GF-ONE PLUS®

BLOOD SEPARATOR FOR DENTISTRY

CLASS II A CERTIFIED MEDICAL DEVICE

UBGEN SPECIALISTS OF BONE SURGERY IN DENTISTRY

THE BEST WAY TO PREDICT THE FUTURE IS TO **CREATE IT**

The future of biomedical field according to UGEN®

GF-ONE PLUS® is a **Class II A certified medical device** for the preparation of platelet concentrates specifically designed for bone surgery in dentistry.

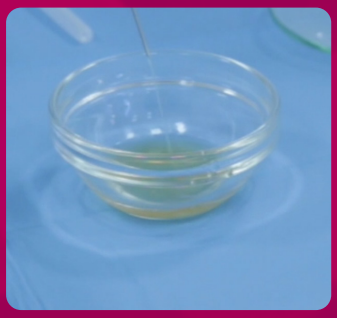
Unlike our competitors who simply provide blood separation equipment for general use, UBGEN created instead a specific system to be used in dental surgery supported by **technical training, start-up assistance and authorization** of the dental practice.

For the clinician, this means achieving benefits in terms of **predictable results** that can only be reached by a specific technology, having a **unique and complete solution** that aims to simplify and certify the procedure.

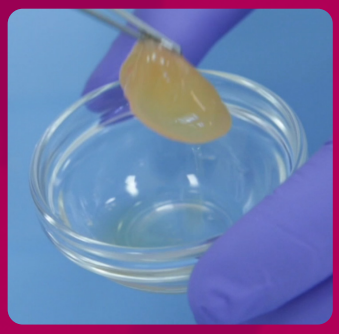
GF-ONE PLUS® is the most advanced system that aims to obtain the APG® (Autologous Platelet Gel); it is based on the activation of the patient's own platelets, that are concentrated through the centrifugation of a small autologous blood sample. It is used for the stimulation and acceleration of tissue regeneration, as well as to avoid complications in oral and regenerative surgery in dentistry.

THREE DIFFERENT FORMATS

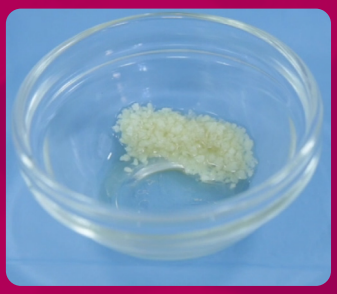
APG (Autologous Platelet Gel) can be used in liquid form or in gel form by adding calcium chloride, depending on the fields of application. The combination with the RE-BONE biomaterial enhances the characteristics of the bone graft, speeding up and implementing the bio-repair and regenerative processes, resulting in the “sticky bone”.



Platelet concentrates



APG® in gel



APG® combined with
RE-BONE biomaterial

MAIN APPLICATIONS

OF **APG®** WITH **GF-ONE PLUS®**

What are the main properties of growth factors?

Growth factors act proactively towards angiogenic processes, they are chemotactic towards biological steps, mitogenic towards the cells they encounter, triggering a multiplier effect, and significantly increasing the expression of the cell membrane receptor.

Growth factor treatment is widely used in medicine as a very safe procedure to reduce patient pain and recovery time.

A SIMPLE, SAFE AND EFFICIENT METHOD USED IN:

Ophthalmology

Cardiology

Dermatology

Orthopedics

Sports Medicine

Trichology

Cosmetic Surgery

Gynecology

In dentistry they are used:

- to accelerate the healing of surgical wounds;
- to decrease post-operative inflammation and discomfort;
- in the surgical treatment of post-extraction sockets in bone regeneration associated with biomaterials;
- in maxillary sinus surgery;
- in periodontal and mucogingival surgery;
- in the surgical treatment of patients with bisphosphonate-induced osteonecrosis.

BOOSTING **REGENERATIVE MEDICINE**

APG®

FEATURES	BENEFITS
È un prodotto autologo	Nessun rischio di effetti collaterali sul paziente, quali allergie intolleranze
Si può utilizzare in diversi formati (liquido, gel o con biomateriale)	È adattabile al tipo di intervento
Stimola i processi bioriparativi e rigenerativi	Riduce i tempi di recupero post-operatorio
Promuove la formazione di un coaugulo	Velocizza la guarigione delle ferite
È completamente riassorbibile	Evita complicanze post-operatiorie

MAIN GROWTH FACTORS INSIDE APG	FUNCTION
PDGF Platelet Derived Growth Factor	Chemotactic for fibroblasts and macrophages, mitogen for fibroblasts, smooth muscle cells, endothelial cells.
TGF-β1/β2 Transforming Growth Factor	Angiogenesis mediator, chemotactic for fibroblasts, keratinocytes and macrophages.
VEGF Vascular Endothelial Growth Factor	Chemotactic and mitogen for endothelial cells, mediator for angiogenesis.
EGF Epidermal Growth Factor	Mitogen for fibroblasts, endothelial cells, keratinocytes, angiogenesis mediator.
FGF Fibroblast Growth Factor	Mediator of tissue organization and regeneration.
Proinflammatory Cytokines IL1, IL6, TNF-α	Important role in the early stages of tissue repair.
Serotonin, histamine, dopamine, calcium, adenosine.	Effect on tissue regeneration.

