























# 2020-21 PRODUCT CATALOG

8<sup>th</sup> Edition

AccelleratedBiologics.com 800-367-0844 • orders@accelleratedbiologics.com

#### **TESTIMONIALS**



"We've been using AcCELLerated Biologics' products with tremendous success for the past few years. We appreciate the collaborative nature and the service they provide for our patients at the Regenerative SportsCare Institute. We look forward to a long, successful collaboration with AcCELLerated Biologics, as we continue to help patients with orthopedic injuries heal with regenerative treatments."

— **Dr. Gregory Lutz**, Founder of the Regenerative SportsCare Insitute



"The team at AccEllerated Biologics back their business model with a wealth of knowledge and experience that is reliable and easy to access. Whether you are new to the field or an expert seeking a consultation on the latest technology, you will find they truly care about enhancing your expertise in this emerging field."

— **Joseph J Ruane, DO**, Medical Director Spine, Sport and Joint Physicians. Head Team Physician NHL Columbus Blue Jackets



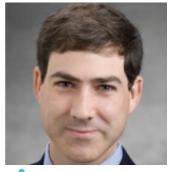
"I have worked with AccELLerated Biologics and Steve Whyte for over seven years. This organization has been an incredible resource for our orthobiologics, research and education programs at the Andrews Institute. I highly recommend them."

— Josh Hackel, MD, The Andrews Institute, Gulf Breeze, FL



"My partners and I at Premier Orthopaedics have been using AccELLerated Biologics' products for the past few years, with great success and patient outcomes. Bob Voelker always provides us with excellent service and education. He is always quick to respond to questions and offer us the most updated research and products."

— Kelly Scollon-Grieve, MD, Premiere Orthopaedics, Pennsylvania



"The Accellerated Biologics team is an invaluable asset to our company, providing excellent products and consistently superior service."

— **Christoper J. Rogers, MD, RMSK** XCELL Sports and Regenerative Medicine, San Diego CA

#### **TESTIMONIALS**

"I've used AcCELLerated Biologics since the company opened and have found amazing customer support from Steve and everyone who works there. I also am a big believer in their products and am seeing great results in my orthobiologic practice."

— **Dr. Ken Mautner,** Emory Sports Medicine Center

"Accellerated Biologics has been an invaluable resource for my regenerative medicine practice. They are on top of the latest products and research in the orthobiologic arena. Steve and his staff are always readily available to address any need I that have, from shooting to new product/process information they go above and beyond with customer service."

— R. Amadeus Mason MD, Emory Orthopaedics, Sports & Spine

"AccELLerated Biologics has changed my perception of stem cells. The best thin I can say about it is that it is always consistent. You get the same product every time you spin it."

— **Afzal Mohammad Innstrand, Doctor,** Oslo Medisinske Senter, Norway

"I have worked with AcCELLerated Biologics for many years. The owner and staff work with utmost respect and professionalism. Steve Whyte has tremendous experience in the field of regenerative medicine and has given me important insight to the effectiveness and differences of different biologic treatments, in particular, platelet rich plasma. My regenerative medicine practice has thrived with the use of products from AcCELLerated Biologics. Not only does this company provide excellent service but provides knowledge and support in the field of biologic treatments."

— Kristopher Goddard, DO, The Osteopathic Center, Miami, FL & Knoxville, TN

"Steve Whyte and his team are very supportive and they make our practice really run efficiently in the orthobiologics realm."

— Leonardo Oliveira, MD, Cleveland Clinic Florida













1-800-367-0844

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#### PLATELET RICH PLASMA

#### Platelet Rich Plasma (PRP)

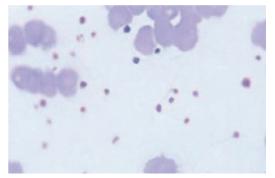
Platelet Rich Plasma (PRP) is concentrated from your own blood which contains healing factors, such as white blood cells and bioactive proteins, called growth factors and stem cell markers. These cells are vital for tissue regeneration and repair. Platelets, once thought of being responsible for only clotting, have been scientifically proven to be a reservoir of these essential healing components. With advanced techniques, we can concentrate these regenerative healing cells in a simple outpatient setting.

PRP is from your own blood, autologous, so there is little to no risk when conducted by a trained professional. Since the cells are autologous, there is no risk for an allergic or immune reaction. Side effects or complications with PRP are extremely rare.

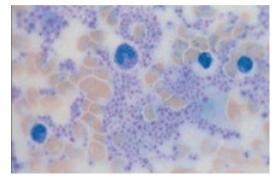
Patients can expect to see significant improvement in symptoms over the course of healing time. This procedure may eliminate the need for further invasive treatments, such as surgery or prolonged use of medications. While other therapies such as corticosteroid injections may provide temporary relief and stop inflammation, PRP injections stimulate healing of the injury over a shorter time period with fewer side effects. Patients usually report a gradual improvement in symptoms and return of function. Many patients require two to three treatments to obtain optimal results and may even experience a dramatic return of function and relief within 2-3 months.

#### Not All PRP is the Same

PRP products differ both qualitatively & quantitatively. It is well documented that not all PRP is the same. Patients may experience varying outcomes with PRP applications. These outcomes can be attributed to the system used to prepare the PRP. To get the best results, the PRP system must significantly concentrate the platelet growth factors in the treatment sample. The better the concentration, the better the chances for recovery.



