



Rice Blight Genomic Diagnostic

Xanthomonas oryzae pv. *oryzicola* (Xoc) is a gram-negative, rod-shaped bacterium. It is emerging as an important pathogen of rice (*Oryza sativa*) and is a recognized biosecurity threat to the United States. Xoc enters through stomates or wounds, multiplies in the mesophyll apoplast and causes bacterial leaf streak of rice. Rice with bacterial leaf streak is destroyed when it is encountered, and import / export of rice is closely monitored by governmental agencies worldwide. Compounding the problem, false-positive tests are common because several *Xanthomonas* species and subspecies are not pathogenic; current tests cannot distinguish between *Xanthomonas* species effectively.

Researchers at CSU have created a multiplex PCR test that distinguishes between 150 *X. o. pv. oryzae*, 90 *X. o. pv. Oryzicola*, and 40 other xanthomonads and plant pathogenic bacteria. Comparative genomics that distinguish between all of these potential rice bacteria may prove to be a boon for domestic rice producers and the international trade of rice, consisting of greater than 30 million tons of rice annually (representing only 5% of the total rice produced). In its current form we anticipate this technology to be a laboratory diagnostic with the potential for moving into an on-site rapid diagnostic. This technology is available for exclusive or non-exclusive license.

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Patent Information

None filed yet, not disclosed.

Inventor Information

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Related Technologies

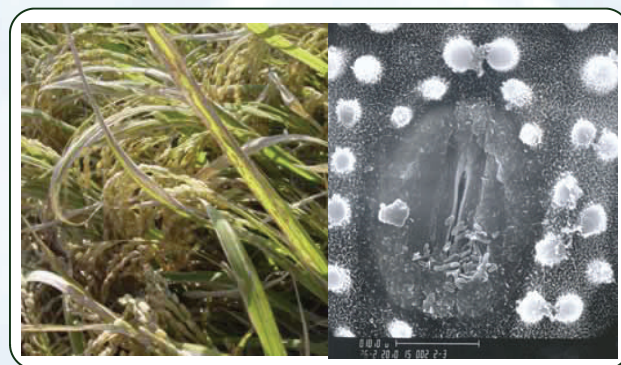
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Publications

None submitted

Features and Benefits

- Distinguishes between pathogenic and non-pathogenic bacteria.
- Multiplex PCR diagnostic distinguishes between 280 bacterial species and subspecies
- Potential worldwide impact on the international rice trade.



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