VISIT OUR WEBSITE FOR MORE INFORMATION

Antonio Scarano, Francesco Inchingolo, Giovanna Murmura, Tonino Traini, Adriano Piattelli, Felice Lorusso. Three-Dimensional Architecture And Mechanical Properties Of Bovine Bone Mixed With Autologous Platelet Liquid, Blood, Or Physiological Water: An In Vitro Study. *Int J Mol Sci. 2018 Apr 18;19(4):1230. doi: 10.3390/ijms19041230*.

Antonio Scarano, Luca Valbonetti, Massimiliano Marchetti, Felice Lorusso, Maurizio Ceccarelli. Soft Tissue Augmentation Of The Face With Autologous Platelet-Derived Growth Factors And Tricalcium Phosphate. Microtomography Evaluation Of Mice. *J Craniofac Surg. 2016 Jul;27(5):1212-4. doi: 10.1097/SCS.0000000000002712.*

Antonio Scarano, Maurizio Ceccarelli, Massimiliano Marchetti, Adriano Piattelli, Carmen Mortellaro. Soft Tissue Augmentation With Autologous Platelet Gel And ß-TCP: A Histologic And Histometric Study In Mice. *Biomed Res Int. 2016;2016:2078104. doi: 10.1155/2016/2078104. Epub 2016 Jul 12.*

Robert Marx, Eric Carlson, Ralph Eichstaedt, Steven Schimmele, James Strauss, Karen Georgeff. Platelet-Rich Plasma Growth Factor Enhancement For Bone Grafts. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 1998 Jun;85(6):638-46. doi: 10.1016/s1079-2104(98)90029-4.*

Àlvar Roselló-Camps, Alberto Monje, Guo-Hao Lin, Vahid Khoshkam, Mitchel Chávez-Gatty, Hom-Lay Wang, Jordi Gargallo-Albiol, Federico Hernandez-Alfaro. Platelet-rich plasma for periodontal regeneration in the treatment of intrabony defects: a meta-analysis on prospective clinical trials. *Oral Surg Oral Med Oral Pathol Oral Radiol. 2015 Nov;120(5):562-74. doi: 10.1016/j.oooo.2015.06.035. Epub 2015 Jul 8.*

Albanese et al. Immunity & Ageing. Platelet-rich plasma (PRP) in dental and oral surgery: from the wound healing to bone regeneration. *Immun Ageing. 2013 Jun 13;10(1):23. doi: 10.1186/1742-4933-10-23.*

Marchetti E, Mancini L, Bernardi S, Bianchi S, Cristiano L, Torge D, Marzo G, Macchiarelli G. Evaluation of Different Autologous Platelet Concentrate Biomaterials: Morphological and Biological Comparisons and Considerations. *Materials MDPI, May 2020.*

Sakou T. Bone morphogenetics protein: from basic studies to clinical approaches. *Elsevier Science Inc June 1998, vol. 22.*

Mozzati M, Carossa S, Anitua A. I concentrati piastrinici per uso topico. *UTET div. Scienze Mediche, 2013.*

Del Fabbro M, Gallesio G, Mozzati M. Autologous platelet concentrates for biosphosphonate-related osteonecrosis of the jaw treatment and prevention. A systematic review of the literature. *Eur J Cancer, 2015 Jan;51(1):62-74, doi:10.1016/j.ejca.2014.10.015.Epub 2014 Nov 6.*

Panda S, Sankari M, Satpathy A, Jayakumar D, Mozzati M, Mortellaro C, Gallesio G, Taschieri S, Del Fabbro M. Adjunctive Effect of Autologous Platelet-Rich Fibrin to Barrier Membrane in the Treatment of Periodontal Intrabony Defects. *J Craniofac Surg. 2016 May;27(3):691-6. doi: 10.1097/SCS.0000000000002524.*

Franco Forni, Massimo Marzagalli, Patrizia Tesei, Alessandra Grassi Platelet gel: applications in dental regenerative surgery. *Blood Transfus. 2013 Jan;11(1):102-7. doi: 10.2450/2012.0007-12. Epub 2012 Jul 4.*

Ting Yuan, Chang-Qing Zhang and James H-C. Wang. Augmenting tendon and ligament repair with platelet-rich plasma (PRP). *Muscles Ligaments Tendons J. 2013 Aug 11;3(3):139-49.*

Dae Hun Kim, M.D., Young Jin Je, M.S., Chang Deok Kim, Ph.D., Young Ho Lee, M.D., Young Joon Seo, M.D., Jeung Hoon Lee, M.D., Young Lee, M.D. Can Platelet-rich Plasma Be Used for Skin Rejuvenation? Evaluation of Effects of Platelet-rich Plasma on Human Dermal Fibroblast. A*nn Dermatol. 2011 Nov;23(4):424-31. doi: 10.5021/ad.2011.23.4.424. Epub 2011 Nov 3.*

P. Rozman and Z. Bolta. Platelet growth factors in treating wounds Use of platelet growth factors in treating wounds and soft-tissue injuries. *Acta Dermatovenerol Alp Pannonica Adriat. 2007 Dec;16(4):156-65.*

Shin MK, Lee JH, Lee SJ, Kim NI. Platelet-rich plasma combined with fractional laser therapy for skin rejuvenation. *Dermatol Surg. 2012 Apr;38(4):623-30. doi: 10.1111/j.1524-4725.2011.02280.x. Epub 2012 Jan 30.*

Bibliography

Viale del Lavoro, 14 - 35010 Peraga di Vigonza (Padova) Italy
T +39.049.628.630 - info@ubgen.com - www.ubgen.com