

The Vivostat® system is the first in the world of its type. It enables fully automatic production of the OBSiDiAN® ASG® matrix.



The Vivostat® system comprises three components:

1. Processor Unit
2. Applicator Unit
3. OBSiDiAN® Single-Use Set

1. Processor Unit (PRO 800)

The Processor Unit is used to prepare the patient's blood and produce the bioactive OBSiDiAN® matrix.

2. Applicator Unit (APL 404)

The Applicator Unit is used for controlled application of the OBSiDiAN® matrix on the treatment area. The Co-Delivery Applicator also facilitates application of medicinal products, drugs or stem cells together with OBSiDiAN®.



3. a) OBSiDiAN® ASG® Single-Use Set (GM 700)

The Single-Use Set contains all the components necessary for the production and application of OBSiDiAN® ASG®.

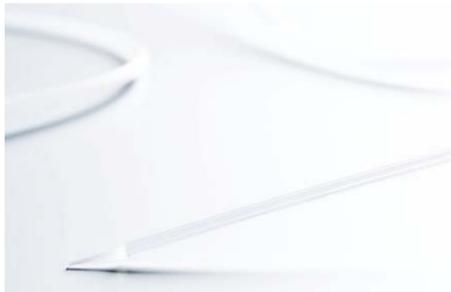
3. b) OBSiDiAN® ASG® Endoscopic Set (GM 720)

(co-delivery, available as an option)

The Endoscopic Applicator is employed in minimally invasive surgery. It can be inserted easily into the Endoscopic Handle using a 5mm trocar.

3. c) OBSiDiAN® RFT® Straight Endoscopic Set (GM 740)

All common operating techniques in fistula surgery can be performed in combination with the OBSiDiAN® RFT® Straight Endoscopic Set.



The patented micro-spray technology comes fully to bear, as complete refilling of the fistula tract and its interconnections is ensured. The unique Co-Delivery option allows the user to apply an additional substance (e.g. antibiotics, stem cells) locally, protected in the bioactive matrix.

There are numerous Co-Delivery options with the Vivostat® Co-Delivery system:

stem cells (bone marrow stem cells), cells (keratinocytes), medicinal products (antibiotics, chemotherapeutics, pain medications); the highly efficient Co-Delivery method can significantly reduce the overall cost of several treatment methods.



OBSiDiAN® ASG®
regenerative medicine of the future

100 % bioactive matrix

7 to 10 times multiplied concentration of
non-activated thrombocytes

new application technology:

IAA® – Intra Anastomotic Application

OBSiDiAN® ASG®- & RFT®-Set

Picture	Code	Product Description	PU	PU/ package
	GM 700	OBSiDiAN® ASG®-Set	1	10
	GM 720	OBSiDiAN® ASG® -Set Endo	1	10
	GM 740	OBSiDiAN® RFT®-Set Endo Straight Co-Delivery	1	10
	GM 220	OBSiDiAN® ASG® Endoscopic HG	1	1

SuperSeton Drain

Picture	Code	Product Description	PU	PU/ package
	SS 1.0	SuperSeton Drain	1	10

OBSiDiAN® ASG® & OBSiDiAN® RFT®

autologous bioactive matrix
for optimum tissue regeneration



information & order

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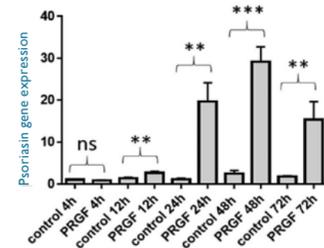


OBSiDiAN® RFT® – trial results

Clinical trials have substantiated the positive effect on tissue regeneration in wound treatment with the bioactive OBSiDiAN® RFT® matrix.

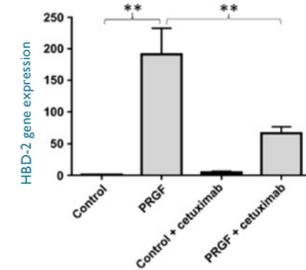
The key proteins for tissue regeneration and defence against infection, such as HBD-2, HBD-3 and Psoriasin, are improved very significantly. This prevents wound infections and creates an optimum environment for natural tissue regeneration and accelerated wound closure..

