


ACCELLERATED
BIOLOGICS
DELIVERING THE TOTAL BIOLOGIC™

PRODUCT CATALOG 2023

9th Edition

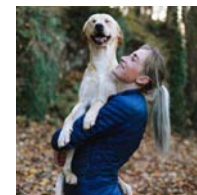
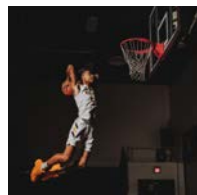
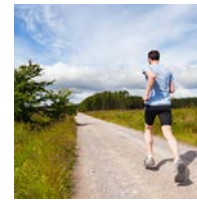
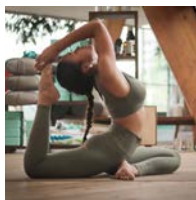
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PLATELET RICH PLASMA | BONE MARROW ASPIRATE | OSTEOFUZE | BONE MARROW CONCENTRATE | ADIPOSE A2M AND FIBRINOGEN | SUPERSHOT | TENDONOVA | TRAINING | MARKETING SERVICES | RESEARCH

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TESTIMONIALS



"AcCELLerated Biologics is an integral part of our practice. We have used many of their products over the years with great success. Steve, Felix, and their entire staff have the best customer service bar none! When other companies and suppliers had supply chain issues, AcCELLerated Biologics continued on without a glitch, which allowed our practice to thrive. They will keep your practice on the 'cutting edge'".

— **Michael Carlson, DO**, *Tennessee Regenerative Sports Medicine*



"I have been with AcCELLerated Biologics for over 10 years, and remain impressed. They are committed to the science of regenerative medicine, and maintain a commitment to providing evidence-based products. I am provided access to some of the top scientists in the field if I have questions or concerns. Bob Voelker, our local representative, is professional, personable and extremely knowledgeable. He will immediately respond to a question for me, my staff, member, or a lab tech to ensure we are following best practice procedures and is happy to come on site whenever needed. And that is just for my practice. He serves our entire hospital system and we could not be happier."

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



"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*



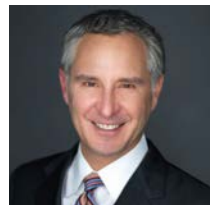
"I've used AcCELLerated Biologics since the company opened and have found amazing customer support from Steve and everyone who works there. I also am a big believer in their products and am seeing great results in my orthobiologic practice."

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



"Steve Whyte and the staff at AcCELLerated Biologics continue to provide the highest quality regenerative medicine products, together with unprecedented superlative customer service. It's a winning combination that has served us well for years!"

— **Paul D. Tortland, DO, FAOASM, RMSK**, *New England Stem Cell Institute, LLC*



"We at Annapolis Plastic Surgery have owned and used on a daily basis an AcCELLerated Biologics PRP system for over 4 years. Our hair restoration, laser and face lift patients have significantly benefited from this fantastic technology. Easy to use, great results and next-level customer support. We couldn't be happier."

— **Bryan T. Ambro, MD**, *MS Annapolis Plastic Surgery*



"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*



"I have worked with AcCELLerated Biologics for over a decade. During this time, I have always appreciated the customer service. From receiving new information on new products to educational lectures and training at RMTI Institute. If I ever had a problem they were just a phone call away. Usually the problem was I had a procedure and forgot to order and they were able to deliver the next day. I used to be a Harvest customer back in the beginning, but AcCELLerated Biologics has been my go to for over a decade. Their products are easy to work with and the machines are user friendly. What more could you ask for in a product?"

— **Brian Kahan, DO**, *The Kahan Center, Annapolis MD*

TESTIMONIALS

"AcCELLerated Biologics is 100% committed to customer satisfaction for our practice. The physician and nursing staff feel our training from Bob Voelker was outstanding, complete with multiple site visits, to ensure our comfort with the centrifuge and product kits. He continues to be responsive with questions as our practice is growing. We went through several PRP companies and AcCELLerated Biologics has far superior products and service for our medical aesthetics practice."

— **Bridget B Flickinger, MD**, *Bloom MedAesthetics*

"Bob and his team at AcCELLerated Biologics have been great partners with our practice. We love the simplicity and all in one packaging of their PRP system. Patients are seeing consistently good results leading to the biologics portion of our practice continuing to grow."

