



**THE UNIVERSITY of TEXAS**

**HEALTH SCIENCE CENTER AT HOUSTON**

Office of Technology Management

## **E. COLI STRAIN JA200 CARRYING PLASMID PPS3155-LAMBDA**

The Technology: Dr. William Dowhan at the University of Texas Health Science Center at Houston (UTHSC-H) has developed a bacterial strain to construct null mutants in specific steps of phospholipid biosynthesis. The anionic phospholipid (phosphatidylglycerol and cardiolipin) content of the mitochondria can be varied and controlled in these mutants. This bacterial strain lacks phosphatidylethanolamine (PE) and contains monoglucosyldiacylglycerol. At present, the role of individual phospholipids in specific membrane functions is not completely understood. Mutants with defects in the biosynthesis of particular classes of phospholipids provide a powerful tool to study different membrane associated processes and specifically the involvement of phospholipids in protein translocation across membranes

### Publications:

- Dowhan, W. (1997). Molecular basis for membrane phospholipid diversity: Why are there so many phospholipids. *Annu. Rev. Biochem.* 66: 199-232.
- Mileykovskaya, E., Sun, Q., Margolin, W. and Dowhan, W. (1998). Localization and function of early cell division proteins in filamentous *Escherichia coli* cells lacking phosphatidylethanolamine. *J. Bacteriol.* 179: 4252-4257.
- Mikhaleva, N. I., Golovastov, V. V., Zolov, S. N., Bogdanov, M. V., Dowhan, W., and Nesmeyanova, M. A.: Depletion of phosphatidylethanolamine affects secretion of *Escherichia coli* alkaline phosphatase and its transcriptional expression. *FEBS Lett.* 30: 85-90, 2001

### **NON-CONFIDENTIAL TECHNOLOGY DESCRIPTION**

The preceding is intended to be a non-confidential summary of a novel technology created at the University of Texas Health Science center at Houston (UTHSCH), for which the University has obtained patent protection.

**UTHSC-H Ref. No.:** 2006-0043-rmd

**Inventors:** Dowhan

**Patent Status:** N/A

**License Available:** world-wide; non-exclusive

To obtain further information about this technology, please contact:  
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