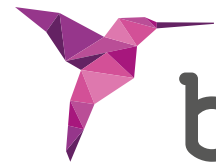


unicCa[®]
SURFACE



bti[®]

Human
Technology



WHAT IS UNICCA®?

UnicCa® is the surface of BTI implants that consists of a chemical modification with calcium ions over its triple roughness.

UNICCA® SURFACE, CERTIFIED PURENESS

BTI UnicCa® is the first implant system in the market awarded with the CleanImplant Foundation Mark, as a guarantee of the highest quality of its materials and surface.



CleanImplant Trusted
Quality Mark

2017-2021





Neck

ATTENUATED ROUGHNESS:

Enhances marginal tissue retention, reducing bacterial colonization.



Threads

HIGH ROUGHNESS:

Allows bone anchorage outside of the threads.



Valleys

MEDIUM ROUGHNESS:

Guides the bone growth between the threads maintaining the implant's mechanical properties.

TRIPLE ROUGHNESS

The triple roughness topography, depending on the area of the implant (neck, threads or valleys) adapts to the different tissues and biomechanical needs to achieve better osseointegration.

◀ CHEMICAL MODIFICATION WITH CALCIUM IONS ▼



Recent studies demonstrate that implants with the unicCa® surface obtain significantly higher osseointegration rates in less time.^[1]

DO NOT CONFUSE

UnicCa® is not a calcium titanate nor a calcium-phosphate/hydroxyapatite coating.



WHAT ARE THE RESULTS OF THE UNICCA® SURFACE?

1. UNICCA® IS ELECTROPOSITIVE, CLEAN AND SUPERHYDROPHILIC

-> **benefit:** it immediately initiates the regenerative process [2-5].

2. UNICCA® IMPROVES PERI-IMPLANT BONE STABILITY

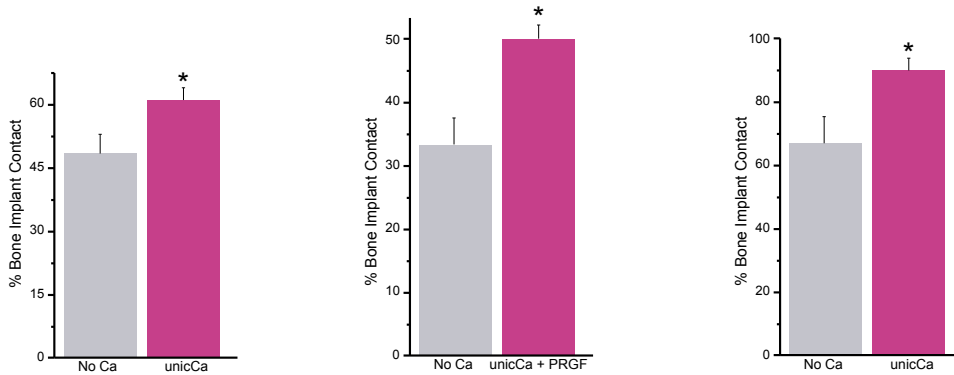
-> **benefit:** reduces implant failure. (13)

3. UNICCA® MINIMIZES BACTERIAL ADHESION

-> **benefit:** the attenuated roughness in the coronal area along with the use of Endoret® (PRGF®) significantly reduces the bacterial colonization (in vitro study). (14)

4. UNICCA® STIMULATES OSTEOGENIC ACTIVITY

-> **benefit:** bone forming cells synthesize significantly, resulting in a greater extracellular matrix (in vivo and in vitro studies) [4, 6-9]



Surfaces subjected to human osteoblast cell tests. Adhesion measured at 3 hours, proliferation at 4 days, synthesis at 7 days.

