

## International Doctorate School of Health Sciences

List of PhD programmes which students from Erasmus Plus International Credit Mobility partner institutions can apply to for a mobility period at USC as part of their doctorate studies at their home university

Please consult the **Campus Terra** list for available areas in Veterinary Sciences.

For procedures see footnote 1:

### Advances and New Strategies in Forensic Science

- Advances in Legal Medicine and Criminology
- Forensic Toxicology
- Forensic Genetics

### Advances in Microbial and Parasitic Biology

- Characterization of taxonomy, molecular factors, pathogenicity and development of vaccines in bacteria and aquatic animal viruses
- Comprehensive study of protozoa and enteric waterborne viruses of food and water supply
- Diagnosis, treatment and prevention of human and animal infectious diseases
- Molecular studies and development of vaccines against meningococcal meningitis
- Genetic improvement of ferments and bacteria of industrial interest
- Pathogenesis, epidemiology and microbiological diagnosis of Escherichia coli that cause infection in humans and animals
- Physiology and biotechnology of cyanobacteria and microalgae
- Bacterial communication: Quorum Sensing, Quorum Quenching and biotechnological applications
- Immunoparasitology and parasitic genetics
- Prevention and control of human and animal parasites

### Vision Science

- Retinal degeneration
- Inflammatory diseases of the ocular surface
- Optical neuropathies
- Visual optics

### Dental Science

- Research in restorative dentistry, endodontics and occlusal rehabilitation
- Research in medical-surgical dentistry

### Endocrinology

- Clinical endocrinology and nutrition
- Neoplasia and cellular endocrinology
- Neuroendocrinology, obesity and metabolism

### Epidemiology and Public Health:

- Indoor radon and its effects on health.
- Meta-analysis.
- Risk factors for banal diseases.
- Adaptation of the KAAR-11 questionnaire to different environments- Smoking prevalence and tobacco control policies.

### Innovation in Food Safety and Technology

- Materials in contact with food and food quality
- New technologies in the analysis and processing of foods
- New methods of food control

### Medicine Clinical Research

- Medical-Surgical Specialties

- Pediatrics
- Surgery
- Medicine

#### Neuroscience and Clinical Psychology

- Neurobiology. Structure, evolution, development and regeneration of the nervous system
- Pharmacogenomics in neuroscience
- Neurophysiology
- Cognitive Neuroscience. Psychophysiological and neuropsychological study of higher psychic processes in general population and in special populations
- Clinical and health psychology and psychiatry
- Mechanisms of neurodegeneration and dopaminergic neuroprotection in Parkinson's disease and new therapeutic strategies
- PET studies and SPECT in neurology. Fusion of morphological and functional images
  - Project 1: EARLY2ALZ. Amyloid PET quantification and Machine Learning for early diagnosis of Alzheimer disease. Reference: PI16/01416 Funding agency: Spanish ISCIII IP: Pablo Aguiar
  - Project 2: RadiomicsPET. Advanced PET quantification for early evaluation of treatment response in oncology. Reference: PI17/01653 Funding agency: Spanish ISCIII IP: Álvaro Ruibal & Pablo Aguiar
  - Project 3: Ocular biodistribution and drugs pharmacokinetic using molecular imaging
  - Project 4: NeuroATLANTIC: An Atlantic innovation platform on diagnosis and treatment of neurological diseases and aging. Reference: EAPA\_791/2018 Funding agency: Interreg UE IP: Pablo Aguiar

#### Drug Research and Development

- Forms of dosage and advanced systems for the administration of drugs, vaccines and genetic material in the prevention, diagnosis and treatment of diseases
- Materials and nano-structured systems for tissue engineering and cell therapy
- Molecular, cellular and clinical aspects involved in pathogenesis and the research and development of medications
- Development of growth factor micro/nano systems to functionalise scaffolds for meniscus regeneration
- New platforms for mucosal administration of nanocarriers loaded with therapeutic compounds
- Design of microparticles for pulmonary administration of therapeutic compounds

#### Molecular Medicine

- Cellular and molecular bases of the disease
- Biological bases of cancer
- Human genome and genetic medicine
- Techniques applied to biomedical research

---

<sup>i</sup> **Students should follow the procedure indicated in the Calls for applications for 2019-2022, to be published Autumn 2019 onwards, taking into account:**

- The PhD Learning Agreement must contain a description of your PhD research so far and thesis plan
- It is **not** necessary to request an acceptance letter from the academic coordinators
- In any contact with USC PhD programme coordinators, please make it clear that you are applying for Erasmus Plus International Credit Mobility (KA107), and give the name of your home university
- **ONLY** the above areas are available; applications for other programmes will be rejected.
- USC External Relations Service will send acceptance-invitation letters to candidates applying through the correct channel for any of the above programmes provided the candidate complies with Erasmus+ eligibility criteria at their home University and fulfils USC selection requirements
- More information in English on each PhD programme can be found at: <http://www.usc.es/doutoramentos/en>