



Cleveland Cord Blood  
CENTER

*Save a Cord. Save a Life.*

## 2016 Year in Review



**Save a Cord. Save a Life.**

# About The Cleveland Cord Blood Center

The Abraham J. and Phyllis Katz Cord Blood Foundation dba Cleveland Cord Blood Center (CCBC) is a non-profit organization that collects, stores, and distributes stem cell-rich umbilical cord blood. The cord blood, usually discarded at birth, is used for the treatment of deadly blood cancers and other life-threatening illnesses, and for medical research.

As a non-controversial source of stem cells, cord blood is collected from umbilical cords after delivery of full-term, healthy infants. The cord blood is then frozen and stored in liquid nitrogen freezers until needed. Hundreds of cord blood stem cell transplants are performed worldwide each year and used in the treatment of leukemia and other blood disorders. Researchers are also looking at cord blood stem cells to treat other diseases such as diabetes, heart disease, metabolic diseases, neural disease or injury and more. Established in 2008, CCBC has been issued a biologics license from the U.S. Food and Drug Administration (FDA), is accredited by the Foundation for Accreditation of Cellular Therapy (FACT) and the American Association of Blood Banks (AABB), is designated as a Health Resources and Services Administration (HRSA) contractor, and is a member bank of the National Marrow Donor Program (NMDP).



## Nathan Mumford: A Cord Blood Recipient's Story

In August 2004, Nathan Mumford learned he had leukemia and was given nearly no hope for survival. When no match was found among family members for a bone marrow transplant, Cleveland Cord Blood Center founder and Mumford's physician, Mary J. Laughlin, M.D., offered him hope with the suggestion that he consider a cord blood stem cell transplant.

In November 2004, he received a cord blood stem cell transplant from the cord blood of an African-American baby girl. Since his transplant, he's gotten married and enjoys spending time outdoors – taking every advantage to appreciate life more, be grateful and ponder the many milestones he's achieved since receiving his cord blood transplant.



**“**The more parents of African-American descent and others donate their babies' cord blood, the more lives will have a chance of being saved. And because umbilical cord blood would otherwise be medical waste if not donated, why not?  
**”**

## A Year of Growth, Gratitude

### A message from the Executive Director

Dear friends,

We are grateful to the many who have helped make 2016 a landmark year as the Cleveland Cord Blood Center continues on our mission of healing. There are many ways to measure success, as you will read in this report.

We were very proud that we achieved an important milestone in September when the U.S. Food and Drug Administration issued a biologics license to the CCBC for CLEVECORD™, a stem cell product derived from umbilical cord blood. This accomplishment is reflective of our dedication to meeting the highest standards in the industry for distribution of cord blood products to transplant centers throughout the U.S. and around the world.

As we look to the future, the addition of a new west coast collection site will help extend our ability to maintain a diverse pool of cord blood stem cells. The construction of the CCBC Cellular Therapy Incubator will capitalize on our experience with clinical products. Also, the launch of our newsletter CCBC Connection, along with the development of a new website and social media platforms, will help friends, colleagues and the public keep abreast of the latest news, as well as help increase awareness of our organization.

We appreciate the many ways we are supported by cord blood donors, financial contributors, friends and colleagues, and invite you to read on and learn more about the Cleveland Cord Blood Center's activities and accomplishments in 2016.

