

Utah Cord Bank offers the **broadest spectrum**, minimally manipulated regenerative products for homologous use. Our young multipotent cells are bathed in a rich milieu of growth factors, cytokines and other factors for maximum regenerative potential.

We provide several therapeutic options to choose from depending on the indication. Each product is available with two preservative formulations: DMSO, the most common preservative in the industry, and our unique DMSO-Free product for treatment of patients with sulfa allergies.

### THE DIFFERENCE IS IN THE DETAILS

COMPONENT	StemVive®	Stemii™	StemCB™	CORD MATRIX	CORD BLOOD	AMNIOTIC MATRIX	AMNIOTIC FLUID	ADIPOSE PRP	BONE MARROW PRP	BLOOD DERIVED PRP
Extracellular Matrix (ECM)	✓	✓✓✓								
Fibroblast Growth Factor (FGF)	✓	✓✓✓								
Hyaluronic Acid (HA)	✓	✓✓✓		✓✓						
Scaffolding Proteins	✓	✓✓✓		✓✓		✓✓				
Young Multipotent Mesenchymal Stem Cells (MSCs)	✓✓✓*	✓✓		✓✓		✓✓	✓	**	**	
Micro RNA/miRNA	✓	✓								
Exosomes	✓	✓	✓							
Cord Blood Serum	✓	✓	✓							
Young Hematopoietic Stem Cells (HSCs)	✓	✓	✓					✓	✓	
Platelet-Rich Plasma (PRP)	✓	✓	✓		✓			✓	✓	✓
Cytokines	✓	✓	✓		✓	✓✓	✓✓	✓	✓	✓
Growth Factors/Growth Proteins	✓	✓	✓	✓✓	✓	✓✓	✓	✓	✓	✓

\*Multiple check marks indicate a relatively higher concentration of components  
 \*\*Old stem cells only, with shorter telomeres/less bioactive. May be tumorigenic

### COMPONENT DEFINITIONS

#### Extracellular Matrix (ECM)

- Provides structural and biochemical support/scaffolding
- Elastin, reticulin, glycoproteins, proteoglycans, fibronectin, laminins, and osteopontin

#### Fibroblast Growth Factor (FGF)

- Multi-functional proteins
- Regulate cell proliferation, gene expression, angiogenesis, keratinocyte organization, and wound healing

#### Hyaluronic Acid (HA)

- Non-sulfated glycosamino-glycan in the extra cellular matrix of connective, epithelial, and neural tissues
- Important component of cartilage with lubricating function
- Major component of skin, involved in tissue repair
- Key function in cell movement and proliferation

#### Scaffolding Proteins

- The most abundant proteins in the human body
- Gives skin strength and elasticity
- Involved in wound healing

#### Young Multipotent Mesenchymal Stem Cells (MSCs)

- Undifferentiated immunologically privileged stem cells
- Develop into different cell types – skin, bone, nerves, cartilage, muscle, etc.
- Do not elicit an inflammatory immune response or graft-host reaction

#### Micro RNA/miRNA

- Small non-coding mRNA
- Important in gene regulation

#### Exosomes

- Intracellular vesicles that are secreted by cells
- Attractive target for future DNA/RNA therapies

#### Cord Blood Serum

- Facilitates the preservation of stem cells
- Enhances cellular viability post-thaw
- Rich with growth factors, neurotropic factors, vitamin A, fibronectin, prealbumin, and lipids

#### Young Hematopoietic Stem Cells (HSCs)

- Multipotent, self-renewing stem cells that give rise to all types of blood cells

#### Platelet-Rich Plasma

- Plasma with concentrated platelets and some leukocytes
- Used to promote healing

#### Cytokines

- Small proteins important in cell signaling, regulating and mediating immunity, inflammation, and hematopoiesis

#### Growth Factors/Growth Proteins

- Signal developing cells to become various types of cells required in the healing of damaged organs and tissues
- More than 70 growth factors are found in umbilical cord blood, tissue, and amniotic membrane
- Include platelet-derived growth factors, vascular endothelial, epithelial cell, and nerve growth factors



**StemVive®** is a novel flowable regenerative cellular allograft product that contains mesenchymal stem cells from Wharton's Jelly and Umbilical Cord Blood for the greatest cellular composition available to patients. <sup>1,2,3,4</sup>

**Stemii™** is a viable cellular biologic product designed for local delivery of powerful healing factors. Individual components have been shown to stimulate the growth of healthy new bone and other tissue. <sup>5,6,7</sup>

**StemCB™** is a rich source of the cellular components found in Umbilical Cord Blood including a potent leukocyte array for anti-inflammatory response.

