PROGRAM OF THE THREE YEARS COURSES

GENERAL PATHOLOGY (G. Muzio)

Program:

• Introduction to General Pathology concepts: homeostasis, aspects of diseases (etiopathology, pathogenesis, morphological and molecular changes)
• Adaptations (hypertrophy, hyperplasia, atrophy, metaplasia)
• Pathology of Cell: Cell damage and death
• General features of acute: phases, chemical mediators, systemic manifestations of inflammation.
• General features of chronic inflammation: granulomatous inflammation
• Wound healing
• Immune system features and correlation with periodontitis.
• Diabetes and periodontitis

Objectives:

The course aims to give the student the knowledge on the basic aspects of physiopathology, pathology and immunology necessary for understanding the molecular mechanisms and the events involved in the pathogenesis of periodontal diseases.

MICROBIOLOGY (M. De Andrea)

• Methods of sterilization and disinfection in dentistry. Antibacterial therapeutics.
• Diagnosis of bacterial infections: isolation, cell culture, antibiotic sensitivity test, molecular biology methods.
• Oral microbiology. The normal flora of the oral cavity and the dental plaque. Biofilm formation and bacterial communication
• Periodontal pathogens (the Red Complex and beyond)
• Immune response to bacterial pathogens. Innate immunity to periodontal pathogens
• Periodontal disease and autoimmunity

The course structure refers to frontal lectures mainly focused to general bacteriology, and some interactive lessons addressed to examine some of the most recent discoveries related to the etiopathogenesis of periodontal diseases.

STATISTICS AND RESEARCH METHODOLOGY (F. Romano)

Program:
• The evidence-based medicine and the evidence-based dentistry: definition and significance in the clinical practice
• How to search for the scientific literature: the PICO question
• How to search for the scientific literature: simple and advanced search tools
• How to critically appraise the scientific literature: grading of the evidence, designs of the experimental studies, data analysis
• Descriptive statistics (data types, measures of location, measures of dispersion, graphs)
• From the sample to the population: the randomization and the inferential statistics
• The standard error
• The confidence interval
• The gaussian distribution
• Hypothesis testing: principles, p-value, null hypothesis, alternative hypothesis, one-sided versus two-sided test, power
• Tests for paired and unpaired data: comparing means of two or more groups, parametric and non parametric tests (Student t-test, ANOVA, Wilcoxon-rank test, Mann-Whitney test, post hoc tests)
• Relationship between two categorical or numeric variables (chi-square test, regression analysis)
• Association measures: risks, relative risk, odds ratio
• The meta-analysis: interpretation of forest plot and funnel plot
• The sample size calculation

Objectives:
The course aims to provide students with the tools to search for and appraise the literature on the topics of interest. The critical analysis of the biomedical studies is essential to develop research protocols independently.

The course provides an introduction to selected important topics in biostatistics concepts and reasoning. Specific topics include tools for describing central tendency and variability in data; methods for performing inference on population means and proportions; statistical hypothesis testing and its application to group comparisons; issues of power and sample size in study designs; and random sample and other study types. While there are some formulae and computational elements to the course, the emphasis is on interpretation and concepts.

Upon completion of the course, students will be competent at:

• Recognizing and giving examples of different types of data arising in clinical studies
• Interpreting differences in data distributions
• Calculating statistical descriptive measures
• Interpreting confidence intervals for population means and proportions
• Interpreting a p-value
• Selecting an appropriate statistical method for comparing two populations on a continuous and categorical measures by means of parametric and non parametric tests
• Understanding and interpreting results from the most common statistical tests
• Understanding and interpreting relative risks and odds ratios when comparing two populations
• Interpreting the results of a meta-analysis
• Describing different kinds of studies
• Formulating a PICO question
• Performing a literature search
• Critically evaluating the scientific literature

CLINICAL PERIODONTICS (A. Quirico)

Program:
• Epidemiology and classifications of periodontal diseases
• Current case definitions of periodontitis
• Oral microbiology
• Microbial composition in periodontal health and diseases
• Supra- and sub-gingival calculus
• Infectious, inflammatory and immunological processes in the pathogenesis of periodontal and peri-implant diseases
• Behavioral risk factors for periodontal diseases
• Mechanisms, effects and interactions of drugs with periodontal tissues
• Relationships between periodontal and systemic diseases
• Imaging techniques in the diagnosis of periodontal and peri-implant diseases
• Clinical chart data (medical, oral, dental history)
• Extraoral and oral semeiotics
• Periodontal clinical parameters
• Laboratory tests in periodontal diagnosis
• Photographic documentation
• TUPC (Turin University Periodontal Chart)
• Preclinical training in periodontal semeiotics

