Record Nr. UNINA9910143407703321 Green fluorescent protein [[electronic resource]]: properties, **Titolo** applications, and protocols / / edited by Martin Chalfie, Steven R. Kain Pubbl/distr/stampa Hoboken, N.J.,: Wiley-Interscience, c2006 **ISBN** 1-280-28688-1 9786610286881 0-470-32559-3 0-471-73949-9 0-471-73948-0 Edizione [2nd ed.] Descrizione fisica 1 online resource (486 p.) Methods of biochemical analysis; v. 47 Collana Altri autori (Persone) ChalfieMartin KainSteven Disciplina 543.8 572.6 572/.6 Soggetti Green fluorescent protein Electronic books. 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 and index. Nota di contenuto Discovery of green fluorescent protein / Osamu Shimomura -- Photons for reporting molecular events: green fluorescent protein and four luciferase systems / J. Woodland Hastings and James G. Morin --Biochemical and physical properties of green fluorescent protein / William W. Ward -- The three-dimensional structure of green fluorescent protein and its implications for function and design / George N. Phillips, Jr -- Molecular biology and mutation of green fluorescent protein / David A. Zacharias, Roger Y. Tsien -- Discovery and properties of GFP-like proteins from nonbioluminescent anthozoa / Konstantin A. Lukyanov ... [et al.] -- Evolution of function and color in GFP-like proteins / Mikhail V. Matz, Yulii A. Labas, and Juan Ugalde --The uses of green fluorescent protein in prokaryotes / Raphael H. Valdivia, Brendan P. Cormack, and Stanley Falkow -- The uses of green fluorescent protein in yeasts / Amy L. Hitchcock, Jason A. Kahana, and

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## Sommario/riassunto

Since the discovery of the gene for green fluorescent protein (GFP), derived from jellyfish, this protein that emits a green glow has initiated a revolution in molecular biosciences. With this tool, it is now possible to visualize nearly any protein of interest in any cell or tissue of any species. Since the publication of the first edition, there have been tremendously significant technological advances, including development of new mutant variants. Proteins are now available in yellow and blue, and Novel Fluorescent Proteins (NFPs) have expanded their utility in developing biosensors, biolog