UNIVERSITY OF ENNA "KORE"

KIRO
Kore International Relations Office

ERASMUS+ BLENDED INTENSIVE PROGRAMME

Ageing Unlocked

The secrets of ageing: genes, nutrition and inflammation

IN-PERSON: 5–9 July 2027 | **ONLINE: 28 June – 1 July 2027**

GENETICS · HISTOLOGY · EPIGENETICS · INFLAMMATION · ARTIFICIAL INTELLIGENCE



MULTIDISCIPLINARY INTERVENTIONS



NUTRITION
Mediterranean diet and personalized nutrition



PHYSICAL ACTIVITY
Regular exercise and reduction of sedentariness



STRESS MANAGEMENT
Sleep, balance and psycho-emotional well-being



PHARMACOLOGICAL THERAPIES
Senolytic drugs, modulation of longevity pathways (e.g. mTOR, sirtuins)



EPIGENETIC APPROACHES
Nutraceuticals and epigenetic modulation



REGENERATIVE MEDICINE
Stem cells and innovative therapies

IN-PERSON: 5–9 July 2027
ONLINE: 28 June – 1 July 2027

Students of Medicine and Surgery
15 participants

Language: English

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Erasmus+ – KIRO International Relations Office

For the attention of
Prof. Ilaria Frana, Head of KIRO
Dr Barbara Baldi, KIRO Administrative Manager

Expression of Interest Form - Erasmus+ Blended Intensive Programme

Proposing Department (UKE):

Department of Medicine and Surgery

Provisional BIP title:
Ageing Unlocked: Genes, Nutrition and Inflammation

From Biological Mechanisms to Integrated Clinical Care

UKE Coordinators:
Cosimo Galletti, Antonino Maniaci, Rosario Leonardi, Federica Barbagallo

Brief description of the BIP:

This Blended Intensive Programme explores how tissue remodelling, genetic susceptibility, epigenetic regulation, chronic inflammation and nutrition shape health trajectories across the lifespan. A dedicated session will address the application and validation of artificial intelligence in the analysis of clinical data and biomarkers. Researchers and clinicians in otorhinolaryngology, ophthalmology, dentistry, general surgery, plastic and reconstructive surgery, anaesthesiology, cardiology, gynaecology, urology and andrology will integrate biological mechanisms with clinically relevant case scenarios. Working in international teams, participants will critically appraise the evidence, discuss prevention and care strategies, and develop an interdisciplinary proposal to promote healthy ageing. The programme combines online collaboration with five days of face-to-face activities comprising lectures, workshops and case-based discussions. To integrate theoretical learning with experiential training, teaching sessions will alternate with simulation laboratory activities, anatomy-based exploration using the Anatomage Table, an interdisciplinary practical session on the vestibular system jointly delivered by otorhinolaryngologists, ophthalmologists and neurologists, and guided literature searches at the Kore University Library. The blended component is integral to the programme: before, during and after the physical mobility period, international teams will progressively address a shared ageing-related challenge, integrating biological mechanisms, clinical reasoning and critical appraisal of the evidence into a final interdisciplinary output.

Please indicate the Erasmus+ horizontal priority/priorities to which the BIP is intended to contribute:

- Inclusion and diversity
- Digital transformation

Partner Institutions and Countries Involved:
List the partner higher education institutions and their respective participating countries (minimum of 3 different countries).

- *Universidad de Salamanca (USAL), Spain - Partner HEI.*
- *Paracelsus Medical Private University (PMU), Salzburg, Austria - Partner HEI.*
- *Mons? Valencia? Madrid?*

Expected number of participants:

- 15 Erasmus+ mobile students from partner institutions, in addition to any UKE students and the teaching staff involved.

Planned activities:

The programme comprises a total workload of 75 hours, corresponding to 3 ECTS subject to approval by the partner institutions. Activities include five days of physical mobility (34.5 hours) and a virtual component based on collaborative work within international teams.

