



## GENETICALLY MODIFIED NITROGEN FIXING BACTERIA AND USES THEREOF

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### The Invention

A genetically modified bacterium for excreting fixed nitrogen (in the form of ammonia) is disclosed. The bacterium can be made by deleting at least a portion of the *nifL* gene of a diazotrophic  $\gamma$ -proteobacterium, and inserting a promoter sequence into the diazotrophic  $\gamma$ -proteobacterium genome that is placed and oriented to direct transcription of the *rnfl* gene complex. The resulting genetically modified bacterium excretes ammonia constitutively and at a greater rate than the wild type bacterium, and can be used to make biofertilizers to stimulate plant growth. The biofertilizers may contain a culture of the bacteria, or a co-culture of the bacteria and a mycorrhizal fungus.

#### Tech Fields

- [Animals, Agriculture & Food : Plant biotech](#)
- [Animals, Agriculture & Food : Plant health](#)

For current licensing status, please contact Mark Staudt at [mstaudt@warf.org](mailto:mstaudt@warf.org) or 608-960-9845