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## **FOR IMMEDIATE RELEASE**

### **JMAR INITIATES TABLE TOP X-RAY MICROSCOPE DEVELOPMENT**

**San Diego, CA – June 24, 2004 – JMAR Technologies, Inc. (NASDAQ: JMAR)** is developing an innovative X-ray microscope (XRM) product line based on the Company's existing Collimated Plasma Lithography (CPL™) X-ray source technology. This new product will enable 3D visualization of single cells and polymers at sub-50 nanometer resolution using X-ray tomography. JMAR has initiated this product development project as part of its drive to expand and diversify its customer base.

The X-ray microscope is an important complement to the transmission electron microscope, a market estimated at over \$200 million per year. Currently, X-ray microscopy is carried out at several of the world's synchrotron facilities. The availability of an in-lab XRM, immediately accessible to researchers for cell, polymer and drug tomography, will greatly increase the use of this valuable imaging technique.

Key program milestones include laser produced plasma (LPP) target optimization, development of the X-ray generator, and design of the zone plate condenser optics. JMAR is working with a federally funded national research center to form an alliance for joint technical exchange and to prepare for initial operation, characterization and demonstration of the Alpha Model of its X-ray microscope in early 2006.

Ronald A. Walrod, JMAR President and Chief Executive Officer said, "The physical and performance characteristics of our CPL X-ray source uniquely positions JMAR to develop table top instruments for nanoscale visualization and analysis. While we continue to pursue lithography applications for our core X-ray source technology, new instrument applications, such as XRM, offer exciting parallel paths for near term business expansion. Part of the financing we secured in February has been allocated to this work.

"The X-ray microscope product falls in the \$0.5 million to \$2 million price range, large enough to contribute significantly to JMAR's top-line. Our XRM is designed to easily fit into bioscience, nanotechnology, and chemical industry facilities to immediately produce results.

"Just as the table top X-ray microscope is made possible by many years of R&D directed at lithography applications, production of this commercial instrument will mature the X-ray source as a standard product, to the benefit of CPL," concluded Walrod.

(more)

## JMAR INITIATES TABLE TOP X-RAY MICROSCOPE DEVELOPMENT/2

JMAR is also evaluating a plan to develop an X-ray NanoPlasma (XNP) instrument product line for surface characteristic analysis, machining, and materials deposition to 20 nanometer resolution. This instrument line would use the same X-ray source as the X-ray microscope, and has broad application across a number of industries including nanotechnology, chemical, and materials industries.

Headquartered in San Diego, California, JMAR Technologies, Inc., develops, manufactures, and supports advanced laser, sensor, and custom systems for applications in the semiconductor, biotech, homeland security, and nanotechnology markets. JMAR originated the Collimated Plasma Lithography (CPL™) light source for advanced semiconductor chip manufacturing. JMAR's operations include its high brightness lasers and laser-produced plasma technology at its Research Division in San Diego, California; its Systems Division in Burlington, Vermont, which serves as JMAR's product design and manufacturing arm, carrying out the engineering, production, and integration of JMAR's CPL light sources and CPL stepper systems; and its Microelectronics Division, based in Sacramento, California, where JMAR provides process integration and maintenance support for the U.S. Government's Defense Microelectronics Activity semiconductor fabrication facility.

*This news release contains certain "forward-looking statements." Forward-looking statements are based on current expectations and assumptions and are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified, and many of which are beyond the Company's control. Actual results could differ materially from these forward-looking statements as a result of a number of factors, including delays in completion of the X-ray microscope and X-ray NanoPlasma prototypes and transition to production units, failure of the technology to perform as predicted, competition from alternative technologies, uncertainties as to the size of the market, cost and margins, failure to obtain market acceptance, the lack of availability of critical components, the degree of protection from future patents, and other unforeseen issues involved in the development or acquisition of new products or technologies and other risks detailed in the Company's 2003 Form 10-K filed with the SEC. Given these risks and uncertainties, investors are cautioned not to place undue reliance on such forward-looking statements and no assurances can be given that such statements will be achieved. JMAR Technologies, Inc. does not assume any duty to publicly update or revise the material contained herein.*