— **Michael Gordon MD**, *Milwaukee Orthopedic Group*

"I have performed thousands of regenerative medicine injections since January of 2016. In the beginning, it was important for me to find the best possible products out there to maximize the results for my patients. After spending the first year or so testing out different BMAC needles, Adipose, PRP and A2M kits, I finally found the products I was looking for with AcCELLerated Biologics. Their products were significantly less time consuming than any other product I have ever used and most importantly they provided my patients with the best results. In addition, their pricing is incredibly fair and the customer service I have received over the years from Steve, Jim and Bob has been impeccable. Please do not do your patients a disservice and buy cheap knock off products just to save money. They deserve the best, and AcCELLerated Biologics is certainly the best out there."

— **James Altizer, MD**, *NeoGenix, Charlotte, NC*

"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*

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

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

"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 thing 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*





THE PRACTITIONER'S SOLUTION
SINCE 1999

Years of Experience

In 1999, the founder of AcCELLerated Biologics began his career within the world of biologics. Since that time, the evolution of the industry has been exponential and we have always been in the forefront. We are focused on consulting and providing the physician, their staff, and community with quality information, resources and products related to Platelet Rich Plasma (PRP), Pure PRP, SuperShot PRP, Pure BMC, Bone Marrow Aspirate/Adipose Tissue (Stem Cells), photomodulation, and other regenerative medicine products.

Welcome to AcCELLerated Biologics. We are uniquely positioned within the field of biologics. We are an independent medical distribution company focused on consulting and providing the physician, their staff, and their community with quality information and products related to Platelet Rich Plasma, Stem Cells, Bone Marrow Concentrate, and other products that support the use of biologics. Our customers receive our ongoing commitment to supplying them with the most up-to-date information, technologies, and equipment. We do this because we firmly believe that not all PRP is created equal.

In 2015, the Regenerative Medicine Training Institute (RMTI) was formed. The educational component RMTI offers physicians is a chance to learn regenerative medicine modalities directly from their colleagues. RMTI has a series of on-site educational training sessions throughout the year with CME-approved didactic presentations, live patient procedures, and cadaver trainings at our facility. We could choose any PRP system to distribute. However basic engineering designs with some systems simply cannot match platelet yields. Some cannot adjust for hematocrit or leukocyte percentages as other systems can and do consistently. Some automated systems have design flaws that cause laminar flow/turbulent flow problems that prematurely activate the platelets and create an early release of growth factors. These systems inherent to their design, disrupt the buffy coat and consistently have platelet counts that don't measure up to competing systems during testing.

In addition, many companies do not offer independent laboratory analyses of their final product. That is an important factor in why all PRP and stem cell products are not created equal, even though the manufacturers make statistical claims showing equal numbers. Fortunately, AcCELLerated Biologics saw this need for a reliable and trustworthy partner for physicians that want to introduce or use biologics in their practice.

PLATELET RICH PLASMA

Platelet Rich Plasma (PRP)

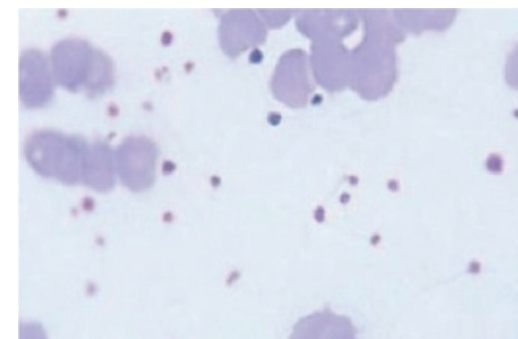
Platelet Rich Plasma (PRP) is concentrated from your own blood which contains healing factors, such as white blood cells and bioactive proteins, called growth factors and stem cell markers. These cells are vital for tissue regeneration and repair. Platelets, once thought of being responsible for only 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.

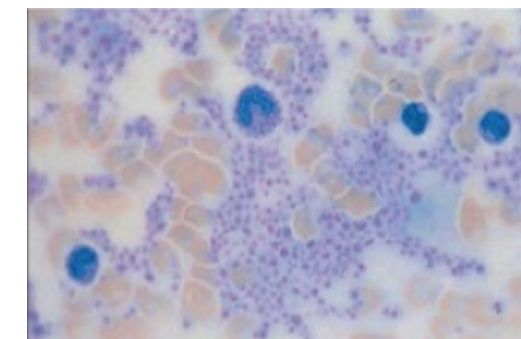
Patients can expect to see significant improvement in symptoms over the course of healing time. This procedure may eliminate the need for further invasive treatments, such as surgery or prolonged use of medications. While other therapies such as corticosteroid injections may provide temporary relief 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



