Effect of **gasoline exhaust** emission on bronchial **epithelial cells** and **natural killer cells**

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Background & Exposure System

Universitäts-Kinderspital beider Basel

Done by
Christoph Bisig

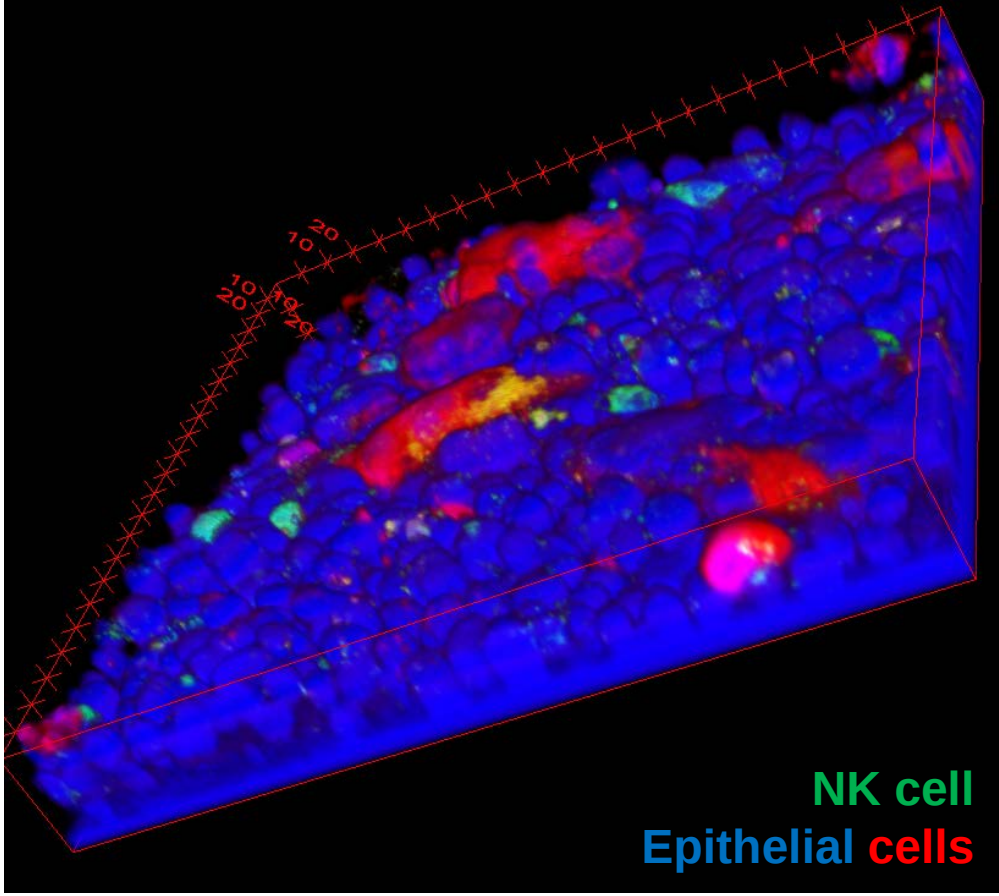
Study Design & Method

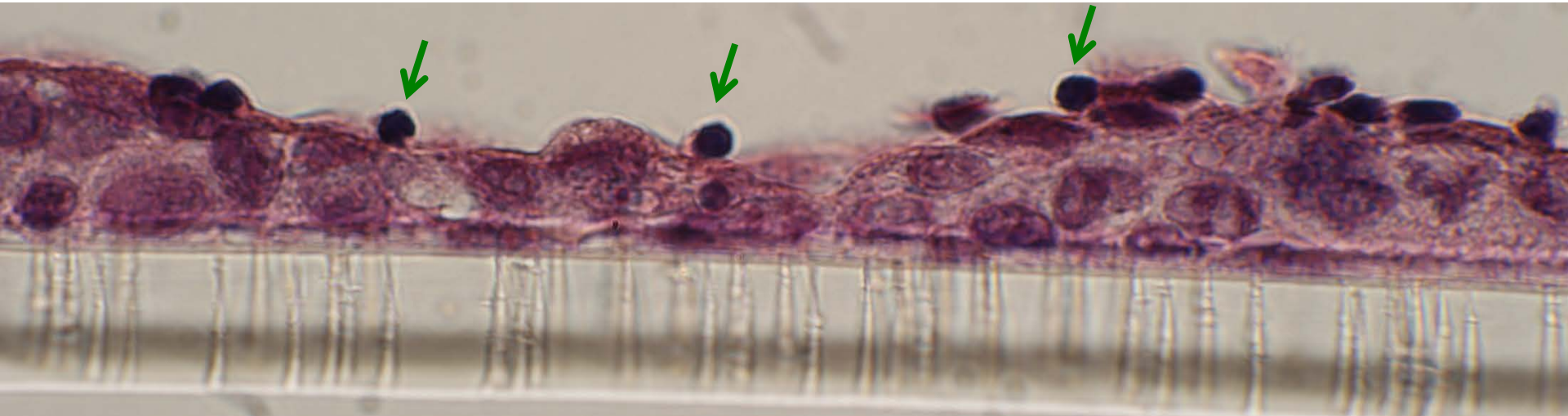
- Exposure conditions: 2 & 6hrs

- Biological system:
  - Monocultures of 16HBE14o$^-$ bronchial epithelial cells (ECs) (the same cell line as Christoph Bisig)
  - Co-Culture of 16HBE14o$^-$ cells and primary natural killer (NK) cells
    > to study the effect on NK cells (innate immune cell)

