

# The Center

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## Software Tool for Genomics Research

The Center is a bulletin compiled by WRRC to alert potential partners of technology transfer opportunities.

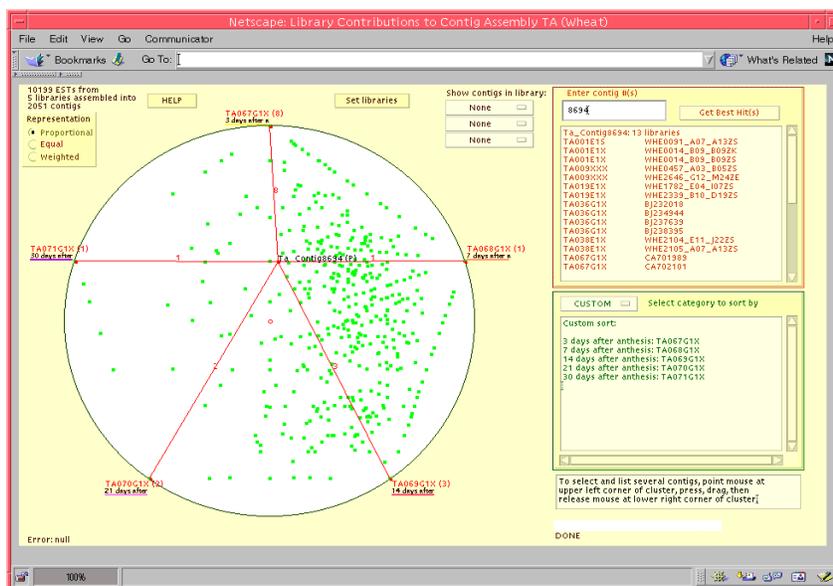
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Scientists in the WRRC Genomics and Gene Discovery Research Unit have recently developed a software tool that should be quite useful to anyone engaged in genomics research including drug discovery. Gerard Lazo, Nancy Lui, and Frank You have produced a Java™ based software tool that can be used with existing genome databases and provides an overall visual representation of data, allowing researchers to see relationships among the data that would otherwise be difficult or impossible to detect. It is a significant advance in sorting through the enormous genome datasets being generated with high-throughput technologies, and assists the researcher in understanding gene expression profiles. ARS has filed a patent and is seeking a licensee who will develop and market a commercial product based on this software.



2,051 Contigs (each green dot represents a unique gene) formed from five wheat cDNA libraries constructed at different times of seed development are arranged to show genes expressed in common between the different time-points of development.



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## **WRRC Patent Activity** August 2003 - July 2004

### **■ Patent Applications Filed:**

August 20, 2003

Serial No. 10/647,268

"Solanum bulbocastanum Late Blight Resistance Gene and Use Thereof"

Inventor(s): T. Osumi, W. Belknap,  
D. Rockhold, M. Maccree

August 29, 2003

US Serial No. 10/734,366

"Computer Display Tool for Visualizing Relationships Between and Among Data"

Inventor(s): G. Lazo, N. Lui, F. You

March 10, 2004

US Serial No. 10/797,346

"Transformation Methods for Guayule Using Agrobacterium and Reduced Light to Slow Metabolism and Enhance Recovery"

Inventor(s): N. Dong, K. Cornish

May 10, 2004

US Serial No. 10/842,792

"Method and Apparatus for Non-Destructive Detection of Pits and Seed Fragments in Fruit"

Inventor(s): E. Jackson, R. Haff, T. Pearson

June 3, 2004

US Serial No. 10/861,616

"Diacylglycerol Acyltransferase and its use to Preferentially Incorporate Fatty Acids into Diacylglycerol"

Inventor(s): T. McKeon, X. He, J. Lin

### **■ U.S. Patents Issued:**

September 16, 2003

Patent No. 6,620,986

"Transformation of Ricinus Communis, The Castor Plant"

Inventor(s): T. McKeon, G. Chen

September 23, 2003

US Patent No. 6,623,779

"Intermediate-Moisture Formed Food Products Made From Partially Dehydrated Fruit and/or Vegetables and Novel Methods of Packing Thereof"

Inventor(s): C. Huxsoll, T. McHugh, D. Olson

October 28, 2003

US Patent No. 6,638,552

"Glutenin Genes and Their Uses"

Inventor(s): A. Blechl, O. Anderson

## **Liquid Membrane Module**

Researchers at the WRRC Bioproduct Chemistry and Engineering Research Unit have developed a new type of filtering device for carrying out liquid or gas separations. It utilizes a combination of membranes, made from disparate materials, to selectively and continuously extract and remove a target compound from a product stream.

This invention addresses three problems: 1) how to efficiently remove components extracted into a solvent, 2) how to replenish the solvent in a contained liquid membrane without interrupting operation, and 3) how to minimize loss of the solvent. The envisioned use is in the recovery of ethanol or other desirable components from fermentation broths. ARS is seeking industry partners who may wish to enter into a CRADA and/or license this invention.

For technical information, please contact:

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## **Update on WRRC R & D Facility Modernization**

Phases 1 and 2 of the modernization of WRRC's Research and Development Facility (pilot plant) were completed in May 2004. This 12,000 ft<sup>2</sup> portion of the facility is being utilized by scientific staff in the WRRC Bioproduct Chemistry and Engineering (BCE) and Processed Foods Research (PFR) Units. The remaining four phases of the modernization, which includes the Food Processing portion of the Pilot Plant and space dedicated to biobased product and biofuel research, are on hold, pending availability of funds. When completed, the facility will be unique in the western U.S., and provide greatly enhanced capabilities to conduct research cooperatively with industry and other collaborating entities.

## **How Do Businesses Get Access to These Technologies**

WRRC is seeking private companies interested in licensing technologies which have been patented or for which patent applications have been filed. We are also looking for companies interested in becoming our partners in Cooperative Research and Development Agreements (CRADAs). CRADA partners have the first right to negotiate an exclusive license for each invention which is made as part of the CRADA. We encourage small and minority-owned businesses to take part in our technology transfer programs.