Objectives:
The course is planned to provide students with comprehensive knowledge of:
- Oral microbiology with emphasis on the composition and physiology of plaque biofilm and its relationship to inflammatory periodontal and peri-implant diseases.
- Infectious, inflammatory and immunological processes in periodontal and peri-implant diseases.
- Classification and epidemiology of the periodontal diseases.
- Risk factors and interrelationships between systemic conditions and periodontal diseases.
- Imaging techniques and their interpretation as they related to the diagnosis of periodontal diseases and for implant therapy.
- Extraoral, oral and periodontal semeiotics.

At the end of the course the student must demonstrate to be proficient in:
- Collecting all the patient’s records.
- Performing extraoral, oral and periodontal semeiotics to fill out completely the TUPC.
- Executing a full-mouth radiographic examination.

**NON-SURGICAL THERAPY**  (F. Romano, S. Pallotti, N. Guzzi, L. Bongiovanni)

**Program:**

- Operative phases
- Etiological aspects of the periodontal diseases
- Modification of life style/behavioral risk factors for periodontal disease
- Motivation and oral hygiene instructions
- Non-surgical instrumentation
- Correction of plaque retentive factors
- Occlusal adjustment
- Effects of non-surgical therapy:
  - Microbiological considerations
  - Histological considerations
  - Clinical considerations
- Limits
• **Home plaque control:**
  - Effects
  - Techniques:
    - Brushing methods
    - Manual versus electric toothbrush
    - Inter-proximal hygiene
    - Dental floss versus interdental brush
    - Toothpaste
    - Mouthwash

• **Operative protocols:**
  - Scaling, root planing and debridement
  - Therapeutic modalities (indications and protocols)
  - Conventional Staged Debridement
  - Full Mouth Scaling Root Planing
  - One Stage Full Mouth Disinfection
  - New technologies (photodynamic and laser therapy)
  - Peri-implant non surgical therapy in healthy conditions, mucositis and peri-implantitis
  - Local antiseptic and antibiotic therapy
  - Systemic antibiotic therapy (indications and protocols)

• **Operative techniques:**
  - Instruments description
  - Sonic instruments
  - Ultrasonic instruments:
    - Magnetostrictive
    - Piezoelectric
  - Scalers and curettes
    - Techniques of instruments sharpening
    - Techniques of scaling and root planing
  - Polishing
- Occlusal adjustment

- Periodontal maintenance therapy:
  - Objectives
  - Effects
  - Maintenance individualized program

The frontal lessons will be associated with preclinical training sessions on home oral hygiene instructions, instruments sharpening and root planing in the training room.

Objectives:
The aim of this course is to guide students in the non-surgical management with particular emphasis to the treatment of patients affected by periodontal and peri-implant diseases.

At the end of the course each student must demonstrate to be proficient in:

- Developing an appropriate operating sequence according to the periodontal diagnosis.
- Modifying individual life/style behavioral risk factors for periodontal disease (including diet, alcohol consumption and smoking habit).
- Planning and performing the non-surgical therapy through a correct and rationale use of ultrasonic and hand instruments, antiseptics and antibiotics.
- Evaluating the results of the non-surgical periodontal therapy.
- Establishing and monitoring an individualized periodontal maintenance program in cooperation with other members of the dental team, including the likely risk factors.

SURGICAL TECHNIQUES (M. Bottone, E. Ercoli)

Program:

- Oral maxillo-facial surgical anatomy
- Wound healing mechanisms
- Surgical instruments
- Incisions in oral and periodontal surgery
- Gingivectomy and gingivoplasty
- Surgical flaps (incision and flap thickness)
Objectives:
The aim of this course is to provide the student with comprehensive theoretical and practical knowledge about oral maxillo-facial anatomy, surgical instruments, preparing the surgical field in clean and sterile conditions, incision and suturing techniques, indications and use of biomaterials in periodontal regeneration. A course of anatomic dissection and surgical techniques will be held at the Department of Physiology and Anatomy at the Lausanne University (Switzerland).

