

MASTER ▪ Postgraduate UPV/EHU

OROFACIAL REGENERATIVE THERAPY

and ORAL IMPLANTOLOGY



uirmi

University Institute
for Regenerative Medicine
and Oral Implantology

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UPV EHU


FUNDACIÓN
eduardo
anitua

National and international reference center in regenerative therapy and implantology



uirmi

University Institute
for Regenerative Medicine
and Oral Implantology

The Eduardo Anitua Foundation, University Institute for Regenerative Medicine and Oral Implantology (UIRMI), offers a total immersion in our multidisciplinary team. The objective is the student's high qualification in regenerative medicine and oral implantology from biomedical research.

It is a professional master, in an international, clinical and research environment (equivalent to the American fellowship). In addition to the biosanitary profile, the student will also acquire the training to develop their professional work in oral implant rehabilitation.

During the two intense years of training, the student will obtain the knowledge in the basis of the regenerative therapy, expertise in the planning with complete digital flow.

WHY TO CHOOSE THIS MASTER?

The institute has the recognition **of the largest Spanish scientific production in the last ASEBIO report**, being a benchmark in research at an international level.

Innovative clinical profile: implantology implemented with regenerative medicine, sleep medicine and oral pathology.

To obtain a profile that differentiates you in the labour market and that extends your possibilities: **clinician, researcher and teacher.**

International environment and total immersion method "fellowship type".

• APPLICANT'S PROFILE •

Odontology, Medicine and Surgery degree* (Specialist in Maxillofacial surgery or in stomatology).

Linguistic profile: fluid communication in English is essential. *Knowledge of other languages will be positively valued.*

**Titles must be approved or in process of approval in Spain/European Union.*

Basic information:

Sp | En
MP Type
120 credits

PLACE:

University Institute for
Regenerative Medicine and Oral
Implantology (UIRMI)

CALENDAR:

PRE-ENROLLMENT:

· 28th September – 4th October 2019

MASTER DURATION:

· October 2019 – July 2020
· October 2020 – July 2021

TEACHING TYPE:

Face-to-face

PRICE:

20.000 €

CONTACT

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DOCUMENTATION REQUESTED:

· CV (PDF format)
· Video explaining the reasons why
you want to study the master

INTERPROFESSIONAL EDUCATION

Due to the multidisciplinary nature of this Master, the career opportunities are also multiple:



Directly into the **clinical practice**
and/or **research in the area of**
regenerative medicine and
oral surgery.



Incorporation into the **biosanitary/**
biotechnological and/or pharmaceutical
sector as a researcher in public and private
research centers, being able to participate
in **R&D&i projects** in biopharmaceutical
companies, science and technology parks.

PRACTICAL WORKSHOPS

Internship will be carried out in the different departments of
the UIRMI Institute and Eduardo Anitua Clinic.

· Diagnosis and planning	· Sleep Unit
· Surgeries	· Oral Surgery Unit
· Dental Prosthesis Laboratory with digital flow	· Research project in the R+D+i department

SUMMARY

AREAS OF KNOWLEDGE

REGENERATIVE THERAPY

1.

1. INTRODUCTION TO REGENERATIVE MEDICINE
2. PROTEINS AND GROWTH FACTORS
3. SCAFFOLDS
4. CELLS
5. BIOLOGICAL THERAPIES BASED ON HEMATIC DERIVATIVES
6. EFFICACY AND BIOSAFETY IN REGENERATIVE THERAPY

RESEARCH METHODOLOGY

2.

1. DESIGN, STATISTICS AND DATA PROCESSING
2. BASIC AND ADVANCED STATISTICAL TESTS
3. SYSTEMATIC REVIEW OF STUDIES AND META-ANALYSES
4. MULTIVARIATE ANALYSIS: REGRESSION MODELS
5. CALCULATION AND INTERPRETATION OF BASIC EPIDEMIOLOGICAL RATES: PREVALENCE, RISKS AND RATES.
6. QUANTITATIVE DIAGNOSTIC TESTS
7. ASSOCIATION AND IMPACT MEASURES
8. DESIGN, ANALYSIS AND INTERPRETATION OF STUDIES
9. ADVANCED BIBLIOGRAPHICAL SEARCHES

SURGERY

3.

1. ESSENTIAL AREAS OF KNOWLEDGE
2. SURGICAL BASIS
3. THE IMPLANT. TYPES
4. PLANNING IN IMPLANTOLOGY
5. IMPLANT SURGERY 1
6. PRE-SURGICAL CARE
7. IMPLANT SURGERY 2. ADVANCED TECHNIQUES
8. IMPLANT SURGERY 3.

PROTHESIS

4.