Normal Platelet Count



Concentrated Platelet Count



LLERATED

EmCyte - AcCELLerated Biologics' AB60 Pure PRP

#### PLATELET RICH PLASMA

#### **PRP Concentrating Systems**

GS30 AbsolutePRP<sup>™</sup> – Platelet Concentrating System 30mL GS60 AbsolutePRP<sup>™</sup> – Platelet Concentrating System 60mL GS120 AbsolutePRP<sup>™</sup> – Platelet Concentrating System 120mL GS301-EU AbsolutePRP Gold – Platelet Suspension kit 20mL

#### The Absolute Concentrating Systems

The AbsolutePRP™ Concentrating System is the benchmark for all PRP systems. AbsolutePRP™ provides the complete PRP composition. Therapeutically high concentrations of platelets and growth factors along with very high levels of neutrophils, monocytes and other cell mediating cytokines. AbsolutePRP™ is the fastest and most efficient single spin 60mL concentrating system available. Prepare 7mL of PRP, with high concentrations of regenerative cells, in a SINGLE 5 MINUTE SPIN. These systems are designed to accommodate physicians that run a busy practice and mandate superior performance outcomes that are consistent and reliable.

The key to the Absolute Concentrating System is the ClearVUE Conical Piston. The piston is specially designed to improve the collection of the cell concentrate buffy coat layer. The primary feature of the new ClearVUE Conical Piston is its deep conical shape. The deep conical design perfectly directs the collection of the cell concentrate buffy coat with minimal red cell integration. This design feature provides quality platelet rich plasma and bone marrow concentrate with near perfect collection yields. The ClearVUE Conical Piston also features enhanced handling of the concentrating device with frictionless motion and a CLEAR VIEW of the buffy coat while it's being aspirated, further instilling confidence in the quality of the end product.

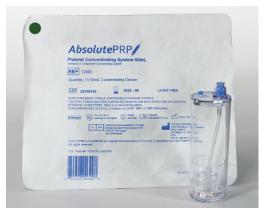
With Active Displacement Disc Technology the operator has the flexibility to access the buffy coat concentrate at any point of separation. The GenesisCS System is not volume dependent or hematocrit dependent. Physicians appreciate the versatility of the GenesisCS and enjoy using a system that can respond to their specific needs.



GS301-EU AbsolutePRP Gold



GS30



GS60



GS120

Soft Braking Technology acceleration and deceleration are both controlled for optimal buffycoat

Active Displacement Disc Technology (ADDT)

Closed system throughout.

Maximizes safety of the contents and ensures sterility throughout processing



#### PURE PLATELET RICH PLASMA – SUPRA SUPRAPHYSIOLOGIC

#### Pure PRP® Supraphysiologic Concentrating Systems

#### GS60-SP – AcCELLerated Biologics Supraphysiologic –

Pure Platelet Concentrating System 60mL





GS60-SP

There is a clear reason for the success of PurePRP® Supra Physiologic. It has the perfect cellular composition at ideal concentrations delivering a clinical marvel that's not duplicated anywhere. PurePRP® SupraPhysiologic provides the most powerful concentration of deliverable regenerative cells, without the deleterious contaminants found in most PRP products. Deliverable platelets are the actual volume of viable platelets contained in a PRP sample. PurePRP® SupraPhysiologic provide upwards of 9 billion platelets in a 7mL sample of PurePRP®. This is up to 2 billion higher than the minimum required treatment amount. High volumes of deliverable platelets enhances the volumetric activity of platelet growth factors and cytokines.

The system is a result of 20 years of bio-engineering research, strictly focused on isolating and harvesting the most powerful regenerative components of your blood and bone marrow, while leaving the unwanted substances behind. This carefully orchestrated and painstaking task has yielded the PurePRP® SupraPhysiologic Concentrating System. It is the clear leader in PRP and bone marrow concentrating systems.



Minimal sterile barrier entries designed to reduce handling and improve sterility maintenance

Total biologic capable with direct access to the platelet buffycoat

Full swinging bucket centrifugation optimizes separation & enhances the buffycoat concentrate



#### PURE PLATELET RICH PLASMA

#### Pure PRP® Concentrating Systems

**GS30-Pure II –** Pure Platelet Concentrating System 30mL **AB-60 Pure – AccEllerated Biologics** Pure Platelet Concentrating System 60mL **GS120-Pure II –** Pure Platelet Concentrating System 120mL

The AccEllerated Biologics 30mL, 60mL, or 120mL Pure PRP® system is revolutionary. PurePRP® II is an autologous cellular biologic that has become the standard of care for many treatment modalities. In today's world of regenerative medicine, clinicians require not only clinically effective products but also the versatility to provide for specific treatment requirements. These may include therapeutic strength PRP with low neutrophils and no red blood cells. Alternatively, it may consist of



GS30-PURE-II



**AB60-PURE** 



GS120-PURE-II

therapeutic strength PRP with high neutrophils and nominal red blood cells. Some physicians may require a bio regenerative fibrinogen matrix scaffold to support PRP retention and sustain growth factor release. Others may require protein compositions to help mitigate cellular degradation. Whatever the need, PurePRP® II has the biologic versatility to be an integral part of the treatment modality.

#### The Cellular Physiology of PurePRP® II/Deliverable Platelets in PurePRP® II

Deliverable platelets are the actual volume of viable platelets contained in a PRP sample. PurePRP® II provides upwards of 9.5 billion platelets in a 7mL treatment sample (approximately 1.4 million platelets per microliter). High volumes of deliverable platelets enhance the volumetric activity of platelet growth factors and cytokines in active tissue repair. Platelet alpha granules contain various platelet growth factors that promote tissue repair through cell proliferation, chemotaxis, differentiation, and angiogenesis. Platelet cytokines provide the chemical stimulus needed to mediate cell signaling and migration. The number of deliverable platelets is clinically significant if you are to attain active tissue repair. Your deliverable platelet count must be more than 1 million platelets per microliter [1].