OSSEOUS PERIODONTAL SURGERY (M. Aimetti, G. Mariani)

OSSEOUS RESECTIVE SURGERY

Program:

- Indications and goals
- Osseous resective surgery in periodontal patients:
  - Bone defects
  - Non surgical therapy versus surgical therapy
  - Conservative therapy versus osseous resective surgery
• Surgical procedures
• Soft tissue management (flap design, type of incision, flap thickness and positioning)
• Hard tissue management (ostectomy, osteoplasty, treatment of the interproximal lesion, Fibre Retention technique)
• Biological considerations related to osseous resective surgery (effects on soft/hard tissues)
• Osseous resective surgery and crown lengthening:
  • Natural teeth
  • One tooth to be restored
  • Two or more teeth to be restored
  • Surgical crown lengthening versus or combined with orthodontic approach
• Osseous resective surgery and treatment of furcation involvement:
  • Treatment of furcation of 1°, 2°, 3° degree
• Preclinical training in the simulators room of soft tissue management and bone defects remodeling and root resection

PERIODONTAL REGENERATIVE THERAPY

Program:
• Principles of periodontal regeneration
• Indications and goals of periodontal regenerative therapy
• Patient-, tooth- and site-related factors
• Surgical techniques (flap design, defect cleaning, root surface treatment, selection of the regenerative procedure)
• Bone grafting materials
• Guided tissue regeneration (GTR)
• Non-resorbable membranes
• Resorbable membranes
• Growth factors and amelogenins
• Periodontal regeneration in furcation defects
• Suture techniques in GTR
• Postoperative follow-up

Preclinical training in the simulators room of soft tissue management (papilla preservation techniques) and application of membranes and graft materials to regenerate periodontal intrabony and furcation defects.

Objectives:
The course is aimed to provide the student with comprehensive knowledge about biological mechanisms, indications, contraindications, advantages and disadvantages of all the surgical techniques used for the correction of deep supra- and intra-bony periodontal defects and in the management of the furcation involvements. In addition, the surgical or orthodontic approach in crown lengthening will be discussed in the different clinical scenarios.
The technical phases of soft and hard tissue surgical management will be discussed in detail to ensure high predictability of long-term results. At the end of the course students must demonstrate comprehensive knowledge of the healing mechanisms and be proficient in selecting the most appropriate treatment option and in establishing the most appropriate postoperative follow-up.

PERIODONTAL PLASTIC SURGERY (F. Ferrarotti)

Program:
• Role of keratinized tissue in dento-periodontal health
• Etiology, diagnosis and classification of gingival recession defects
• Gingival surgery (gingivoplasty, gingivectomy, partial thickness palatal flap, modified Widman flap)
• Mucogingival surgery:
  ▪ Procedures to augment the attached gingiva: frenectomy, apically repositioned flap, laterally repositioned flap, interdental multipapilla flap, rotated flap, double papilla flap, free gingival graft.
• Periodontal plastic surgery:
  ▪ leveling of gingival margin:
Objectives:
At the end of the course students will demonstrate comprehensive knowledge about pathogenesis, diagnosis, and treatment options of the gingival and mucogingival problems. Students must also demonstrate to be familiar in managing all the mucogingival and periodontal plastic surgical procedures and in selecting the most appropriate one for each individual patient.

ORTHODONTICS IN PERIODONTAL THERAPY (D. Garbo)

Program:
- Role of orthodontic treatment in periodontal patients
- Biology of tooth movement and rationale of orthodontic treatment in periodontally compromised patients
- Analysis of case and priorities
- Dental, occlusal and aesthetic aims
- Interdisciplinary planning of the ortho-perio treatment
- Timing of the ortho-perio treatment
- Major orthodontic tooth movement: intrusion, extrusion, space closure, uprighting
- Tooth movement with vertical bony defects
- Tooth movement with horizontal bone loss
- Papilla reconstruction
- Use of prosthetic implants and mini-screws as skeletal anchorage
- Prosthetic finishing
- Retention and long-term maintenance
Objectives:
The course aims to give the student the knowledge to be able to plan an interdisciplinary case and to share information with the orthodontic specialist. At the end of the course the student must have comprehensive knowledge of the interrelationships between orthodontics and periodontal treatment with particular emphasis to the prerequisites to start with the orthodontic treatment, the treatment options for clinical cases with tooth migration and instable occlusion, the timing of the orthodontic treatment, and the periodontal maintenance therapy of patients during the orthodontic treatment.

