

**Title** Ethylene-regulated transcription and crosstalk with jasmonic acid  
**Author** Hideaki Shinshi  
**Citation** Plant Science, Volume 175, Issues 1-2, July-August 2008, Pages 18-23  
**Keywords** Ethylene; Jasmonic acid; Transcription factor; ERF

#### **Abstract**

The transcriptional activation of genes in response to ethylene depends on the ETHYLENE INSENSITIVE3 (EIN3) and EIN3-like (EIL), downstream signaling components in the ethylene pathway. EIN3/EIL genes are not ethylene-induced and regulated at post-transcriptional level. The EIN3/EIL family genes are involved in a regulatory cascade and activate other transcription factors such as ETHYLENE RESPONSE FACTOR1 (ERF1), a member of the ethylene-responsive transcription factor (ERF) family of transcription factors. ERFs have been shown to act as activators or repressors of additional downstream ethylene responsive genes. ERFs function as a transcription factor that integrates signals from ethylene and jasmonic acid pathway. ERFs represent a control point for crosstalk with other signals. Multiple signaling pathways converge on ERFs by transcriptional and post-transcriptional regulation, and a specific subset of ethylene responses is modulated by ERFs that are regulated not only by ethylene but also by other signals.