#### Neutrophils in PurePRP® II

Neutrophils are the most abundant leukocyte and one of the first responders to migrate towards a site of injury or infection (chemotaxis). Neutrophils are also the hallmark of acute inflammation. This is an aggressive response of chemical signals from cytokines such as interleukins (IL 1, IL 8) and tumor necrosis factor alpha (TNF a) along with many others. The primary function of the neutrophil is to engulf and destroy foreign material through phagocytosis. Under normal circumstances, neutrophils are short lived (1–2 days) and are cleared by tissue macrophages. In conditions where the neutrophils cannot be removed, for lack of macrophages, they undergo a process called necrosis, resulting in the release of all of the intracellular contents. This causes the amplification and prolonging of the inflammatory response. This prolonged amplified inflammatory response potential is a concern of many physicians. This is why physicians are not encouraged by a PRP product containing high concentrations of neutrophils.

 $Pure PRP^{\circ} \& Pure BMC^{\circ} \ are \ registered \ trademarks \ of \ EmCyte \ Corporation \ and \ are \ patent \ pending \ processes.$  All rights reserved. US patent #: 7976796, 6835353



#### PURE PLATELET RICH PLASMA

#### Monocytes in PurePRP® II

Monocytes are the largest of all leukocytes and are characteristically non-inflammatory phagocytic cells. Monocytes migrate to sites of injury and infection and differentiate into macrophages and dendritic cells to elicit an immune response which lasts for more extended periods (months rather than days when compared to neutrophils). Monocytes illicit the immune response through phagocytosis, antigen presentation, and cytokine production each of which has a specific and intended function in enhancing the immune response through both protective prophylaxis and active phagocytosis.

PurePRP® II is unique because it dramatically enhances monocyte concentrations while giving the end user control over the number of neutrophils they would like to add to their PRP preparation. PurePRP® II takes advantage of the long term phagocytic and protective properties of the monocytes while avoiding the potential harmful inflammation incurred by large concentrations of neutrophils that go through cellular necrosis. This is another differentiating factor that helps to explain the natural success of PurePRP® II in patient outcomes.

#### PURE PRP® II: ONE SYSTEM, TWO PROTOCOLS

#### Protocol A

Protocol A processes Pure PRP® without red blood cells or neutrophil granulocytes. This protocol is used when powerful healing without inflammatory activity is required at the application site. This protocol is also the low viscosity solution to a viable PRP product, providing very high concentrations of platelets in a bath of non-viscous plasma. This protocol has also been reported to reduce the potential for pain at the application site. It is the most frequently used protocol.

Low Inflammatory PRP
Higher Platelet Count
Low Granulocyte
Low Viscosity
Less than 1% HCT



#### **Protocol B**

Protocol B processes Pure PRP® with low red blood cell counts and very high cytokine activity and neutrophil cell recoveries. This protocol is used when the phagocytic powers of neutrophils are needed to help fight infectious processes at the application site. This protocol produces the highest chemoattractant activity and significantly increases regeneration potential. Once the neutrophils have completed phagocytosis, they become apoptotic cells and are subsequently removed, thereby also eliminating the inflammatory activity.

Infection Fighting PRP with Increased Cytokines

Higher Platelet Count High Neutrophil Granulocytes Moderate Viscosity HCT Less than 20%





#### **BONE MARROW ASPIRATE**

#### Marrow Cellution™

MC-Ran-11C - Marrow Cellution™ 11G x 3.5" (9cm)

MC-Ran-11CSTS - Marrow Cellution™ 11G x 4.5" (11.4cm)

MC-Ran-13C - Marrow Cellution™ 13G x 3.5" (9cm)

**MC-Ran-13FA** – Marrow Cellution<sup>TM</sup> 13G x 2" (5cm) designed for use in foot and ankle surgery and features a closed tip, sharp introducer needle. No blunt stylet or aspiration cannula is included.

#### Marrow Cellution™ Autologous Bone Marrow Aspiration

#### **Autologous Bone Marrow Aspiration**

The Marrow Cellution™ Bone Marrow Aspiration Harvesting System is a novel bone marrow access and retrieval device that incorporates features designed to minimize the limitations of traditional trocar needles.

Marrow Cellution™ maximizes stem and progenitor cell recovery while minimizing peripheral blood infiltration. Because fluid under force follows the path of least resistance, trocar needles with side ports aspirate primarily through the distal end of the cannula. This leads to excessive blood collection, requiring additional manipulation, i.e., centrifugation or chemical separation in a laboratory.

Marrow Cellution™ accesses aspirate flow collected exclusively laterally as the tip of the aspiration cannula is closed allowing marrow collection perpendicular to and around the channel created by the device. It incorporates technology to precisely reposition the retrieval cannula within the marrow space after each aspiration. These features achieve a clinicians' desire for a single entry point.

A single puncture with Marrow Cellution™ provides high quality bone marrow aspirate and cancellous bone graft, collected from numerous sites within the marrow geography.



MC-Ran-11C

Overcome Aspiration Limitations & Maximize Cell Yield

510(k) – Marrow Cellution™ Bone Marrow Aspiration Needle #K150563 Hematopoietic component of bone marrow produces approximately 500 billion blood cells per day



#### **BONE MARROW ASPIRATE**

#### Marrow Aspiration, Minimal Manipulation

The Marrow Cellution™ Bone Marrow Aspiration System is intended for use for aspiration of bone marrow or autologous blood. It allows the user to aspirate in a measured and controlled manner over a large geography within the marrow space. Marrow Cellution™ is available in 11 Gauge and 13 Gauge diameters and includes an introducer needle, sharp and blunt stylet, aspiration cannula and 10ml syringe. Marrow Cellution™ also comes in multiple lengths and is designed for use in the Iliac Crest, Pedicle, Calcaneous or Tibia.

