C. elegans: A Practical Approach

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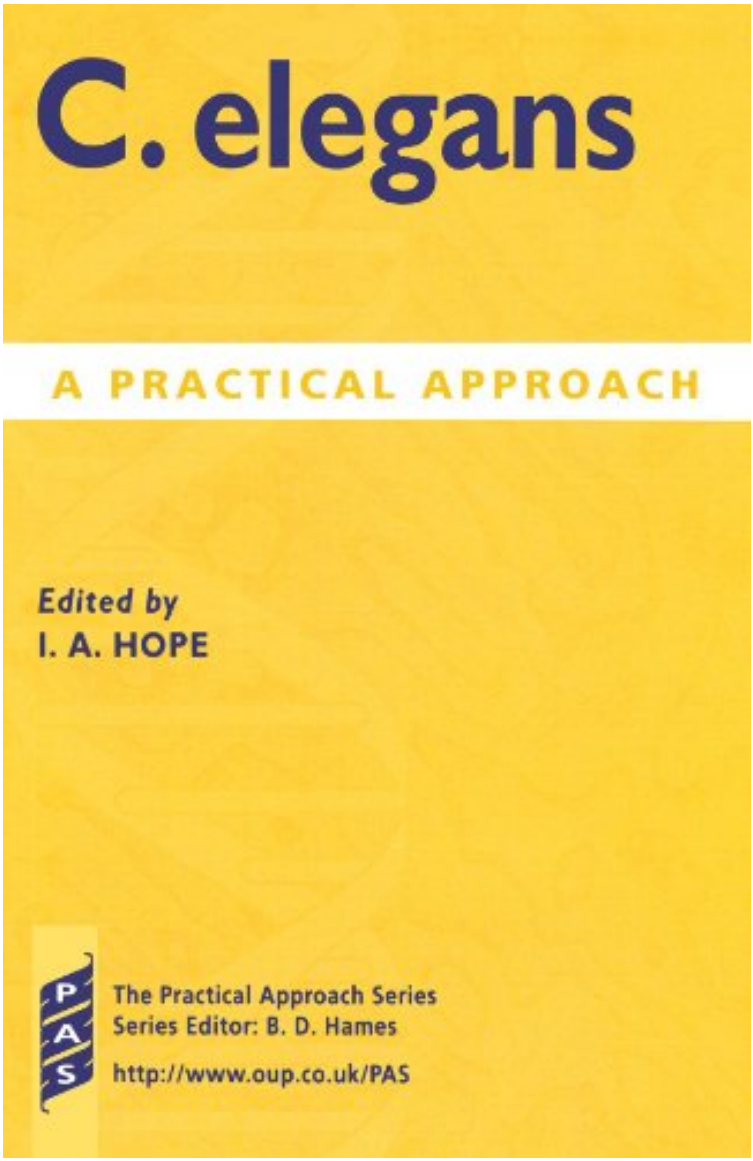

#1808878 in Books 1999-12-15Ingredients: Example IngredientsOriginal language:EnglishPDF # 1 6.10 x .60 x 9.20l, 1.16 #File Name: 0199637385304 pages | File size: 46.Mb

From Oxford University Press : C. elegans: A Practical Approach before purchasing it in order to gage whether or not it would be worth my time, and all praised C. elegans: A Practical Approach:

2 of 2 people found the following review helpful. If you work with nematodes you must own this bookBy Andres G. Vidal-gadeaThis book contains vital and easily accessible information for people working with the nematode C. elegans. It is written in a very accessible way and contains lots and lots of precious information to help people starting up with worms and becomes a reference book for those already savvy.2 of 2 people found the following review

helpful. C. elegans for begginers and expertsBy MarcelaThe book is exactly what you need if you are starting to deal with C. elegans. It contains both basic and complex protocols and for a wide variety of worm organs.In addition there is an appendix with useful web links to C. elegans community.2 of 2 people found the following review helpful. Great book, horrible printing qualityBy ZachI ordered this book recently and while the text is a classic in the C. elegans field, the (paperback) copy I received was printed so badly that the images are basically useless. It looks like it came out of a badly-aligned inkjet! The quality of the printed text is OK, but nothing great.By way of comparison, I have an older edition of this book, also in paperback, that looks much better in all respects.

Caenorhabditis Elegans has been a popular model organism for biological research for over thirty years and has been used to investigate many aspects of animal development, for example apoptosis, the Hox genes, signal transduction pathways, and the development of the nervous system. It has recently taken on new importance with the publication of the entire genome sequence in 1998. The first chapter gives all the basic information on C. elegans required to use it: it's natural history, anatomy, life cycle, development, and evolution. Information on how to obtain, grow, and maintain C. elegans for use as a model system is given in Chapter 4. Chapters 2 and 3 describe the genome project and show how to use genome sequence information by searching the database for homologues using different search methods and then how to analyse the search data. The next chapter gives the essential practical details of transformation and common uses for the technique. Chapter 6 covers reverse genetics and describes strategies for gene inactivation that are known to work in C elegans: epigenetic inactivation and mutational germ line inactivation. Chapter 7 is designed to help the user analyse phenotype by microscopy and includes Normaski, fluorescence, 4-dimensional, and electron microscopy. Techniques for studying the neurobiology of C. elegans are given in chapter 8. Chapter 9 describes the three commonly used approaches for studying gene expression and Chapter 10 deals with the common methods of molecular biology essential for gene characterization. C. elegans is not the ideal organism for biochemical studies, but chapter 11 describes several procedures for producing biochemically useful quantities of pure tissues. The final chapter is about conventional genetics and details the standard procedures for selfing and crossing; mutagenesis and mutant screening; characterization of mutants; gene mapping; temperature-shift experiments and mosaic analysis. Caenorhabditis Elegans: A Practical Approach will therefore provide all the background information necessary for use of C. elegans as a model system.

"Provides information for researchers working with Caenorhabditis elegans, giving basic background on the organism's natural history, anatomy, life cycle, and evolution, and then detailing methods for using C. elegans in research. Tells how to obtain and grow C. elegans, and discusses the C. elegans genome project, transformation of C. elegans, reverse genetic techniques, analysis of phenotypes by various methods, and approaches for studying gene expression. Describes procedures for producing biochemically useful preparations, and details conventional genetics procedures for selfing and crossing, mutagenesis and mutant screening, gene mapping, and mosaic analysis. Hope teaches biology at the University of Leeds."--SciTech Book NewsAbout the AuthorIan A. Hope is at University of Leeds.