EmCyte – AcCELLerated Biologics' AB60 Pure PRP

PLATELET RICH PLASMA

High Yield PRP

GS301-EU AbsolutePRP Gold – High Yield Concentrating System 20mL



The GS301 Pure Gold Series is designed to be a low blood draw, high yield PRP consisting of platelets and the entire plasma fraction. This protocol is ideal for topical applications in aesthetics. Microneedling is a common procedure where the GS301 Pure Gold is being used as a treatment modality for skin rejuvenation since the last decade. There has been a lot of ambiguity regarding the ideal protocol to be followed and the specific indications where its use should be promoted. The use of PRP as monotherapy for skin rejuvenation, acne scars, periorbital rejuvenation, lipofilling and in combination with fractional CO2 and other resurfacing modalities is increasing rapidly.

The use of platelet-rich plasma (PRP) as a treatment modality for skin rejuvenation has been increasing rapidly over the past decade. Platelets become the logical choice for replacement and renewal of cells, tissues, or organs due to low invasiveness/high healing, easy availability, and abundance in growth factors. PRP is considered to be a growth factor cocktail, which promotes wound healing, angiogenesis, and tissue remodeling.



GS301-EU AbsolutePRP Gold



PLATELET RICH PLASMA

PRP Concentrating Systems

GS30 AbsolutePRP™ – Platelet Concentrating System 30mL

GS60 AbsolutePRP™ – Platelet Concentrating System 60mL

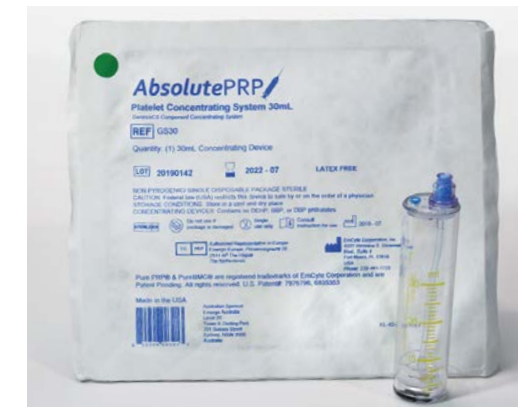
GS120 AbsolutePRP™ – Platelet Concentrating System 120mL

The Absolute Concentrating Systems

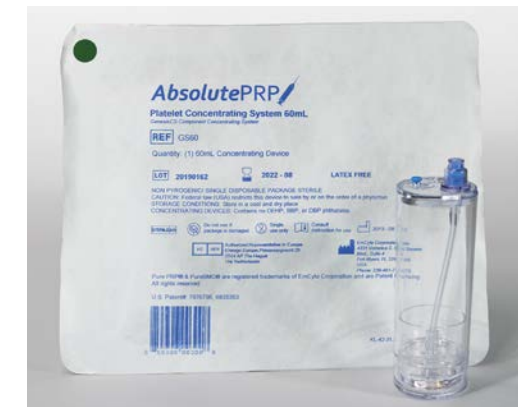
The AbsolutePRP™ Concentrating System is the benchmark for all PRP systems. AbsolutePRP™ provides the complete PRP composition. Therapeutically high concentrations of platelets and growth factors along with very high levels of neutrophils, monocytes and other cell mediating cytokines. AbsolutePRP™ is 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.

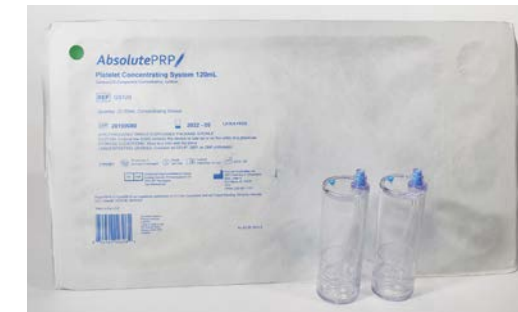
With Active Displacement Disc Technology the operator has the flexibility to access the buffy coat concentrate at any point of separation. The GenesisCS System is not volume dependent or hematocrit dependent. Physicians appreciate the versatility of the GenesisCS and enjoy using a system that can respond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



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 – SUPRAPHYSIOLOGIC

Pure PRP® Supraphysiologic Concentrating Systems

GS60-SP – AcCELLerated Biologics Supraphysiologic – Pure Platelet Concentrating System 60mL



GS60-SP

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.



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.

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 α) 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.

