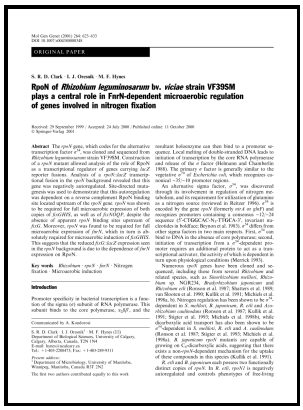
Structure, function and regulation of modulation genes of Rhizobium leguminosarum.

University ofEast Anglia - nodE



Description: -
-Structure, function and regulation of modulation genes of Rhizobium leguminosarum.
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Rleg2_4222

The fnrN mutant LMB648 critically reduced fixation. Thus, FnrN is key for full symbiotic expression of fixNOQP. Our goal is therefore to understand how the two sensors interact in Rlv3841 and to provide insight into why they coexist.

Cascade regulation of nif gene expression in Rhizobium meliloti

Effect of mutations in Pisum sativum L.

The Rhizobium meliloti trpE(G) gene is regulated by attenuation, and its product, anthranilate synthase, is regulated by feedback inhibition.

This abrupt start was absent in nodules infected with the double hfixL mutant, indicating it requires the hFixL-FxkR-FixK pathway. Nitrogenase activity of nodules at flowering 4 weeks was assessed by acetylene reduction assay according to the method described previously.

Organization, structure and symbiotic function of rhizobium meliloti nodulation genes determining host specificity for alfalfa

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Regulation of the hydrogenase system in Rhizobium leguminosarum

Symbiotic effectiveness, rate of respiration and glutamine synthetase activity of sodium azide-resistant strains of Rhizobium leguminosarum biovar trifolii. Two types of pea leghemoglobin genes showing different O2-binding affinities and distinct patterns of spatial expression in nodules. Thus, loss of one oxygen sensor can severely impair nitrogen fixation even if other sensors remain.

Multiple sensors provide spatiotemporal oxygen regulation of gene expression in a Rhizobium

H Bothe, F J de Bruijn and WE Newton. A protein comparison of the nodF protein showed it to be similar to the acyl-carrier protein from Escherichia coli and barley, especially around the pantothenate-binding region and on this basis it is thought that this protein may be involved in an acyl transfer reaction. Rlv3841 encodes one putative rpoN gene RL0422 , but we found no RpoN binding sites upstream of the Rlv3841 fnrN transcription start site.

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