1. IMPLANT-SUPPORTED PROTHESIS 1. FUNDAMENTS
2. IMPLANT-SUPPORTED PROTHESIS 2
3. IMPLANT-SUPPORTED PROTHESIS 3
4. SLEEP DISORDERS AND ODONTOLOGY

REGENERATIVE THERAPY

TEACHING GUIDE

1. INTRODUCTION TO REGENERATIVE MEDICINE

2. PROTEINS AND GROWTH FACTORS

3. SCAFFOLDS

4. CELLS

5. BIOLOGICAL THERAPIES BASED ON HEMATIC DERIVATIVES

6. EFFICACY AND BIOSAFETY IN REGENERATIVE THERAPY

- 1.1.** Definition and historical perspective
- 1.2.** Central axis of regenerative medicine: cells, scaffolds and growth factors.
- 1.3.** Other strategies: tissue engineering, gene therapy and nanotechnology

- 2.1.** Definition and mechanism of action.
- 2.2.** Descriptive clasification.
- 2.3.** Presence of growth factors in platelets and plasma
- 2.4.** Potential uses of growth factors in medicine

- 3.1.** Definition and functions.
- 3.2.** Descriptive classification: natural versus synthetic.
- 3.3.** Brief summary of the state of the art in relation to the use of scaffolds in medicine.
- 3.4.** 3D/4D Bioprinting
- 3.5.** Scaffolds from our own biological fluids like blood

- 4.1.** Definition and functions.
- 4.2.** Types of cells.
- 4.3.** Stem cells: biological types and capacities.
- 4.4.** Mecanotransduction.
- 4.5.** Uses of cell therapy in medicine.

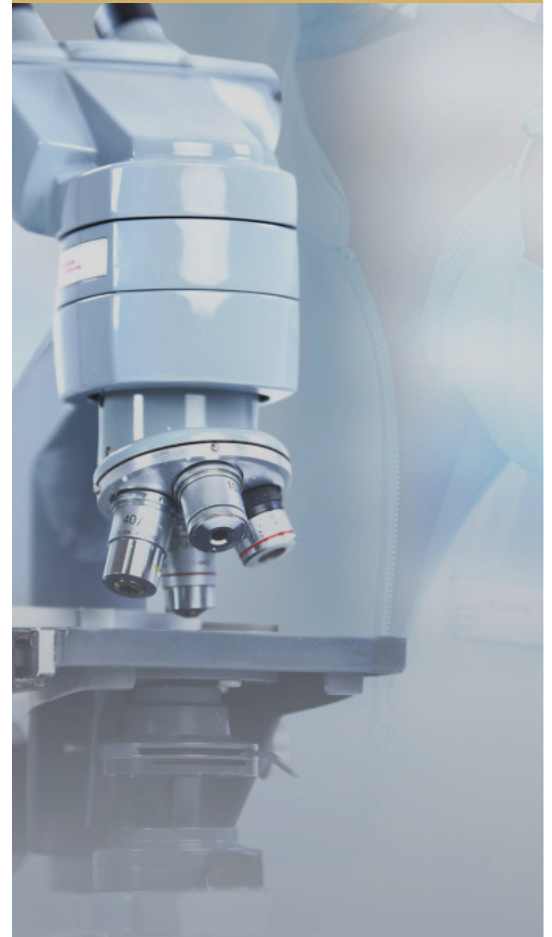
- 5.1.** Blood components.
- 5.2.** Plasma as a source of signaling molecules.
- 5.3.** Role of platelets in tissue regeneration.
- 5.4.** Composition and formulations of hematic derivatives.
- 5.5.** Therapeutic applications.
 - 5.5.1** Post-extraction socket treatment
 - 5.5.2** Bone, cartilage
 - 5.5.3** Skin, mucous membranes
 - 5.5.4** Other areas of medicine

TEACHING GUIDE

1. Design, statistics and data processing
2. Basic and advanced statistical tests
3. Systematic review of studies and meta-analyses
4. Multivariate analysis: regression models
5. Calculation and interpretation of basic epidemiological rates: prevalence, risks and rates.
6. Quantitative diagnostic tests
7. Association and impact measures
8. Design, analysis and interpretation of studies
9. Advanced bibliographical searches

Area of knowledge 2:

RESEARCH METHODOLOGY



TEACHING GUIDE

1. ESSENTIAL AREAS OF KNOWLEDGE

2. SURGICAL FUNDAMENTS

3. THE IMPLANT. TYPES:

4. PLANNING IN IMPLANTOLOGY

- 1.1. History of implantology.
- 1.2. Medical history.
- 1.3. Anatomy oral implantology.
- 1.4. Bone: biotypes.
- 1.5. Mucosa: biotypes.
- 1.6. Physiology of bone repair. Osseointegration.
Osteointegration: primary and secondary stability.
- 1.7. Implant-tooth differences.

