

## ABSTRACTS - Session III: Signalling

PIII03

### **DOES THE ANIMAL PROAPOPTOTIC PATHWAY WORK IN PLANT CELLS?**

ANNA MANARA, BARBARA SOTTOCORNOLA, MASSIMO DELLEDONNE AND MASSIMO CRIMI.

Dept. of Biotechnology, University of Verona – Italy.

*Keywords: Bcl-2 proteins, Bid, apoptosis.*

Bid is a BH3-only member of the Bcl-2 family that regulates cell death at the level of mitochondrial membranes. Full length Bid protein (flBid) becomes activated after a proteolytic cleavage catalyzed by apical caspases (tBid). The cleaved protein then re-locates to mitochondria and promotes membrane permeabilization, presumably by interaction with mitochondrial lipids and other Bcl-2 proteins. The un-cleaved Bid (flBid) also has pro-apoptotic potential in vivo, when ectopically expressed in cells, or in vitro. Although no homologues of Bcl-2 proteins have been identified in plant genomes to date, recent evidence suggests that both Bcl-2 and Bax can fulfill similar roles when introduced into plant cells (Jones, 2000). In this study both full length and truncated Bid proteins were expressed in plant.