

Multi-locus Genome-Wide Association Study and Gene Expression Analysis of Anticancer Peptide Lunasin in Soybean (*Glycine max* L. Merr.) Seeds.

Soybean [*Glycine max* (L.) Merr.] seeds contain a variety of potential health beneficial phytochemicals including cancer-preventive molecule lunasin. This research is aimed at: (1) identify genetic variants including quantitative trait nucleotides (QTNs) and their associated single nucleotide polymorphism (SNP) markers for lunasin contents in the soybean germplasm collection using multi-locus genome-wide association study (GWAS) approach, (2) select elite lines from the mapping panel with high and stable lunasin contents for soybean trait improvement, (3) analyze candidate gene expression to validate QTNs for lunasin productions in soybean plants. The information of QTNs and SNP markers associated with lunasin contents will be used in molecular breeding programs to produce elite soybean cultivars with better seed quality and cancer prevention.

For technical information Contact:

Professor Jiazheng (John) Yuan, PhD
Department of Biological and Forensic Sciences
Fayetteville State University
STB 407
1200 Murchison Rd
Fayetteville, NC 28301
Email: jyuan@uncfsu.edu
Tel: 910-672-1056