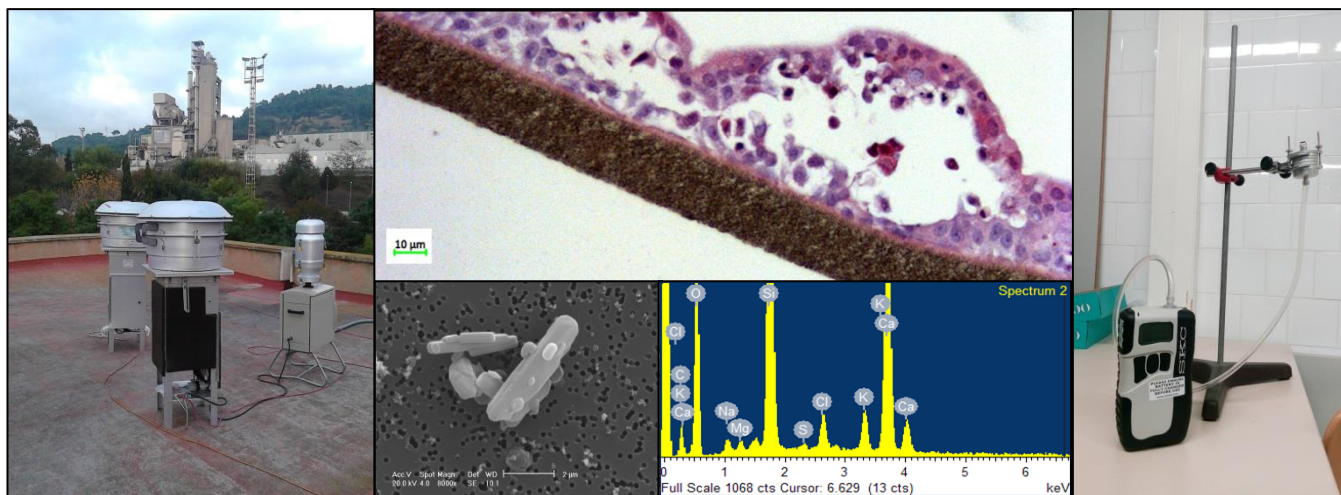


## ASSESSING THE EXPOSURE AND HEALTH EFFECTS OF AMBIENT FINE AND ULTRAFINE PARTICLES IN AREAS OF INTENSIVE INDUSTRIAL ACTIVITY

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### MAIN GOALS

- ✓ To quantify and to perform chemical characterization of fine and ultrafine particles (smaller than 2.5 and 0.1  $\mu\text{m}$  respectively) in industrial areas.
- ✓ To evaluate the health risks and exposure in indoor and outdoor environments.
- ✓ To study the toxicity derived from inhalation of FP and UFP.



### EXPECTED RESULTS

- ✓ Concentration and chemical composition of PM collected in environments influenced by different kind of activities (petrochemical industry, harbor, airport).
- ✓ Contribution of different microenvironments and activities to total exposure and risk.
- ✓ Source apportionment of ambient PM and subsequent source contribution to exposure and health risks.
- ✓ Accuracy assessment of PM infiltration models.
- ✓ Linked application of dosimetry and PBPK models to know the fate of the inhaled pollutants in the human body.
- ✓ Relationship between chemical composition/morphology and toxicity.