



Miraculins to License Additional Preeclampsia Technology from Mount Sinai Hospital

Unique Form of Key Regulator Protein HIF-1 a Promising Addition to Company's Maternal Health Portfolio

WINNIPEG, Manitoba – March 11, 2013 - Miraculins Inc. (TSX-V:MOM), a medical diagnostic company focused on acquiring, developing and commercializing diagnostic tests and risk assessment technologies for unmet clinical needs, announces today its plans to add to its suite of maternal health biomarkers under license from Mount Sinai Hospital's Samuel Lunenfeld Research Institute by signing a term sheet to license methods and reagents for detecting hydroxylated Hypoxia Inducible Factor 1 *alpha* ("HIF-1aOH"), a promising biomarker with potential in differentiating high and low risk pregnancies, including risk of preeclampsia. The technology is part of the pioneering research on preeclampsia and placental development being conducted by Dr. Isabella Caniggia, Senior Investigator at the Samuel Lunenfeld Research Institute, in collaboration with Dr. Martin Post, a Senior Scientist at The Hospital for Sick Children. Dr. Caniggia is also a member of Miraculins' Scientific Advisory Board and is cross-appointed at the University of Toronto as a Professor in Obstetrics and Gynecology as well as Physiology.

In addition to its promise in maternal health and preeclampsia, HIF-1aOH also presents an opportunity as a cancer biomarker and of further note, the license will include unique monoclonal antibodies highly sensitive to HIF-1aOH and the exclusive rights to manufacture reagents that measure the biomarker using materials developed by Dr. Caniggia. Miraculins is currently advancing a development plan for a kit to detect and measure HIF-1aOH in bodily fluid, which if successful could lead to a near term commercial research use product and allow for more widespread research into the utility of this novel biomarker. The ultimate goal for the biomarker development program would be worldwide sales of the biomarker technology, either alone or in combination with other markers, in a diagnostic kit for the early detection of preeclampsia or as a pregnancy risk assessment tool.

"Since HIF-1a is central to proper placental development, early detection of abnormal HIF-1a regulatory mechanisms could one day provide tools to physicians and caregivers to differentiate high and low risk pregnancies. Although HIF-1a itself is a very promising biomarker, the hydroxylated form may prove to be important to diagnosing the severity of preeclampsia and to better manage this disease throughout pregnancy," stated Dr. Isabella Caniggia, the discoverer of the markers that comprise Miraculins' preeclampsia biomarker suite and inventor of the HIF-1aOH technology. "I am very eager to expand our continued work with the Miraculins team to achieve the goal of better outcomes for mothers and babies."

"We are very pleased to expand our maternal health program and partnership with Dr. Caniggia and Mount Sinai Hospital's Samuel Lunenfeld Research Institute," stated Christopher J. Moreau, President and Chief Executive Officer of Miraculins Inc. "This program has been very successful to date, and recently produced a license agreement for the biomarker Endoglin with a major global diagnostic company. We look forward to continuing research into this promising biological pathway with the goal of developing additional preeclampsia diagnostic tools for this devastating disease of growing incidence worldwide."

About HIF-1aOH

Dr. Isabella Caniggia's research has provided strong evidence that preeclampsia is characterized by abnormal placenta formation leading to persistent low oxygen being delivered to the

developing fetus during pregnancy. A primary protein in this mechanism is HIF-1, a key regulator of the response to this low oxygen setting and an activator of expression of the often-noted protein biomarker Endoglin. A subunit of HIF-1, known as HIF-1 *alpha* (HIF-1a), is a key marker in Miraculins' preeclampsia suite and part of a well-characterized pathway involved in preeclampsia. The hydroxylated form of HIF-1a (HIF-1aOH), a form which appears as part of the elimination of HIF-1a from the system, represents a novel biomarker with potential for use in developing diagnostic assays, or risk assessment tools, for the early detection of preeclampsia.

