

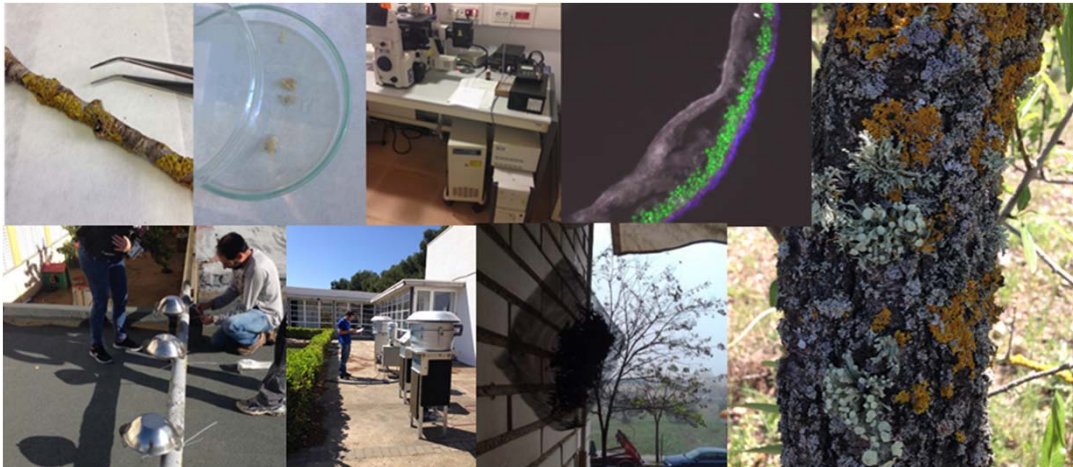
Optimising the use of lichens as biomonitors of atmospheric PAHs

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MAIN GOALS:

- ❑ To study the mechanisms of accumulation of polycyclic aromatic hydrocarbons (PAHs) by lichens (symbioses of fungi and algae);
- ❑ To understand how PAHs accumulated in lichens relate to PAHs in the particulate- and gas-phase of air;
- ❑ To define a critical level for PAHs in lichens that will affect lichen's functioning.



EXPECTED RESULTS:

- ❑ Conceptual models to explain accumulation of PAHs in lichens.
- ❑ Calibration between PAH concentrations accumulated in lichens and measured in the particulate- and gas-phase of air.
- ❑ PAH uptake kinetics in lichens in controlled indoor environments and in natural outdoor environments.
- ❑ Identification of different pollutant sources based on PAH profiles measured in lichen transplants exposed in petrochemical, chemical and urban areas.
- ❑ Concentrations of PAHs that may induce cytotoxicity and genotoxicity in the algal cells of the lichen symbiosis.