## OUR GOALS: SAFETY AND EFFICACY

The entire process, from local procurement to in-house processing and storage, is carefully monitored to ensure the **safest, purest, most bioactive products** for patients. Our products have been used by over **60,000 patients with no reportable severe adverse events**.

Cellular therapeutics have been used safely for many years to treat a variety of conditions. As a powerful emerging clinical tool, it is important to note that the field is still growing. Phase I and II clinical trials are underway to help define the scope of the practice. Allogeneic stem cells predominate the emerging therapies as they outperform older autologous treatments which are more likely to have DNA damage resulting in a greater risk for cancer and a less robust clinical performance. Professional training on safe clinical practices as well as relevant patient education promotes the safest possible interventions with realistic outcome expectations.

*"I felt relief within an hour and saw a dramatic reduction in swelling after just one day."*

- DSP Salt Lake City, UT



*"Superior to anything else I've used."*

- BV, Pain Medicine MD



Our proprietary process begins with **meticulous screening** of the donor mother and father as well as family members for several generations. In addition to routine industry screens for blood borne pathogens, we also screen for heritable and non-heritable conditions, environmental contaminants from medications, alcohol, drugs, tobacco, and electronic vaping. Only healthy families who meet or exceed these criteria are considered. Post-natal tissues are collected after Cesarean section. After processing, the allografts are tested again to ensure they are free of contaminants and infection and contain healthy, viable cells prior to cryopreservation.

**Rigorous in-house and third party testing** confirms that our proprietary methods consistently result in the **most bioactive** products available. UCB products support **improved cellular function** by orchestrating reduced inflammation and normal healing cascades. This is yet another way that we raise the bar for regenerative products, and why our accounts consistently rave about superior clinical results compared to other regenerative products. In fact, our cells are 150 times more likely to form a colony compared to fresh stem cells from bone marrow. This is a remarkable achievement, allowing our customers to have the confidence of knowing they are providing their patients a superior product.

Contact us today for more information on how to provide stem cell products to your patients.

**Utah Cord Bank**

P: 888-295-1093

support@utahcordbank.com

Utah Cord Bank is registered with the FDA as a Human Cell and Tissue Establishment (FEI: 3005351861)

**DISCLAIMER STATEMENT:** WE DO NOT CLAIM THAT THERAPY USING STEM CELLS IS A CURE FOR ANY CONDITION, DISEASE OR INJURY. ALL STATEMENTS AND OPINIONS PROVIDED ARE FOR EDUCATIONAL AND INFORMATIONAL PURPOSES ONLY AND WE DO NOT DIAGNOSE OR GIVE MEDICAL NOR LEGAL ADVICE. INDIVIDUALS INTERESTED IN STEM CELL THERAPY ARE URGED TO REVIEW ALL PERTINENT INFORMATION AND DO THEIR OWN RESEARCH BEFORE CHOOSING TO PARTICIPATE IN STEM CELL THERAPY.

1. Bleback K, Brinkmann I. Mesenchymal stem cells from human perinatal tissues: From biology to cell therapy. *World J Stem Cells* 2010 2:81-92.
2. Witkowska-Zimny M, Wrobel E. Perinatal sources mesenchymal stem cells: Wharton's Jelly, amnion and chorion. *Cell & Molecular Biology Letters* 2011 16:493-514.
3. Kwon A, Kim Y, Kim M, Kim J, Choi H, Jekari D, Lee S, Kim JM, Shin J, Park I. Tissue-specific differentiation potency of mesenchymal stem cells from perinatal tissues. *Nature* 2016 6(23544):1-11.
4. Maslova O, Novak M, Kruzliak P. Umbilical cord tissue-derived cells as therapeutic agents. *Stem Cells Int* 2015 150609:10 pages.
5. Hare J, Traverse J, Henry T, Dib N, Strumpf R, Schulman S, Gerstenblith G, DeMaria A, Denktas A, Gammon R, Hermiller J, Reisman M, Schaefer G, Sherman W. A randomized, double-blind, placebo-controlled, dose escalation study of intravenous adult human mesenchymal stem cells (Prochymal) after acute myocardial infarction. *J Am Coll Cardiol* 2009 54(24):2277-2286.
6. Lee R, Pullin A, Seo M, Kota D, Ylostalo J, Larson B, Semprun-Prieto L, Delafontaine P, Prockop D. Intravenous hMSCs improve myocardial infarction in mice because cells embolized in lungs are activated to secrete the anti-inflammatory protein TSG-6. *Cell Stem Cell* 2009 5:54-63.
7. Galieva L, Mukhamedshina Y, Arkhipova S, Rizvanov A. Human umbilical cord blood cell transplantation in neurodegenerative strategies. *Frontiers in Pharmacol* 2017 8:1-13.