

1. Record Nr.	UNINA9910337481203321
Titolo	Translational Research Methods in Diabetes, Obesity, and Nonalcoholic Fatty Liver Disease : A Focus on Early Phase Clinical Drug Development // edited by Andrew J. Krentz, Christian Weyer, Marcus Hompesch
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019
ISBN	3-030-11748-0
Edizione	[2nd ed. 2019.]
Descrizione fisica	1 online resource (557 pages)
Disciplina	616.4620072
Soggetti	Diabetes Metabolism - Disorders Pharmacology Metabolic Diseases Pharmacology/Toxicology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Part 1: Review of Clinical Investigative Methods -- Chapter 1: Quantifying Insulin Action in Humans -- Chapter 2: Assessment of Islet Alpha- and Beta-Cell Function -- Chapter 3: Pharmacokinetic and Pharmacodynamic Assessment of Novel and Biosimilar Insulins -- Chapter 4: Measurement of Energy Expenditure -- Chapter 5: QUANTIFYING APPETITE AND SATIETY -- Chapter 6: Non-invasive quantitative magnetic resonance imaging and spectroscopic biomarkers in nonalcoholic fatty liver disease and other cardiometabolic diseases associated with ectopic fat deposition -- Chapter 7: Structural and Functional Imaging of Muscle, Heart, Endocrine Pancreas and Kidneys in Cardiometabolic Drug Development -- Chapter 8: Positron emission tomography and computed tomography measurement of brown fat thermal activation: key tool for developing novel pharmacotherapeutics for obesity and diabetes -- Chapter 9: Isotopic Tracers for the Measurement of Metabolic Flux Rates -- Chapter 10: Role of Tissue Biopsy in Drug Development for NonAlcoholic Fatty Liver Disease and Other Metabolic Disorders -- Chapter 11: Utility of Invasive and Non-invasive Cardiovascular Research Methodologies in Drug Development

for Diabetes, Obesity and NAFLD/NASH -- Chapter 12: Omics: Potential role in early phase drug development -- Part 2: Preclinical Drug Development and Transitioning to Clinical Studies -- Chapter 13: Peptide Drug Design for Diabetes & Related Metabolic Diseases -- Chapter 14: ANIMAL MODELS OF TYPE 2 DIABETES, OBESITY AND NONALCOHOLIC STEATOHEPATITIS – CLINICAL TRANSLATABILITY AND APPLICABILITY IN PRECLINICAL DRUG DEVELOPMENT -- Chapter 15: Drug Development for Diabetes Mellitus: Beyond Hemoglobin A1c -- Chapter 16: Emerging Circulating Biomarkers For The Diagnosis And Assessment Of Treatment Responses In Patients With Hepatic Fat Accumulation, Nash And Liver Fibrosis -- Chapter 17: Quantitative Approaches in Translational Cardiometabolic Research: An Overview -- Chapter 18: Transitioning from Preclinical to Clinical Drug Development -- Chapter 19: Regulatory Considerations for Early Study and Clinical Development of Drugs for Diabetes, Obesity, NonAlcoholic Steatohepatitis (NASH) and other Cardiometabolic Disorders -- Chapter 20: Early Phase Metabolic Research with Reference to Special Populations.

Sommario/riassunto

This book aims to aid the selection of the most appropriate methods for use in early phase (1 and 2) clinical studies of new drugs for diabetes, obesity, non-alcoholic fatty liver disease (NAFLD) and related cardiometabolic disorders. Clinical research methods to assess the pharmacokinetics and pharmacodynamics of new diabetes drugs, e.g. the euglycemic clamp technique, have become well-established in proof-of-mechanism studies. However, selection of the most appropriate techniques is by no means straightforward. Moreover, the application of such methods must conform to the regulatory requirements for new drugs. This book discusses the need for new pharmacotherapies for diabetes, obesity and NAFLD and the molecular targets of drugs currently in development. Emerging technologies including functional imaging, circulating biomarkers and omics are considered together with practical and ethical issues pertaining to early phase clinical trials in subjects with cardiometabolic disorders. Translational Research Methods in Diabetes, Obesity, and Non-Alcoholic Fatty Liver Disease is of interest to biomedical scientists, pharmacologists, academics involved in metabolic research and clinicians practicing in these specialties.