PurePRP® & PureBMC® 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**

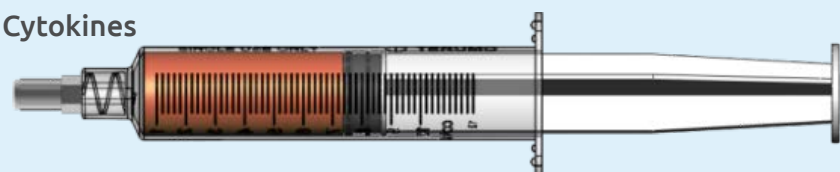


Protocol B

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%**



PURE PLATELET RICH PLASMA

SUPERSHOT® PLATELET RICH PLASMA

What is SuperShot® PRP?

SuperShot® PRP is a process that concentrates the plasma EVs in PRP. By performing one additional spin of the platelet-poor plasma (PPP), SuperShot® enables the precipitation of low-density lipid-based EVs. Many of the EVs concentrated by SuperShot® are exosomes. All PRP contains EVs (including exosomes). Using SuperShot® in the PRP process increases the content of EVs by concentrating them.

Why doesn't the standard PRP process concentrate extracellular vesicles?

EVs are not dense enough to be isolated by clinical centrifuges, which typically spin at speeds of 1000-5000 RPM. To precipitate EVs by centrifugation alone, speeds of >100,000 RPM are required, and it takes several hours. Standard PRP contains EVs, but they are not concentrated above the patient's basal plasma levels by the normal PRP process.

How does SuperShot® work?

SuperShot employs a physics technique to change the dynamics of plasma centrifugation. The addition of polyethylene glycol (PEG) and a high-weight Dextran (Dex) to plasma creates an aqueous two-phase system that decreases the solubility of low-density lipids (such as EVs). The EVs can then readily be pelleted at tabletop centrifuge speeds.

Is SuperShot® solution included in the PRP?

No. The PEG/Dextrin SuperShot® solution remains in the depleted PPP, which is discarded. Both the PEG and Dex remain soluble in the PPP. Only the pelleted EVs are added to the PRP.

Why use SuperShot®?

Extra cellular vesicles in the plasma carry potent biologically active molecules including non-coding microRNAs. MicroRNAs are critical signaling components during wound healing, tissue regeneration, and neo-vascularization. SuperShot® technology enables the isolation of low-density EVs, increasing their concentration in PRP, and the important microRNAs they carry within. The EVs isolated by SuperShot® are autologous and collected and used at point-of-care, not shipped, or stored before use. EVs and the microRNAs they contain within are damaged by freezing and lyophilization. Aside from introducing serious risks such as infection from prions or viruses, allogeneic products are functionally degraded by processing and storage.

In a standard PRP preparation, whole blood is centrifuged into three components, separated by density: red blood cells, Platelet Rich Plasma, and Platelet Poor Plasma. In SuperShot® PRP, the Platelet Poor Plasma is centrifuged one additional time using the SuperShot® patent-pending aqueous two-phase system, that precipitates low-density lipid-rich EVs from the Plasma.



SuperShot Vial



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™ 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.



Bone Marrow Aspirate



Marrow Cellution™ in Iliac crest



Traditional Needle



Marrow Cellution™

BONE MARROW + BONE DOWEL

Marrow Cellution™ Percutaneous Bone Graft Collection

MC-Ran-8C – Marrow Cellution™ 11G x 3.5" (9cm) with 8G x 4" Trepine Needle

MC-Ran-8CSTS – Marrow Cellution™ 11G x 4.5" (11.4cm) with 8G x 6" Trepine Needle

MC-Ran-13FAB – Marrow Cellution™ 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.^{1 2}
- 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 bony union because the reconstructed bone is comparable to a bone with a double fracture.^{1 2}
- 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.^{1 2}



MC-Ran-8C

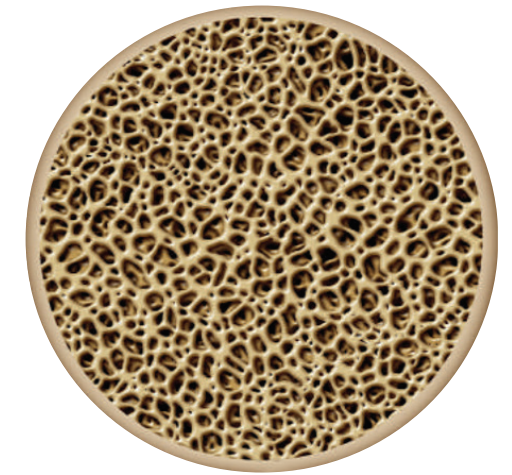
Bleuming SA, et al. Bone morphogenetic protein signaling suppresses tumorigenesis at gastric epithelial transition zones in mice. *Cancer Res.* 2007 Sep 1;67(17):8149-55.
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BONE MARROW + BONE DOWEL