#### What are the Limitations of a Traditional Needle?

Traditional bone marrow aspiration needles aspirate primarily through an open-ended cannula, which leads to excess peripheral blood dilution and inadequate collection of key stem and progenitor cells. For this reason, a high volume of bone marrow aspirate must be collected and then manipulated (i.e., centrifuged) before being applied for regenerative therapies.

#### How Does the Marrow Cellution™ System Overcome These Limitations?

The unique design of the Marrow Cellution™ system offers two key features that are not capable with a traditional needle:

- Closed-tip aspiration cannula that restricts aspiration through the side holes of the cannula and away from the channel caused by the tip of the needle, avoiding excess peripheral blood infiltration.
- A mechanical means for measured, controlled retraction of the aspiration cannula to collect bone marrow aspirate from multiple geographies inside the medullary space with a single puncture.





Marrow Cellution™ in Iliac crest



Traditional Needle



Marrow Cellution™



#### **BONE MARROW + BONE DOWEL**

#### Marrow Cellution™ Percutaneous Bone Graft Collection

MC-Ran-8C − Marrow Cellution<sup>™</sup> 11G x 3.5" (9cm) with 8G x 4" Trephine Needle MC-Ran-8CSTS − Marrow Cellution<sup>™</sup> 11G x 4.5" (11.4cm) with 8G x 6" Trephine Needle MC-Ran-13FAB − Marrow Cellution<sup>™</sup> 13G x 2" (5cm) designed for use in foot and ankle surgery and features a closed tip, sharp introducer needle. No blunt stylet or aspiration cannula is included.

#### Marrow Cellution™ Autologous Bone Marrow Aspiration & Bone Graft Harvesting

#### Intact Bone Cores vs. Morselized Bone

- Harvesting intact cancellous bone cores without disrupting the highly-organized living tissue is superior to transplanting pieces of bone.
- Intact grafts maintain the microvascular network within the graft promoting bone callus formation/ remodeling and do not exhibit extensive resorption.<sup>1</sup>
- Intact bone exploits the biology of normal fracture healing rather than through slow creeping substitution associated with the gradual incorporation of a non-vascularized graft.¹ Research demonstrates the enhanced survival of a bone graft as long as its primary blood supply is preserved. A living bone graft will shorten the time for a boney union because the reconstructed bone is comparable to a bone with a double fracture.¹²
- Allogenic or synthetic bone chips hydrated with marrow can be packed around the living bone graft/ core to accelerate anastomosis into the graft and minimize morbidity.<sup>1</sup>



MC-Ran-8C

Bleuming SA, et al. Bone morphogenetic protein signaling suppresses tumorigenesis at gastric epithelial transition zones in mice. Cancer Res. 2007 Sep 1;67(17):8149-55. Ostrup LT, et al. Distant transfer of a free, living bone graft by microvascular anastomoses. An experimental study. Plast Reconstr Surg. 1974 Sep;54(3):274-85. Taylor GI, et al. The free vascularized bone graft. A clinical extension of microvascular techniques. Plast Reconstr Surg. 1975 May; 55(5):533-544.

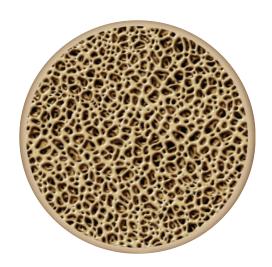


#### **BONE MARROW + BONE DOWEL**

## Marrow Cellution™ Autologous Bone Marrow Aspiration and Bone Graft Harvesting

#### Minimally Invasive Bone Grafts

- Vascularized and cancellous autograft shows optimal skeletal incorporation but is limited by morbidity concerns.<sup>3</sup>
- Using the Marrow Cellution™ Graft Delivery Syringe and the Marrow Cellution™ Bone Core Harvest Device, the clinician can create a combination graft of a vascularized intact bone core in the center of the graft surrounded by allogeneic, autologous or synthetic bone chips hydrated with cellular marrow aspirate.
- Higher quality, less quantity, delivered appropriately minimizes host morbidity

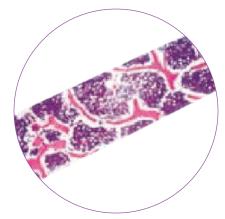




Bone Dowel



**Multiple Bone Dowels** 



Vascularization in Bone Dowel







Produces Autologous Cancellous Graft Material with Osteoconductive, Osteoinductive & Osteogenic Properties

