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Tekmira Announces New Preclinical Data from Anti-Viral Programs

Results Demonstrate Survival Following Lethal Infection When Treatment Is Delayed

VANCOUVER, British Columbia, Nov. 12, 2013 (GLOBE NEWSWIRE) -- Tekmira Pharmaceuticals Corporation (Nasdaq:TKMR) (TSX:TKM), a leading developer of RNA interference (RNAi) therapeutics, announced positive preclinical data demonstrating the anti-viral efficacy of its TKM-Ebola and TKM-Marburg programs when treatment is delayed following infection.

"We are pleased to see more positive preclinical data validating our LNP technology in multiple anti-viral programs. These recent studies with TKM-Ebola and TKM-Marburg demonstrate survival in non-human primates despite delayed treatment after infection with lethal doses of the Ebola and Marburg viruses. Such "delay to treat" studies in animals infected with lethal doses of rapidly replicating viruses, like Ebola and Marburg, are rigorous tests of anti-viral efficacy in established infections," said Dr. Mark J. Murray, Tekmira's President and CEO.

<u>TKM-Ebola</u>

TKM-Ebola, an anti-Ebola viral therapeutic, is being developed under a contract with the U.S. Department of Defense's (DoD) Joint Project Manager Medical Countermeasure Systems (JPM-MCS), with a total contract value of approximately \$140 million. Earlier preclinical studies were published in the medical journal *The Lancet* and demonstrated that when siRNA targeting the Ebola virus and delivered by Tekmira's LNP technology were used to treat previously infected non-human primates, the result was 100 percent protection from an otherwise lethal dose of Zaire Ebola virus (Geisbert et al., *The Lancet*, Vol 375, May 29, 2010).

New preclinical data from the TKM-Ebola program has been generated showing survival in non-human primates despite infection with the most lethal Zaire variant of Ebola virus and delayed treatment.

- In a new study each cohort received seven daily treatments of 0.5 mg/kg TKM-Ebola beginning 24-, 48-, 72-, or 96-hours
 after infection.
- The study demonstrated 83% survival when treated 24- or 48-hours post infection and 67% survival when treatment was initiated at 72-hours, as compared to 0% survival rates in the placebo and 96-hour cohorts.

Tekmira anticipates the completion of pre-clinical, chemistry, manufacturing and control studies and a submission to the FDA in the second half of 2013 in order to support the use of a more potent product in a Phase I clinical trial. The Phase I TKM-Ebola clinical trial is expected to be initiated in the first quarter of 2014 with data available in the second half of 2014.

TKM-Marburg

Like Ebola, Marburg is a member of the filovirus family of hemorrhagic fever viruses. Regularly occurring natural outbreaks of the Marburg Angola strain have resulted in mortality in approximately 90% of infected individuals, matching that of the most lethal Ebola strains. There are currently no approved therapeutics available for the treatment of Marburg infection. Data from a collaboration between Tekmira and the University of Texas Medical Branch (UTMB) showed 100% survival in non-human primates infected with the Angola strain of the Marburg virus. In earlier studies, 100% survival was achieved when dosing at 0.5 mg/kg TKM-Marburg began either one hour or 24 hours after infection with otherwise lethal quantities of the virus. Dosing then continued once daily for seven days.

New preclinical data from the TKM-Marburg program showed:

• In a new study, 100% survival was achieved when dosing at 0.5 mg/kg TKM-Marburg began 48 hours after infection with lethal quantities of the virus. Dosing was administered once daily for seven days.

These studies represent the first known demonstration of protection of non-human primates from Marburg-Angola, the most lethal strain of Marburg virus.

About Joint Project Manager Medical Countermeasure Systems (JPM-MCS)

JPM-MCS, a component of the Joint Program Executive Office for Chemical and Biological Defense, aims to provide U.S. military forces and the nation with safe, effective, and innovative medical solutions to counter chemical, biological, radiological, and nuclear threats. JPM-MCS facilitates the advanced development and acquisition of medical countermeasures and systems to enhance U.S. biodefense response capability. For more information, visit <u>www.jpeocbd.osd.mil</u>.