BASIS OF IMPLANT THERAPY (M. Aimetti, G. Mariani)

Program:
- Biology of the bone tissue
- Healing mechanisms of the alveolar socket
- Principles of osseointegration
- Implant surfaces
- Implant functional loading
- Diagnosis in implant therapy:
  - clinical assessment
  - radiographic evaluation
- Timing of implant positioning
- Techniques of implant insertion:
  - bone quality evaluation
- Management of peri-implant soft tissue
- Bone crest augmentation procedures
- Sinus lift techniques
- Preclinical training in the simulators room of implant placement and minor procedures in GBR technique
Objectives:
The course is aimed to provide comprehensive knowledge of biology of the osseointegration, the micro- and macro-topography of implant surface. At the end of the course students must demonstrate to be familiar with the implant placement techniques, soft tissue management in one- and two-stage techniques to improve peri-implant soft tissue thickness and width of keratinized peri-implant tissue. Emphasis will be done to the use of osseointegrated implants in periodontal patients.

Programs of the Three Year Workshops

Immediate and Delayed Post-Extraction Implants (R. Abundo)

Program:
- Timing of implant insertion
- Healing process of post-extraction sites with and without simultaneous implant placement
- Long-term results of immediate and delayed post-extraction implants
- Decision making for timing of implant placement
- Surgical protocols for hard and soft tissue management in post-extraction implants
- Immediate loading of post-extraction implants

Objectives:
Educational objectives of the course are providing extensive knowledge on post-extraction implants and teaching participants to correctly perform up-to-date surgical techniques in this specific field.
PHOTOGRAPHIC DOCUMENTATION OF THE CLINICAL CASE (A. Arcidiacono)

Program:

Frontal lessons:

- Goals of the photographic documentation
- Photographic tools
- Basis of photography
- Setting the camera
- Execution of extra- and intra-oral photographs
- Protocol for the presentation of a clinical case
- Photographs in periodontal surgery
- How to import and optimize pictures on the computer
- Management of photos

Practical sessions:

- Preparation of the operative room and of the photographic tools
- Practical session of extra-oral photographs
- Practical session of intra-oral photographs
- Transferring the photos to the computer
- Inserting the photos in the framework of the clinical case presentation

Objectives:

The purpose of the seminar is to understand the role of the photographic documentation in the periodontal clinical practice. At the end of the seminar the students will acquire the theoretical knowledge of dental photography and will be proficient in managing the photographic tools and in taking pictures for an adequate presentation of the clinical case.

NON PLAQUE-INDUCED MUCOSAL LESIONS (P. Arduino)

Program:
• Oral mucosa anatomy
• Oral medicine semeiotics and biopsy of the oral tissues
• Interpretation of clinical data in oral medicine
• Elementary lesions in oral medicine
• Desquamative gingivitis
  ▪ Oral hygiene in patients with desquamative gingivitis
• Gingival swelling
  ▪ Oral hygiene in patients with gingival swellings
• Traumatic lesions of the oral mucosa
• Potentially malignant disorders of the oral cavity and oral cancer

Objectives:
The program’s students will acquire knowledge of the diagnosis, etiology, clinical features, and treatment of some of the more common oral disorders affecting the gingival tissues, and will develop skills in investigating and managing such diseases in both hospital and private settings. Particular emphasis will be placed on the preventive aspects of oral health care and on the evidence-based care of such patients. A comprehensive literature search will be provided for the different topics analyzed.

TREATMENT OF AESTHETIC AREAS (A. Chierico)

Program:
• Stability of the gingival margin around prosthetic rehabilitations on natural teeth and osseointegrated dental implants:
  ▪ Recovery of the aesthetics in severely compromised periodontal patients: diagnosis, treatment options, indications/contraindications, limits, multidisciplinary approach
  ▪ Biotype as selection criteria for different types of prosthetic restorations
  ▪ Soft tissue thickness augmentation techniques to modify tissue biotype around teeth and implants
Connective tissue graft in edentulous ridge augmentation: inlay, onlay and combined graft techniques and their management to minimize the postsurgical contraction

Use of prosthetic guides to optimize soft tissue architecture in prosthetic treatment in dentate patients

Use of the computer in the aesthetic treatment plan

Aesthetics in implant-therapy

Current surgical protocols according to the socket classification and the tissue biotype

Computer-assisted implant surgery: advantages and limits

Objectives:
The aim of this seminar is to point out the role of esthetics in the treatment of patients with healthy and reduced periodontal support by using natural teeth and/or osseointegrated implants with emphasis to the aesthetics. In addition, the role of new technology in the treatment plan strategy is widely and critically discussed.

