

Extremus | Smart Surface

Surface engineering for Implants

Smart surface solutions which improve the interface between implant and human body leading to superior patient's quality of life

Business Summary

Extremus provides smart surface solutions to implant manufacturers in the dental, orthopedic and veterinary segments. Our solution uses nanotechnology to improve implant performance and can be applied through a simple process directly in our client production site. We generate benefits to all stakeholders: manufacturers, clinicians, health systems, health insurance and patients by improving cost-effectiveness and quality-of-life.

Customer Problem

The poor interface between implant and bone leads to implant failure, increasing treatment costs and reducing patient's quality of life. Yearly, the burden for hip and knee arthroplasties sum ~£1B[1] only in England. About 10 to 20% of the implants require revision surgeries, procedure to correct failures over lifetime[2, 3].

Our Solution

Smart surface which improves implant and bone interface maximizing osseointegration, reduces implant failure, accelerate recovery and healing periods.

Target Market

Global Implant Market (Dental, Orthopedic, Veterinary).

Our Implant treatment fee is between 2-6% of retail price.

Dental = £80M (~£4B Market implant Value[4])

Orthopedic=£720M (~£36B Market implant Value[4])

Veterinary = £2M (~£80M Market implant Value[4])

CAGR 2020-2025 > ~7%[4]. Strong growth supported by population aging, spending with healthcare and increased access to treatment.

Competitors

Implant Treatment Services provider: ACCENTUS MEDICAL (UK), DOT (Germany), CERAMED (Portugal), SELENIUM MEDICAL (France), HIMED (US). Coating solution & equipment: PROMIMIC (Sweden) & NBMolecules (Swiss).

Competitive Advantage

Product: Cost-effective solution, controlled topography in Macro, Micro and Nano Levels direct on the implant, regenerative properties accelerating healing times.

Process: "Turnkey surface treatment system" direct in the manufacturer production site (avoid logistics and stock), customizable to any implant design with upgradable versions which reduces R&D costs.

Customers

One Dental and one Orthopedic implant manufacturer in Brazil, development is ongoing.

Revenue Model

We sell our solution through surface development projects for each implant manufacturer. There is an Initial Fee (surface validation, process validation and turnkey equipment) and there is a treatment fee per implant which is impacted by volume and includes consumables and quality control means.

Exit Strategy

Potential Acquisition by any competitor or by one global implants manufacturers, such as: Straumann, Stryker, Zimmer-Biomet.

References

[1] Hospital Episode Statistics England

[2] Report: Prótese para artroplastia de quadril de revisão com material diverso da primária. CONITEC 2018.

[3] Artroplastia total de joelho e quadril:a preocupante realidade assistencial do Sistema Único de Saúde brasileiro, 2017. Revista Brasileira de Ortopedia.

[4] Fortune Business Insights - 2018 data



EXTREMUS
SMART SURFACE

Management

Area: Medical Devices

Stage: Startup

3 Founders – 100% of capital

Team

Diego de Oliveira, PhD. R&D

Lucas Magalhães, Sp. Sales & Marketing

Luis Felipe Baroni, PhD. Operations

Advisory Board

Bruno Carraro, MBA&I. Executive

Prof. Joni Cirelli, PhD. Clinical Senior

Prof. Claudemiro Bolfarini, PhD. Biomaterials Senior

Partners

São Paulo State University- Dental School

São Carlos Federal University - Biomaterials

São Paulo University- Dental School

Ferrara University- Medical

São Paulo Research Foundation

(FAPESP Brazil), RAEng (UK)

Achievements

2019 - Present: Tech Validation in Industry, ~£120K funding raised, Pre-Clinical ongoing & Clinical Test under definition. 2 partnerships (ortho & dental)

2017-2019: Tech Validation in Lab, ~£30K funding.

2013-2017: Proof of Concept, *In vitro* tests.

Seeking

Partnership to Internationalization.

Collaboration for tests & incrementals

Country of origin



Brazil

Contact

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