



Clon de Líneas de investigación

- **Líneas de investigación**
- **Responsible Researcher:** Dr. Houria Boulaiz Tassi (@email)
 - Functionalized Nanoparticles for Targeted Drug and Therapeutic Agent Delivery.
 - Identification and Development of New Molecules for Molecular Targets in Cancer.
 - Targeted Gene Therapy for Oncology and Rare Diseases.
- **Responsible Researcher:** Dr. Mariana Fernández Cabrera (@email)
 - - Biomonitoring of human exposure (Epidemiology and prevention of diseases resulting from environmental chemical exposures).
 - - Endocrine Disruption
 - - Intervention strategies for health promotion and disease prevention
 - - Management of databases in health (Big data)
- **Responsible:** Dr. José Luis Quiles Morales. (@email)
 - At the Food4HealthLab of the University of Granada, we study the role of nutrition in health and disease, with a particular focus on healthy aging and age-related diseases (periodontitis, neurodegenerative diseases, etc.). Our research explores the effects of nutrients and bioactive compounds from foods and agro-food by-products, combining preclinical and clinical approaches. We focus on mitochondrial biology, oxidative stress, and redox regulation as key processes in maintaining health. Our lab has a strong facility on the experimental model *Caenorhabditis elegans*.
- **Responsible Researcher:** Dr. Margarita Rivera Sánchez (@email)
 - Shared genetic and environmental factors between physical and mental disorders.
 - Physical health in individuals with mental disorders.
 - Use of bioinformatics tools and large-scale statistical analyses to investigate the relationship between physical and mental disorders.
- **Responsible Researcher:** Dr. Cristina Sánchez (@email), Pilar Aranda (@email) and Juan Llopis (@email)
 - Effects and applications of nanoparticles and metal coordination compounds in biological systems.
 - Study of mineral metabolism and the role of trace and ultra-trace elements in physiological and pathological situations.
 - Studies of exposure to toxic environmental contaminants.
 - Analysis of mineral composition and trace and ultra-trace elements in foods and samples of biological and biomedical interest.

- Assessment of the nutritional status of populations in physiological and pathological situations.
- Bioactivity analysis and evaluation of the nutritional value of naturally occurring matrices.
- **Responsible Researcher:** Dr. Germaine Escames (@email); Dr. Luis Carlos López García (@email); Dra Iryna Rusanova (@email); Laura Jiménez Sánchez (@email); Carmen Venegas (@email); Pablo Ranea (@email); <https://grupoinvestigacion-cts101.es>
 - • Mechanisms of action of melatonin. Nucleus-mitochondria connection
 - • Regulation of mitochondrial bioenergetics by melatonin
 - • Chronodisruption, oxidative and inflammatory stress, and mitochondrial damage in aging
 - • Study of clock genes in cellular and mitochondrial damage in experimental models of Parkinson's disease and sepsis
 - • Melatonin and its metabolites as new pharmacological tools in cancer
 - • Chronobiology of cancer
 - • Mechanisms to prevent chemo- and radioresistance
 - • Melatonin and mucositis
 - • Mitochondrial physiology. Pathophysiological mechanisms and therapeutic strategies in mitochondrial diseases
 - • Cellular and animal models of mitochondrial diseases
 - • Primary coenzyme Q10 deficiency
 - • Mitochondrial Complex I deficiency
 - • Hydrogen sulfide metabolism
 - • Pharmacological, cellular, and genetic therapies
 - • Mitochondria and exo-miRNAs: therapeutic targets for treating endothelial dysfunction in diabetes
 - • Mitochondrial encephalopathies associated with sulfur metabolism disorders
 - • Senescence and inflammation in neurodegenerative diseases
 - • Peroxisomes and metabolic homeostasis
- **Responsible Researcher:** Dr. M^a Inmaculada López Aliaga (@email), M^a José Muñoz Alférez (@email), Teresa Nestares Pleguezuelo (@email), Javier Díaz Castro (@email) and Jorge Moreno Fernández (@email)
 - Bioavailability of macro and micronutrients in health and disease: dietary modifications.
 - Nutritional iron deficiency anemia: modifications in cellular signaling pathways and patterns of gene and protein expression mediated by nutrients.
 - Goat milk as a nutraceutical, bioactive components and health effects.
- **Responsible Researcher:** Dr. Teresa Nestares Pleguezuelo (@email)
 - Celiac disease and gluten free diet
- **Responsible Researcher:** Dr. Inmaculada Llamas Company (illamas@ugr.es)
 - Microbial biodiversity
 - Study of exopolysaccharides produced by halophilic bacteria
 - Study of intercellular communication systems and their interference
 - Selection of bacteria of interest in agriculture
 - Selection of enzymes of industrial and agricultural interest
- **Responsible Researcher:** Dr. Margarita Aguilera Gómez (@email) and Mercedes Monteoliva Sánchez (@email)

- Intestinal Microbiota and Probiotics: Biotechnological resources of interest in nutrition and health
- Microbial Phylogeny and Taxonomy
- Genetic Biomarkers
- **Responsible Researcher:** Dr. Laura Vera Ramírez (@email). <https://www.ugr.es/~tumor.dormancy.lab/>
 - Study of the molecular mechanisms regulating the establishment and maintenance of dormancy in disseminated tumor cells.
 - Analysis of the molecular mechanisms that regulate the dormant-to -proliferative switch of disseminated tumor cells.
 - Development of new tumor dormancy models
- **Responsible Researcher:** Dr. Enrique J Cobos del Moral (@email), Francisco R Nieto López (@email), Rafael González Cano (@email) and Miguel Ángel Tejada Giráldez (@email)
 - New pharmacological targets for pain treatment
 - Sigma receptors
 - Neuroimmune interactions in pain states
 - Associations of analgesic drugs to improve their therapeutic range
 - Artificial intelligence tools for the evaluation of rodent behavior
- **Responsible Researcher:** Dr. Rafael Jiménez Medina (@email) and Francisco Barrionuevo Jiménez (@email)
 - Developmental Genetics and mammalian sex determination
 - Genetic basis of seasonal testis regression.
 - Genetic basis of non-obstructive azoospermia.
- **Responsible Researcher:** Dr. María Dolores Mesa (@email) and Emilio Martínez de Victoria (@email)
 - Development of functional foods derived from olives and virgin olive oil.
 - In vitro and in vivo assays and nutritional clinical trials.
- **Responsible Researcher:** Dr. Ángel Gil (@email), Carmen Piernas (@email) and M. Dolores Mesa (@email)
 - Dietary antioxidants
 - Clinical studies on nutritional components and dietary interventions in healthcare settings
 - Maternal and child health
- **Responsible Researcher:** Dr. Julio José Ochoa Herrera (@email), Javier Díaz Castro (@email), Jorge Moreno Fernández (@email), Juan Manuel Toledano Dueñas (@email), María Puche Juárez (@email)
 - Influence of advanced maternal age on gestation and postnatal health.
 - COVID-19 and pregnancy
 - DHA supplementation in pregnancy and lactation.
 - Oropharyngeal colostrum intake.
 - Exercise, gestation and newborn development.
 - Early metabolic programming, advanced maternal age, mitochondrial rheostasis and microbiota. Implications on maternal-fetal health.
 - Influence of hormonal administration in transgender population. Physical and mental health implications.