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[Home](#) > [Featured Entrepreneur](#) > 2006 Showcase: Somark Innovations

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New Bio-Tech Firm Developing Improved ID System for Livestock Industry

Somark Innovations — St. Louis, MO

A baseball diamond is sometimes called a field of dreams, but what is a cow pasture called?

For two former baseball teammates from Washington University that pasture could become their field of dreams. But their dream - of developing a revolutionary and marketable livestock identification and tracking system - isn't pie in the sky. It has solid research to back it up and a definite commercial direction to take.

Ramos Mays and Mark C. Pydynowski, baseball buddies and WU graduates, are teaming up again as co-founders and partners in the St. Louis-based biotechnology firm Somark Innovations.

Mays, a computer scientist-turned-physicist, collaborated with Swedish scientist Dr. Alexander Grishin to develop a livestock ID and tracking system that uses a unique biocompatible liquid possessing radio-frequency identification (RFID) capability without the need for microchips or antennas.

"Ramos, who was born and raised on a small cattle farm in Southwest Missouri, developed the idea after years of brainstorming how to solve the livestock industry's problem of inadequate identification technology," says Pydynowski, a former sales consultant who oversees Somark's marketing, sales and administration.

Three basic parts comprise the livestock RFID system: an ink tattoo tag, an applicator and a reader. It works similarly to the EZ-Pass highway toll system for automobiles.

Current livestock industry RFID uses problem-plagued ear tags, which suffer a high rate of detachment, cost \$2.25 per tag and are subject to data tampering.

"Since Somark's tags are chipless and actually integrate with the skin, the benefits are very low manufacturing costs, which results in a significant cost advantage, and no tag detachment," explains Pydynowski. "Tagged and verified cattle command a premium of \$25-\$40 per head, whereas unverified cattle are sold at a discount. Therefore, a tag that

guarantees attachment provides more value than a cheaper tag."

Likely markets for the new technology include swine, poultry and equine, in addition to the cattle industry. Somark's entrepreneurs have located a pilot site for testing their technology: the Joplin Regional Stockyards in Carthage, Mo., the second largest stockyards in the nation. Steve Owens, co-owner of the stockyards and member of Somark's advisory committee, will assist in developing the technology to meet producers' needs, according to Pydynowski.

Of course research and product development take time and money. To explore sources of R&D funding Somark enlisted the help of Wayne Harvey, St. Louis-based business counselor with the Missouri Federal and State Technology Partnership (MoFAST) program. MoFAST is affiliated with the University of Missouri Extension's [Small Business and Technology Development Centers](#) (MO SBTDC).

"We were virgins to the (area) of federal grants," admits Pydynowski. Harvey helped with questions about locating funding, grant eligibility, the application process, and how to avoid mistakes and increase chances for successful grant applications.

"Wayne answered ALL our questions and also introduced us to MU's industry relations director, which has led to a valuable partnership and potential co-development with the MU veterinary school."

With Harvey's assistance, Pydynowski and Mays are expecting the approval soon of two SBIR (Small Business Innovative Research) awards: an \$80,000 grant from the U.S. Department of Agriculture and a \$100,000 stipend from the National Science Foundation.

"Although our grant applications are still pending, Wayne has significantly enhanced our probability of receiving the grants," admits Pydynowski. "Without his expertise and experiential knowledge, we would still be searching through the FAQ sections of government grant Web sites."

And because of the firm's impressive progress thus far and its potential for even greater achievements in the future, Somark will represent MO SBTDC at the second annual [Client Showcase](#) and Legislative Breakfast Thursday, Feb. 9, in the State Capitol Rotunda in Jefferson City.

At that event hosted by MO SBTDC, Somark and more than a dozen other outstanding Missouri companies will meet with legislators to discuss their products and services. They also will be recognized for their contributions to the economic development of the state of Missouri. Recognition from MO SBTDC will be accompanied by legislative resolutions presented by each company's district state senator and state representative.

For more information on the services of the MoFAST program, call Harvey at 314-631-5509 or e-mail him at harveryw@missouri.edu