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## Medicago reports positive Phase II interim results for its avian flu pandemic vaccine 02/01/2011

QUEBEC CITY, Feb. 1 /CNW/ - Medicago Inc. (TSX: MDG) a biotechnology company focused on developing highly effective and competitive vaccines based on proprietary manufacturing technologies and Virus-Like Particles (VLPs), today reported positive interim results from a Phase II human clinical trial with its H5N1 Avian Influenza VLP vaccine candidate ("H5N1 vaccine"). The vaccine was found to be safe, well tolerated and also induced a solid immune response.

"We believe our phase II interim study results continue to show impressive findings. These data demonstrate that our H5N1 vaccine is both safe and introduces cross-reactive antibody responses against multiple strains of H5N1," said Andy Sheldon, President and CEO of Medicago. "We also believe that our effective VLP vaccine, produced in less than one month, is capable of providing a rapid response to an influenza pandemic, a much needed solution. With these encouraging results in hand, we will proceed with part B of our Phase II study and look forward to reporting final data in Q2 2011."

"These results demonstrate that we have a safe product, as our H5N1 vaccine was well tolerated at all levels," said Nathalie Landry, VP Product Development of Medicago. "We are the first novel vaccine manufacturing technology to report an immune response of this kind at such low dosage levels. This is especially important as H5N1 vaccines are known to be poorly immunogenic in humans. The results indicate that we have a solid vaccine manufacturing platform and we look forward to continuing the clinical advancement of our vaccine candidates."

"These very promising results clearly indicate the potential of Medicago's innovative proprietary plant-based VLP vaccine technology," said Doug Dean, Senior Vice President R&D of Philip Morris International (PMI). PMI currently holds 33% of Medicago's outstanding shares.

### Interim results of the study

The study enrolled 135 healthy volunteers who were immunized with Medicago's vaccine at 3 dosage levels to determine the optimal dose. No serious adverse events were reported during the trial and the vaccine was found to be safe and well tolerated at all levels. Local site reactions were mild and comparable between the H5N1 vaccine groups. In those vaccinated in the 18 to 49 age group at the 20 microgram dosage level, 82% of immunized subjects developed an immune response against the H5N1 virus after the second immunization, 65% of subjects had a four-fold increase in HI titers from baseline and 65% of subjects had seroprotective antibody titers. All subjects tested negative for antibodies to the H5N1 A/Indonesia strain before vaccination and no response was observed among individuals who received a placebo. These data show that Medicago's H5N1 vaccine induces a robust hemagglutination inhibition (HAI) antibody response against the H5N1 vaccine strain. The H5N1 vaccine also induced the production of antibodies that react with multiple strains of H5N1 Avian Influenza indicating the potential for cross-protection of Medicago's vaccines. As planned in the initial design, adverse event monitoring will continue for six months after administration of the second dose of vaccine.

Based on these results, a committee will be selecting the optimal dose to proceed with Part B of the Phase II H5N1 vaccine clinical trial. In the second part of the study, 120 healthy adults will receive an injection of either the H5N1 vaccine at the optimal dose or a placebo. Final results are currently expected in the second quarter of 2011.

### About Medicago's pandemic flu vaccine candidate

Medicago's H5N1 vaccine candidate was formulated to protect against the Indonesian influenza virus. It is manufactured in *Nicotiana benthamiana*, a relative of the tobacco plant, using the Company's proprietary VLP technology. VLPs may have several advantages over traditional flu vaccines. They are made to look like a virus, allowing them to be recognized readily by the body's immune system, however, they lack the core genetic material making them non-infectious and unable to replicate. Medicago's technology only requires the genetic sequence of a viral strain and not the live influenza virus. This key difference allows vaccines to be manufactured within four weeks of obtaining the genetic sequence of a pandemic strain. This is in contrast with current manufacturing technologies which rely on strain adaptation and can only deliver a vaccine six to nine months after a pandemic is declared.

## About Medicago

Medicago is committed to provide highly effective and competitive vaccines based on proprietary Virus-Like Particle (VLP) and manufacturing technologies. Medicago is developing VLP vaccines to protect against H5N1 pandemic influenza, using a transient expression system which produces recombinant vaccine antigens in non-transgenic plants. This technology has potential to offer advantages of speed and cost over competitive technologies. It could deliver a vaccine for testing in about a month after the identification and reception of genetic sequences from a pandemic strain. This production time frame has the potential to allow vaccination of the population before the first wave of a pandemic strikes and to supply large volumes of vaccine antigens to the world market. Additional information about Medicago is available at [www.medicago.com](http://www.medicago.com).

## Forward Looking Statements

*This news release includes certain forward-looking statements that are based upon current expectations, which involve risks and uncertainties associated with Medicago's business and the environment in which the business operates. Any statements contained herein that are not statements of historical facts may be deemed to be forward-looking, including those identified by the expressions "anticipate", "believe", "plan", "estimate", "expect", "intend", and similar expressions to the extent they relate to Medicago or its management. The forward-looking statements are not historical facts, but reflect Medicago's current expectations regarding future results or events. These forward-looking statements are subject to a number of risks and uncertainties that could cause actual results or events to differ materially from current expectations, including the matters discussed under "Risks Factors and Uncertainties" in Medicago's Annual Information Form filed on March 24, 2010 with the regulatory authorities. Medicago assumes no obligation to update the forward-looking statements, or to update the reasons why actual results could differ from those reflected in the forward-looking statements.*