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Joshua Prabhakar

Indiana University - Purdue University Fort Wayne

George Mourad

Indiana University - Purdue University Fort Wayne, mourad@ipfw.edu

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COMPLEMENTATION OF A DEFECTIVE URACIL TRANSPORTER OF *ARABADOPSIS THALIANA* BY THE *E. COLI URAA* GENE

Joshua Prabhakar and George Mourad

(George Mourad, Associate Professor of Biology)

Department of Biology, School of Arts and Sciences

Biosynthesis of pyrimidine nucleotides can be either by *de novo* or by salvage pathways. In *Arabidopsis*, a mutant resistant to the toxic uracil analog 5'-fluoroortic acid (FOA) was isolated by Mourad and Snook (1996). Biochemical characterization revealed that FOA resistance was due to a defective membrane transporter protein. To confirm that, the gene encoding the uracil transporter protein, *uraA*, of *E.coli* was PCR-amplified and then cloned in the plant expression vector pBI 121.1. The cloned *uraA* will then be engineered into the FOA-resistant plants by *Agrobacterium*-mediated transformation. Genetically engineered FOA-resistant plants will then be planted in medium with FOA. Loss of FOA resistance will provide molecular confirmation that FOA resistance is due to a defective membrane transporter. The uracil transporter of *Arabidopsis* will then be cloned by a map-based cloning approach.