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GNACDAA

### Generation of new cDNA Resources from Soybean

Comprehensive cDNA collections provide essential resources for functional gene analysis. Therefore the National BioResource Project of the Japanese Government supported at the Japanese Soybean Full-Length cDNA Research Consortium to prepare nearly 40,000 cDNA clones from soybean (*Glycine max*).

Soybeans are one of the world's most important crops with their high protein and oil content. To a large extent soybeans are grown for oil production, where the remaining protein is used as livestock feed. But in particular in Japan, soybeans are also directly consumed as for example in miso, natto, kinako, shoyu, tofu, or edamame. Less well known is that Henry Ford was not only a pioneer for car manufacturing but also a great leader of soybean research and industry. Already by 1935 Ford used soybeans in the production of every and each car!

Using a normalized full-length enriched cDNA library from DNAFORM, 39,936 soybean cDNA clones have now been isolated and clustered based on 5' and 3' end sequences. From 22,674 scaffolds, the RIKEN scientists thus far obtained 6,570 new full-length sequences from soybean cDNAs. Those data indicate that 87.7% of the soybean cDNA clones comprise complete coding sequences in addition to 5'- and 3'-untranslated regions, and that they cover a wide variety of different genes. This project shows the effective use of our cDNA library technology for creating important resources for gene analysis and genome annotation based on superior gene discovery and full-length rates.

The results from the soybean cDNA project can be found at the RIKEN Soybean Full-Length cDNA Database ( <http://rsoy.psc.riken.jp/> ). The publication is freely available as open access under:

<http://dnaresearch.oxfordjournals.org/cgi/content/full/15/6/333>

#### **References:**

Umezawa T et al., Sequencing and analysis of approximately 40,000 soybean cDNA clones from a full-length-enriched cDNA library. DNA Res. 2008 Dec;15(6):333-46. Epub 2008 Oct 16

The National BioResource Project of the Japanese Government:

<http://www.nbrp.jp/?jsessionid=0ED5844AFAA02332DD4F30F71E043397.lb1>

\* Full-length cDNA library service was jointly developed by RIKEN and DNAFORM.