HEALING MECHANISMS AND ALVEOLAR SOCKET PRESERVATION (C. Dellavia)

Program:

• Description of the main growth factors and cytokines involved in the socket healing process.

• Analysis of the biological events characterizing the integration of bone substitutes in alveolar socket preservation

• Histological methods to evaluate in vivo the effects of grafting materials on the bone remodeling pattern

• Clinical cases displaying the influence of different grafting biomaterials on the physiology of post-extraction sites

Objectives:
The seminar is aimed to provide the postgraduate students with comprehensive knowledge on:

• The biological processes activated in the alveolar socket healing

• The major factors of bone remodeling cascade
• The methodology to evaluate and validate the integration of the grafting biomaterials commonly used in the alveolar socket preservation techniques
• The distribution of the bone remodeling biomarkers in the histological images from bioptic post-extraction sites grafted with different bone substitutes.

PROSTHETIC REHABILITATION (S. Gracis)

Program:

• Indications for the maintenance of compromised teeth as abutments for dental prosthesis and their eventual replacement with implants
• Restoration of non-vital teeth so that they can be considered reliable abutments
• Role of surgery and the healing times relative to the establishment and maturation of the periodontal tissues
• Influence of biotype and distance between bone crest and CEJ on the tissue stability
• Level and types of tooth preparation
• Orthodontics as a tool for the treatment of periodontal lesions
• Occlusal aspects of prosthetic restorations on teeth and implants
• Aesthetic implications of perio-prosthetic rehabilitations
• Criteria for the choice of prosthetic materials: metal-ceramic versus all ceramic
• Technical and laboratory procedures

Objectives:

The seminar is aimed to provide students with:

• A systematic approach to the decision-making process for the formulation of an ideal treatment plan
• The literature support to defend the proposed therapeutic options
• Comprehensive knowledge of:
  ▪ The importance of multidisciplinary approach to improve the quality of the prosthetic therapies
  ▪ The impact of risk factors for eventual implant abutments
- The anatomical aspects for the proper management of the dento-gingival complex
- The limits of the preparation and of the restorative materials for the fabrication of prostheses on teeth that have lost part of the periodontal support
- The implications of any orthodontic and surgical therapy

PERI-IMPLANT SOFT TISSUE MANAGEMENT (S. Parma Benfenati)

Program:

- Anatomy and biology of peri-implant soft and hard tissues
- Radiographic and diagnostic evaluation
- Hard and soft tissue surgical treatment
- Flap design in the mandibular arch
- Flap design in the maxillary arch
- Flap design and anatomic principle in the anterior sextant
- Bony defects classification post implant insertion
- Basic concepts on regenerative techniques
- Suturing techniques

Objectives:
The seminar demonstrates the importance of thorough medical and dental history taking, and how different facets of each specialty contribute to the outcome of implant treatment. Successful implant treatment is the result of careful planning and integration of various areas of dentistry, not just those of prosthodontics and surgery.

The fields of regenerative dentistry and tissue engineering have undergone significant advancements, however successful endosseous implant therapy requires integration of the implant with bone and soft tissues. The main objective of the workshop is to provide students with basic concepts and surgical techniques "step by step".
ENDO-PERIODONTAL LESIONS (D. Pasqualini)

Program:
- Anatomic and histopathological considerations
- Etiopathogenetic classification of diseases of the attachment apparatus of endodontic and periodontal origin
- Diagnosis: assessment of pulp and periodontal conditions
- Healing potential and prognosis
- Differential diagnosis and decision making
- Treatment options and outcomes
- Influence of the periodontal therapy on the endodontium

Objectives:
The seminar will explore the interrelationships between pulp disease and periodontitis and will provide biological and clinical evidence for diagnosis, prognosis, and decision-making in the treatment of these conditions.

