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News Release

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EMD Millipore and the Centre for Commercialization of Regenerative Medicine Collaborate to Optimize Conditions for Large-scale Stem Cell Cultivation

- **Collaboration to deliver optimized methodologies for cultivation of stem cells on microcarriers in Mobius® CellReady bioreactor systems**
- **Associated monitoring and control algorithms to be developed**
- **Will help accelerate commercialization of stem cell-based therapies**

March 12, 2012, Billerica, MA, Toronto, ON, — [EMD Millipore](#), the Life Science division of [Merck KGaA](#), and the [Centre for Commercialization of Regenerative Medicine](#) (CCRM) today announced a collaboration to develop optimized conditions for bioreactor-based cultivation of stem cells.

This joint project will focus on the development of a proprietary monitoring and control methodology, enabling robust growth of adherent human pluripotent stem cells in EMD Millipore's Mobius® CellReady stirred tank bioreactor. Ultimately, the project will deliver a commercially available kit containing reagents and associated methodologies for bioreactor culture of stem cells on microcarriers.

EMD Millipore is a division of Merck KGaA, Darmstadt, Germany



“As the demand for stem cells used in drug discovery and clinical applications grows, effectively translating the promise of stem cells into therapeutic reality will require large-scale, industrialized production under tightly controlled conditions,” states Robert Shaw, Commercial Director of EMD Millipore’s Stem Cell Initiative. “At this time, production is typically achieved using stacks of 2D tissue culture vessels, which is an expensive and labor intensive process. This joint project will address those challenges and facilitate optimized, large-scale cultivation of stem cells which can accelerate the progress of therapies into the clinic.”

“When CCRM was created, we had industry partnerships like this in mind,” says Michael May, CEO of the Centre for Commercialization of Regenerative Medicine. “We are delighted to have EMD Millipore as our first project partner. Their production expertise and technologies will help CCRM to develop products that will benefit industry, academia, and the patient community. We appreciate that EMD Millipore has commissioned us to undertake this project and recognizes our strength in bioprocessing engineering.”

CCRM will be employing EMD Millipore’s Mobius® CellReady stirred tank bioreactor in its product development facility at the University of Toronto’s Banting Institute. The work began on February 27, 2012.

For more information, please visit www.millipore.com and www.ccrm.ca.

About EMD Millipore

EMD Millipore is the Life Science division of Merck KGaA of Germany and offers a broad range of innovative, performance products, services and business relationships that enable our customers' success in research, development and production of biotech and pharmaceutical drug therapies. Through dedicated collaboration on new scientific and engineering insights, and as one of the top three R&D investors in the Life Science Tools industry, EMD Millipore serves as a strategic partner to customers and helps advance the promise of life science.

Headquartered in Billerica, Massachusetts, the division has around 10,000 employees, operations in 67 countries and 2010 revenues of \$2.2 billion. EMD Millipore is known as Merck Millipore outside of the U.S. and Canada.

Note: Merck KGaA or Merck shall mean Merck KGaA, Darmstadt, Germany.

About the Centre for Commercialization of Regenerative Medicine (CCRM)

[CCRM](http://www.ccrm.ca), a Canadian not-for-profit organization funded by the Government of Canada’s Networks of Centres of Excellence program and six institutional partners, supports the development of technologies that accelerate the commercialization of stem cell- and biomaterials-based products. A network of academics, industry and entrepreneurs, CCRM translates scientific discoveries into marketable products for patients. CCRM launched in Toronto’s Discovery District on June 14, 2011.

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