Record Nr. UNINA9910784529103321 **Titolo** Molecular imaging [[electronic resource]]: FRET microscopy and spectroscopy / / edited by Ammasi Periasamy, Richard N. Day Pubbl/distr/stampa Oxford: New York,: Published for the American Physiological Society by Oxford University Press, 2005 **ISBN** 1-281-03382-0 9786611033828 0-08-053687-5 Descrizione fisica 1 online resource (329 p.) The American Physiological Society methods in physiology series Collana Altri autori (Persone) PeriasamyAmmasi DayRichard N Disciplina 570/.28 Soggetti Fluorescence microscopy Fluorescence spectroscopy Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Front Cover: Molecular Imaging: FRET Microscopy and Spectroscopy: Copyright Page; Contents; Contributors; Chapter 1. Proteins and the Flow of Information in Cellular Function; Chapter 2. Basics of Fluorescence and FRET; Chapter 3. An Introduction to Filters and Mirrors for FRET; Chapter 4. FRET Imaging in the Wide-Field Microscope; Chapter 5. Confocal FRET Microscopy: Study of Clustered Distribution of Receptor-Ligand Complexes in Endocytic Membranes: Chapter 6. Multiphoton FRET Microscopy for Protein Localization in Tissue; Chapter 7. FRET Data Analysis: The Algorithm Chapter 8. Photobleaching FRET MicroscopyChapter 9. Single-Molecule FRET; Chapter 10. FRET Measurements Using Multispectral Imaging; Chapter 11. Real-Time Fluorescence Lifetime Imaging and FRET Using Fast-Gated Image Intensifiers: Chapter 12. Streak Fluorescence Lifetime Imaging Microscopy: A Novel Technology for Quantitative FRET Imaging; Chapter 13. Time-Correlated Single Photon Counting Fluorescence Lifetime Imaging- FRET Microscopy for Protein Localization; Chapter 14. Bioluminescence Resonance Energy Transfer:

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Sommario/riassunto

The detection and measurement of the dynamic interactions of proteins within the living cell are critical to our understanding of cell physiology and pathophysiology. With FRET microscopy and spectroscopy techniques, basic and clinical scientists can make such measurements at very high spatial and temporal resolution. But sources of background information about these tools are very limited, so this book fills an important gap. It covers both the basic concepts and theory behind the various FRET microscopy and spectroscopy techniques, and the practical aspects of using the techniques and analyz