DIAGNOSIS AND TREATMENT OF PERI-IMPLANT BIOLOGICAL COMPLICATIONS (M. Roccuzzo)

Program:
- Peri-implant tissues health
- Etiopathogenesis of mucositis and peri-implantitis
- Peri-implantitis: influence of implant surfaces
- Occurrence and progression of peri-implantitis
- Examination of patients with peri-implant infections
- Indications and limits of radiographic examination
- Clinical diagnosis of patients affected by peri-implantitis
- Strategies of treatment of peri-implantitis
- Regenerative surgical technique for the treatment of peri-implantitis
- Maintenance of peri-implant tissue health
- Risk of recurrence of biological complications
• Long-term results

Objectives:
The seminar is aimed to provide students with comprehensive knowledge to:
  • Perform clinical examination for a correct diagnosis of peri-implantitis
  • Select the appropriate diagnostic technique
  • Select the proper therapeutic strategy for treatment on the basis of indications and limits of the various surgical techniques
  • Select graft materials (autologous bone vs. non autologous materials)
  • Prescribe a pharmacological local and/or systemic therapy
  • Assess patient’s risk profile (susceptibility to periodontitis)
  • Evaluate local risk factors (number, position, surface of implants)
  • Conduct an adequate long-term periodontal maintenance program

RECOVERY OF THE SEVERELY COMPROMISED TOOTH, REGENERATIVE SURGERY AND IMPLANT PLACEMENT (C. Tinti)

G.T.R.
Clinical procedure
• Selection of a case on the basis of:
  ▪ Type of defect (angular defects, furcation defects, mixed defects)
  ▪ Treatment alternatives
  ▪ Selection criteria for the use of reabsorbable or non reabsorbable membrane

Surgical procedure:
• Choice of the flap design
• Use of filling materials

Papilla preservation techniques:
• In the palatal aspect
• In the buccal aspect
• Inter-proximal connected flap
• Suturing techniques for covering the membrane
• Exposure of the membrane
  a) how to avoid it
  b) what to do if it occurs
  c) literature support

**G.B.R.**

Clinical procedure

• Selection criteria for the use of membranes on the basis of:
  ▪ Types of defect
  ▪ Cost/benefit ratio
  ▪ Prediction of results with or without membrane
  ▪ Literature data

Defects classification:

• Choice of suitable material
• Surgical procedure:
  ▪ Considerations on the flap: design and incisions
  ▪ To cover the material
• Use of filling materials? Which materials, what is the literature support?
• Flap design and incisions for keeping the membrane submerged: new palatal sliding flap
• Quality of the new regenerated tissue histology
• Suture and manipulation of the tissues for the closure of the flap on the material and the maintenance of the submerged membrane

Post-operative follow-up:

• Is it important to keep the membrane submerged?
• What to do if the membrane is exposed: removal or maintenance? On what conditions?
• Literature data
• Removal of material
The second stage: healing connection

• Long-term evaluation of the results obtained

**Objectives:**
The purpose of these seminars is to provide the participants with the current knowledge and techniques for the implementation of various regenerative procedures through the literature analysis, slides and videos. Much time will be given to the collegial discussion with the postgraduate students who will express their views on the diagnosis and treatment plans proposed. Shall also be required that participants showing clinical cases treated in order to demonstrate their knowledge and skill in periodontal regeneration procedures.

**ROLE OF THE OCCLUSAL TRAUMA IN THE PERIODONTALLY COMPROMISED PATIENTS** (J Badreddin)

**Program:**

• Definition of occlusal trauma
• Biological considerations
• Role of the occlusal trauma in the progression of the periodontitis
• Occlusal vertical dimension
• Role of the incisors guide for a correct function and for the stability of the therapeutic outcomes
• Clinical and radiographic aspects of the occlusal trauma
• Treatment of the occlusal trauma (occlusal adjustment, role of splinting, occlusal bites)
• Check of the occlusal contact points during the maintenance periodontal therapy

**Objectives:**
The aim of the seminar is to provide students with comprehensive knowledge of the influence of forces (trauma, parafunctions, etc.) on the periodontium and related structures, their diagnosis (clinical and radiographic) and management in the periodontally compromised patient.
OSSEOUS RESECTIVE SURGERY WITH FIBRE RETENTION TECHNIQUE (FibReORS) (G. Carnevale)

Program:
- Biological width
- Biological rationale of the FibReORS
- Surgical technique: soft and hard tissue management in relation to connective fibers preservation
- Comparison with the traditional osseous resective procedure
- Discussion of clinical cases
- Long-term outcomes

Objectives:
At the end of the seminar the postgraduate students must demonstrate comprehensive knowledge of the biological rationale and operative steps of the FibReORS procedure, and of soft and hard tissue management. Clinical cases will be discussed to analyze the healing, maturation and stabilization process of soft and hard tissue and the long-term results.