Minimally Invasive Cancellous Bone Core Extraction Technique

Combine with Synthetic Bone Granules Hydrated with Marrow Cellution™ Aspirate

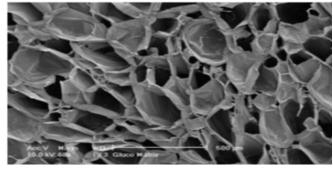


## OsteoFuze™ – Cell Harvesting , Natural Bone, Allograft Bone and Application Together

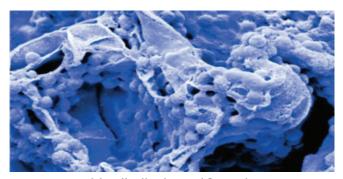
OsteoFuze™ by AcCELLerated Biologics is a Stem Cell Harvesting and Application system that offers surgeons several options for providing patients with highest CFU-f Stem Cell counts that are proven to provide unsurpassed outcomes in all bone grafting procedures. The unique marrow aspiration device significantly enhances marrow cell capture and provides an autologous bone graft with intact vasculature. This breakthrough aspirating needle offers >2000 CFU-f per mL, in as little as 6-10 mL of BMA and does not need to be centrifuged. This system maximizes the yield of stem and progenitor cells by giving the clinician the ability to efficiently harvest bone marrow from multiple levels within the medullary space, while restricting dilution caused by peripheral blood. The marrow and bone dowel(s) are combined with a revolutionary new porous, Hyper-Crosslinked Carbohydrate Polymer (HCCP) bone graft substitute with a structure simulating the multi-dimensional interconnectivity of human cancellous bone. OsteoFuze™ provides bone forming marrow cells, cellular signaling and a resorbable scaffold.



OF-BMDG-85



OsteoFuze™ scaffold matrix



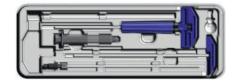
OsteoFuze™ with cell adhesion and formation



#### **OSTEOFUZE™**

OsteoFuze – Bone Marrow Bone Marrow Harvesting System with 11G x 4" Trephine Needle

OF-BMA-11



OsteoFuze - Marrow & Dowels Bone Marrow Harvesting System & Bone Dowel with 8G x 4" Trephine Needle **OF-BMD-8** 



OsteoFuze – Marrow, Dowels & Granules OF-BMDG-85 Marrow & Dowel with 5cc OsteoFuze **Synthetic Bone Granules** 













#### **BONE MARROW CONCENTRATE**

#### PureBMC® Concentrating Systems

**BC30-Pure** – PureBMC® Concentrating System 30mL **BC60-Pure** – PureBMC® Concentrating System 60mL **BC120-Pure** – PureBMC® Concentrating System 120mL





**BC60-PURE** 

#### Pure BMC® is Better Than Ever

Pure BMC® is better than ever and remains the perfect solution for Bone Marrow Cell Concentrate. PureBMC® processes BMC in a system that remains closed and sterile throughout all steps of processing. This is especially important when processing in a surgical suite. It is also proven to concentrate viable platelets, hematopoietic stem cells (HSC), total nucleated cells (TNC) and mesenchymal stem cells (MSC) in a bath of plasma with low hematocrit. PureBMC® can be prepared with or without Heparin, either way, it provides viable platelet concentrates that further add to the strength of the cell composition. PureBMC® delivers the excellence and reliability physicians can depend on.

#### **Higher HSC Concentrations**

Hematopoietic stem cells (HSCs) are the blood cells that have the ability to replenish all blood cell types (Multipotency) and the ability to self-renew. These cells include monocytes, macrophages, erythrocytes, megakaryocytes, platelets, neutrophils, basophils, eosinophils, dendritic cells, and lymphoid lineage cells.

#### **Higher MSC Concentrations**

Mesenchymal stem cells (MSC) are multipotent stromal cells that can differentiate into a variety of cell types. These cell types primarily include cartilage, bone, and adipose cells. Mesenchymal stem cells are found in minimal quantities in bone marrow aspirate, making the concentrating capabilities of PureBMC® more vital to the physician.

#### **Higher TNC Concentrations**

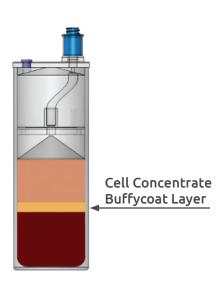
Total nucleated cell count by any method is a count of cells with nuclei. To accurately represent the TNC cell count a correction calculation that removes nucleated red blood cells (nRBCs) is performed. It is understood, as in other therapies, that more cells equal better outcomes.



#### **BONE MARROW CONCENTRATE**

#### Absolute BMC® Concentrating Systems

**GSBMA30** – *Absolute* BMC® Concentrating System 30mL **GSBMA60** – *Absolute* BMC® Concentrating System 60mL **GSBMA120** – *Absolute* BMC® Concentrating System 120mL





GSBMA60

#### The Absolute BMC Concentrating System

The Absolute BMC Concentrating System provides significant concentrations of CFU F, CD34+, and total nucleated cell counts. CD34+ are cell markers for hematopoietic stem cells. These are the primary multipotent cells that replenish all blood cell types. These cells are crucial for the regenerative processes needed for active tissue repair. In addition to these cells are CFU F, which are representative of mesenchymal stem cells.

Mesenchymal stem cells (MSC) are multipotent stromal cells that differentiate into a variety of cell types, including cartilage, bone, and adipose cells. *Absolute* BMC provides therapeutic concentrations of these cell types, which is the key to desirable patient outcomes. *Absolute* BMC is the fastest and most efficient single spin 60mL concentrating systems available. Prepare 7mL of BMC, in a SINGLE 5 MINUTE SPIN.

Bone marrow cells reside deep inside bone cavities in the most protected part of the body, and are redundant throughout the organism. This preferential status reflects the primary role these cells play in the survival of the organism. Tissue repair is a dynamic self-organizing process that relies on cell mobility and growth factor production from cells within a biologic scaffold. Platelets and Cells from Peripheral Blood Initiate the Inflammatory Process of the Healing Cascade, and release cytokines to cause marrow cells to mobilize and home to the injury site (vasculogenesis). Marrow stem cells and marrow complementary cells mediated vasculogenesis and cell to cell contact with the immune system stem cells and transitioned the Healing Cascade from the inflammatory phase to the proliferation and remodeling phase.