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.³
- 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



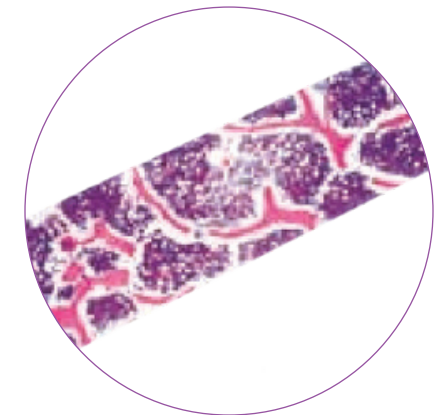
Bone Marrow Aspirate



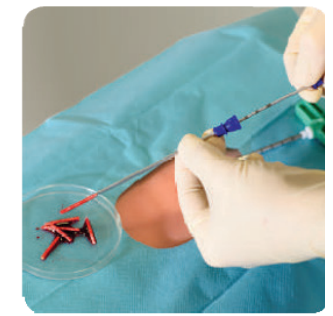
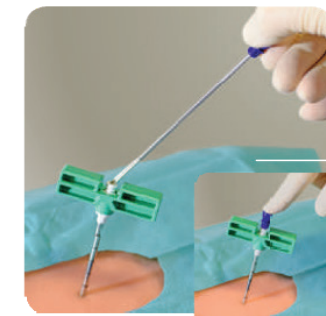
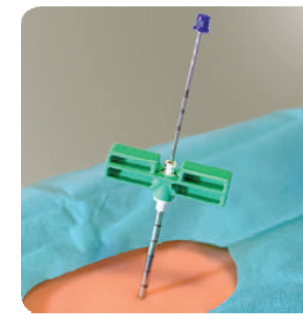
Bone Dowel



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

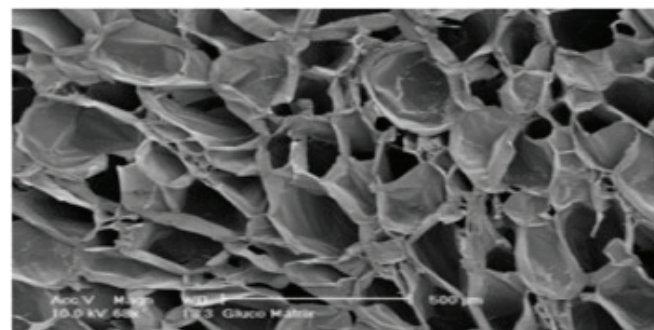
OSTEOFUZE™

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

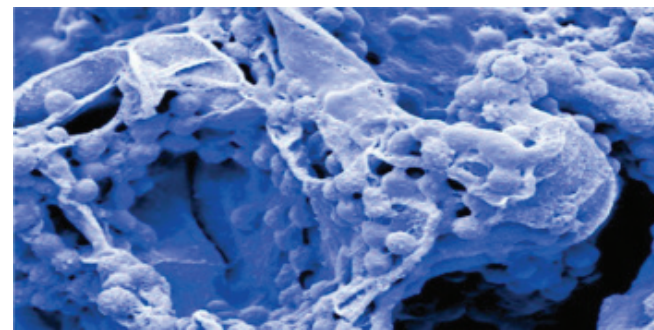
OsteoFuze™ by AcCELLerated Biologics is a Stem Cell Harvesting and Application system that offers surgeons several options for providing patients with highest CFU-f Stem Cell counts that are proven to provide unsurpassed outcomes in all bone grafting procedures. The unique marrow aspiration device significantly 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



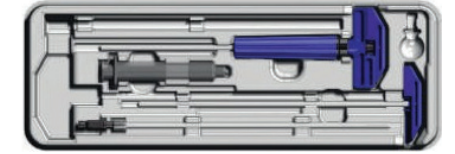
OsteoFuze™ scaffold matrix



OsteoFuze™ with cell adhesion and formation

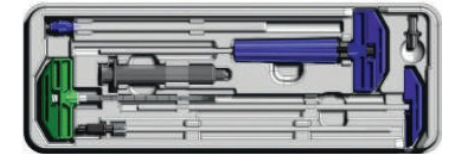
OsteoFuze – Bone Marrow
Bone Marrow Harvesting System
with 11G x 4" Trepine Needle