Activity	Hours
Face-to-face: 2 days of 6 hours and 3 days of 7.5 hours	34.5
Online: synchronous collaborative meetings	12
Reading, case preparation and final assignment	28.5
Total	**75**

Face-to-face sessions last 1.5 hours each; three days include a fifth session. Breaks between sessions are not included in the teaching hours.

Face-to-face programme

Day 1 Biological Foundations

Time	Session	SSD codes and disciplines involved
09:00-10:30	Biology, anatomy and histology of ageing: tissue remodelling and cellular senescence. Integrated session combining anatomical-histological correlation with hands-on exploration using the Anatomage Table.	BIOS-06/A Physiology BIOS-12/A Human Anatomy BIOS-13/A Histology and Human Embryology
10:45-12:15	Genetics of ageing and individual susceptibility	BIOS-14/A Genetics MEDS-01/A Medical Genetics
13:15-14:45	Epigenetics and regulation of gene expression	BIOS-08/A Molecular Biology
15:00-16:30	Chronic inflammation in ageing: biomarkers and pharmacological perspectives. Workshop - hands-on guided database searching in the University Library.	BIOS-11/A Pharmacology MEDS-25/B Occupational Medicine MEDS-02/A General Pathology MEDS-02/B Clinical Pathology MEDS-10/B Infectious Diseases

Day 2 Otorhinolaryngology, Dentistry and Ophthalmology

Time	Session	SSD codes and disciplines involved
09:00-10:30	The ageing ear: genetics, epigenetics, inflammation and modifiable risk factors - hands-on audiological and functional assessment.	MEDS-18/A Otorhinolaryngology MEDS-18/B Audiology and Phoniatrics
10:45-12:15	Smell, taste and nutrition: the forgotten senses of ageing - hands-on SNIFF test and olfactometric assessment.	MEDS-18/A Otorhinolaryngology MEDS-18/B Audiology and Phoniatrics MEDS-08/C Nutrition Science

Time	Session	SSD codes and disciplines involved
13:15-14:45	Oral health and chronic inflammation: periodontal disease as a potential sentinel of systemic inflammation.	MEDS-16/A Oral and Dental Diseases
15:00-16:30	Integrated case discussion: oral health, swallowing and nutritional status - hands-on Anatomage simulation of the head and neck region.	MEDS-16/A Oral and Dental Diseases MEDS-18/A Otorhinolaryngology MEDS-08/C Nutrition Science
16:45-18:15	Ocular ageing: visual function, ocular surface and independence in daily living, with an interdisciplinary vestibular practical session addressing balance, oculomotor function and fall risk in older adults (otorhinolaryngology, ophthalmology and neurology).	MEDS-17/A Ophthalmology MEDS-18/A Otorhinolaryngology MEDS-12/A Neurology

Day 3 Nutrition, General Surgery and Reconstructive Surgery

Time	Session	SSD codes and disciplines involved
09:00-10:30	Nutrition, metabolism and inflammatory processes - session on skin health and the mechanisms of photoageing.	MEDS-08/C Nutrition Science BIOS-07/A Biochemistry MEDS-10/C Dermatology and Venereology MEDS-24/C Nursing Sciences BIOS-06/A Physiology
10:45-12:15	Nutritional assessment and frailty in the surgical patient	MEDS-08/C Nutrition Science MEDS-06/A General Surgery
13:15-14:45	Response to surgery and postoperative recovery	MEDS-06/A General Surgery MEDS-02/A General Pathology
15:00-16:30	Workshop: preoperative assessment pathway - hands-on session in the simulation laboratory.	MEDS-06/A General Surgery MEDS-08/C Nutrition Science
16:45-17:30	Wound healing and plastic and reconstructive surgery in older adults	MEDS-14/A Plastic Surgery
17:30-18:30	Hands-on laboratory: tissue handling and suturing techniques in older adults - tissue fragility, wound healing and reconstructive principles.	MEDS-14/A Plastic Surgery MEDS-16/A Oral and Dental Diseases