"PurePRP® & PureBMC® are registered trademarks of EmCyte Corporation and are patent pending processes. All rights reserved. US patent#: 7976796, 6835353"

Total nucleated cell concentrations: 9.1 x Baseline or greater

Hematopoietic stem cells/ Progenitor Cells: 13.3 x Baseline or Greater

Hematocrit: Less than 15% on Average



#### **Adipose Concentrate Systems**

**PK25 Progenikine** – 25 mL Adipose Harvesting Kit **PK50 Progenikine** – 50 mL Adipose Harvesting Kit **CANSUP** – Tulip Medical Harvester and Infiltrator Canula and VPH **VPH** – Vacuum Pressure Handle 30cc and (2) 30mL Syringes

Adipose is used in regenerative medicine procedures because mesenchymal stem cells can be isolated from almost every tissue in the human body. The central connecting aspect to explain this fact is that all of these tissues are vascularized and that every blood vessel in the body has mesenchymal cells in abluminal locations. These perivascular cells can be summarily called Pericytes.

Adipose-Derived MSCs are being used therapeutically because they undergo homing to sites of inflammation or tissue injury, and they secrete massive levels of bioactive agents that are both immunomodulatory and trophic.

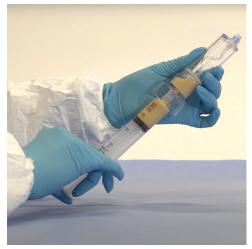
#### **PK25 Progenikine Shown Below**





PK25









#### **ADIPOSE**

#### **CANSUP**





#### **TULIP Infiltrator and Harvesting Canulas**



#### Vacuum Pressure Handle (VPH)



2. Position 1

- Attach Syringe with VPH to BMA device once ready to aspirate
- Pull plunger to first position and allow the pressure to fill syringe (approximately 15cc)
- Pull plunger to second position (if more aspirate is needed) and allow the pressure to fill syringe
- Remove syringe with VPH from BMA device
- Remove VPH from syringe
- Apply VPH to second syringe (if more aspirate is needed)



#### **A2M and FIBRINOGEN**

#### **A2M and Fibrinogen Protein Concentrator**

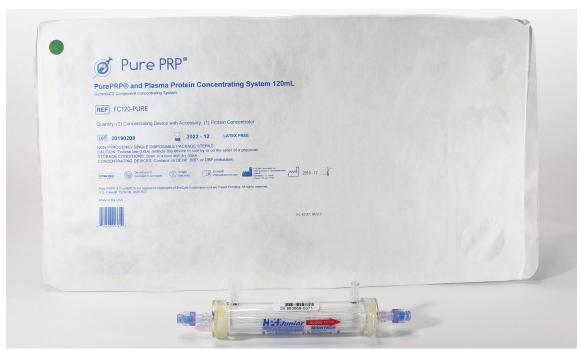
FC-120 PURE – A2M Pure PRP with Protein Concentrator 120mL CUST1000 – Fibrin and A2M Plasma Concentrator

This kit is designed to provide at least 6x concentration of A2M and Fibrinogen Proteins.

Alpha-2-Macroglobulin is the largest major nonimmunoglobulin protein in plasma. The alpha-2-macroglobulin molecule is synthesized mainly in the liver, but also locally by macrophages, fibroblasts, and adrenocortical cells.

Alpha 2 macroglobulin acts as an antiprotease and can inactivate an enormous variety of proteinases. It functions as an inhibitor of fibrinolysis by inhibiting plasmin and kallikrein. It works as an inhibitor of coagulation by inhibiting thrombin. Alpha-2-macroglobulin may act as a carrier protein because it also binds to numerous growth factors and cytokines, such as platelet-derived growth factor, basic fibroblast growth factor,  $TGF-\beta$ , insulin, and  $TC-\beta$ .

The plasma protease inhibitor A2M is not present in sufficient concentrations to inactivate the high levels of catabolic factors found in OA synovial fluid. Findings suggest that supplemental intra-articular A2M provides chondral protection in post traumatic OA.





- Transfer the plasma back and forth from syringe to syringe. Water will begin to fill the VacLok syringe.
- Continue to transfer the plasma back and forth until 5 mL is left in the starting syringe.
- Remove the empty syringe. Attach venting filter. Pull back on 60 mL syringe with A2M/Fibrinogen concentrate to remove remaining concentrate from within filter.
- · Inject air and foam back into the concentrator. Leave approximately 13mL A2M in syringe.

Provides at least 6x concentration of A2M and Fibrinogen proteins

Protects the joint space from destructive proteins

Powerful inhibitor of cartilage catabolic factors



#### VISIONSCOPE ARTHROSCOPY

#### What is the VisionScope system?

The VisionScope system provides similar information to surgical diagnostic arthroscopy – using a minimally-invasive technique. The exam takes place in the office exam room and requires only a local anesthetic (Lidocaine). The system's small needle endoscope houses a miniature camera and when it is inserted into a joint it captures real-time images and video – providing a thorough evaluation with higher quality information and improved reliability compared to static MRI images. Patients are able to get a clear diagnosis during the same office visit and the need for additional diagnostic tests or procedures and follow up visits may be eliminated.

#### Bringing Diagnostic Arthroscopy Power Into The Office

#### Choose the right tool for the right reason

- Inconclusive MRI
- Articular Surface Assessments
- Meniscal or Cuff Tears
- Post-operative evaluation
- Surgical Planning
- MRI Contradictions
- Pacemaker
- Implants
- Claustrophobia
- Obesity
- Accurate
- Immediate
- Convenient
- Patient-centric
- Cost-effective
- Office-based
- Safe









- For patients who may not benefit from standard diagnostic modalities,
   VisionScope® Imaging (VSI™) can enrich the clinical exam and diagnostic discussion in real time.
- Exam room set up takes no time at all with the VSI™ PrepPak™. Just add sterile gloves and local anesthesia and you're ready to go.
- Reusable endoscopes, come in a variety of lengths and house premium optics, delivering the highest quality images.
- VSI™ components that come in contact with a patient are packaged in a sterile, single-use procedure kit.

