Norsk institutt for luftforskning
Norwegian Institute for Air Research

Advanced 3D models: ALI co-cultures and liver spheroids - application of the comet assay

On-site training at NILU Week 19: May 9-13 2022

Day 1:

- Welcome and introduction
- Introduction to advanced *in vitro* lung and liver models
- Procedures step by step
- Practical training: Seeding of ALI co-cultures
- Practical training: Seeding of HepG2 spheroids

Day2:

- Introduction to the practical work of the day
- Presentation: Advanced ALI co-culture model
- Presentation: Advanced 3D spheroids
- Practical training: Preparation of cultures for ALI
- Practical training: Following up on HepG2 spheroids growth

Day 3:

- Protocol for exposure
- Practical training: Preparation of NM dispersion
- Practical training: Exposure in VitroCell™ cloud system
- Practical training: Exposure of spheroids
- Practical training: Following up on HepG2 spheroids growth

Day 4:

- Short background/principle on AlamarBlue and Comet assays
- Practical training: Cytotoxicity assay AlamarBlue
- Practical training: Comet assay for DNA damage
  Disaggregation of spheroid and ALI cultures and embedding of cells in gels, preparation of slides, lysis, electrophoresis
- Practical training: Following up on HepG2 spheroid growth
- Summary of the day

Day 5:

- Analysis of AlamarBlue results
- Demonstration of scoring of comet slides
- Summary, questions and closure of the training

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Applicant background/experience:

- Cell culturing
- Sterile work
- Comet assay basics (if you want to join the part of the course related to comet assay)