

Particles and Health 2021

Session 2: Inflammation as a key adverse outcome pathway in particle-induced effects

Goals and description

Inflammation is considered a key event in the pathology of many chronic diseases, including pulmonary and systemic particle induced effects. In addition, inflammation is now considered as the key response in standard setting for PSLT and also the endpoint to screen for in OECD based protocols for testing in sub-chronic animal inhalation studies. This session will provide the participant with newest insights into the onset, resolving and tissue effects of persistent inflammation and its impact in standard setting and classification.

In the first part of this session two invited speakers will provide a state of the art insight into different aspects and sequels to (persistent) inflammation as a protective/adverse response. Most recent insights on the role of different macrophage cell types will be presented as well as perspectives and data provided by non-particle induced inflammatory pathways in humans, such as in asthma and COPD. In addition, a brief review of the expert workshop on PSLT focusing on the regulatory impact of using persistent inflammation in PSLT is provided. The second part of the session focusses on the outcomes that are associated to inflammation in animal studies, with a focus on cell proliferation and other pathology that needs to be considered when comparing humans and animal responses. This will be done using test-protocols and outcomes of 14- or 28 day inhalation studies used for specific target organ toxicity (STOT)-RE classification. Finally all speakers present will participate in a panel discussion which is open for all participants, either online or present.

Speakers:

Kevin Driscoll, Jack Harkema, Dominique Lison, Rodger Duffin, Klaus Weber

Moderators:

Paul Borm/Alison Elder