Record Nr. UNINA9910787846203321 The fluorescent protein revolution / / editors, Richard N. Day, Michael **Titolo** W. Davidson Pubbl/distr/stampa Boca Raton:,: CRC Press/Taylor & Francis Group,, [2014] ©2014 **ISBN** 0-429-19353-X 1-4398-7508-1 Descrizione fisica 1 online resource (340 p.) Collana Series in cellular and clinical imaging Disciplina 616.07/58 Soggetti Cytodiagnosis Fluorescence microscopy Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Includes bibliographical references and index. Nota di bibliografia Nota di contenuto Front Cover; Contents; Series Preface; Preface; Editors; Contributors; Part I: History and perspective: Chapter 1: Introduction to fluorescent proteins; Part II: Photophysical properties of fluorescent proteins; Chapter 2 Lessons learned from structural studies of fluorescent proteins; Chapter 3: Optimization of fluorescent proteins; Chapter 4: Development of new colors from coral fluorescent proteins; Chapter 5: Red fluorescent proteins: multipurpose markers for live-cell imaging; Chapter 6: Optical highlighter photophysical properties Chapter 7: Far-red and near-infrared fluorescent proteinsPart III: Applications; Chapter 8: Genetically encoded fluorescent proteins and FRAP: Chapter 9: Optical highlighters: Applications to cell biology: Chapter 10: Optogenetic tools derived from plant photoreceptors; Chapter 11: Fluorescent proteins for FRET: monitoring protein interactions in living cells: Chapter 12: Super resolution techniques using fluorescent protein technology; Chapter 13: In vivo imaging revolution made by fluorescent proteins; Back Cover Sommario/riassunto Advances in fluorescent proteins, live-cell imaging, and superresolution instrumentation have ushered in a new era of investigations in cell biology, medicine, and physiology. From the

identification of the green fluorescent protein in the jellyfish Aeguorea

victoria to the engineering of novel fluorescent proteins, The Fluorescent Protein Revolution explores the history, properties, and applications of these important probes. The book first traces the history of fluorescent proteins and the revolution they enabled in cellular imaging. It then discusse