- Psoriasin is increased by 40 times (wound granulation).
- HBD-2 is increased by 200 times (infection).
- HBD-3 is increased by up to 1000 times (multi-resistant germs).



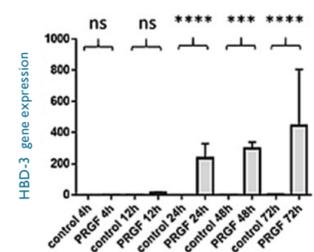
effect on Psoriasin expression³

Psoriasin, fundamentally responsible for wound granulation, is increased by 40 times.



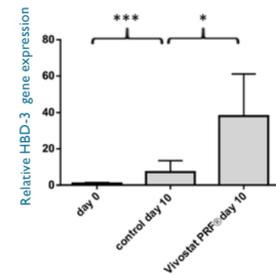
effect on HBD-2 expression¹

HBD-2 is increased by 200 times as an optimum infection control and prevention medium.



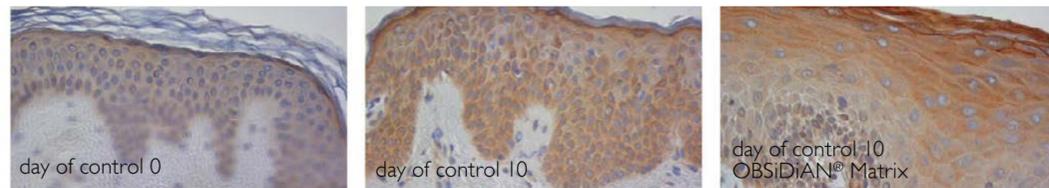
effect on HBD-3 expression²

HBD-3 is increased after 72 hours by up to 1.000 times (control/defence against multi-resistant germs).



effect on HBD-3 expression²

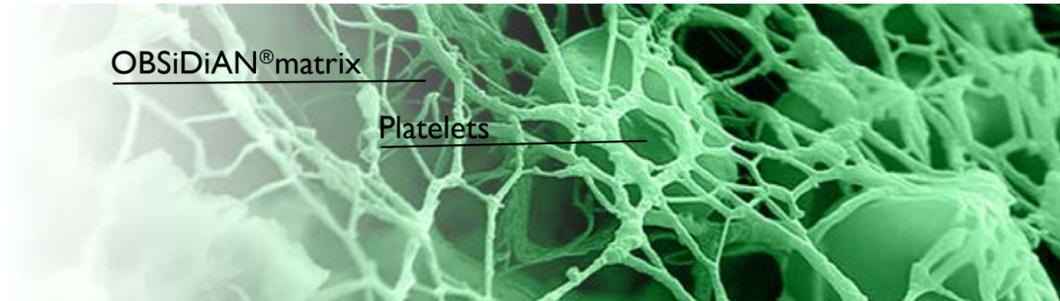
Improved autoimmune defence against multi-resistant germs.



Treatment with OBSiDiAN® RFT® increases levels of the key protein for wound healing, HBD-3, by 1000 times, and improves the defence against multi-resistant germs.²

OBSiDiAN® ASG® & RFT® – bioactive matrix

Impulses for an optimum healing process – difference between activated and non-activated thrombocytes



OBSiDiAN® ASG® & RFT® is the world's only bioactive matrix with non-activated thrombocytes. In order to release the growth factors, the thrombocytes must first be activated with Thrombin. As soon as contact is established, the growth factors become active with an average lifespan of approximately 4 to 24 hours.

In the case of OBSiDiAN® ASG® & RFT®, the thrombocytes are embedded and protected in a bioactive matrix. The use of Thrombin is dispensed with in the manufacturing process, thereby ensuring that the growth factors are not activated during production or immediately on application on the patient. Activation takes place during natural proteolytic absorption of the matrix over a period of 4 to 7 days, with healing stimulation being provided continuously over a defined time span.