About RNAi and Tekmira's LNP

RNAi therapeutics have the potential to treat a broad number of human diseases by "silencing" disease causing genes. The discoverers of RNAi, a gene silencing mechanism used by all cells, were awarded the 2006 Nobel Prize for Physiology or Medicine. RNAi therapeutics, such as "siRNAs," require delivery technology to be effective systemically. Tekmira believes its LNP technology represents the most widely adopted delivery technology for the systemic delivery of RNAi therapeutics. Tekmira's LNP platform is being utilized in multiple clinical trials by both Tekmira and its partners. Tekmira's LNP technology (formerly referred to as stable nucleic acid-lipid particles or SNALP) encapsulates siRNAs with high efficiency in uniform lipid nanoparticles that are effective in delivering RNAi therapeutics to disease sites in numerous preclinical models. Tekmira's LNP formulations are manufactured by a proprietary method which is robust, scalable and highly reproducible, and LNP-based products have been reviewed by multiple FDA divisions for use in clinical trials. LNP formulations comprise several lipid components that can be adjusted to suit the specific application.

About Tekmira

Tekmira Pharmaceuticals Corporation is a biopharmaceutical company focused on advancing novel RNAi therapeutics and providing its leading lipid nanoparticle delivery technology to pharmaceutical partners. Tekmira has been working in the field of nucleic acid delivery for over a decade and has broad intellectual property covering LNPs. Further information about Tekmira can be found at <u>www.tekmirapharm.com</u>. Tekmira is based in Vancouver, B.C.

Forward-Looking Statements and Information

Forward-looking statements in this news release include statements about Tekmira's strategy, future operations, clinical trials, prospects and the plans of management; RNAi (ribonucleic acid interference) product development programs; the effects of Tekmira's products on the treatment of viral disease, including the Marburg and Ebola members of the filovirus family of hemorrhagic fever viruses; the timing of a submission to the FDA and initiation of a Phase I clinical trial for TKM-Ebola; and, the quantum and timing of funding that may be provided to Tekmira pursuant to the TKM-Ebola contract with the U.S. DoD's JPM-MCS.

With respect to the forward-looking statements contained in this news release, Tekmira has made numerous assumptions regarding, among other things: LNP's status as a leading RNAi delivery technology; Tekmira's research and development capabilities and resources; and the time required for development partners and licensees to complete research and product development activities. While Tekmira considers these assumptions to be reasonable, these assumptions are inherently subject to significant business, economic, competitive, market and social uncertainties and contingencies.

Additionally, there are known and unknown risk factors which could cause Tekmira's actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements contained herein. Known risk factors include, among others: Tekmira's research and development capabilities and resources may not meet current or expected demand; Tekmira's products may not prove to be effective in the treatment of viral diseases, including the Marburg and Ebola members of the filovirus family of hemorrhagic fever viruses, or other diseases; the DoD may reduce or cancel certain defense spending, including Tekmira's contract to develop TKM-Ebola; Tekmira may not complete its submission to the FDA or initiate a Phase I clinical trial for TKM-Ebola in the anticipated timeframe, or at all; Tekmira may face competition from other pharmaceutical or biotechnology companies and the possibility that other organizations have made advancements in RNAi delivery technology that Tekmira is not aware of; Tekmira may become subject to product liability or other legal claims for which Tekmira has made no accrual in its financial statements; and, the possibility that Tekmira may not have sufficiently budgeted for expenditures necessary to carry out planned activities.

A more complete discussion of the risks and uncertainties facing Tekmira appears in Tekmira's annual report on Form 20-F for the year ended December 31, 2012 (Annual Report), which is available at <u>www.sedar.com</u> or at <u>www.sec.gov/edgar.shtml</u>. All forward-looking statements herein are qualified in their entirety by this cautionary statement, and Tekmira disclaims any obligation to revise or update any such forward-looking statements or to publicly announce the result of any revisions to any of the forward-looking statements contained herein to reflect future results, events or developments, except as required by law.

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