* shows statistically significant differences ($p < 0.05$, Student T-Test)

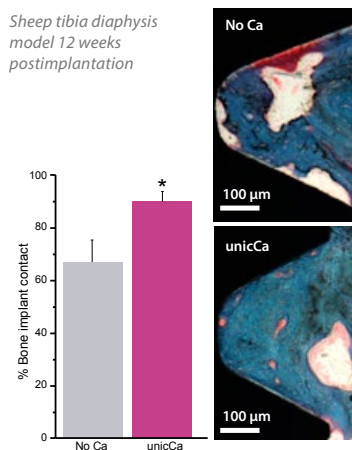
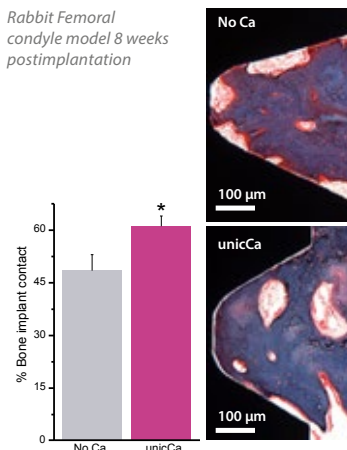
5. UNICCA IS OSTEOGENIC: INDUCES THE FORMATION OF BONE TISSUE

-> **benefit:** accelerates and improves osseointegration (in vivo studies). [2, 6, 12, 13]

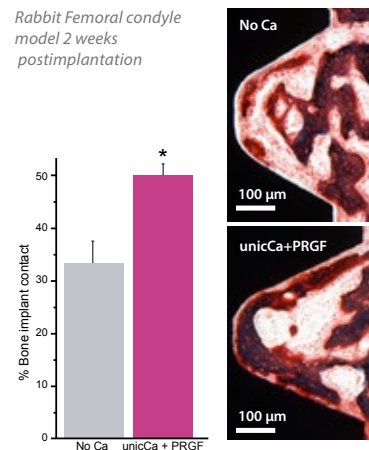
IN LOW DENSITY BONE [11]

IN POORLY VASCULARIZED BONE [4]

COMBINATION OF UNICCA® WITH ENDORET® (PRGF®) [11,12]



Accelerates early osseointegration



* Show statistically significant differences $p < 0.05$ between the groups (Student T-Test).



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NOTE: consult your distributor for the availability of the product in the different markets.

References

- [1] Favero R, Botticelli D, Antunes A., Martinez Sanchez R, Caroprese M, Salata L. Clin Implant Dent Relat Res 2015. doi:10.1111/cid.12311.
- [2] Tejero R, Rossbach P, Keller B, Anitua E, Reviakine I. Langmuir 2013;29:902–12.
- [3] Sánchez-Illáduya MB, Trouche E, Tejero R, Orive G, Reviakine I, Anitua E. J Biomed Mater Res A 2012;1–11.
- [4] Anitua E, Piñas L, Murias A, Prado R, Tejero R. Colloids Surfaces B Biointerfaces 2015. doi:10.1016/j.colsurfb.2015.04.006.
- [5] Ellingsen JE. Biomaterials 1991;12:593–6.
- [6] Anitua E, Tejero R, Zalduendo MM, Orive G. J Periodontol 2013;84:1180–90.
- [7] Adams CS, Manseld K, Perlot RL, Shapiro IM. J Biol Chem 2001;276:20316–22.
- [8] Dvorak MM, Siddiqua A, Ward DT, Carter DH, Dallas SL, Nemeth EF, et al. Proc Natl Acad Sci U S A 2004;101:5140–5.
- [9] McKee MD, Nanci A. Microsc Res Tech 1996;33:141–64.
- [10] Favero, Lang NP, Favero R, Carneiro Martins Neto E, Salata LA, Botticelli D. Clin Oral Implants Res. 2016 Jun 14. doi: 10.1111/clr.12906.
- [11] Anitua E, Prado R, Orive G, Tejero R. J Biomed Mater Res A 2014;20072018:1–12.
- [12] Tejero R, Anitua E, Orive G. Prog Polym Sci 2014;39:1406–47.
- [13] Eduardo Anitua , Laura Piñas and Mohammad Hamdan Alkhrasat International Journal of Implant Dentistry (2017) 3:49 DOI 10.1186/s40729-017-0111-5
- [14] Eduardo Anitua, Ricardo Tejero, Miguel Angel Pacha-Olivenza, Maria Coronada Fernandez-Calderon, Maria Delgado-Rastrollo, Mari Mar Zalduendo; Wiley Online Library 2017 Jan. DOI: 10.1002/jbm.b.33860



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NEW PRODUCTS

iPhone / smartphone version
iPad / Tablets version
(Customer Area)