 2-AG -- Endocannabinoids' Mechanism of Action -- Anandamide -- 2-AG -- Plasticity of Endocannabinoid Signaling -- Endocannabinoids in Pain -- Peripheral Mechanisms -- Spinal Mechanisms -- Supraspinal Mechanisms -- Conclusion -- 10: Phytocannabinoids: Tetrahydrocannabinol (THC) -- Phytocannabinoids -- Introduction -- 9-Tetrahydrocannabinol (THC) -- Mechanism of Action of THC -- Applied Pharmacology and Pharmacokinetics -- Absorption -- Smoking -- Oral -- Oro-mucosal and Intranasal -- Rectal -- Transcutaneous -- Distribution -- Metabolism and Elimination -- Conclusion -- 11: Phytocannabinoids: Cannabidiol (CBD) -- Phytocannabinoids -- Cannabidiol and Its Various Clinical Effects -- Pharmacodynamics of Cannabidiol -- Applied Pharmacology and Pharmacokinetics -- Smoking -- Oral -- Transcutaneous -- Volume of Distribution -- Metabolism -- Elimination -- Safety Profile and Side Effects -- Cannabidiol Interaction with Tetrahydrocannabinol -- Conclusion -- 12: Other Phytocannabinoids -- Introduction -- Synthesis of Phytocannabinoids -- Cannabinoids and the Endocannabinoid System (ECS) -- Minor Cannabinoids -- Cannabinol (CBN) -- Cannabigerol (CBG) -- Cannabichromene (CBC) -- Tetrahydrocannabivarin (THCV) -- Conclusion -- 13: Cannabis Drug Interactions -- Introduction -- Routes of Administration -- Cannabinoid Drug Interactions -- Specific Drug Interactions -- Over-the-Counter (OTC) Analgesics -- Neuropathic Agents -- Opiates -- Antiepileptics -- Psychotropics -- Anticoagulants and Antiplatelets: "Blood Thinners" -- Warfarin -- Direct Oral Anticoagulants -- Clopidogrel -- Heparin/Fondaparinux -- References -- Part III: Pharmaceutical Cannabinoids.

14: Dronabinol (Marinol®) -- Introduction -- Mechanism of Action -- Pharmacokinetics -- Therapeutic Use -- Safety, Toxicity, and Adverse Effects -- 15: Nabilone (Cesamet) -- Introduction -- Clinical Trials -- Pharmacology and Pharmacokinetics -- Dosage and Administration -- Monitoring, Adverse Events, Drug Interactions, and Abuse Potential -- Adverse Effects -- Drug Interactions -- Abuse Potential -- 16: Cannabidiol (Epidiolex) -- Introduction -- Clinical Trials -- Pharmacology and Pharmacokinetics -- Dosage and Administration -- Monitoring, Adverse Events, and Drug Interactions -- Adverse Effects -- Abuse Potential -- 17: Nabiximols (Sativex®) -- Introduction -- Nabiximols Production -- Nabiximols Approval and Indications -- Nabiximols Contraindication -- Nabiximols Evidence -- Nabiximols for MS-Related Spasticity -- Nabiximols for MS-Related Neuropathic Pain -- Nabiximols for Cancer-Related Pain -- Nabiximols for Chronic Pain -- Nabiximols Tolerability -- Nabiximols Dosage and Administration -- Administration -- Dosing -- Storage, Stability, and Dosage Form -- Storage and Stability -- Dosage Form -- Summary -- Part IV: Medical Cannabis -- 18: Cannabis Strains to Chemovars -- Introduction -- Cannabis sativa L. -- Cannabis Cultivation and Trichomes -- Importance of Trichomes -- Cannabis Constituents