IMPLANT SURGERY (A. Scipioni)

Program:
- Combined one-stage techniques of osseous resective surgery and implant insertion
- Horizontal ridge augmentation by split crest techniques
- Vertical ridge augmentation by split crest technique in sinus lift elevation
- One-stage implant placement and soft tissue management to optimize stable and aesthetic results
- Timing and methods to optimize soft tissue results by provisional crowns in implant therapy
- Prosthetic solutions

Objectives:
This seminar is aimed to provide student with comprehensive knowledge of biological concepts that support split crest techniques without the application of biomaterials and membranes. Clot
stability and primary implant stability are critical with these particular techniques and specific surgical protocols are needed. The operative steps of soft and hard tissue management in implant insertion are discussed in horizontal and vertical bone augmentation procedures.

**FORENSIC MEDICINE** (G. Roggero)

**Program:**

- Principles of ethics and professional conduct in periodontics and implant dentistry
- Informed consent for periodontal treatment, privacy and confidentiality
- Civil responsibility in periodontal and implant therapy malpractice (obligations, behaviors, results, errors, complications, damage restoration)
- Penal responsibility in periodontal and implant therapy malpractice (relations in the penal code concerning to criminal responsibility of the dental professionals)

**Objectives:**

The aim of this seminar is to point out the importance of understanding the moral and ethical responsibilities involved in the provision of care to individual patients and of having comprehensive knowledge of contemporary laws applicable to the practice of dentistry. At the end of the seminar students must demonstrate to be competent in the application of the principles of regulatory law and ethical reasoning and professional responsibility as they pertain to the practice of periodontics and implant therapy.

**PERIODONTAL ANATOMY AND HISTOLOGY** (C. Ghelardoni)

- Gingiva
- Periodontal ligament
- Root cementum
- Alveolar bone
• Blood supply of the periodontium
• Nerves of the periodontium
• Lymphatic system of the periodontium

PERIOMEDICINE (F. Graziani)

• Infection and inflammatory mechanisms
• Periodontal diseases and cardiovascular diseases (CVD)
• Periodontitis and diabetes
• Evidence that periodontal treatment improves biomarkers and CVD outcomes
• Periodontal disease and adverse outcomes pregnancy

NON-SURGICAL THERAPY (M. Aimetti)

• Non surgical periodontal therapy versus surgical therapy
• Factors limiting the efficacy of non surgical periodontal therapy
• Operative protocols
• New technology in periodontal and implant therapy: laser and photodynamic devices
• Role of systemic antibiotic therapy
• Role of local antibiotic delivery
• Antiseptic therapy
• Failures, complications and relapses in non surgical periodontal treatment
• Control of trauma from occlusion and parafunctions
• Esthetic splinting and restoration
• Role of non surgical periodontal treatment in controlling halitosis
• Periodontal maintenance
  - Biological principles
  - Aims
• **PERIODONTAL PLASTIC SURGERY** (S. Parma Benfenati)
  - Leveling of gingival margins
    - Prognostic parameters for complete root coverage
    - Non surgical and surgical techniques for root coverage without connective tissue graft
    - Bilaminar techniques
  - Recovery of interdental papillae
    - Non surgical therapy
    - Adhesive restorations
    - Prosthetic therapy
    - Orthodontic therapy
    - Surgical therapy
    - Combined therapy
  - Bone alveolar preservation techniques
  - Alveolar ridge augmentation techniques

**Implant therapy** (G. Schierano)

- Alveolar bone atrophy
- Bone biology and bone physiology
- Bone modeling and bone remodeling
- Bone repair
- Osseointegration: historic background
- Osseointegration from a mechanical and biological point of view
- Diagnosis in implant therapy:
  - Clinical examination
  - Model casts
  - Radiographic examination
- The surgical technique
- Soft tissue management
- Flap design
- One stage versus two-stages approach
- Technique to increase the width of keratinized peri-implant mucosa
- Increase of keratinized peri-implant mucosa thickness
- Inter-implant soft tissue management

- Hard tissue management
  - Bone drilling
  - Implant position
  - Implant direction
  - How to manage hard bone
  - How to manage soft bone