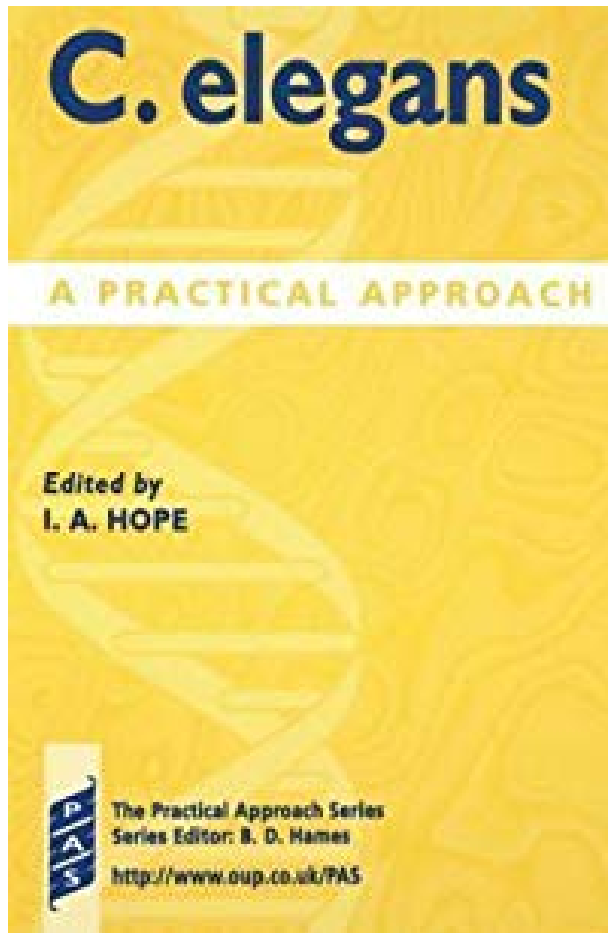


C. Elegans: A Practical Approach



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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 its entire genome sequence in 1998. This book contains all the basic information on C. elegans required to use it: its natural history, anatomy, life cycle, development, and evolution; information on how to obtain, grow, and maintain C. elegans for use as a model system; the genome project and 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 essential practical details of transformation and common uses for the technique; and how to analyse phenotype by microscopy, including Normaski, fluorescence, 4-dimensional, and electron microscopy. Reverse genetics and strategies for gene inactivation that are known to work in C elegans are also outlined, such as epigenetic inactivation and mutational germ line inactivation.

Techniques for studying the neurobiology of C. elegans are given as well as information on conventional genetics and details of the standard procedures for selfing and crossing; mutagenesis and mutant screening; characterization of mutants; gene mapping; temperature-shift experiments and mosaic analysis. All in all, this

is the ideal book for those looking to know anything from applicability to the biology of *C. elegans*.