



For Immediate Release

Contacts: Walt Barnhart/NCBA
303/850-3360
wbarnhart@beef.org

Mary Ellen DeFrancesco/MMI
301/617-9080 x 227
med@metamorphixinc.com

Partnership to Allow Development of New Genomic Test for Assessing Marbling Quality in Cattle

Research Could Eventually Lead to Gene Testing for Other Traits that Affect Beef Quality

NASHVILLE (January 29, 2003) – A unique partnership between MMI Genomics, a subsidiary of MetaMorphix Inc., and the beef checkoff has been established to develop and offer producers selection tools to genetically determine marbling in beef cattle. These selection tools will be made available to the industry within the next three months.

The partnership eventually could lead to the development and commercialization of additional selection tools to determine other desirable carcass traits. This first validation study to genetically test for marbling will be conducted by MMI Genomics and managed by the National Cattlemen's Beef Association (NCBA) for the Cattlemen's Beef Board and state beef councils.

The beef checkoff is a program administered by the Beef Board and overseen by the U.S. Department of Agriculture. It funds beef research, information and promotion programs by assessing \$1-per-head on cattle marketed in the U.S. as well as an equivalent on imported beef and cattle.

Over the past dozen years, checkoff-funded research has helped provide the foundation for this new arrangement. The research, conducted at and partially funded by the Texas Agricultural Experiment Station, has identified genes and gene markers that affect traits such as marbling, tenderness, composition and palatability. It also found that only a handful of genes, known as Quantitative Trait Loci (QTL), control many of these carcass merit traits.

The Texas Agricultural Experiment Station's research mapped the QTL to their chromosomal locations in Angus/Brahman mix animals. These locations were refined and are being validated in other cattle breeds. In fact, the validation for developing genetic markers in 13 different breeds is currently in its final stages, and should be completed by summer or early fall of 2003.

"This is a tremendous example of how checkoff research dollars can be put to use in ways that directly benefit producers," according to Paul Genho, a beef producer from Kingsville,

Tex., and chairman of the Joint Research & Technical Services Group. “Beginning with marbling, we can establish both the development potential and commercial viability of the selection tool, and get it to producers as quickly as possible.”

MMI will use this research to develop a commercial tool using these gene markers and offer it for sale to cattle producers. Beef producers will benefit both from utilization of the selection tool and through royalties back to the checkoff provided through its sale.

“MMI has had a long-term research collaboration with NCBA and is very pleased to be developing this new selection tool for the beef industry,” according to Stephen Bates, general manager of MMI Genomics. “We believe that the application of genomics will bring significant benefits to the beef cattle industry. MMI will leverage its internal research efforts and alliance partnerships to commercialize a wide range of genomic-based selection tools over the next few years.”

“This kind of study obviously takes time, but the fruits of the many years of effort appear to be just around the corner,” according to Genho. “The genomic research being used here will give breeders and feedlot operators selection tools that allow the industry to meet consumer demands for consistency and tenderness.”

MMI Genomics is the discovery and commercialization division for MetaMorphix, Inc.’s core genomic and proteomic platforms. Formerly owned by Celera Genomics, MMI Genomics was acquired by MetaMorphix, Inc., a privately held life sciences company, dedicated to discovering and commercializing multiple technology platforms to naturally improve the food supply and human health, in March 2002.

This and other beef industry research efforts are funded by beef producers through the \$1-per-head beef checkoff, which is administered through the Cattlemen’s Beef Board subject to USDA approval. The Cattlemen’s Beef Board is a 110-member board appointed by the Secretary of Agriculture to oversee the collection of the checkoff, certify state beef councils, implement the provisions of the federal order establishing the checkoff and evaluate the effectiveness of checkoff programs.

Producer-directed and consumer focused, NCBA is the trade association of America’s cattle farmers and ranchers, and the marketing organization for the largest segment of the nation’s food and fiber industry.

Founded in 1994 and based in Savage, Maryland, MetaMorphix, Inc., a privately held life sciences company, is dedicated to discovering and commercializing multiple technology platforms to naturally improve the food supply and human health.

Drawing on three distinct technology platforms – growth differentiation factors (GDFs), genomics/proteomics and immunopharmaceuticals – MetaMorphix has more than a dozen products in various stages of development. These products are intended to vastly improve livestock breeding and production and to create more nutritious, consistent-quality meat. Further, the company is leveraging a licensing agreement, using its GDF technology platform, to research potential applications to serious human health conditions.

Certain statements in this press release are forward-looking. These may be identified by the use of forward-looking words or phrases such as “believe,” “expect,” “intend,” “anticipate,” “should,” “planned,” “estimated,” and

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