VSI™ combines durable and disposable components to maximize workflow efficiency!

Direct visualization adds clarity to the conversation

In-office convenience with uncompromising quality and accuracy



#### **BLUE-CUBE UV**

#### **UV LIGHT ITEM SANITIZER**

Blue-Cube UV is designed to sanitize small items that are prone to biohazard contamination from pathogens including viruses, bacteria, and mold.

This small unit {the size of a large microwave oven) delivers a significant 1 joule/cm2 dose of UV-C energy after the pre-programmed two minute disinfection cycle.

Germicidal UV-C light is an established disinfection technology that has been proven effective against nearly all biological pathogens.

Safety features include dual interlock switches to prevent accidental exposure of skin and eyes. There is also an internal 20 amp (non-serviceable) fuse.

Gas-phase contaminants, odors, and volatile organic compounds (VOCs) that may be present in exhaust air are neutralized by proprietary APCO® cells.



For the disinfection of small items that fit within the UV chamber {14"W x 7.5"H x 14"0). The automatic disinfecting cycle irradiates high-touch and hard-to-reach surfaces that would otherwise be difficult to disinfect by any other means.

#### **OPERATION:**

Simply place the items to be sanitized on the rack and press start. The irradiation sequence is pre-programmed and the UV-C light will turn on automatically. The sequence lasts 2 minutes. When the indicator light turns off the item can be removed. Do not open the door when in operation.



**BLUE-CUBE UV** 

Specifications		
Unit Dimensions	22"W x 14"H x 16"D	
Interior Dimensions	14"W x 7.5"H x 14"D	
Disinfection Cycle	2 minutes	
Disinfection Energy	1 J/cm² after 2 minutes	
Odor Mitigation	Proprietary APCO® cells	
Electrical	120VAC, 2 amps	
Safety	Dual safety interlocks, 20A internal inlet fuse (not serviceable)	
Replacement Lamps (6)	TUVL-200EZ	
Lamp Spectrum	100% 254 NM Germicidal UV-C	
Lamp Type	Shielded Quartz Hot Filament	
Lamp Dimensions	14" x 1" Dia	
Warranty	Lifetime all parts except lamps	











#### **PURITY ULTRA HEPA/UV SYSTEM**

#### **INDOOR AIR QUALITY**

Purity Ultra address biological and particulate contaminants in indoor air. This versatile unit can be integrated into the HVAC system or operate as a stand-alone or wall-mounted system. Purity Ultra delivers hospital-level disinfection and submicron (PM 2.5) particulate removal. It is designed to significantly improve indoor air quality where it is most critical. Purity Ultra is available in several configurations. Options include HEPA & ULPA filtration, multiple high-output UV lamp combinations, and patent-pending onboard and remote sensors. Standard wall plug 120V/220V, 50/60Hz.

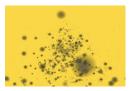
#### **HOUSING OPTIONS**

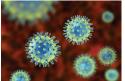
- · Premium, easy-to-clean stainless steel
- Low-maintenance robust powder-coat finish

#### **FEATURES**

- Stainless steel or optional powder-coat housing
- Available 450 CFM or 1000 CFM blower
- Includes award-winning APCO® technology
- In/out duct collar for HVAC integration
- Pressure sensors
- Air quality sensors allow for real-time IAQ monitoring
- Optional HEPA or ULPA filtration
- Multiple high-output UVC germicidal options
- Multiple safety features & interlocks
- Quiet operation
- Medical/Industrial grade









**PARTICULATES** 

VIRUSES





#### SMART LCD DISPLAY

- Fan speed indication
- Air quality indication
- · Room oxidation levels
- Chamber pressure
- Lamp status
- Days left counter for replacement parts
- Visual and audible alarms



#### **TRAINING**

#### REGENERATIVE MEDICINE TRAINING INSTITUTE

Accellerated Biologics is proud to offer training programs to best meet the physicians schedule and preferences. Our training opportunities include day long training courses at the RMT Institute, live one-on-one webinars, training videos, quick quides and clinical visits.



HOME / SCHEDULE OF COURSES / REGISTRATION / PATIENT EDUCATION & ACQUISITION / ABOUT / CONTACT / TESTIMONIALS



The Regenerative Medicine Training Institute offers peer to peer courses in a comfortable setting offering classrooms, procedure rooms, a lounge and lab space. Our PRP training classes help you advance your practice to serve your patients better. Class sizes are relatively small, up to 40 attendees. Our training courses encompass lectures on history, current studies, and literature relating to platelet-rich plasma and stem cell therapy from bone marrow, adipose, and other biologic modalities. Additional elements of a course could also include live patient procedures, cadaver labs, patient protocols, product-specific training, and marketing sessions.





