

The advances made in animal gene expression control have benefited plant research, as we continue to find that much of the machinery and mechanisms controlling gene expression have been preserved in all eukaryotes. Through comparison, we have learned that certain aspects of gene regulation are shared by plants and animals, i.e. both contain introns separating the coding regions of most genes and both utilize similar machinery to process the introns to form mature mRNAs. Yet there are some interesting differences in gene structure and regulation between plants and animals. For example, unlike animal genes, plant genes are generally much smaller with fewer and smaller introns.

Regulation of Gene Expression in Plants presents some of the most recent, novel and fascinating examples of transcriptional and posttranscriptional control of gene expression in plants and, where appropriate, provides comparison to notable examples of animal gene regulation.

About the Editor:

Dr. Carole L. Bassett is a molecular biologist at the USDA – ARS's Appalachian Fruit Research Station in Kearneysville, West Virginia. Her research emphasizes the identification and characterization of different mechanisms controlling gene expression in plants. She has worked on flowering in the Japanese morning glory (*Ipomoea nil* L.) and in fruit quality and development in peach (*Prunus persica* L. [Batsch]). Her current area of interest is in understanding how genes respond to cold and drought stress in peach and apple (*Malus X domestica*) and using this information to reduce the impact of adverse environmental conditions on orchard production and fruit quality.

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