OBSiDiAN® – regenerative medicine of the future

- 100 % autologous, bioactive matrix
- 7 to 10 times multiplied concentration of non-activated thrombocytes
- high elasticity & high mechanical strength (25 mg/ml fibrinogen I)
- immediate polymerisation and application control
- reduced foreign body reaction
- antibacterial effect, completely absorbable

OBSiDiAN® ASG®: regenerative medicine of the future in colorectal surgery

- 100 % anastomosis sealing (airtight and waterproof)
- doubling of the burst pressure directly after application
- new application technology: Intra Anastomotic Application (IAA)®
- applicable in all surgical techniques: open surgery, laparoscopy, endoscopy, robotics
- avoidance of staple line bleeding

OBSiDiAN® RFT®: regenerative medicine in coloproctology

- 100 % refilling of the fistula tract
- Do-Delivery option
- indications of OBSiDiAN® RFT®: excellent results in extrasphincteric, suprasphincteric, transsphincteric or intersphincteric fistula.

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OBSiDiAN® ASG® – trial results

The first human study with OBSiDiAN® ASG® confirms greater safety in anastomosis with low levels of anastomotic leakage.

The first human study using the procedure with OBSiDiAN® ASG® in anastomosis was led by Prim. Univ.-Doz. Dr. Andreas Shamiyeh (Kepler University Hospital Linz) and Prim. Univ.-Prof. Dr. Friedrich Herbst and OA Priv.-Doz. Dr. Bernhard Dauser (St. John of God Hospital Vienna). The study, which ran from 2018 to 2020, included 261 patients, of whom 177 patients underwent left-sided colon resection and 84 patients rectrum resection.

Parameter	177	84
Number	177	84
Male	77	46
Female	100	38
Age (years)	64 (23–87)	63 (35–91)
BMI (kg/m²)	26.35 (18.13–39.92)	25.5 (16.0–38.5)
Comorbidities		
Smokers	24 (13.5%)	5 (6.0%)
Diabetes	11 (6.2%)	10 (11.9%)
Hypertension	49 (27.7%)	15 (17.9%)
Heart failure	12 (6.8%)	5 (6.0%)
Asthma/COPD	9 (5.1%)	2 (2.4%)
Hyperlipidaemia	8 (4.5%)	5 (6.0%)
Hypothyroidism	17 (9.6%)	1 (1.2%)
Cirrhosis	1 (0.6%)	1 (1.2%)
Chronic renal failure	10 (5.6%)	2 (2.4%)
Other	1 (0.6%)	2 (2.4%)
Neoadjuvant Therapy		
Chemotherapy alone	2 (1.1%)	30 (35.7%)
Radiotherapy alone	2 (1.1%)	6 (7.1%)
Chemoradiation		5 (6.0%)
		19 (22.6%)

Patient demographics treated with the platelet-rich BioMatrix OBSiDiAN® ASG®.⁴

FACTS & RESULTS⁴

- The study included 261 patients, of whom 177 patients underwent left colon resection and 84 patients rectum resection.
- OBSiDiAN® ASG® Matrix was applied to the rectal stump in all interventions.
- In addition, the new application method IAA® (IAA – Intra Anastomotic Application), developed by RiVOLUTION GmbH, was used in all patient cases.
- With the application performed in this way, the study led to a leakage rate of 2.3 % (4/177) and 2.4 % (2/84).
- The study shows that the use of the autologously obtained platelet-rich BioMatrix (OBSiDiAN® ASG®) in anastomosis after colorectal resection is safe and associated with a low rate of anastomotic leakage.

¹ Platelet-Released Growth Factors Induce Differentiation of Primary Keratinocytes · Bayer A. et al. Mediators Inflamm. 2016; 2017:5671615.

² The Antimicrobial Peptide Human Beta-Defensin-3 Is Induced by Platelet-Released Growth · Bayer A. et al. Mediators Inflamm. 2017; 2017:6157491.

³ Platelet-released growth factors induce psoriasin in keratinocytes: Implications for the cutaneous barrier · Bayer et al. Annals of Anatomy 2017.

⁴ Colorectal Surgery: Obsidian ASG® Autologous Platelet-Rich Fibrin Matrix and Colorectal Anastomotic Healing: A Preliminary Study · A. Shamiyeh · Surgical Technology International Journal Volume 39 / 2021

⁵ Histologic changes in early colonic anastomotic healing using autologous platelet-rich fibrin matrix. · B. Dauser · European Surgery 04/2019