OF-BMA-11



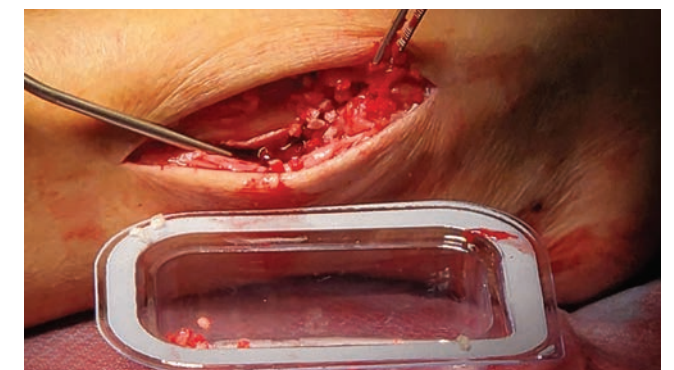
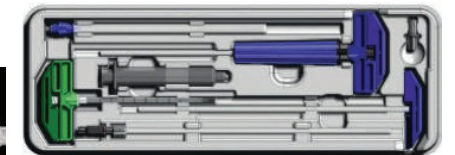
OsteoFuze – Marrow & Dowels
Bone Marrow Harvesting System &
Bone Dowel with 8G x 4" Trepine Needle

OF-BMD-8



OsteoFuze – Marrow, Dowels & Granules
Marrow & Dowel with 5cc OsteoFuze
Synthetic Bone Granules

OF-BMDG-85



OsteoFuze™

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.

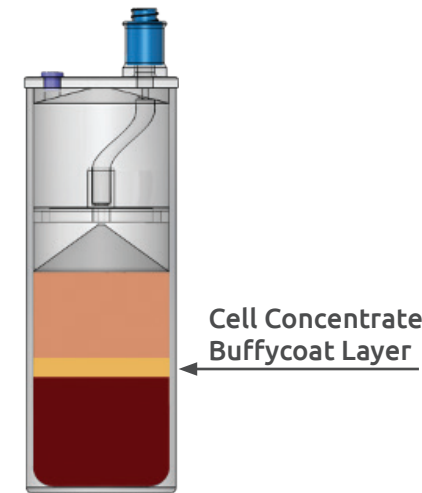
Higher TNC Concentrations

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

AbsoluteBMC® Concentrating Systems

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



GSBMA60

The AbsoluteBMC Concentrating System

The *AbsoluteBMC* 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. *AbsoluteBMC* provides therapeutic concentrations of these cell types, which is the key to desirable patient outcomes. *AbsoluteBMC* 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.

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

Adipose Concentrate Systems

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

Progenikine® Adipose Concentrating System prepares an adipose treatment sample that's purified, emulsified and condensed. It's designed to quickly and completely remove inflammatory oil and infranatant contaminants, leaving a clinically pure treatment sample for discriminating practitioners. It prepares concentrated adipose through a highly calibrated and scientifically established automated centrifugal process. Progenikine® adipose has been shown to contain powerful and viable progenitor cells with capacity for self-renewal and multipotent differentiation. This adds regenerative potential for fat transfer in reconstructive applications. The multipotentiality gives rise to cell lineages that includes adipocytes, chondrocytes, myocytes, osteoblasts and neurocytes. These cell types play a role in reconstructive tissue regeneration and has been shown to be effective in various treatment applications.



PK25



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.

