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## Bone allografts for clinical use in implantology: From retrieval to evidence of their effectiveness

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Bone loss has long been a challenge to dental surgeons who seek to reconstruct and rehabilitate patients with resorptions, especially in the maxillary and mandibular grafting. A range of biomaterial is available for use in dentistry, however the homologous graft, or allografts, has been increasingly used. This study explores four methods for processing the allografts (Group A: fresh allograft; Group B: Irradiated and Criopreserved bone allograft (- 80°C ); Group C: Freeze- Dried Bone Allograft; Group D: Demineralized Bone Allograft. It was initially performed a qualification testing (phase 1: sterility and cytotoxicity tests) and further an analysis of its osseointegration in an experimental trial in rabbits (phase 2: Optical Coherence Tomography (OCT), Cone Beam Tomography, Raman spectroscopy, histomorphometry and immunohistochemistry.

**Objectives:** The aim of this study is to evaluate the bone allografts that were processed in four different ways:

- A. Criopreserved allograft
- B. Criopreserved - Irradiated allograft
- C. Freeze-Dried allograft
- D. Demineralized - Freeze-Dried allograft

**Methods:** To analyze the osseointegration, the areas of grafts were submitted to the exams of Optical coherence tomography (OCT), Cone Beam Tomography, Raman spectroscopy, histomorphometry and immunohistochemistry.

### Biography

Luiz Augusto U. Santos is Master in Science and Implantodontist at University of Sao Paulo. He works as Manager of Tissue Bank and Researcher of the Institute of Orthopedics and Traumatology, Hospital das Clínicas of the School of Medicine of the University of Sao Paulo. Over the years, he has studied the clinical use of bone allografts in orthopedic and dental surgeries and has published studies nationally and internationally. He is a member of the American Association of Tissue Bank (AATB) and the American Dental Association (ADA). He is also a member of the Group of the Regulatory Health Organizations related to the definition of legislation and standards.

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