Methods: Co-Culture

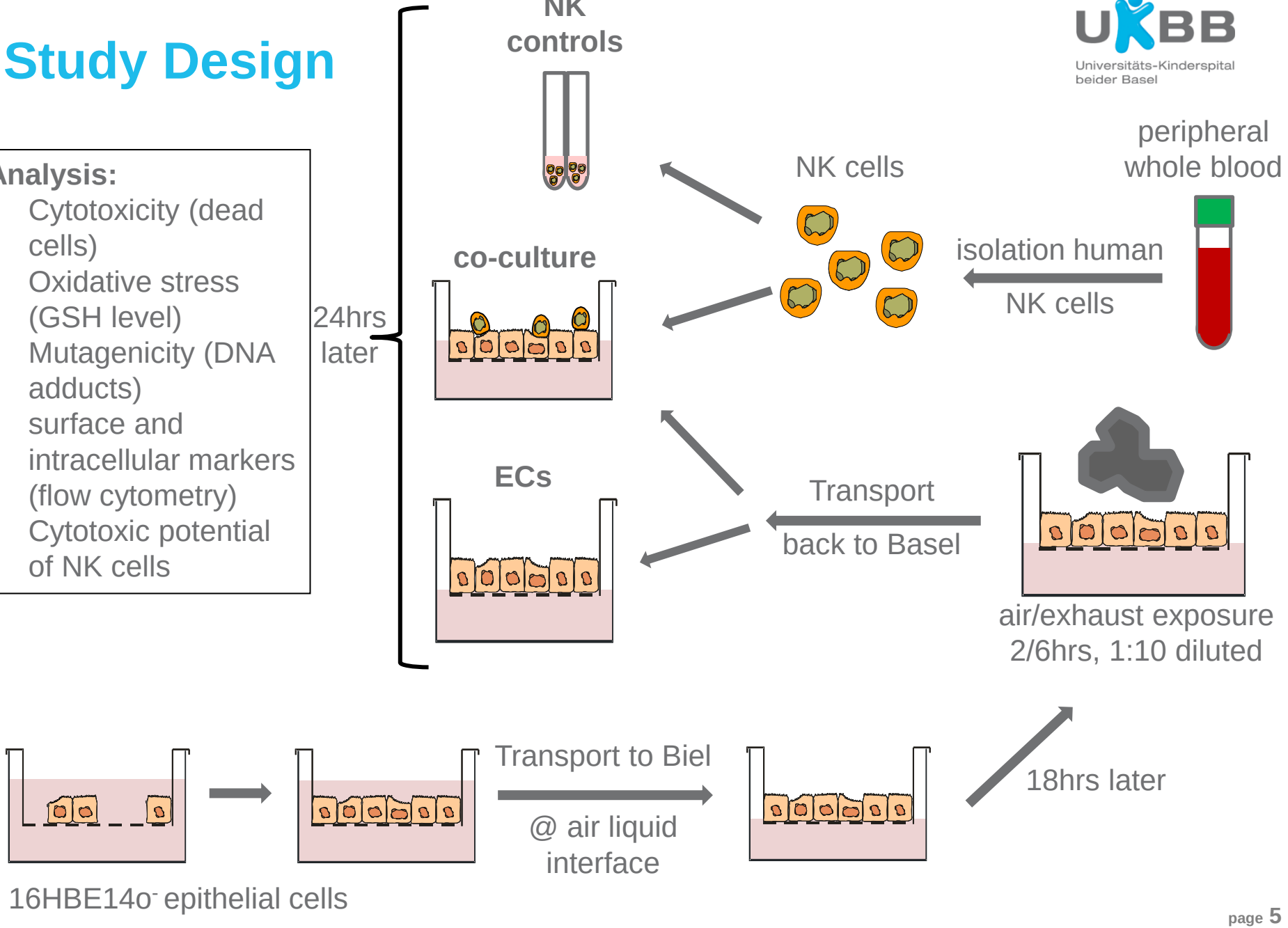
- confluent monolayer of 16HBE14o^{-} epithelial cells
- Natural Killer (NK) cells: freshly isolated from blood





Study Design

Analysis:
- Cytotoxicity (dead cells)
- Oxidative stress (GSH level)
- Mutagenicity (DNA adducts)
- surface and intracellular markers (flow cytometry)
- Cytotoxic potential of NK cells



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