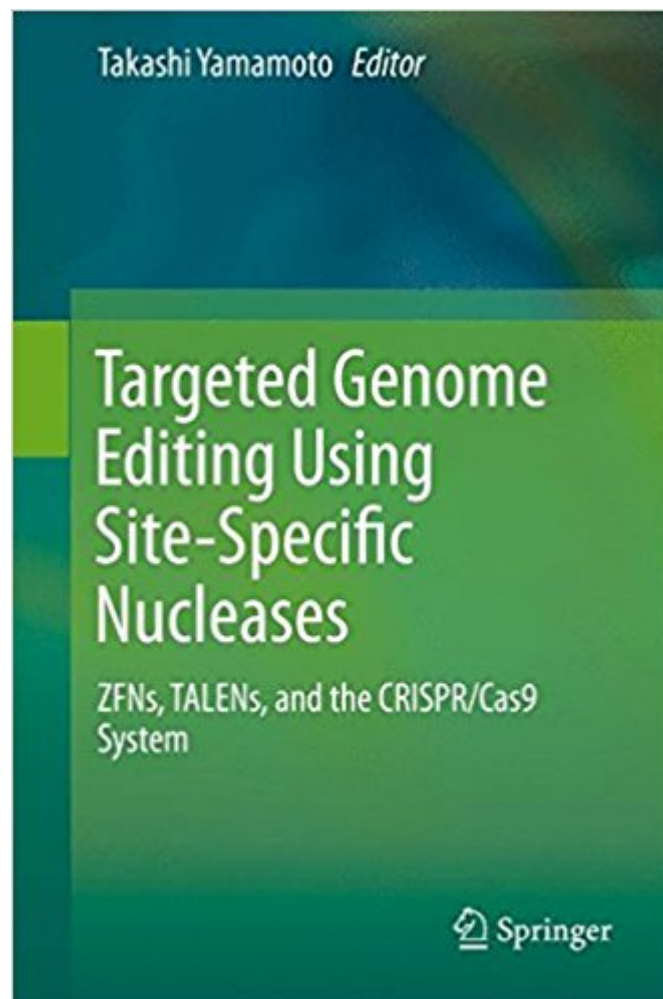


The book was found

# Targeted Genome Editing Using Site-Specific Nucleases: ZFNs, TALENs, And The CRISPR/Cas9 System



## Synopsis

This book serves as an introduction to targeted genome editing, beginning with the background of this rapidly developing field and methods for generation of engineered nucleases. Applications of genome editing tools are then described in detail, in iPS cells and diverse organisms such as mice, rats, marine invertebrates, fish, frogs, and plants. Tools that are mentioned include zinc finger nucleases (ZFNs), transcription activator-like effector nucleases (TALENs), and CRISPR/Cas9, all of which have received much attention in recent years as breakthrough technologies. Genome editing with engineered nucleases allows us to precisely change the target genome of living cells and is a powerful way to control functional genes. It is feasible in almost all organisms ranging from bacteria to plants and animals, as well as in cultured cells such as ES and iPS cells. Various genome modifications have proven successful, including gene knockout and knock-in experiments with targeting vectors and chromosomal editing. Genome editing technologies hold great promise for the future, for example in biomedical research, clinical medicine, and generation of crops and livestock with desirable traits. A wide range of readers will find this book interesting, and with its focus on applications in a variety of organisms and cells, the book will be valuable for life scientists in all fields.

## Book Information

Hardcover: 205 pages

Publisher: Springer; 2015 edition (January 6, 2015)

Language: English

ISBN-10: 443155226X

ISBN-13: 978-4431552260

Product Dimensions: 6.1 x 0.6 x 9.2 inches

Shipping Weight: 1 pounds (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #1,635,721 in Books (See Top 100 in Books) #372 in Books > Science & Math > Biological Sciences > Biology > Developmental Biology #617 in Books > Medical Books > Basic Sciences > Cell Biology #918 in Books > Textbooks > Science & Mathematics > Biology & Life Sciences > Botany

[Download to continue reading...](#)

Targeted Genome Editing Using Site-Specific Nucleases: ZFNs, TALENs, and the CRISPR/Cas9 System Site-Specific Cancer Series: Prostate Cancer Nine Day Novel-Self-Editing: Self Editing For

Fiction Writers: Write Better and Edit Faster (Writing Fiction Novels Book 2) EDITING The RedPen Way: 10 steps to successful self-editing Europe before Rome: A Site-by-Site Tour of the Stone, Bronze, and Iron Ages Molecular Pathology of Nervous System Tumors: Biological Stratification and Targeted Therapies (Molecular Pathology Library) The Muvipix.com Guide to Adobe Premiere Elements 9 (color version): The tools, and how to use them, to make movies on your personal computer using the best-selling video editing software program. Biomimetic Materials And Design: Biointerfacial Strategies, Tissue Engineering And Targeted Drug Delivery (Manufacturing Engineering & Materials Processing) The Next Step in Guided Reading: Focused Assessments and Targeted Lessons for Helping Every Student Become a Better Reader Targeted Therapies in Cancer:: Myth or Reality? (Advances in Experimental Medicine and Biology) Lipoproteins as Carriers of Pharmacological Agents (Targeted Diagnosis and Therapy) Target Keto: The Targeted Ketogenic Diet for Low Carb Athletes to Burn Fat Fast, Build Lean Muscle Mass and Increase Performance Targeted: (BBW Alien Scifi Romance) (Brides of the Kindred Book 15) Targeted Cancer Therapy: A Handbook For Nurses Sales Strategies for Gentle Souls: Targeted Sales Training for Professional Aromatherapists (The Secret Healer Business Guides Book 1) Using Computers in the Law Office (with Premium Web Site Printed Access Card) (West Legal Studies) The Genome War: How Craig Venter Tried to Capture the Code of Life and Save the World Bacterial Genomics: Genome Organization and Gene Expression Tools The Social Life of DNA: Race, Reparations, and Reconciliation After the Genome Molecular Analysis and Genome Discovery

[Dmca](#)