-- Cannabinoids -- Terpenoids -- Other Cannabis Compounds -- Entourage Effect of Cannabis Constituents -- Cannabis Classification: Strains Versus Chemovars -- Strains -- Chemovar -- Practical Chemovar Selection for Clinicians -- Summary -- 19: The Model of a Medical Cannabis Clinic -- Introduction -- Description of a Medical Cannabis Clinic -- Referral and Screening -- Initial Visit -- Follow-Up and Monitoring -- Patient Education and Physician Communication. Protocols and Procedure Guidelines -- Continuing Medical Education -- Research Development -- Conclusion -- References -- 20: Barriers for the Prescription of Cannabinoid-Based Medicines -- Introduction -- Barriers for Cannabinoid Prescription -- Social Stigma for the Use of Cannabis -- Myths Versus Realities of Medical Cannabis Use -- Research Gaps and Limitations to Justify Medical Cannabis Use -- Lack of Knowledge Regarding Cannabis Regulatory Frameworks -- Limited Medical Cannabis Education -- Development of Medical Cannabis Education Programs with High Scientific Content -- Conclusion -- 21: Practical Recommendations for the Use of Medical Cannabis -- Introduction -- Cannabinoid-Based Medicines: What Is Currently Available? -- Prescription or Pharmaceutical Cannabinoids -- Natural Cannabis -- Inhalation -- Practical Recommendations [11, 12] -- Oral Administration -- Practical Recommendations [11, 12] -- Therapeutic Properties of Cannabinoids: THC Versus CBD -- Practical Recommendations for the Prescription of Cannabinoid-Based Medicines -- Clinical Evidence to Support Cannabinoid Use in Specific Medical Conditions -- Is the Patient a Candidate for Cannabinoid Therapy? A Systematic Approach -- Conclusion -- 22: Cannabinoid-Based Medicines: Dosing, Titration & Monitoring -- Introduction -- Methods of Administration -- Inhalation: Smoking and Vaporizing -- Oral -- Oromucosal -- Topical -- Dosing -- Concentration and Potency -- Cannabis Flower Dosing -- Cannabis Oil Dosing -- Achieving Optimal Therapeutic Dose and Cannabis Rotation -- Cannabis Chemovar Rotation and Reduction -- Monitoring -- Summary -- 23: Cannabinoid-Based Medicines: Patient Safety Considerations -- Introduction -- Practical Considerations for Cannabis Use -- Considerations -- Immunocompromised Patients.

Calcineurin Inhibitors, Protein Disulfide Isomerase (PD1) Inhibitors, and Biologics -- Chronic Kidney Disease -- Older Adults and Patients with Concurrent Medical Conditions -- Polypharmacy and Drug Interactions [10] -- Precautions -- Concurrent Active Mood or Anxiety Disorder -- Patients with Risk Factors for Cardiovascular Disease (CVD) -- Tobacco Use -- E-Cigarette Use -- Severe Liver Dysfunction or Disease -- Medications Associated with Sedation or Cognitive Impairment -- Driving and Safety Sensitive Occupations -- Relative Contraindications -- Individuals Under the Age of 25 -- Cannabis Use Disorder (CUD) -- Substance Use Disorder (SUD) and Consideration for Harm Reduction -- Contraindications -- Cardiovascular Disease -- Respiratory Disease -- Psychosis and Bipolar Disorders -- Pregnancy and Breastfeeding -- Summary -- Part V: Cannabinoids and Pain -- 24: Cannabinoids and Pain: Mechanisms of Action -- Introduction -- Endocannabinoids' Mechanism of Action -- Anandamide (AEA) -- 2-Arachidonoylglycerol (2-AG) -- Endocannabinoids and Pain Modulation -- Peripheral Mechanisms -- Spinal Mechanisms -- Supraspinal Mechanisms -- Anandamide and 2-AG Synergistic Effect -- Endocannabinoid Receptors -- CB1 Receptors -- Central CB1 Receptors -- Peripheral CB1 Receptors -- Central CB2 Receptors -- Peripheral CB2 Receptors -- Other Putative Endocannabinoid Receptors: TRPV1 and GPR55 -- TRPV1 -- GPR55 -- Phytocannabinoids (THC and CBD) -- THC -- CBD -- Mechanisms of Action in Pain Modulation -- THC --

CBD -- References -- 25: Cannabinoids and Pain: Clinical Evidence -- Introduction -- Chronic Non-cancer Pain -- Chronic Neuropathic Pain -- Fibromyalgia -- Rheumatoid Arthritis -- Cancer Pain -- Acute Nociceptive Pain -- Summary -- 26: Cannabinoids and Cancer Pain -- Introduction -- Relevant Mechanisms of Cancer Pain. Current Understanding of Clinical Studies.

Sommario/riassunto

This book presents a well-balanced view of the potential medical use of cannabinoids in pain. It comprehensively covers the current challenges with medical cannabis utilization and provides recommendations for research and future directions.