

book spotlight

RNAi: A Guide to Gene Silencing

Fortune Magazine calls RNAi Technology, "Biotech's Billion Dollar Breakthrough."

RNA interference (RNAi) is one of the hottest research tools in biology today because it allows scientists to assess the functions of genes by turning them off and seeing what happens to a cell.

RNAi: A Guide to Gene Silencing, edited by Gregory Hannon of Cold Spring Harbor Laboratory (Product Code [Z70,113-0](#)), contains more than 400 pages over 18 chapters, along with numerous illustrations. The use of double-stranded RNA to silence gene activity has become widely and rapidly adopted. RNA interference is highly specific, remarkably potent, and acts on cells and tissues far removed from the site of introduction. The principles behind RNAi are just being uncovered, but this laboratory technique has been applied effectively in a wide variety of animal and plant species. Variations on RNAi are revolutionizing many approaches to experimental biology, complementing traditional genetic technologies with a quicker and cheaper way of mimicking the effects of mutations in both cell cultures and in living animals. This book presents the principles of RNA interference and reliable protocols for its laboratory use in *C. elegans*, *Drosophila*, plants, avian embryos, mammalian cells, mouse oocytes, and more.

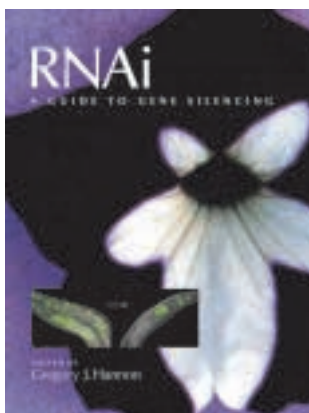


Table of Contents:

- Chapter 1. Sense Cosuppression in Plants: Past, Present, and Future
- Chapter 2. Transgene Cosuppression in Animals
- Chapter 3. Regulation of the Genome by Double-stranded RNA
- Chapter 4. RNAi in *Caenorhabditis elegans*
- Chapter 5. Biochemistry of RNAi in *Drosophila*
- Chapter 6. Stable Suppression of RNAi in Mammals
- Chapter 7. RNAi Proteins and Functions in Plants: Genetics of RNAi in Plants
- Chapter 8. The Ribonuclease III Superfamily: Forms and Functions in RNA Maturation, Decay, and Gene Silencing
- Chapter 9. RNA-dependent RNA Polymerase in Gene Silencing
- Chapter 10. Structure and Function of Heterochromatin: Implications for Epigenetic Gene Silencing and Genome Organization
- Chapter 11. Total Interference: Genome-wide RNAi Screens in *C. elegans*
- Chapter 12. PTGS Approaches to Large Scale Functional Genomics in Plants
- Chapter 13. Mammalian RNA Interference
- Chapter 14. RNAi in Avian Embryos
- Chapter 15. Guide to RNAi in Mouse Oocytes and Preimplantation Embryos
- Chapter 16. RNAi Technologies in *Drosophila* Cell Culture
- Chapter 17. RNAi Applications in *Drosophila melanogaster*
- Chapter 18. RNA Interference in *Trypanosoma brucei* and Other Nonclassical Model Organisms

Ordering Information

Product	Description	Unit
Z70,113-0	RNAi: A Guide to Gene Silencing	1 each

Science is changing. *Are you?*

Order your copy today. Keep pace with new technology, while updating your protocols and knowledge...

For a complete listing of all scientific books that Sigma-Aldrich has to offer, visit our website at sigma-aldrich.com/books.