Sincerely yours,

  
Marcie Finney



# Commitment to Quality is Key to Cord Blood Collections

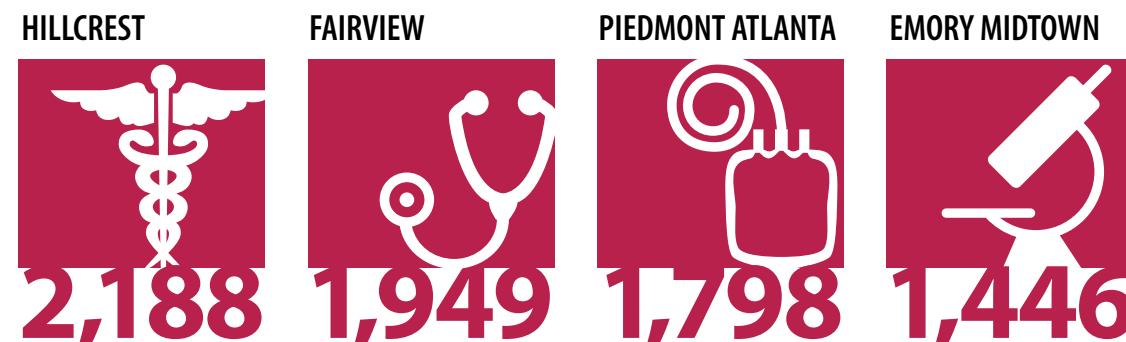
## FDA grants approval of CLEVECORD™ for stem cell transplants

The Cleveland Cord Blood Center received a biologics license from the U.S. Food and Drug Administration for CLEVECORD, a stem cell product derived from umbilical cord blood for use in stem cell transplants. The FDA approval of CLEVECORD reflects the organization's ability to meet the highest quality standards in the industry for distribution of cord blood products to transplant centers throughout the U.S. and around the world.

"The ability to meet such standards is indicative of the commitment of our organization to providing high quality transplant options to patient populations that are underserved in hematopoietic transplantation. It also stages the pursuit of new lifesaving and life-enhancing research and product development opportunities," said Wouter Van't Hof, Ph.D., Cord Blood Bank Director.



## Cord Blood Collections by Hospitals



Up to 50 percent of parents giving birth in CCBC's partner hospitals donate their babies' umbilical cord blood, a rate well above the national average.

## Mothers at partner hospitals give the gift of life

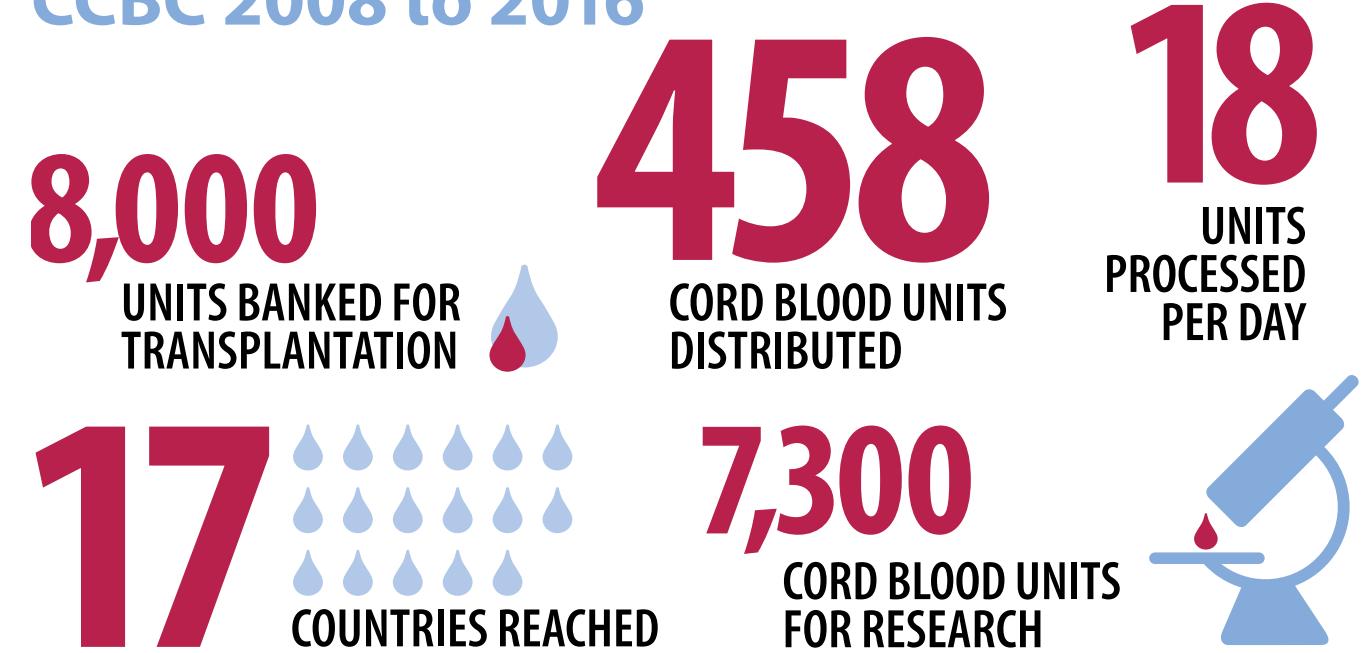
Thanks to the mothers who gave birth at our four partner hospitals, 7,381 cord blood units were donated for lifesaving work. These mothers joined a growing number throughout the world who have chosen to have their babies' cord blood stem cells help save lives – holding the potential to treat patients with life threatening blood and immune systems disorders.

