National Research Institute of Brewing (2010)

Gene analysis reconfirmed the safety of Kuro-Koji (black) mold group for use in Shochu making

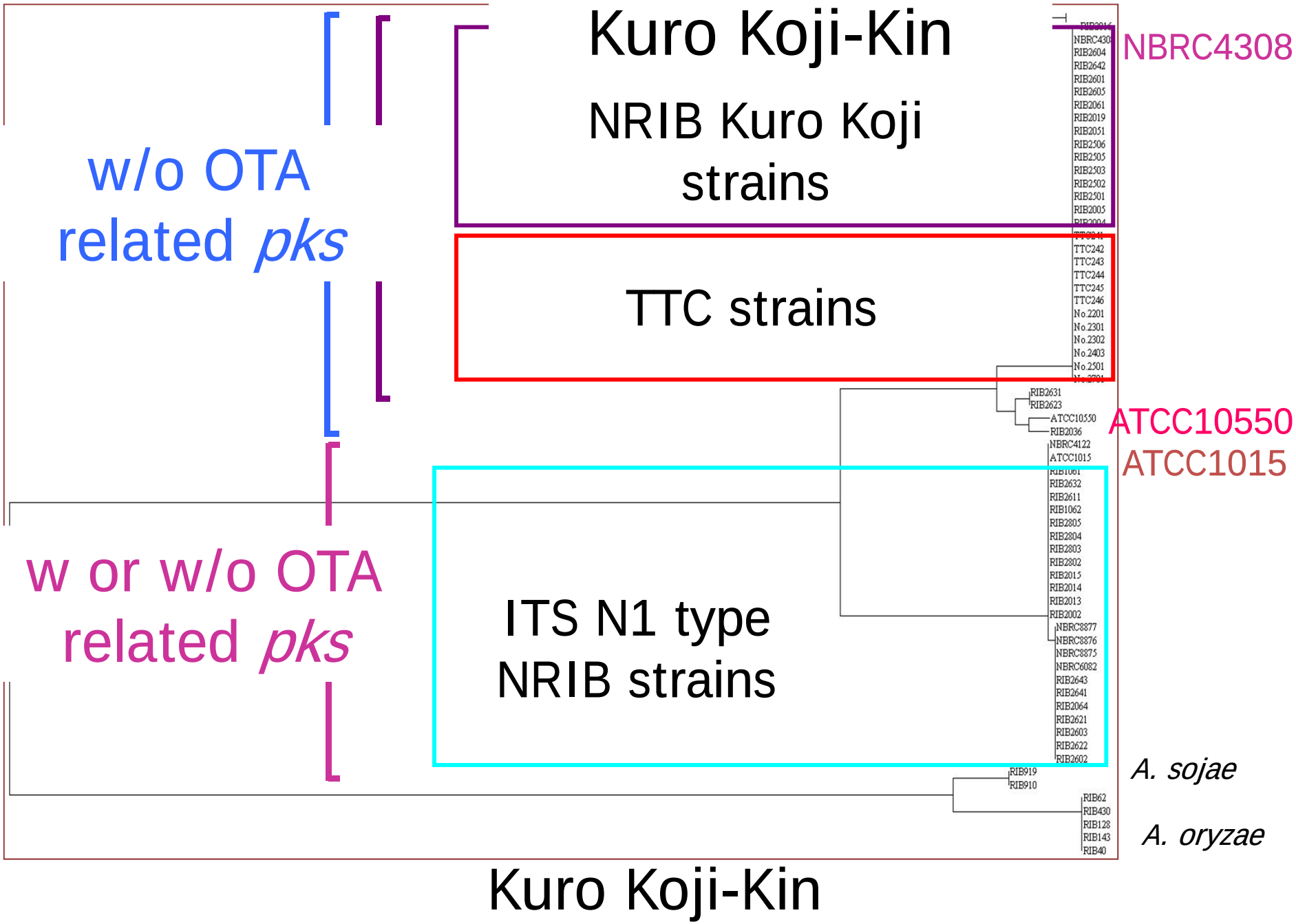
Kuro-koji (black) mold is used for Awamori* making in Okinawa, and shiro-koji (white) mold is used for Shochu* making in Kyushu, Japan. The kuro-koji mold is classified as *Aspergillus luchuensis* or *A. awamori*, and shiro-koji mold is classified as *A. kawachii*. It is believed that kuro-koji and shiro-koji molds are closely related (kuro-koji mold group). However, the relationship of the kuro-koji mold group and *A. niger* was not clear. In addition, some strains of *A. niger* produce a mycotoxin, ochratoxin A.

Thus, several genes of strains of kuro-koji, shiro-koji and *A. niger* kept in NRIB and other sources were sequenced. The result showed that kuro-koji and shiro-koji made one group, and that *A. niger* made another group. In addition, kuro-koji and shiro-koji lacked a polyketide synthase gene, which is involved in ochratoxin A production.

This study showed that kuro-koji and shiro-koji are different from *A. niger*, and that kuro-koji and shiro-koji do not produce ochratoxin A.

*Awamori and Shochu are traditional distilled liquor in Japan.

O. Yamada et al., *J. Biosci. Bioeng*., **112**, 233-237 (2011)


Kuro Koji-Kin
NRIB Kuro Koji strains
TTC strains
ITS N1 type NRIB strains
w/o OTA related *pks*
w or w/o OTA related *pks*
NBRC4308
ATCC10550
ATCC1015
A. sojae
A. oryzae
Kuro Koji-Kin