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Your Trusted Stem Cell Center



Message from the staff Cell Biology Scientist

Welcome to the new year, and welcome to the snow, ice, and cold. All this frigid weather got me thinking about what 'cold' really means. An average room temperature is about 25°C (about 77°F) while the recent cold has dropped well below freezing (0°C or 32°F). Cold right? Well when we freeze down stem cells they end up at -196°C (that is -321°F)! Now that is cold!

We take great pride in our commitment to maintain your cord blood and umbilical cord segment stem cells. If and when you need those cells for life saving treatments, you have the peace of mind that the cells are stored according to industry leading standards. Later you'll get to meet Mike Marrazzo, our cryogenic manager, who's in charge of overseeing that your cells are maintained at frosty temperature.

We'll also take a look at some fantastic news out of Harvard University with some groundbreaking work to make cord blood an even more powerful tool for life saving treatments than it already is.

Finally we are proud to announce our new website has gone live! It brings with it a new ease of use with a clean interface, and a number of features you have been asking for. If you haven't taken a look at it yet, feel free to stop on by. Better yet, it has links to an abundance of information and news! *Cordbloodbank.com*

- Matthew Wilgo Cell Biology Scientist, NECBB

Definitions:

<u>HSC</u>: *Hematopoietic stem cells*, the stem cells in cord blood and bone marrow, which are responsible for making your blood cells.

Engraftment: When HSC's 'take up residence' in a new body's bone marrow. Successful engraftment indicates a successful transplant.

Reasons to save for the future: Harvard leads the way for improved cord blood treatments

Recent news out of the Harvard Stem Cell Institute (HSCI) has thrilled the world over the results from their phase 1b clinical trial. According to the report the therapeutic agent "has the potential to improve the success of blood stem cell transplantation."

Basically the therapeutic agent helps the HSC's from cord blood home into the recipient's bone marrow more effectively than cord blood alone. With the phase 1b safety study complete, the researchers are now moving on to phase II clinical trials to assess efficacy. It is being run in 8 medical centers with 60 patients with results expected later this year.

In animal models the treatment increased engraftment upward of 4 times over the untreated, and in the safety study, 10 of the 12 patients had engraftment due solely to the therapeutic agent.

This means your cord blood has become even more powerful than it was before! Who knew!?

Read more about this groundbreaking research on our website!

Prostaglandin-modulated umbilical cord blood hematopoietic stem cell transplantation *Blood blood-2013-05-503177*; *published ahead of print August 30, 2013, doi:10.1182/blood-2013-05-503177*

Your Stem Cells In the News... a small glimpse at the power of your cord blood and cord segment stem cells!

Traumatic Brain Injury —The University of Texas is conducting clinical trials to determine the efficacy and safety to use cord blood to treat traumatic brain injury. The hope is that cord blood stem cells may help reduce severity or even help repair damage and restore functionality.

Cerebral Palsy — Duke University Medical Center, Raleigh, NC is currently recruiting patients for a potential treatment for cerebral palsy. They hypothesize that an "infusion of autologous umbilical cord blood will facilitate neural cell repair resulting in improved function in pediatric patients with cerebral palsy".

Tissue engineering, Skin — Recent research from the University of Granada (Granada, Spain) suggests that it may be possible to use umbilical cord segment stem cells to create and regenerate human skin. These cord segment stem cells have been show to be able to become oral mucosa and epithelial cells, both of which are a necessity to grow and repair damaged skin.

Getting to Know New England Cord Blood Bank: Mike Marrazzo

You probably know that your stem cells are frozen here at New England Cord Blood Bank. What you may not know is the level of dedication and peerless attention your stem cells receive from Mike Marrazzo, Manager of Cryogenic Services.

Mike's main duties include overseeing each and

every stem cell maintained here at our facility, be they cord blood, cord segment, dental pulp, or other. He and his staff are constantly monitoring the temperature, liquid nitrogen levels, supplies and reagents, and many other critical factors that make New England Cord Blood Bank a world class cryogenic facility.

He is also the man in charge of shipping your stem cells when needed for treatment. He takes pride knowing that when a transplant center receives your cells they will be of the utmost quality, and ready to help save a life.

"I think that is what I love most about my job. I know that my work directly contributes to improving or even saving people's lives."



Mike also loves that New England Cord Blood Bank is a family owned and operated company.

"It's a very personal environment. We take our jobs seriously, but we still find time to laugh and smile. We love hearing about the

success stories from our clients."

As always, we are thankful to you for choosing NECBB to store your child's cord blood and cord tissue stem cells. Should you ever have any questions, please do not hesitate to contact us by phone, or email me directly, at DrGrace@necryogenic.com.

Best wishes for the 2014, Dr. Grace



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NEW ENGLAND CORD BLOOD BANK, INC.

153 Needham St. Newton, MA 02464 Phone: 617-244-4447 Fax: 617-244-6659