## Units readied for lifesaving transplants and research

Our processing facility laboratory received an average of 18 cord blood units per day from the four partner collection sites. Of the units collected, 1,486 (approximately 20%) met qualifying criteria and were banked at our center.

Cord blood units not meeting clinical criteria for processing were sent to researchers at The Cleveland Clinic, Case Western Reserve University, University of Louisville, Emory University, and others for use in studies in blood and metabolic disorders.

## CCBC 2008 to 2016



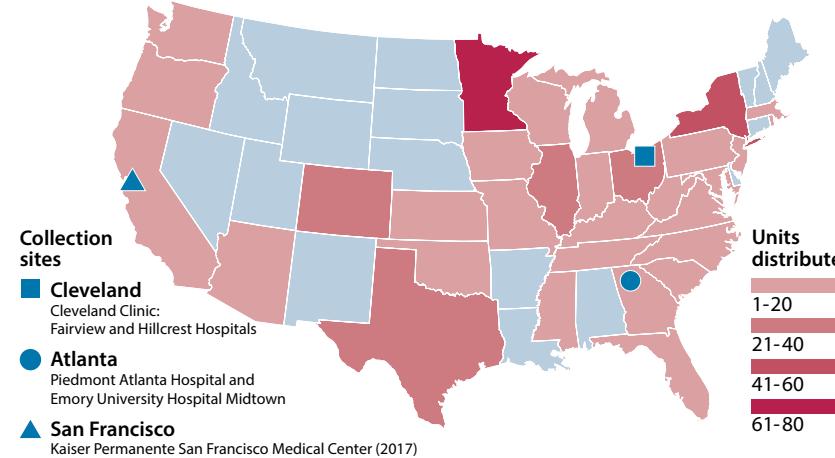
# Cord Blood Distributed Throughout the U.S., Around the Globe through 2016

## Cord blood units distributed to serve a diverse population

During the year, a total of 104 units were distributed worldwide for transplant into patients. The cord blood stem cell units stored for use in transplant have met specific testing requirements and will be available for use by transplant doctors through the international registries, including the National Marrow Donor Program/Be The Match and Bone Marrow Donors Worldwide.

Because of the broad diversity in the genetic and ethnic backgrounds of families in the CCBC collection sites in Atlanta and Cleveland, the center's diverse donor pool helps ensure good matches for patients of African American, Latino and Asian descent, for whom well-matched stem cell grafts are not generally available in the adult donor registry.

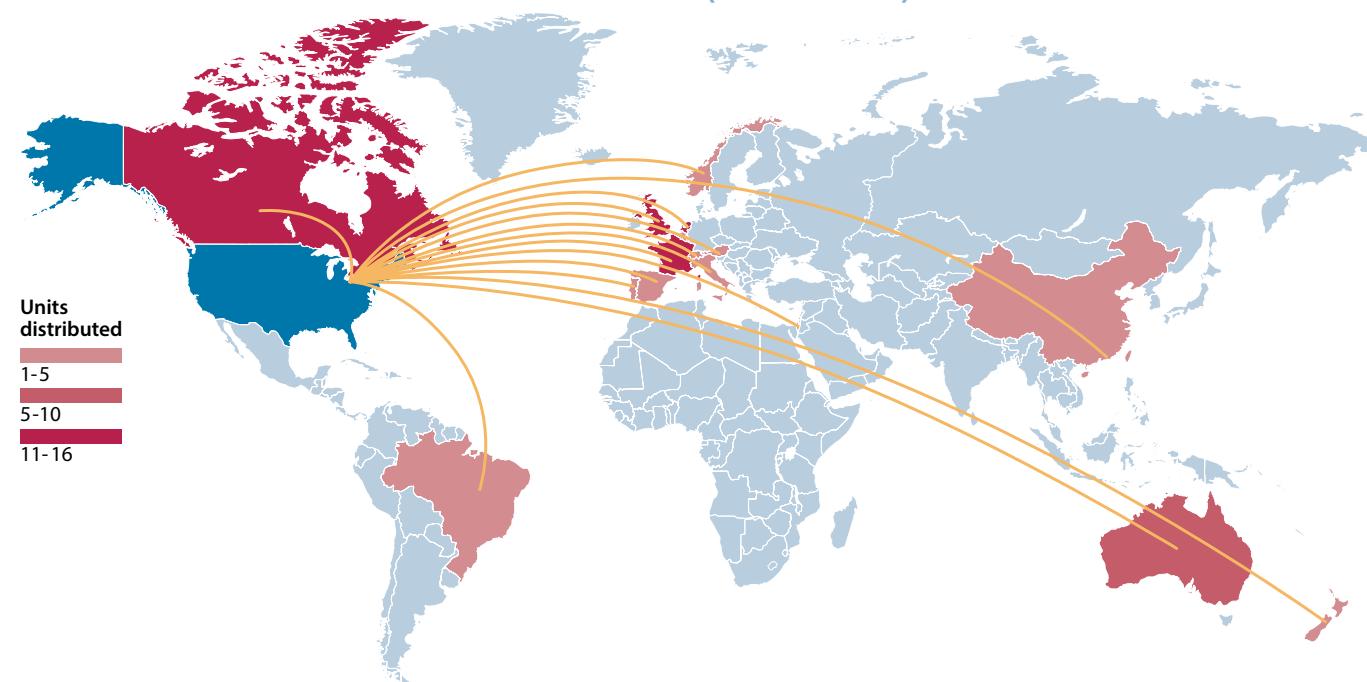
### CCBC Cord Blood Distributions Across the United States (2008 to 2016)



### About 2016 Cord Blood Recipients

- Recipients ranged in age from 1 to 74
- Race of recipients: 84% Caucasian; 9% African American; 7% Asian
- Units distributed: in the U.S – 80%; internationally – 20%
- Units collected have been used to treat a variety of diseases including:
  - Acute lymphoblastic leukemia (ALL)
  - Acute myelogenous leukemia (AML)
  - Non-Hodgkin lymphoma
  - Myelodysplastic/myeloproliferative disorders
  - Disorders of the immune system
  - Inherited disorders of metabolism
  - Severe aplastic anemia

### CCBC Cord Blood Distributions Across the Globe (2008 to 2016)



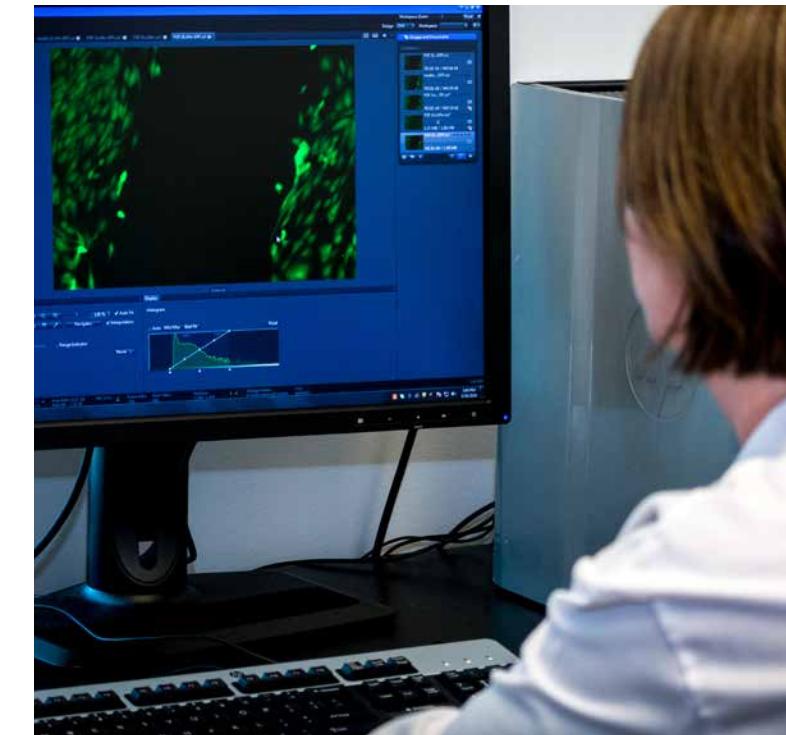
# Research & Development Laboratory Focuses on New Medical Applications

## Supports treatment of Parkinson's disease, diabetes, HIV/AIDS and wound healing

Established in 2014 and located in 1,640 square feet of laboratory space at the Global Cardiovascular Innovation Center, our scientists are conducting innovative research in the development of stem cell treatments to address unmet medical needs in patients suffering from Parkinson's disease, diabetes, HIV/AIDS and those with wound healing issues.

"Plans are to take the researchers' initial proof of concept to intellectual property development, and ultimately take these discoveries into clinical trials that aim to prove safety and efficacy in the clinical setting," explained Jennifer Greene-Roos, Ph.D.

"These 'bench to bedside' studies are very focused on expanding the use of cord blood as treatment in novel medical applications."



## Michael Rowe: A Cord Blood Recipient's Story

In January 2012, at age 35, Michael Rowe, a happily married father of four, was diagnosed with leukemia.

During his six months of chemotherapy, his medical team recommended that he consider a bone marrow transplant. However, testing revealed that none of his three siblings were a match, and no matching donors could be found through the national bone marrow registries. Cleveland Cord Blood Center founder and Rowe's physician, Mary J. Laughlin, M.D., suggested a cord blood transplant.

Cord blood matches were found, and Rowe went on to receive his lifesaving transplant. Since the transplant, he has returned to work as a software engineer. He treasures the time he spends with his family.



**“**I am deeply grateful to the parents who donated the cord blood I received. They didn't know me, but their donation saved my life. Every day, babies are born and parents don't realize that their umbilical cords could be used to save the life of another person. The cords are just thrown away. I encourage people having babies to donate. It is a significant opportunity to help someone else, especially someone like me who would not have found a match otherwise.

**”**



## Cleveland Cord Blood C E N T E R

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Supported by The Abraham J. and Phyllis Katz Foundation and  
Dr. Donald J. and Ruth Weber Goodman Philanthropic Fund

### Cleveland Cord Blood Center

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### Leadership

Mary J. Laughlin, M.D.  
Founder, Medical Director  
Marcie R. Finney, M.S.  
Executive Director  
Wouter J. Van't Hof, Ph.D.  
Cord Blood Bank Director  
Lisa Phillips Johnson, B.S.  
Quality & Regulatory Director

### Board of Directors

Bruce Goodman  
Chairman  
Alex Katz  
Treasurer  
David Katz  
Secretary  
Pablo Rubinstein, M.D.  
Mary J. Laughlin, M.D.



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