

SEMINAR

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18 March 2015 (Wednesday), 2pm
Seminar Rm 05-41 (Level 5)

Hosted by: Dr JI Liang Hui

Genetic, Epigenetic and Physiological Control of Rice Chlorophyll Biosynthesis and Leaf Color

Prof Shu Qingyao
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Prof Shu Qingyao is currently a professor of Zhejiang University, Hangzhou, China. His research area ranges from rice breeding by conventional breeding, hybrid technology and transgenesis. If you are interested on the safety of transgenic crops, he is a good expert to consult. He has served as a plant breeder/geneticist in the Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture in the International Atomic Energy Agency, USDA/ARS and University of Ottawa.

The market and problems on the production of hybrid rice seeds will be briefed. I will present our long quest to solve the genetic basis of a yellowish leaf mutant we term xantha. Our recent data indicates that xantha is caused by an inheritable epigenetic mutation in the GUN4 gene, which is involved in chlorophyll biosynthesis. GUN4 expression is regulated by light, stress stimuli and encodes a chloroplast-targeted protein.

Recent Publications:

1. A 90-day safety study in Wistar rats fed genetically modified rice expressing snowdrop lectin *Galanthus nivalis* (GNA). *Food and chemical toxicology* 45.3 (2007): 350-363.
2. A 90-day safety study of genetically modified rice expressing Cry1Ab protein (*Bacillus thuringiensis* toxin) in Wistar rats. *Food and Chemical Toxicology* 45.3 (2007): 339-349.
3. Larvicidal Cry proteins from *Bacillus thuringiensis* are released in root exudates of transgenic *B. thuringiensis* corn, potato, and rice but not of *B. thuringiensis* canola, cotton, and tobacco." *Plant Physiology and Biochemistry* 42.5 (2004): 383-387.