



**PRESS RELEASE**

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## **Medicago and Collectis Successfully Achieve First Step in Research Collaboration**

### **-Progress made towards production of biosimilar products in tobacco plants-**

Quebec City (Quebec, Canada) and Saint Paul (Minnesota, USA), October 4, 2012 – Medicago Inc. (TSX: MDG; OTCQX: MDCGF), (“Medicago”) a biopharmaceutical company focused on developing highly effective and competitive vaccines based on proprietary manufacturing technologies and Virus Like Particles (“VLP”s), and Collectis plant sciences, a US-based subsidiary of Collectis Group (Alternext: ALCLS), (“Collectis”), the specialist in genome engineering, today announced the successful completion of the first step in their research collaboration to improve therapeutic proteins produced in tobacco plants.

As part of an ongoing effort in the development biosimilar protein therapeutics from tobacco plants, Medicago is partnering with Collectis to modify the glycosylation of biosimilar product candidates. A biosimilar product is a therapeutic protein, which is similar in terms of quality, safety and efficacy to an already approved and marketed biotherapeutic product. Glycosylation is the addition of sugar molecules to proteins. Modifying the glycosylation of a protein can optimize the efficacy and other characteristics such as solubility, therapeutic half-life, and tissue distribution. Collectis develops enzymes called nucleases that can specifically cut DNA and modify genes, and can enable the modification of protein glycosylation patterns. These nucleases can enable the development of modified tobacco plants with the goal of producing biosimilar products with optimal efficacy.

Since January 2012, research conducted by Medicago and Collectis plant sciences has demonstrated high levels of efficacy using Collectis’ nucleases to modify six different genes in the tobacco genome related to protein glycosylation. Medicago and Collectis will now continue with the next stage of their research collaboration, which includes both the generation and testing of modified tobacco plants and the evaluation of the ability to produce therapeutic proteins with modified glycosylation.

“Developing tobacco plants capable of producing biosimilars with modified glycosylation profiles could significantly reduce discovery and development timelines, and also improve the therapeutic profile of our biosimilar product candidates,” said Andy Sheldon, Chief Executive Officer of Medicago. “In addition to our core approach of utilizing transient expression technologies for the production of proteins in tobacco plants, we are also exploring genome engineering applications to improve products for human health benefit.”

“We are very pleased by the rapid achievement of these positive results,” said Luc Mathis, Chief Executive Officer of Collectis plant sciences. “This success further validates our ambition to be the leading platform technology applying genome engineering in plants and should open new opportunities for Collectis plant sciences as a key partner in the plant business.”

### **About Medicago**

Medicago is a clinical-stage biopharmaceutical company developing novel vaccines and therapeutic proteins to address a broad range of infectious diseases worldwide. The Company is committed to providing highly effective and competitive vaccines and therapeutic proteins based on its proprietary VLP and manufacturing technologies. Medicago is a worldwide leader in the development of VLP vaccines using a transient expression system which produces recombinant vaccine antigens in plants. This technology has potential to offer more potent vaccines with speed and cost advantages over competitive technologies, enabling the development of a vaccine for testing in approximately one 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, and supply large volumes of vaccine antigens to the world market. Medicago also intends to expand development into other areas such as biosimilars and biodefense products where the benefits of our technologies can make a significant difference. Additional information about Medicago is available at [www.medicago.com](http://www.medicago.com).

### **About Collectis plant sciences**

Established in March 2010, Collectis plant sciences is a subsidiary of Collectis dedicated to the applications of nucleases in plants. Its main mission is to increase and accelerate usage of Collectis' proprietary technology in agricultural biology, broaden the company's platform to attract partnering opportunities and the development of proprietary traits for selected applications. Collectis plant sciences is located in Saint Paul, Minnesota, USA.

### **About Collectis**

Collectis improves life by applying its genome engineering expertise to a broad range of applications, including agriculture, bio research and human therapeutics. Collectis is listed on the NYSE-Euronext Alternext market (code: ALCLS) in Paris. For further information about Collectis, visit our website at: [www.collectis.com](http://www.collectis.com).

### **Medicago Forward Looking Statements**

This news release includes certain forward-looking statements or forward-looking information for the purposes of applicable securities laws and such statements and information 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. Such statements include but are not limited to statements related to the research agreement between Medicago and Collectis referenced in this press release. 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 "Risk Factors and Uncertainties" in Medicago's Annual Information Form filed on March 29, 2012, 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.

### **Collectis Disclaimer**

This press release and the information contained herein do not constitute an offer to sell or subscribe, or a solicitation of an offer to buy or subscribe, for shares in Collectis in any country. This press release contains forward-looking statements that relate to the Company's objectives based on the current expectations and assumptions of the Company's management only and involve risk and uncertainties that could cause the Company to fail to achieve the objectives expressed by the forward-looking statements.

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