About Dr. Isabella Caniggia

As a Senior Investigator at the Samuel Lunenfeld Research Institute, Dr. Isabella Caniggia is a leading authority on placental development and preeclampsia. Preeclampsia is the most common complication of pregnancy, affecting seven to 10 per cent of all pregnancies, and yet there is no cure and the cause is unknown. This common disease can lead to blindness, epilepsy, deafness and cerebral palsy in newborns, and to hypertension, cardiac problems and diabetes later in life. Dr. Caniggia and her team have made progress in identifying genetic alterations, or biomarkers, that predicts whether pregnant women will have early- or late-onset preeclampsia. The earlier preeclampsia is detected, the better the chances for improved health of both mother and child. Dr. Caniggia holds several patents on potential diagnostic tools and clinical practices.

About the Samuel Lunenfeld Research Institute of Mount Sinai Hospital

Established in 1985, the Samuel Lunenfeld Research Institute of Mount Sinai Hospital is one of the world's leading centres for biomedical research. The Institute is part of Mount Sinai Hospital, an internationally recognized academic health science centre affiliated with the University of Toronto. Research at the Lunenfeld is focused on women's and infants' health, cancer biology, stem cell biology, neurobiology, diabetes, arthritis, genetic disorder research and systems biology. The Lunenfeld's internationally recognized and award winning researchers continue to make leading-edge discoveries in the prevention, detection and treatment of cancer, diabetes, arthritis, osteoporosis, psychiatric disorders, kidney disease, women's and infants' health, inflammatory bowel disease, and spinal cord injury. For more information about the Lunenfeld, please visit www.lunenfeld.ca.

About Preeclampsia

Preeclampsia affects 3 million mothers worldwide every year and is associated with premature births and infant illness including cerebral palsy, blindness, epilepsy, deafness and lung conditions. There is no effective detection method for the risk of preeclampsia and the cause is unknown. It is estimated that preeclampsia costs the global health care system US\$3 billion per year.

About Miraculins Inc.

Miraculins is a medical diagnostic company focused on acquiring, developing and commercializing non-invasive tests for unmet clinical needs. A significant number of promising diagnostic opportunities remain un-commercialized because of the sizable gap between the discovery stage, when research institutions are typically involved, and the commercialization stage, when the larger commercial enterprises become interested. Miraculins has direct experience in bridging this gap. The Company's PreVu[®] technology is a revolutionary new coronary artery disease risk assessment technology that measures cholesterol levels in a patient's skin non-invasively, painlessly and without the need for fasting. Miraculins is also advancing a suite of biomarkers to aid in the early detection of the devastating disease of pregnancy known as preeclampsia. The lead marker in the Company's preclampsia program is

partnered with Alere Inc., one of the world's largest diagnostic companies. For more information visit <u>www.miraculins.com</u>.

For more information, please contact:

Christopher J. Moreau President & CEO Miraculins Inc. Ph: 204-477-7599 Fax: 204-453-1596

info@miraculins.com www.miraculins.com

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These statements reflect management's current beliefs and are based on information currently available to management. Certain material factors or assumptions are applied in making forwardlooking statements, and actual results may differ materially from those expressed or implied in such statements. Important factors that could cause actual results to differ materially from these expectations include, among other things: Miraculins' early stage of development, lack of product revenues and history of operating losses, uncertainties related to clinical trials and product development, rapid technological change, uncertainties related to forecasts, competition, potential product liability, additional financing requirements and access to capital, unproven markets, supply of raw materials, income tax matters, management of growth, partnerships for development and commercialization of technology, effects of insurers' willingness to pay for products, system failures, dependence on key personnel, foreign currency risk, risks related to regulatory matters and risks related to intellectual property and other risks detailed from time to time in Miraculins' filings with Canadian securities regulatory authorities, as well as Miraculins' ability to anticipate and manage the risks associated with the foregoing. Additional information about these factors and about the material factors or assumptions underlying such forwardlooking statements may be found in the body of this news release. Miraculins cautions that the foregoing list of important factors that may affect future results is not exhaustive. When relying on Miraculins' forward-looking statements to make decisions with respect to Miraculins investors and others should carefully consider the foregoing factors and other uncertainties and potential events.

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