

Microbiology
CRIS Research Reports In-Progress
for Agr Exp Station, Univ of Massachusetts
Reporting Period 10/01/2001 to 09/30/2002

AD-421 Publications for Reports in-Progress and Submitted to CRIS for MAS as of 01/17/2003

Project Number: MAS0066A

BIOLOGICAL IMPROVEMENT OF CHESTNUT (CASTANEA SP.)

Performing Department: Microbiology -- 1600

Groome, P. C., T. A. Tattar and M. S. Mount. 2001. Bacteria found on American chestnut bark and their potential in biocontrol of chestnut blight. *Arboricultural Journal* 25:221-234.

Project Number: MAS00686

CHARACTERIZATION AND MECHANISMS OF PLANT RESPONSES TO OZONE IN THE NORTHEAST

Performing Department: Microbiology -- 1600

Elagoz, V. and Manning, W.J. 2002. Ozone and bean plants: morphology matters. *Environmental Pollution* 120: 521-524.

Project Number: MAS00781

PHYSIOLOGY AND GENETICS OF NITROGEN FIXATION IN BURKHOLDERIA CEPACIA

Performing Department: Microbiology -- 1600

Yao, F., H. Zhou, and T.G. Lessie. 2002. Characterization of N-acyl homoserine lactone-overproducing mutants of *Burkholderia multivorans* ATCC 17616. *FEMS Microbiol. Lett.* 206: 201-207. Zhou, H., F. Yao, D.P. Roberts, and T.G. Lessie. 2002. AHL-deficient mutants of *Burkholderia ambifaria* BC-F have decreased anti-fungal activity. *Current Microbiology*. In press.

Project Number: MAS00787

DIVERSITY OF DISSIMILATORY FE(III)--REDUCING BACTERIA IN AGRICULTURAL SOILS

Performing Department: Microbiology -- 1600

Childers, S.E., S.A. Ciufo, and D.R. Lovley. 2002. *Geobacter metallireducens* accesses Fe(III) oxide by chemotaxis. *Nature* 416:767-769.

Nevin, K.P. and D.R. Lovley. 2002. Mechanisms for Fe(III) Oxide reduction in sedimentary environments. *Geomicrobiol. J.* 19:141-159.

Nevin, K. P., and D. R. Lovley. 2002. Mechanisms for accessing insoluble Fe(III) oxide during dissimilatory Fe(III) reduction by *Geothrix fermentans*. *Appl. Environ. Microbiol.* 68:2294-2299.

Lovley, D. R. 2002. Dissimilatory metal reduction: from early life to bioremediation. *ASM News* 68:231-237.

Finneran, K., and D. R. Lovley. 2002. *Desulfitobacterium metallireducens* sp. nov., an anaerobic bacterium that couples growth to the reduction of metals, humics, and chlorinated compounds. *Int. J. Syst. Evol. Microbiol.* 52: 1929-1935.

Shelobolina, E. S., C. G. VanPraagh, and D. R. Lovley. 2002. Use of ferric and ferrous iron containing minerals for respiration by *Desulfitobacterium frappieri*. *Geomicrobiol. J.* 19:(in press).

Finneran, K. T., C. V. Johnsen, and D. R. Lovley. 2002. *Rhodoferax errireducens* gen. nov., sp. nov.; a psychrotolerant, facultatively anaerobic bacterium that oxidizes acetate with the reduction of Fe(III). *Int. J. Syst. Evol. Microbiol.*:(in press).

Project Number: MAS00815

BIOLOGICAL AND CULTURAL MANAGEMENT OF PLANT-PARASITIC NEMATODES

Performing Department: Microbiology -- 1600

Rungrassamee, W., Wick, R. L. and Dicklow, B. 2002 Relationship of *Pasteuria* to root-knot and stunt nematodes. (Abstr.) *Phytopathology*, in press

Project Number: MAS00824

Spatial Structure and Activity of Microbial Communities in Agricultural Soils

Performing Department: Microbiology -- 1600

31. Izquierdo, J. A., and K. Nusslein, 2002. The water-stable microaggregate as a unique soil community microenvironment. Abstract 102nd Ann.Gen. Meet. Am. Soc. Microbiol.