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Titolo	New Approaches to Drug Discovery [[electronic resource] /] / edited by Ulrich Nielsch, Ulrike Fuhrmann, Stefan Jaroch
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Descrizione fisica	1 online resource (335 p.)
Collana	Handbook of Experimental Pharmacology, , 0171-2004 ; ; 232
Disciplina	615.19
Soggetti	Pharmacology Pharmacy Medical biochemistry Metabolism Pharmacology/Toxicology Drug Safety and Pharmacovigilance Medical Biochemistry Metabolomics
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 at the end of each chapters and index.
Nota di contenuto	Preface -- Part 1. Historical View -- Drug discovery in the past and today.Part 2. Target Discovery -- Emerging target families: intractable targets. In vivo target validation especially for biological targets. HR RNAi/High Content analysis -- Part 3. Lead generation and Optimization -- Sources for leads: natural products, libraries. Screening: assays, readout, technology. Impact of structural biology, fragment based screening/Virtual screening. Predictive in silico tools of compound properties. High throughput synthesis. New compound classes: Protein-Protein Interaction. Sources for biological leads/Screening of biologicals -- Part 4. Test systems for Efficacy and Safety -- In vitro / Cell based assays. Pharmacodynamic. Pharmacokinetic. Safety and toxicology. Impact of biomarkers/personalized medicine. Simulating in vivo drug effects.
Sommario/riassunto	This volume gives an overview of state of the art technologies and

future developments in the field of preclinical pharmaceutical research. A balanced mix of experts from academia and industry give insight in selected new developments in the drug discovery pathway. The topics cover the different parts of the drug discovery process, starting with new developments in the target identification and validation area. The lead generation part as a next step focuses on the requirements and technologies to identify new small molecules as lead compounds for further optimization; in a second section the technologies to identify biologics as leads are addressed. The final part focuses on the pharmacological models and technologies to characterize new compounds and the impact of biomarkers to facilitate the transfer of drug candidates into the development phase.