

**ATFC is a Novel Transducer for the Unfolded Protein Response in  
*Bombyx mori* BM5 Cells**

**Tae Won Goo<sup>1</sup>, Eun Young Yun<sup>1</sup>, Sung-Hwan Kim<sup>1</sup>, Kwang-Ho Choi<sup>1</sup>, Jae-Sam Hwang<sup>1</sup>,  
Seok-Woo Kang<sup>1</sup> and O-Yu Kwon<sup>2\*</sup>**

*<sup>1</sup>Department of Agricultural Biology, The National Institute of Agriculture Science & Technology, R.D.A., Suwon 441-100, Korea and <sup>2</sup>Department of Anatomy, College of Medicine, Chungnam National University, Taejon 301-747, Korea*

We report the isolation of a novel cDNA, ATFC (activating transcription factor of chaperone), from a *Bombyx mori* BM5 cells encoding a putative transducer for ER stress. ATFC encodes 236 amino acids, in which both basic region and leucine zipper exist in its C-terminal, in contrast to the Hac1p in its N-terminal of yeast. The expression of ATFC was strongly up-regulated by ER stresses, and which was specifically bind to the unfolded protein response element (UPRE). ATFC cDNA-transfected BM5 cell is showing the more enhanced ER chaperone expression against ER stress. These results thus indicate that ATFC encodes a putative transducer of ER stress.