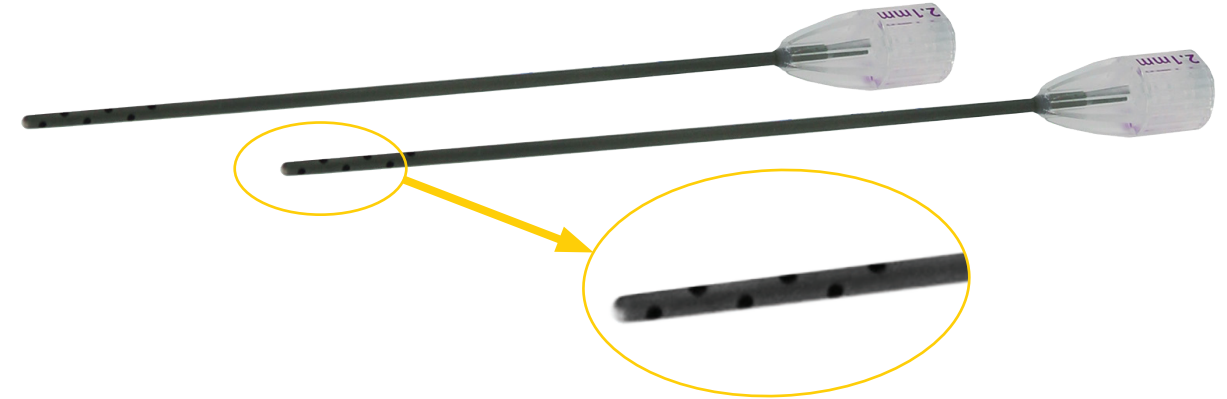


1-800-367-0844

CANSUP



TULIP Infiltrator and Harvesting Canulas



Vacuum Pressure Handle (VPH)



- 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)



Adipose

A2M and FIBRINOGEN

A2M and Fibrinogen Protein Concentrator

FC-120 PURE – A2M Pure PRP with Protein Concentrator 120mL
PCS-01 – 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- β , insulin, and IL-1 β .

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.



FC120-PURE

- 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

TendoNova™

Ocelot™ TDS 1000 System

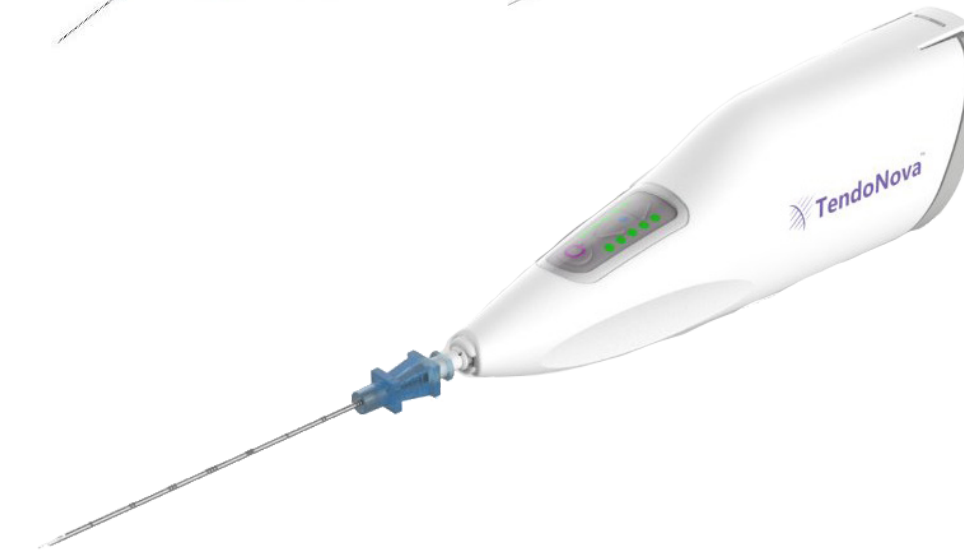
What is the TendoNova™ system?

The Ocelot Nano is indicated for fragmentation and debridement of soft tissue. It can be used in percutaneous tenotomy to help disrupt scar tissue associated with tendinopathy. The idea is to reinjure the diseased tendon using a powered cutting tip so the tendon can restart the healing process and heal properly. It's less expensive and less invasive than alternative procedures and can be performed in an ambulatory surgical center, hospital or physician office.



The Ocelot System is designed to disrupt scar tissue and perforate the tendon using a powered cutting tip so it can remodel and heal properly.

- Low cost
- Easy to use
- Objective visual feedback
- Works well in office



Targeted precise treatment, ultrasound guidance, and innovative technology improve patient outcomes.

Reusable drive unit and charging station, and a sterile disposable unit that houses the cutting tool assembly.

Performed in the outpatient setting and is less expensive than alternative procedures that require an operating room or an ambulatory surgical suite.

