



March 1, 2012

## Tekmira Expands Product Pipeline With RNAi Therapeutic for the Treatment of Alcohol Dependence

VANCOUVER, British Columbia, March 1, 2012 (GLOBE NEWSWIRE) -- Tekmira Pharmaceuticals Corporation (Nasdaq:TKMR) (TSX:TKM), a leading developer of RNA interference (RNAi) therapeutics, announced today that it is adding a new RNAi therapeutic targeting ALDH2 for the treatment of alcohol dependence (AD) to its product pipeline.

"We are excited to add TKM-ALDH2 to Tekmira's product pipeline. ALDH2 is a validated target with both genetic and pharmacological data supporting its role as a key player in alcohol avoidance. Alcohol dependence is a serious medical problem, afflicting approximately 10 million people in the US. Over one million people seek treatment in specialty clinics each year, and they are in need of pharmacological support to break their dependence on alcohol," said Dr. Mark J. Murray, Tekmira's President and CEO.

"Our new TKM-ALDH2 program aims to address the limitations of existing treatments of alcohol dependence, such as low response rates and poor patient compliance. This is a very unique application of RNA interference, which addresses a significant unmet medical need, and does not require lifelong therapy," added Dr. Murray.

Today Dr. Ian MacLachlan, Executive Vice President and Chief Scientific Officer at Tekmira, delivered a presentation entitled, "Progress in the Development of Lipid Nanoparticle siRNA-Based Drugs" at the annual Asia TIDES Oligonucleotide and Peptide® Technology and Product Development Conference in Tokyo, Japan, where he summarized some of the data supporting the TKM-ALDH2 program.

Aldehyde dehydrogenase 2 (ALDH2) is a key enzyme in ethanol metabolism. Inhibition of aldehyde dehydrogenase 2 activity, through the silencing of ALDH2, results in the build-up of acetaldehyde. This mechanism is similar to that of the approved drug disulfiram (Antabuse). Elevated levels of acetaldehyde are responsible for the adverse physiological effects that cause individuals to avoid alcohol consumption.

Some highlights from promising data generated by Tekmira include:

- Data shows, both *in vitro* and *in vivo*, that ALDH2 is readily silenced by siRNA and that treatment of animals with TKM-ALDH2 can reduce liver ALDH2 protein to undetectable levels (< 2%).
- Preclinical results of TKM-ALDH2 have been generated using a novel, proprietary LNP that has demonstrated better potency and greater therapeutic index than all previous LNP formulations.
- In animals treated with TKM-ALDH2, increased blood acetaldehyde levels — a key biomarker of aldehyde dehydrogenase inhibition — were observed following the introduction of alcohol.
- Data showed a greater than 40% reduction of ALDH2 mRNA levels at four weeks after a single dose, supporting the development of "once-a-month" treatment.

Alcohol dependence is a progressive disease distinguished from alcohol abuse by chronic use, tolerance, and physical addiction. Approximately 9.4 million people in the US have alcohol dependence, and approximately 76 million people worldwide are affected. It is estimated that there are 1.7 million patients annually in the United States who receive treatment in a specialty clinic for alcohol dependence.

Tekmira secured an exclusive license from Alnylam Pharmaceuticals, Inc. under its InterfeRx™ program to develop TKM-ALDH2. Tekmira has access to eight InterfeRx licenses at pre-negotiated financial terms, and has identified the first six targets, including ApoB, PLK1, Ebola, WEE1, CSN5 and ALDH2.

### About TKM-ALDH2

Tekmira is developing TKM-ALDH2, a systemically delivered RNAi therapeutic that utilizes Tekmira's lipid nanoparticle (LNP) delivery technology, for the treatment of Alcohol Dependence (AD). Currently, many approved treatments for AD have low response rates and poor patient compliance rates. ALDH2 is a well validated target with both genetic and pharmacological data supporting its role as a key player in alcohol avoidance. It is expected that TKM-ALDH2 could be administered as a "once-a-month" treatment of AD.

## About RNAi and Tekmira's LNP Technology

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 [www.tekmirapharm.com](http://www.tekmirapharm.com). Tekmira is based in Vancouver, B.C.

The Tekmira Pharmaceuticals logo is available at <http://www.globenewswire.com/newsroom/prs/?pkgid=8319>

## Forward-Looking Statements and Information

This press release contains "forward-looking statements" or "forward-looking information" within the meaning of applicable securities laws (collectively, "forward-looking statements"). Forward-looking statements are generally identifiable by use of the words "believes," "may," "plans," "will," "anticipates," "intends," "budgets," "could," "estimates," "expects," "forecasts," "projects," and similar expressions, and the negative of such expressions. Forward-looking statements in this news release include statements about Tekmira's strategy, future operations, clinical trials, prospects and plans of management; Tekmira's RNAi product development programs; the effects of TKM-ALDH2 as a treatment of the Alcohol Dependence (AD); further innovations to Tekmira's LNP technology platform; further development of Tekmira's technology that support late stage clinical development and commercialization of TKM-ALDH2 as well as other LNP-enabled products; and the timing of approval of TKM-ALDH2.

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; the effectiveness of Tekmira's TKM-ALDH2 product candidate as a treatment for AD. 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: the possibility that a Phase 1 clinical trial for TKM-ALDH2 may not be initiated in the anticipated timeframe or at all; TKM-ALDH2 may never receive FDA approval; there may be no further innovations to Tekmira's LNP technology platform; further development of Tekmira's LNP technology may not support late stage clinical development and commercialization of TKM-ALDH2 or other LNP-enabled products; the possibility that other organizations have made advancements in RNAi delivery technology that Tekmira is not aware of; and Tekmira's development programs, including TKM-ALDH2, will not result in expected results on a timely basis, or at all.

A more complete discussion of the risks and uncertainties facing Tekmira appears in Tekmira's Annual Information Form dated March 30, 2011 and available at [www.sedar.com](http://www.sedar.com) or at [www.sec.gov/edgar](http://www.sec.gov/edgar). 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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