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The relationship between *XorII* very-short-patch-repair endonuclease and bacterial race of Korean *Xanthomonas oryzae* pathovar *oryzae*

Park, Young-Jin, Jeong Gu Kim, Eun-Sung Song, Hee-Jung Cho, Tae-Whan[1] Noh and Byoung-Moo Lee*

National Institute of Agricultural Biotechnology, RDA, Suwon, 441-707, Korea; [1]Honam Agricultural Research Institute, RDA, Iksan, 570-080, Korea (*lbmoo@rda.go.kr)

Xanthomonas oryzae pv. *oryzae* (Xoo) causes bacterial blight (BB) in rice. Compared to the long history of rice cultivation, the deployment of genes for resistance to *X. oryzae* pv. *oryzae* in commercial rice cultivars is relatively recent. The introduction of these genes for resistance into rice is correlated with a change in the pathogenic diversity of *X. oryzae* pv. *oryzae* populations, that is, new races of the pathogen emerge and overcome deployed resistance. Restriction-modification systems are particularly interesting for race distribution, because they are thought to protect the bacterial genome from invasion by introduced bacteriophage or plasmid DNA and thus may inhibit genomic variability due to DNA exchange on uptake. Not all *X. oryzae* pv. *oryzae* strains contained the *XorI* and *XorII* modification systems, indicating that the systems might prove useful for developing an understanding of the origins of *X. oryzae* pv. *oryzae*genetic lineages and their distribution patterns. In this study, we determined the distribution of *XorII*-related gene in a group of *X. oryzae* pv. *oryzae* strains collected from throughout Korea. Based on this information, we formulated a hypothesis on the race distribution in Korea.

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