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PRIMEMARKER TO DEVELOP AND COMMERCIALIZE METAMORPHIX'S DNA-BASED MARKER TECHNOLOGY IN BEEF CATTLE**MetaMorphix Expands Commercialization of its Predictive DNA-based Markers By Licensing Their Use in Beef Cattle to PrimeMarker**

BELTSVILLE, MD and HOUSTON, TX – December 4, 2009 – MetaMorphix, Inc. (MMI) and PrimeMarker today announced that MMI has granted PrimeMarker a license to commercialize its predictive markers in beef cattle. The financial details of the agreement have not been disclosed.

MetaMorphix has developed DNA-based markers that predict how individual cattle will perform with regard to meat quality and production efficiency. In terms of meat quality traits, MMI has tests for marbling, tenderness and rib eye area. In terms of production efficiency traits, MMI has tests for average daily gain and red meat yield. The accuracy of many of these tests has been validated on several hundred thousand head of commercial cattle.

“We are very pleased to have PrimeMarker, with their wealth of experience and knowledge of the beef cattle industry, commercializing our genetic tests,” said Dr. Edwin Quattlebaum, MetaMorphix President & CEO. “MMI’s focus has been on marketing its marbling test to the feedlot sector. We are excited that PrimeMarker has identified commercial opportunities in essentially every segment of the beef cattle industry, potentially expanding our customer base beyond the feedlot sector to include breeders, cow/calf operators, and processors. Additionally, PrimeMarker expects to commercialize genetic tests for several traits in addition to our current marbling test.”

PrimeMarker President Tom Hogan, said, “We believe that MMI’s low-cost genetic analysis has the potential to have an economically positive impact on the beef cattle industry. We feel marker assisted selection will allow breeders and cow/calf operators to identify animals with superior traits, thereby improving quality and production efficiency. For feedlots, the tests will allow operators to sort and manage cattle according to their genetic potential, improving uniformity of product and avoiding costly discounts. For processors, the tests

provide an opportunity for supply chain management never available before.” PrimeMarker has already begun working with a number of potential customers and expects a full product roll out during 1st quarter 2010.

About MetaMorphix, Inc.

MetaMorphix, Inc. is a life sciences company dedicated to discovering and commercializing multiple technology platforms to improve human and animal health. The company and its corporate partners are developing products to substantially increase livestock quality and production efficiency, to improve companion animal health, and to treat human muscle degenerative diseases and metabolic disorders utilizing MetaMorphix’s animal genomics and growth and differentiation factors (GDFs) technologies. MetaMorphix was founded in 1994; it has headquarters in Beltsville, MD, and lab facilities in Davis, CA.

MetaMorphix safe harbor: 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 “potential,” among others. These forward-looking statements are based on MetaMorphix Inc.’s current expectations. The Private Securities Litigation Reform Act of 1995 provides a “safe harbor” for such forward-looking statements. In order to comply with the terms of the safe harbor, MetaMorphix Inc. notes that a variety of factors could cause actual results and experience to differ materially from the anticipated results or other expectations expressed in such forward-looking statements. The risks and uncertainties that may affect the operations, performance, development, and results of MetaMorphix Inc.’s business include but are not limited to; (1) unproven use of scientific information to develop or commercialize products; and (2) other factors that might be described from time to time in MetaMorphix Inc.’s business plan and regulatory filings.