We study
1000 children in 5 Italian cities

AIR
Evaluation of cyto-and genotoxicity on in vitro human cell cultures and in bacterial cells. Collection of ARPA data on air pollutants.

CHILDREN
Search for premature damage to DNA (Comet assay and micronucleus test). Data collection on possible indoor air pollutants, demographicfactors and lifestyles.

People involved
The project will involve 1,000 children of 6-8 years old, in 5 Italian cities. The recruitment will take place at the elementary schools and after the consent of parents and children.

Methodology
In areas close to the schools and in the same periods, analysis on samples of air and cells of the oral mucosa of children,will be carried out to verify a possible association between exposure to air pollutants and biological effects.

We study
early effects of air pollutants

Partner
The study MAPEC-LIFE was approved in 2013 by the European Commission and funded by the LIFE + program, the European Union's environment fund. The project is coordinated by the University of Brescia.

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We aim to
orient policy options
for the health
protection

We aim to
better know the effects
of pollution exposure

Expected impact

Deepen scientific knowledge on the effect of pollutants.

Addressing environmental issues in schools.

Providing information to guide policy decisions to protect the public health from the effects of air pollution.

3

Objectives

Studying of early biological effects of exposure to air pollutants in oral mucosa cells and affect the factors that can affect this damages in children of school age. **Building global models** to estimate the risk and to develop strategies for environmental policies aimed to the protection of health.

2

Context

Air pollution and health effects.

Adverse effects of air pollution on human health have been well documented. **Children in particular** are the most vulnerable. Some exposure to such as pollutants or other pollution, however, can affect the health lifestyle, effects.

Expected Results

If the indicators of biological effect will show a good association with the parameters of air pollution, these could be a simple and inexpensive test to assess environmental situations and interventions to counteract the effects of pollution.

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Monitoring of Air Pollution Effects on children to support public health policies

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