INTRODUCTION
The atmosphere has been described as one of the last frontiers of biological exploration on Earth. Despite our intimate relationship with the air around us, the composition of microbial communities in the atmosphere is still poorly defined, and our knowledge about the functional potential of airborne microbes (both beneficial and pathogenic) is scant. Only recently, it has been discovered that airborne microbes are more than just passive inhabitants of the atmosphere: they are metabolically active and well adapted to the harsh atmospheric conditions. In this project, airborne microbes are studied in relation to particulate matter (PM) of polluted air in the region of Antwerp (Belgium) and surroundings. PM is thought to act as a vector for bacteria and their endotoxins, subsequently resulting in inflammation.

MATERIALS AND METHODS

**Endotoxin concentrations**
- Coriolis® μ sampler
- Limulus Amoebocyte Lysate (LAL) bioassay for LPS

**Part I: Spatiotemporal monitoring of microbial endotoxins in relation to other PM pollutants**

![Bar chart showing PM10 concentrations at various locations](chart1.png)

**Part II: Relative pro-inflammatory capacity of microbial endotoxins in cell lines**

![Bar chart showing pro-inflammatory capacity](chart2.png)

**THP-1 Cell line**
- Macrophage cell line
- Relative expression of TNF-α and IL-8 used as inflammation markers
- Determined by qPCR

ACKNOWLEDGEMENTS
We gratefully acknowledge Eline Oerlemans, Benjamine Van Peel, Ilke De Boeck and Ina Brouwers for their motivated participation to this study during their bachelor project.

REFERENCES ON REQUEST