



ACTTTGACTGATAGTGAC CTGTTCTT
GTGATGACTGATAGTGAC TTTGACTT
TGTTTCGTTTGAACAA ATTCGTGGT
GAACTCGTCGAAC GTTCGTCCGA
AGCTGATAGTG CGAACAAATTCGT
GATACTGAT ACTGATAGTGACCTG
ATCGAACC CTGTTTCGTTTGAACAA
TGACCTGT TCGTGAACACTAGTGACCT

Integrated Genomics

A Discovery-Based Laboratory Course

Guy A. Caldwell, Shelli N. Williams and Kim A. Caldwell
The University of Alabama

Integrated Genomics: A Discovery-Based Laboratory Course introduces the excitement of discovery to the basic molecular biology laboratory. Utilizing up-to-date molecular biology protocols and a basic experimental design, this text offers experience with three different model systems. Students will become familiar with the simplicity and power of single-celled organisms, *E.coli* and *S.cerevisiae*, as they search for genes that interact and function within the nematode *C.elegans*. They will also begin to explore the wealth of bioinformatics data available on the Internet via numerous exercises incorporated throughout the book.

Using simple and inexpensive techniques, the concluding chapters enable students to examine the phenotypic consequences of reducing gene function within *C.elegans*. The authors have included a range of alternative experiments that offer flexibility in determining the end date or goal of the laboratory, as well as working within the available budget and resources of most classroom environments.

Key Features

- Provides training with multiple inexpensive and popular model organisms including *C.elegans* and *S.cerevisiae*
- Adopts a student-tested, discovery-based format
- Integrates basic bioinformatics within an experimental context
- Inclusive of modern molecular genomic/proteomic technologies such as the yeast two-hybrid system and RNAi
- Accompanying website includes easy access to instructional materials and experimental reagents including all strains and plasmids used in the course

An invaluable text for advanced undergraduate and postgraduate students studying cell and molecular biology, genetics, microbiology, biochemistry, proteomics, genomics and bioinformatics.

Cover design by Dan Jubb

 **WILEY**
wiley.com

ISBN 0-470-09502-4



9 780470 095027