

PBL NEWS



PBL News - Issue 9 - Sep 2006

PBL Licenses JIC and Sainsbury Lab High Expression Technology to Medicago

In August PBL and Medicago (Quebec, Canada) announced the grant of rights to Medicago to use the new bipartite comovirus-derived expression system developed by Dr George Lomonosoff at The John Innes Centre, as well as gene-silencing suppression technology from the laboratory of Prof David Baulcombe at The Sainsbury Laboratory. The bipartite expression system achieves high levels of heterologous protein expression for molecular pharming purposes, by relying on truncated viral replicons for amplification. The system has many advantages in terms of ease of use and flexibility and also has the benefit of not requiring the production of infective viral particles, thus providing complete bio-containment. Under the licence agreements Medicago receives a non-exclusive licence with exclusive options to produce pharmaceutical and industrial proteins in Medicago, Trifolium and Nicotiana species. Rights are still available in other fields.

IP protection

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New Research Published on Legumes that Produce Nodules in the Absence of Rhizobia

Researchers at the University of Aarhus, Denmark, working in a group led by Dr Jens Stougaard, have recently published a letter in Nature (Tirichine L. *et al.*, Nature 441, 1153-1156, 29 June 2006) showing that a single amino-acid substitution in a key plant cellular messenger, Ca²⁺/calmodulin-dependant protein kinase (CCaMK), can lead to spontaneous root nodule formation in the model legume species *Lotus japonicus* in the absence of symbiotic nitrogen-fixing rhizobial bacteria.

Although the technology is still at an early stage, it may, together with other technologies currently being developed by Dr Stougaard's group, help pave the way to producing improved crops requiring little or no nitrogen fertilizer, with the potential to be applied to non-leguminous crops such as wheat, maize or rice.

These novel technologies are currently the subject of a number of pending patent applications assigned to PBL.



For more information, please contact: Dr Adam Hajjar (adam@pbltechnology.com)

New Screening Method for the Identification of Novel Anti-bacterial and Anti-cancer Drugs

Researchers at the JIC led by Prof Tony Maxwell have developed a new screening method for the identification of novel anti-bacterial and anti-cancer drugs, more specifically inhibitors of DNA gyrase and topoisomerase enzymes. Details of the assay have now been published in *Nucleic Acids Research*. The assay is being commercialised by PBL and evaluations have been commenced by a number of global pharmaceutical companies.

Innovation in life sciences

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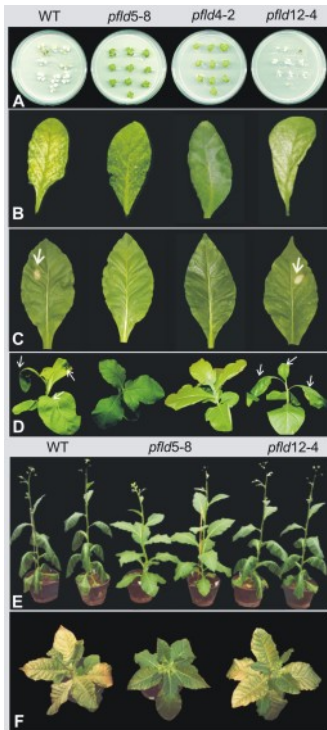


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Flavodoxin for Stress Tolerant Plants - Plant Cell Publication



Prof Nestor Carillo and co-workers have published their exciting work showing that flavodoxin from blue-green algae can make up for the shortcomings of the higher plant photo-electron transport protein, ferredoxin, giving dramatic advantages in tolerance to a wide range of stresses.

This work was published in *The Plant Cell*, in August: **Functional Replacement of Ferredoxin by a Cyanobacterial Flavodoxin in Tobacco Confers Broad Range Stress Tolerance** Tognetti, V, Palatnik, J, Fillat, M, Melzer, M, Hajirezaei, M-R, Valle, E and Carillo, N. (2006) *The Plant Cell*: 18(8).

Flavodoxin is patented by PBL (US Patent No. 6,781,034) and is currently being evaluated by a number of companies for use in crop plants. PBL Tech Id: 01.266.

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PBL Patents Granted in Europe

PBL's patents on Amplicon-mediated gene silencing technology and Plant Resistance Autoactivators, both developed by Prof David Baulcombe and coworkers at The Sainsbury Laboratory, have been granted in Europe, EP 0970228 and EP1228225 respectively.

IP and On-line Journal Publication

Did you know.....

Online publication is becoming more and more frequent and rapid. In order to protect valuable intellectual property, patent applications must be filed prior to any public disclosure or publication. However Nature, for example, permits subscribers to their Premium Plus account to have online access to articles up to two weeks prior to publication of the printed article (see <http://www.nature.com/news/2006/060619/full/060619-12.html>). It is the date that the paper is made available on-line that counts as the disclosure date, not the date of the journal issue containing the paper. In order to protect and commercialise your valuable rights, or for further information on this subject, please contact PBL.

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