The research group on Cell Membrane Surfactant Interactions is a R&D unit at the University of Barcelona specialized in the development of *in vitro* methodology for analyzing safety and toxicology of ingredients and products aimed to Health and Personal Care.

The team also works in the development of colloids systems for drug delivery applications.

**Presentation**

**Industrial sectors**

Cosmetics & Personal Care
Pharmaceutical – Biotechnology
In Vitro Tox – Diagnosis

**Services and expertise**

**In vitro Safety & Toxicology analysis**

- Eye Irritation
  - HET-CAM
- Hemolysis & Hemoglobin denaturation
  - *Protocol invitotox 37*
- Skin Irritation
  - Monolayers & 3D Commercial models
  - 3D new models development
- Skin (Photo) Contact Sensitization
  - Dendritic Cells model
  - h-CLAT; IL-8 production
  - Keratinocytes models
  - IL-18 production; 3D Models
- Photo Toxicology
  - 3T3 NRU
  - Photohemolysis assays
  - In vitro assays of Phototoxicity and photoprotection effect

**Anti-Ox activity**

- Assessment of Anti-Ox activity in cellular models and cytotoxicity.
  - *Haemolysis Inhibition Assay*
  - *Lipid Peroxidation Inhibition Assay*
  - *Cytotoxicity Protection Assay*

**Colloids Systems Development**

- *Physico-Chemical Characterization*
  - Morphology. (TEM, Cryo-TEM); Particle size (DLS)
- *In vitro Biocompatibility*
- Drug delivery
Collaboration with companies and official entities

- Advise on safety assessment of cosmetic and personal care products
- Preclinical toxicology studies for pharmaceutical, veterinary, chemical, cosmetic companies
- Research on developing new alternative in vitro methods
- Safety assessment training
- Institut de nanociència I Nanotecnologia (IN2UB) Members

Teaching activities

- Information and Assessment Report of Safety of Cosmetics Products. Long Life Learning Institute (IL3)

Research projects

- In vitro models adoption for safety assessment of colloids particles at micro and nanometric scale. MAT 2012-38047-C02-01.
- Multifunctional Nanomaterials: Strategies to increase selectivity in solid tumors therapies.
- Derived Nanomaterials as new therapeutic and immunogenic strategy in glioblastoma treatment.
- Fitting alternative methods to assess skin toxic effects induced by nanomaterials.

Latest publications


