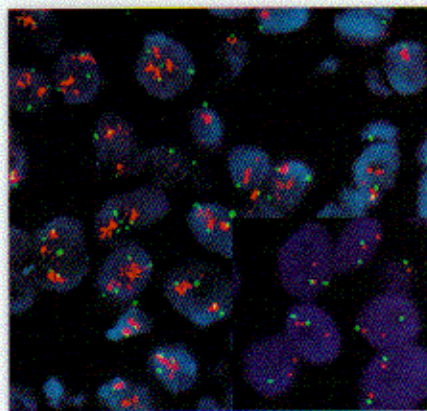


Create a dynamic laboratory experience in genetics



Fluorescent *in situ* hybridization-treated (FISH) interphase nuclei from histological sections showing normal tissue (insert) and the amplification of the HER2 oncogene located on chromosome 17 in breast cancer tissue (red fluorescent signal). The green fluorescent signals are due to the hybridization of a DNA probe specific to the centromere of chromosome 17, and serve as a control. Diagnostically, the HER2 test is important because breast cancer cells showing HER2 amplification respond to Herceptin™ therapy. Slight signal variations in the normal tissue are artifacts of preparation. (Photographs courtesy of the staff of the Mayo Clinic Cytogenetics Laboratory, Dr. Daniel Van Dyke, director.)

The definitive genetics lab manual for over 60 years, this user-friendly volume stresses classical genetics, but includes some of the recent advances related to molecular and human genetics as well.

In response to feedback from genetics instructors, the Fourteenth Edition provides new photos, new problems and examples, updated content, and updated teaching tips in the accompanying Instructor's Manual.

The Fourteenth Edition is also available for customization through the Pearson Custom Library online database.

Highlights of the Fourteenth Edition

- ▶ **NEW!** 4-color photos and figures have been added throughout the lab manual. Examples include new photos and illustrations of maize (*Investigation 1*), Allium mitosis (*Investigation 4*), linkage and crossing over (*Investigation 11*), E. coli (*Investigation 17*), and more.
- ▶ **NEW!** Discussion on the human Y chromosome and linkage (*Investigation 8*).
- ▶ **NEW!** Section on imprinting and epigenetic phenomena in humans (*Investigation 25*).
- ▶ **NEW!** Added examples covering topics such as Mapping the Human Genome (*Investigation 15*) and Population Genetics (*Investigation 23*).

About the Cover

Drosophila are one of the most commonly studied model organisms in genetics. This photograph demonstrates mutant variations in eye-color, moving clockwise: sepia, brown, wild-type, and scarlet. Mutants are due to autosomal traits, or the traits can be sex-linked.

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