Day 4 Cardiology, Reproductive Health and Anaesthesiology

Time	Session	SSD codes and disciplines involved
09:00-10:30	Inflammation and cardiovascular risk	MEDS-07/B Cardiovascular Diseases
10:45-12:15	Menopausal transition and women's health	MEDS-21/A Gynaecology and Obstetrics
13:15-14:45	Male urinary health and age-related urological conditions	MEDS-14/C Urology
15:00-16:30	Male reproductive and sexual health: urological and endocrine perspectives	MEDS-14/C Urology MEDS-08/A Endocrinology
16:45-17:30	Frailty and perioperative risk: anaesthetic assessment and critical care management	MEDS-23/A Anaesthesiology (Anaesthesia and Critical Care)
17:30-18:30	Interdisciplinary simulation: perioperative assessment and management of a frail older patient undergoing a urological procedure.	MEDS-23/A Anaesthesiology MEDS-14/C Urology

Day 5 Clinical Integration and Assessment

Time	Session	SSD codes and disciplines involved
09:00-10:30	Artificial intelligence in ageing: clinical and multimodal data, biomarkers, validation, bias, explainability and model limitations	INFO-01/A Computer Science MEDS-24/A Medical Statistics
10:45-12:15	Longitudinal interdisciplinary challenge: final integration of the proposal - hands-on team work with access to the Library databases	MEDS-05/A Internal Medicine; module faculty members
13:15-14:45	Presentation and defence of international team projects	Interdisciplinary Assessment Panel
15:00-16:30	Critical discussion, assessment and final feedback	Interdisciplinary Assessment Panel

Virtual Component and Guided Study

Phase	Activity	Hours
Before mobility	Four 1.5-hour online meetings: (1) kick-off and formation of international teams; (2) introduction to the longitudinal challenge; (3) critical appraisal of the literature and development of an evidence map; (4) preliminary analysis and development of a pre-mobility concept map.	6
After mobility	Four 1.5-hour online meetings: (1) integration of evidence gathered during the physical mobility period; (2) cross-team peer review; (3) project revision with tutor support; (4) final synthesis, critical reflection and completion of the deliverable.	6
Guided study	Reading and case preparation (12 h); critical appraisal of the evidence and project development (10.5 h); revision of the final assignment and individual reflection (6 h).	28.5

Planned activity period:

- **Virtual Component:**
  June 2027

- **Physical Component:**
  July 2027

Duration of physical mobility:

5 days

Venue for the Physical Component:
Kore University of Enna, Pavilion H, Umberto I Hospital

Number of credits (ECTS) to be recognised for mobile students:

3 ECTS

Additional Notes:

Target participants

Undergraduate and postgraduate students in Medicine and Surgery, Dentistry, Health Professions, Biomedical and Life Sciences, Nutrition, and related health disciplines.

Language of instruction and working language

English; B2 proficiency is recommended to enable active participation in collaborative activities and the final presentation.

Learning outcomes

• By the end of the BIP, participants will be able to integrate the molecular, cellular, tissue-level and clinical mechanisms of ageing;

• critically appraise scientific evidence, biomarkers and clinical data relevant to ageing and healthy ageing;

• analyse complex clinical cases from an interdisciplinary perspective, identifying modifiable and non-modifiable determinants of age-related vulnerability;

• critically evaluate the opportunities, potential biases, explainability and limitations of artificial intelligence applied to clinical data and biomarkers;

• develop and defend an evidence-based proposal within an international, multidisciplinary team.

Assessment and recognition of 3 ECTS

Achievement of the learning outcomes will be assessed through participation in online and face-to-face collaborative activities, contribution to the international team project, the final presentation and defence of the project, and a brief individual critical reflection. Successful completion of the programme and fulfilment of the attendance requirements will lead to the recognition of 3 ECTS, subject to approval by the participating institutions.

Horizontal priorities and European added value

The BIP promotes inclusion and diversity through mixed international teams, accessible digital learning materials and measures designed to support participation. It also contributes to digital transformation through online collaboration, use of scientific databases, simulation-based learning, the Anatomage platform and critical appraisal of artificial intelligence. Its European added value derives from the integration of complementary expertise across partner institutions and from the joint development of an interdisciplinary output by students from different academic and cultural backgrounds.