

X'PLANT 3SS DENTAL

A COMBINATORIAL DEVICE
FOR THE SAFE AND
SOUND RETRIEVAL OF
OSSEOINTEGRATED DENTAL
IMPLANTS FROM THE JAWBONE.

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MARKET

X'Plant 3Ss is a tool designed for dentists, implantologists, maxillofacial surgeons and periodontists. In Chile, there are 5,435 dentists who perform extractions of failed dental implants, and in the United States 58,716 dentists. In addition, each year 540 and 1,800 new professionals specializing in these areas graduate from Universities in Chile and the United States respectively. Two million new implants are placed each year, of which 3-10% fail.

UNMET NEED

Even though science has made dental implants a very successful solution to tooth lose, there is still a potential for clinical failure that is a significant concern for both the patient and the dentist. At present, when a dental implant has to be removed, whether due to unsuccessful insertion, fracture or peri-implantitis, the surgeon faces a lack of efficient removal tools designed to facilitate the unscrewing of the dental implant without destroying it or the neighboring teeth and tissues. Hence, the only way is via performing an open surgery. Nonetheless, the major problem associated with this time and cost-consuming operation is that tools strong enough to unscrew the dental implant are also not available. Thus, the surgeon is faced with the challenge of removing the dental implant with unsuited utensils or else grinding away the jaw bone surrounding the dental implant in order to expose part of it and achieve a better grip on the dental implant so to loosen it from the surrounding bone structures.



Universidad de

los Andes



**DIRECCIÓN
DE INNOVACIÓN**



SOLUTION

Non-invasive and chair-side device that generates the proper value ranges of energy to easily loosen the osseointegrated titanium-bone interface and retrieve failed dental implants. This technology is safe, easy-to-use, chair-side and cost-effective. It offers the care-provider a new, rapid and highly desirable alternative to invasive, painful, lengthy and costly implant retrieval procedures, allowing for the re-implantation of the removed TI screw (if still in working conditions).

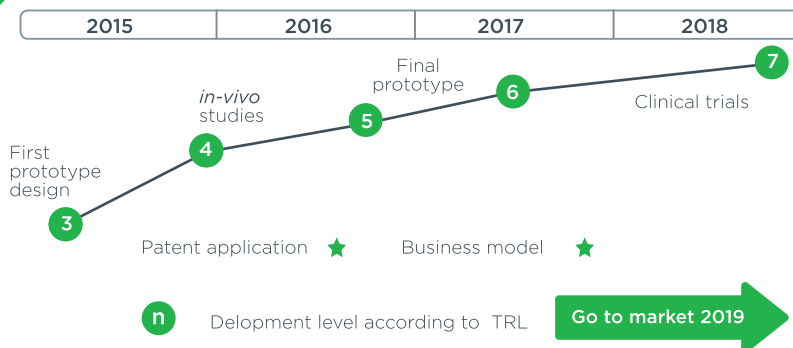
ADVANTAGES

- Easy to use, chair-side tool.
- Facilitates the extraction of failed osseointegrated dental implants.
- Less expensive than other tools currently available.

INTELLECTUAL PROPERTY

Provisional patent filed.

STATE OF DEVELOPMENT



BUSINESS SUMMARY DEPARTMENT OF INNOVATION

The Dirección de Innovación of the Universidad de los Andes seeks to support, canalize and efficiently manage the results from research conducted at the University to the public and private sector, both national and international. This is done in order to promote the transfer and application of the knowledge generated in the University so as to benefit the society and contribute to the economic development.

PROJECT DIRECTOR

Ziyad Haidar, DDS, masters in research in dental sciences, Ph.D. in biomaterials, bioengineering and nanotechnology and MBA.

> His area of expertise is the design of devices and biomaterials for regenerative therapy

RESEARCH TEAM

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