FREE training webinars and inservice visits

Receive access to AcCELLerated Biologics library of learning tools

Training opportunities offer one-on-one learning for staff and physicicans



#### **TRAINING**

#### **VIDEOS, WEBINARS, QUICKGUIDES**

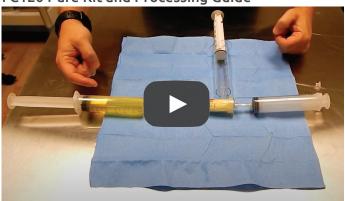
**AB60 Pure PRP Processing Instructions** 

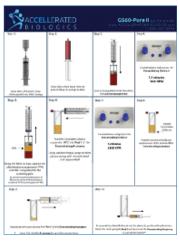


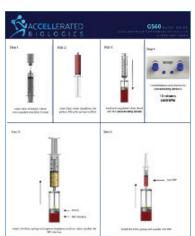
#### BC60-Pure, Pure BMC Processing Instructions

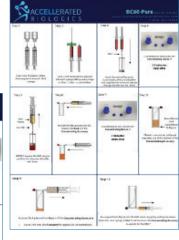


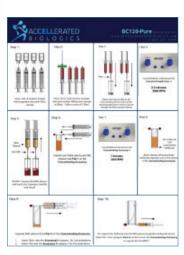
FC120 Pure Kit and Processing Guide













#### MARKETING SERVICES

#### Patient Education Videos, Patient Education Brochures, Digital Presence

We encourage our clients to utilize marketing and advertising services to get the word out. These can include:

#### **Patient Review Building**

- Start turning patients into practice advocates
- · ONE-CLICK REVIEWS with email or text
- Send fully branded Emails and Text Messages to patients after they leave the practice to get reviews and feedback
- · Get new positive reviews on Top Sites such as Google, Facebook, and HealthGrades

#### Social Media Management

- Creation, Branding and Updating of your Social Media Profiles
- · Posting original and practice focused content multiple times each week
- Monitoring: Messages, Comments, Posts, on your profile and in public mentions

#### **Email Marketing & Automation**

- Keep your brand fresh in the mind of your patients, and build a following with effective and timely email marketing
- Email Automation for doctors is like having a full-time marketing assistant checking in with contacts, without the effort

#### **Digital Footprint**

- · Get found everywhere patients are looking
- It doesn't matter whether they are looking on Google, Facebook, Bing, Yahoo, Yelp, or 1 of 100 other platforms. What matters is that your practice is found, has accurate information that is complete and offers something compelling.

#### Content & Blog Writing

- Be the Expert without the Effort. We provide 4 custom articles each month
- Content topics you choose for the next 30 Days

# Committee and Position and Posi

# Improve your online Presence



### Educate your Patients



# Get More patient Reviews







#### PURE PLATELET RICH PLASMA

#### **Analyzing Platelet Samples**

Concentrated platelet samples prepared with the GenesisCS concentrating System tend to have higher platelet concentrations when compared to other systems. High concentrations of platelets suspended in low plasma volumes may clump together. When analyzing platelet samples attained with the GenesisCS Concentrating Systems the following procedures are recommended for accurate results.

#### **Blood Analyzer**

- 1. Platelet counts are best measured in the Beckman Coulter ACT 5, or any approved blood analyzer of similar or better quality.
- 2. The PRP test sample must be placed in an empty red top PLASTIC tube containing no anticoagulant. Glass tubes may activate platelets causing an inaccurate reading.

#### **De-Clumping**

3. To help remove platelet clumping prior to testing, the PRP sample MUST be placed on a rocker for a minimum of 1 hour. The PRP sample must mix with at least 1mL of air inside the sample tube or syringe. GenesisCS PRP samples are stable for up to 4 hours after collection.

#### **Pre-Testing Preparation**

4. After the 1 hour de-clumping period is completed, the test sample MUST be diluted to 50% using an approved isotonic solution.

#### **Analyzing the Results**

- 5. Once the sample results are attained, the CBC (WBC, RBC, HGB, HCT, PLT) results will represent 50% of the sample and then must be multiplied by 2 to attain the final results.
- 6. The WBC differentials (NE, LY, MO, EO, BA) percentages reflect the correct results without multiplying by 2 because the percentages remain constant throughout the dilution procedure.

#### **Formulation**

7. The Platelet yield is calculated using the following formulation

8. Yield = 
$$\frac{PLT_{pRP} \times PR}{PLT_{start}} \times Process \text{ volume}$$

PLT = Platelet count in PRP sample

PRP = Total volume of the PRP collected (not just the volume used for testing)

PLT = Baseline platelet count of the blood sample with anticoagulant

Process = Total volume of collected whole blood with anticoagulant



#### PLATELET SAMPLE VALIDATION

#### Ongoing Performance Analysis Report Campaign

EmCyte stands behind the performance of its concentrating systems. It is the only company that offers free independently reviewed onsite product validation. A representative will assist in the preparation of test a sample at your facility using any EmCyte 2015 PRP or BMC product. Then EmCyte will pay to have it independently validated at a reputable laboratory. This service provides the physician with the documentation that confirms and validates the product performance, assuring that the clinical demand is met according to the standards of the physician.

#### **Avoid Biased Comparison Studies by Competitors**

Avoid biased white papers and comparative performance data provided by competitors. It is simply better to rely on your data. EmCyte understands that your motivation is not to sell products but rather to provide the best care to your patients. It is EmCyte's mission to help physicians achieve this goal. Onsite performance validation is the unadulterated and straightforward truth about real-time product performance at your facility.

#### **Tests Performed**

EmCyte provides the sample preparation kit with simple instructions. The following test results are free of charge for the respective sample types.

#### Platelet Rich Plasma Sample

#### **Bone Marrow Concentrate Sample**

Platelet Count WBC Granulocytes Platelet Count
Total Nucleated cell count
Hematopoietic stem cell count (CD34+)

Additional tests can be performed at nominal fees.

#### Schedule Validation

Simply call **239-481-7725** to schedule product validation. The product validation program is only available to customers located within the US.























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