

8<sup>th</sup> World Congress on

## PLANT GENOMICS AND PLANT SCIENCE

August 10-11, 2018 Osaka, Japan

**Ubiquitination contributes to regulation of the hypoxia response during early seedling in *Arabidopsis thaliana*****Jung In Kim**

Chonnam National University, South Korea

Ubiquitination is an important process related to the activities of enzymes which occurs in the post-translational modification stage. This process requires for the regulation of divers cellular functional through biological events including the response to hormone, apoptosis and abiotic stress. In this study, we characterized the biology functional of *AtEUL* (*Arabidopsis thaliana* E3 Ubiquitin Ligase 1) in ethanol response. The initial result showed that, the mRNA level of *AtEUL1* was dramatically induced by ethanol exogenous application. The transgenic plants overexpressing *AtEUL1* were hypersensitive to ethanol response than wild-type during dark-grown seedling growth, whereas the *ateul1* mutant was hypersensitive, indicating that *AtEUL1* negatively regulates ethanol-mediated response of early dark-grown seedling growth. Additionally, the *ateul1* mutant was significantly influential in ethanol sensitive parameters including hypocotyl length and the expression of ethanol metabolic genes. The taken together, the result suggests that *AtEUL1*, a ligase E3 enzyme, plays a function as ethanol regulator response in early seedling dark-grown of *Arabidopsis* development.

**Biography**

Jung In Kim is fourth year student in Department of Applied biology, Chonnam National University of South Korea. She is studying in plant biotechnology researching at the Cheol Soo Kim's lab. She is interested in ethanol fermentation on anaerobic condition, also her work is related to post-translational modification stage

jik9891@naver.com

Notes: