

2022

Year in Review



Cleveland Cord Blood
CENTER

Save a cord. Save a life.

FROM THE *Executive Director*

As we consider how remarkable the year 2022 was, we look back at a year impacted by global conflict, inflation, and other economic uncertainties. At the Cleveland Cord Blood Center, we stayed the course. Our mission guided us thru the challenges and despite those obstacles, we continued to distribute cord blood units to patients in need during unprecedented times while working to develop new innovative uses of cord blood in the Cleveland Cell Therapy Incubator and the Research and Development Laboratory. And, we have seen our way through yet another year of the COVID-19 pandemic.

I hope you take some time to look at our 2022 Year in Review for examples of how critical connections in our communities — with our donating families, cord blood recipients, industry partners, local universities, our Board of Directors, key opinion leaders, funders, and so many others — helped shape and power our work together.

In 2022:

- Over 4,000 families donated cord blood units to CCBC
- We celebrated 10 years in our Atlanta collection sites
- The DEI committee continued to educate and engage our staff
- Research & Development made huge progress in identifying new uses for cord blood
- CCBC was recognized as a thought leader in the cord blood industry
- Multiple milestones were met in the Cleveland Cell Therapy Incubator social enterprise

As we make the most of the next generation of cord blood's lifesaving work, we are intensely grateful to the parents who have so generously donated their babies' cord blood to help others with critical illnesses and made innovations in future therapies possible. In turn, we are inspired and dedicated to use this most precious gift of cord blood to help save lives and enhance health one birth at a time.



Marcie R. Finney, M.S., MBA
Executive Director

2022 in numbers

4,063
Cord blood
units collected



30 Cord blood
units distributed
for transplant

2,135
Cord blood
units distributed
for research



Research
cord blood
units sent to
18 states

61% Cord
Blood units added
to inventory were
from diverse donors



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CCBC Celebrating 10 YEARS IN ATLANTA

In 2022, CCBC achieved a significant milestone within its organization and for the donors and survivors it serves. CCBC celebrated its 10 year anniversary collecting cord blood donations in Atlanta from its Piedmont Hospital and Emory University Hospital Midtown sites.

The relevance of this anniversary is significant. According to CCBC Atlanta Hospital Liaison Candice Laster, Atlanta was “the first out of state collection site.” She also emphasized the importance of Atlanta collection sites “increasing the diversity of the CCBC cord blood units available due to Atlanta’s diverse population.” 70% of cord blood units from Emory Hospital alone are considered diverse units.

CCBC Collection Site Manager, Kathy Bobik-Kurz also recognized the “tremendous support of both physicians and staff in Atlanta for educating donors on the benefits and safety of cord blood donation.”

To celebrate, CCBC hosted a lunch where physicians, nurses, and staff had the opportunity to mingle and celebrate their good work. CCBC Executive Director Marcie Finney was also in attendance.

“Staff in Atlanta are very passionate about what they do” Candice said. “They love to help people understand that cord blood donation is an option.”

CCBC is honored to have reached this important milestone in Atlanta and extremely optimistic about the number of people they can help as their cord blood units continue to grow in diversity.



CLEVELAND CORD BLOOD CENTER

DEI *Committee*

In its commitment to exhibit equality, respectfulness, belonging, and inclusiveness within the workplace, the CCBC DEI (Diversity, Equity, and Inclusion) Committee worked to uphold these principles in 2022 through focused activity and employee engagement.

The DEI committee, which meets bi-weekly, drafted the organization's DEI mission statement and worked with the CCBC team to select the statement that best supports CCBC's commitment to DEI. The mission statement and values were rolled out in a new section of the CCBC webpage dedicated to DEI. Additionally, monthly presentations were coordinated on topics like mental health, stress management, pronoun usage, and other topics that foster an environment of inclusion and understanding throughout the organization.

The DEI Committee also sent out monthly emails based on happenings in the month that corresponded to CCBC's DEI mission. Email subjects included African Americans in research and science during Black History Month, stress reduction tips during mental health awareness month, and information on holidays celebrated in various cultures.

Plans for the DEI Committee in 2023 include setting up a library of books that represents the principles of DEI, a staff survey, and offering teleconferences led by Goodwill highlighting the various pillars of DEI.

According to Sara Shields, CCBC Associate Director, Processing Facility and DEI Committee member, "Everyone plays a vital role in the DEI Committee. It's effective as it's cross departmental and anyone interested in DEI can join."

Since our founding in 2008, the Cleveland Cord Blood Center has been committed to serving the unmet need of patients with donated cord blood from diverse communities. We are committed to continually building on this value of diversity by focusing on how we can become more inclusive and empower others of different cultures. We strive to exhibit equality, respect, belonging and inclusiveness when working with those who depend on us: our partners, our employees, and our communities.

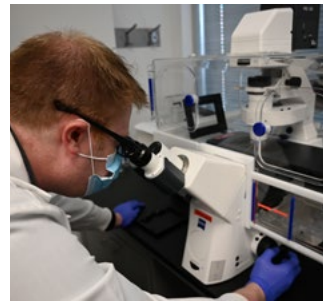
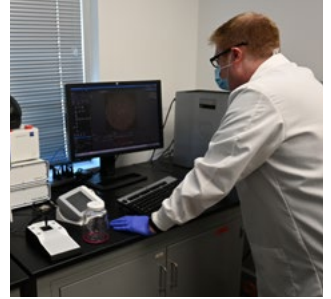
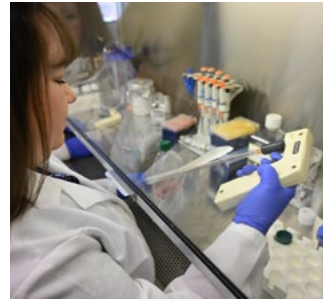


In 2022, CCBC researchers continued their commitment to studying the generation of special immune cells known as Induced T Regulatory Cells (iTreg).

The CCBC Research team studied iTreg cells from umbilical cord blood units which tend to be “more robust and expandable compared to iTreg cells from adult induced regulatory cells” according to Jonathan Kenyon, Ph.D., CCBC Research Associate and Research Scientist Lead for the CCBC iTreg Project. This is related to the iTreg cell immune tolerance between baby and mother during pregnancy. Research from umbilical cord iTreg cells could provide advancements and therapies in the areas of diabetes, macular degeneration, wound care, and auto immune diseases.

CCBC’s work in this area was featured in two peer reviewed journal articles and continues to be a focus for the CCBC research team this year. Additionally, the CCBC Research team is studying the use of iTreg cells as a potential treatment for Graft Vs. Host Disease (GvHD) as well as diabetic retinopathy.

According to Jonathan Kenyon, the potential applications for iTreg cells are “very broad and could help in the development of a number of treatments for various auto immune diseases.”



CCBC RECOGNIZED AS THOUGHT LEADERS IN THE FIELD

In 2022, two distinguished organizations working to advance and advocate cord blood research along with Case Western Reserve University have called upon CCBC’s Cord Blood Bank Director Wouter Van’t Hof, Ph.D. and CCBC’s Executive Director Marcie Finney for participation and thought leadership.

Cord Blood Connect 2022 invited Wouter to be part of a panel discussing how to leverage cord blood operations to diversify cord blood utility as well as a general discussion around cord blood as a platform technology. Cord Blood Connect 2022 was hosted by the Cord Blood Association. CCBC’s Executive Director, Marcie Finney is an active executive board member of the Cord Blood Association who opened Cord Blood Connect 2022 with a preview of the congress as Chair of the technology and education track.

CIBMTR-Center for International Blood & Marrow Transplant Research has also invited Wouter to serve on its advisory committee as their cord blood bank representative. He is one of fifteen professionals invited to serve on this prominent committee that was founded to support analysis of clinical data. CIBMTR is a collaborative resource of data and experts supporting research in cellular therapies to improve patient outcomes.

CCBC is proud to be a part of the Case Western Reserve University (CWRU) Master of Science in Regenerative Medicine (RGME). Both CCBC Executive Director Marcie Finney and CCBC Director, Cord Blood Bank & CEO, Cleveland Cell Therapy Incubator Wouter Van’t Hof Ph.D. are invited guest lecturers at the RGME program as well as other notable leaders in the field of regenerative medicine and cell based therapy development. This is CCBC’s third year involved in the program and both Marcie and Wouter look forward to continuing to pass on their valuable knowledge to the students in the CWRU RGME.

CCBC SOCIAL ENTERPRISES CLEVELAND CELL THERAPY INCUBATOR MILESTONES

The Cleveland Cell Therapy Incubator (CCTI) is a CCBC social enterprise that aims to support advancement of innovative cellular therapy products from Research & Development along the path to FDA approval.

In 2022, CCTI celebrated significant milestones that are a testament to its growth and success!

These milestones include:

ISOLATED CD34 PRODUCTION

CD34 cells are the markers for stem cells. In 2022 alone, CCTI manufactured nearly 300 million isolated CD34 cells from roughly 225 donated cord blood units that were used for non-clinical research purposes. Since 2020, CCTI has nearly doubled production of isolated CD34 cells year over year and will continue to increase production to meet the great demand for these CD34 stem cells as research tools for stem cell and cancer research.

INCREASES IN STAFFING

CCTI added an additional processing technologist and quality staff member in 2022. Additionally, several lab technologists from CCBC's main processing facility were cross-trained to assist with CD34 isolations as demand continues to increase.

CONTRACT MANUFACTURING

CCTI was very excited to enter into its first contract for contract manufacturing of a cGMP (Current Good Manufacturing Practices) material in February 2022. In preparation for this contract, CCTI staff underwent aseptic training on cleanroom gowning and processing. Additionally, the staff drafted numerous operating procedures and worksheets for clinical manufacturing after technology transfer was completed.

FACILITY AND EQUIPMENT UPGRADES

In preparation for the above mentioned contract manufacturing, several pieces of new equipment were purchased including a FACSLyric flow cytometer and CliniMACS cell sorter. Facility improvements included a new vacuum aspirator system, electrical upgrades, and the addition of a CO2 drop. The CCTI facilities are now ready to go for manufacturing of cell therapy products from cord blood.



UMBILICAL CORD BLOOD

Survivor Profile | LAUREN MOSTARDI



In 2009, Lauren Mostardi was diagnosed with Acute Promyelocytic Leukemia (APL), a blood cancer that increases a type of immature white blood cell called promyelocytes. APL is a rare form of leukemia that develops in 600-800 people in the United States each year. Lauren was just 22 years old at the time of her diagnosis.

After multiple rounds of traditional treatments that weren't effective, her medical team initially looked into a bone marrow transplant however there was no match compatible to Lauren. The doctors then searched for a possible match in the cord blood registry and quickly found a match.

"I was so grateful" Lauren said. "They called the transplant an Allogeneic Stem Cell Transplant and the actual procedure was just like a blood transfusion. No pain." She emphasized that the procedure was "completely safe" and that she felt "very comfortable" as the transplantation progressed.

Lauren emphasized that the Allogenic Stem Cell Transplant was the only option to save her life and is extremely thankful to donors. She also sees the importance of raising awareness and helping people understand the benefits of umbilical cord donation. "My family is incredibly grateful and I am so appreciative to those who make the decision to donate their umbilical cord blood to save lives every day."

Donor Testimonial | JAMIE SULLIVAN



It was an emotional moment when WOIO 19 News Anchor and CCBC cord blood donor Jamie Sullivan received the email. "I will never forget that message. It's emotional for me to talk about as I learned that in fact my son's cord blood was used to save someone's life."

When given the option to donate her son's umbilical cord blood, Jamie learned from CCBC that most cord blood in the world is discarded as medical waste. She also referenced the education she received around how cord blood donation saves lives. "You (CCBC) had been wonderful in answering all

of my questions and explaining to me just how safe it was and as well as the process."

Based on her life changing experience as a donor, Jamie has become an advocate for cord blood donation and interviewed CCBC Executive Director Marcie Finney on WOIO 19 News in September 2022 to help build awareness in Northeast Ohio. She also has posted on social media about her cord blood donation.

"This is something that has been so special to me and my family. Something we will never forget. Please know this is something safe for mom, baby, labor and delivery. Who wouldn't want the opportunity to save a life at no cost to you."

CCBC QUALITY MANAGER DAWN THUT EARNS CERTIFICATES FROM RAPS & AABB

2022 was a year of focused professional development and awards of certification for CCBC Quality Manager Dawn Thut, CABP. Dawn successfully completed the Regulatory Affairs Certificate Program for Pharmaceuticals offered by the Regulatory Affairs Professionals Society (RAPS). In addition, Dawn also successfully became a Certified Advanced Biotherapies Professional (CABP). This certification was issued by the Association for the Advancement of Blood & Biotherapies (AABB) in December 2022. Dawn is "proud" of both of her accomplishments as she understands how "they both support CCBC and its mission." CCBC congratulates Dawn on these well-earned professional achievements!

CCBC RECOGNIZES THE PASSING OF DR. HAL BROXMEYER, PH.D.

Dr. Hal Broxmeyer, Ph.D., a pioneer in the field of cord blood transplantation passed away on December 8, 2021 due to thyroid cancer. CCBC recognizes the work and legacy of Dr. Broxmeyer, whose research was instrumental in developing the field of cord blood transplantation. His work made possible the first umbilical cord stem cell transplantation that took place in Paris on October 6, 1988. He also started the first cord blood bank at Indiana University and developed best practices for cord blood collection still used today.

OUR MISSION, VISION, VALUES FOR A NEXT GENERATION OF LIFESAVING WORK

Mission: We are advancing umbilical cord blood cell therapy treatments: saving lives, enhancing health, and expanding knowledge one birth at a time.

Vision: A world in which cord blood therapies enhance quality of life for all.

Values: Quality. Collaboration. Innovation. Leadership. Compassion. Integrity.

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LEADERSHIP

Mary J. Laughlin, M.D., *Founder and Medical Director*

Marcie R. Finney, M.S., MBA, *Executive Director*

Wouter J. Van't Hof, Ph.D., *Director, Processing Facility and CEO, Cleveland Cell Therapy Incubator*

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**WE NEED
YOUR HELP**

**To contribute,
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**Cleveland Cord Blood
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Save a cord. Save a life.

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