- 2.1. Pre-operative.
- 2.2. Basic surgical principles: Asepsis.
- 2.3. Surgical field preparation.
- 2.4. Basic surgical instruments.

- 3.1. Designs.
- 3.2. Surfaces, clinical importance.
- 3.3. Materials.

- 4.1. The patient susceptible to implant treatment.
- 4.2. Assessment of the area prior to exodoncy.
- 4.3. Diagnostic planning 1
 - 4.3.1. Documentation.
 - 4.3.2. Records.
 - 4.3.3. Photography.
- 4.4. Diagnostic planning 2
 - 4.4.1. Diagnosis by image: Intraoral Rx.
Orthopantomographies. TAC.
 - 4.4.2. Assessment of bone quantity and quality
Modifications of the techniques according to
quantity and quality of bone.
 - 4.4.3. Digital Flow
 - 4.4.4. Surgical splints. Guided surgery.
- 4.5. Provisional prothesis.

TEACHING GUIDE

5.1. Bases of biological drilling.

5.2. Biological seal.

Periodontal tissues-periimplant tissues.

5.3. Incisions: types and indications. Flaps types.

5.4. Stability: primary and secondary.

5.5. Sutures types.

5.6. Postsurgical complications
diagnosis and treatment.

5.6.1 Medical.

5.6.2 Surgery dependents.

6.1. Pre-surgical physical care.

6.2. Post-surgical physical care.

6.3. Pre and post-surgical medication: antibiotics,
NSAIDs, analgesics and others.

7.1. Extra-short implant placement technique.

7.2. Expansion technique.

7.3. Alveolar ridge split technique.

7.4. Particulated bone graft technique

7.5. Block graft technique

7.6. Sinus lift technique:

lateral and transcrestal access

8.1. Immediate implant placement
after tooth extraction.

8.2. Immediate implant placement
after implant extraction.

8.3. Implant placement at one or two surgical phases.

8.4. Immediate or delayed loading.

8.5 Second implant surgery.

8.6. Implants in a esthetic area.

The importance of the technique.

8.7. Implants in posterior sectors.

The importance of functionality.

8.8. Orthodontic treatment and implants.

8.9. Safe oral and implantology medicine.

8.10. Periodontal surgery in implant treatments

8.10.1 Pre-treatment assessment.

8.10.2 Decision making for scheduling periodontal techniques.

8.10.3 Periodontal surgery techniques.

8.10.4 Management of periimplant soft tissues.

Area of
knowledge 3:

SURGERY

5. IMPLANT SURGERY 1

6. PRE-SURGICAL CARE

7. IMPLANT SURGERY 2.
ADVANCED TECHNIQUES

8. IMPLANT SURGERY 3.

PROSTHESIS

TEACHING GUIDE

1. IMPLANT-SUPPORTED PROSTHESIS 1. FUNDAMENTS

- 1.1.** Prosthodontics in implantology.
Terminology and basic concepts.
 - 1.1.1.** Retention/Support.
 - 1.1.2.** Cemented/Screwed.
 - 1.1.3.** Passivity/Hermetism.
 - 1.1.4.** Abutments/Materials.
 - 1.1.5.** Cast/CadCam.
 - 1.1.6.** Prosthetic attachments.
- 1.2.** Implant-supported prosthesis types.
- 1.3.** The importance in communicating with the prosthesis laboratory.

2. IMPLANT-SUPPORTED PROSTHESIS 2

- 2.1.** Implant-supported prosthesis printing techniques and materials.
- 2.2.** Prosthesis in a total maxillar/mandibular edentulous.
- 2.3.** Prosthesis in the posterior maxillar/mandibular sector.
- 2.4.** Prosthesis in the maxillar/mandibular esthetic sector.
- 2.5.** Occlusion in implant-supported prosthesis.
- 2.6.** The importance of occlusal sealing.
- 2.7.** Biomechanics in implant-supported prosthesis.

3. IMPLANT-SUPPORTED PROSTHESIS 3

- 3.1.** Printing techniques and impression materials in implant-supported prosthesis.
- 3.2.** Techniques and materials for provisional implants.
Steps and laboratory technology.
- 3.3.** Techniques and materials for the definitive prosthesis.
Steps and laboratory technology.

4. SLEEP DISORDERS AND ODONTOLOGY

- 4.1.** The role of the dentist in sleep apnea.
- 4.2.** The importance of occlusion in the detection of sleep apnea.
- 4.3.** Sleep apnea diagnostic methods.
- 4.4.** Sleep apnea treatment.

Learn with active professionals

FACULTY



SABINO PADILLA

MD, PhD in Medicine and Surgery.
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MOHAMMAD HAMDAN ALI ALKHRAISAT

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Learn
with active
professionals

FACULTY



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