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 guides 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 in-service visits

Receive access to AcCELLerated Biologics library of learning tools

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

VIDEOS, WEBINARS, QUICKGUIDES

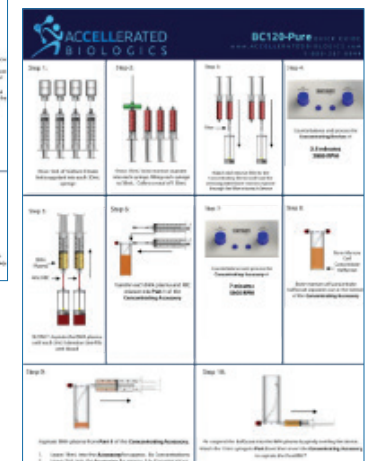
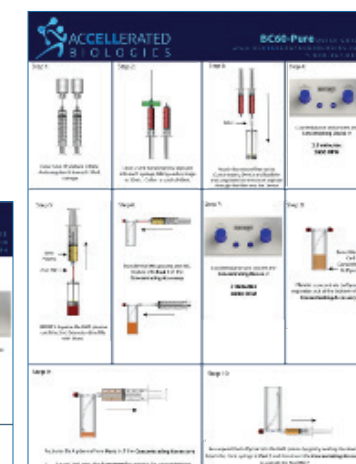
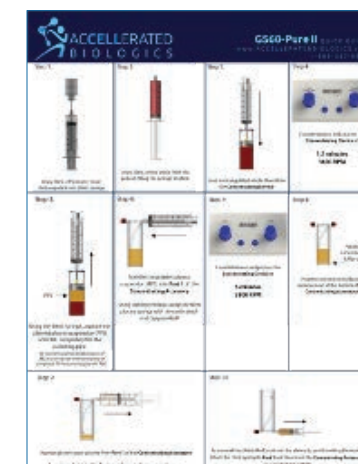
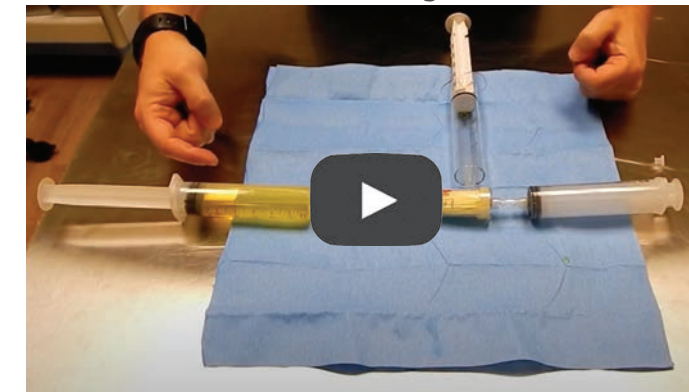
AB60 Pure PRP Processing Instructions



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



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 = $\frac{PLT_{PRP} \times PRP \text{ volume}}{PLT_{start} \times \text{Process volume}}$

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



Free Patient Education Brochures

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

Platelet Count
WBC
Granulocytes

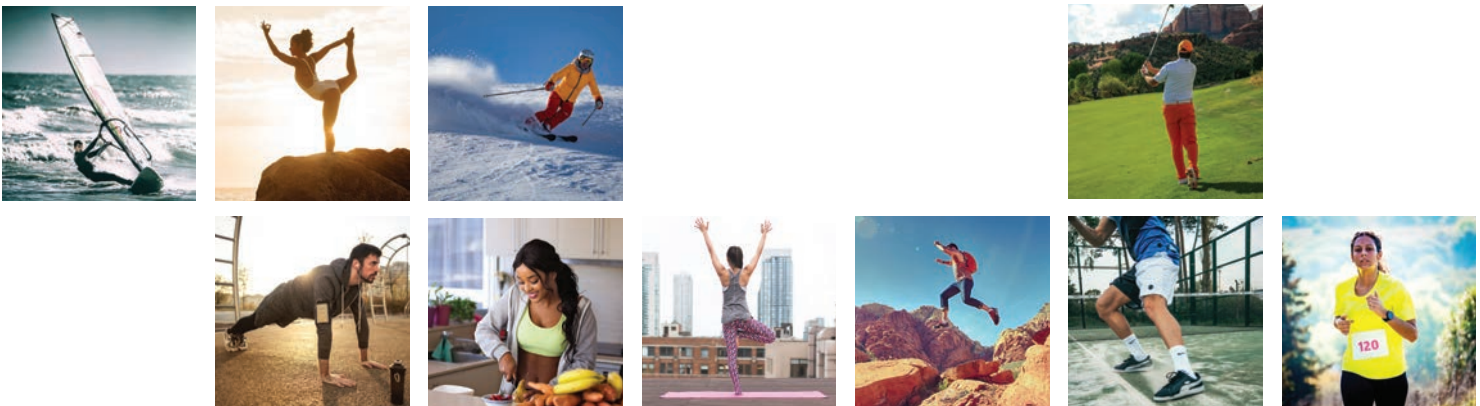
Bone Marrow Concentrate Sample

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.



RESEARCH

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