In vivo models of drug-induced ILD; tools to study and improve drug safety

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Facts & Figures
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Contributions
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Other: 192 733 €
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Challenge
Adverse effects caused by various drugs may induce lung injury known as drug-induced interstitial lung disease (DILD) or liver injury (DILI). The outcome is often organ injury in terms of inflammation and fibrosis over time, or even acute organ failure.

Clinical and preclinical studies within the TRISTAN-consortium aim to find translational imaging biomarkers that can indicate progression of DILD or DILI at an early stage. Lund University and Truly Labs from Lund in Sweden, are two partners from TRISTAN representing the preclinical part of the lung toxicity group.

Approach & Methodology
We bring together a multidisciplinary team of internationally recognised experts in their fields including; physicians who care for the relevant patients, experts in transporter biology, animal models of lung/liver injury, toxicology, lung MRI and in the labelling of peptides with radionuclide for PET detection.

Animal models are designed to incorporate imaging modalities’ MRI, CT and PET and scan animals longitudinally while also terminating animal groups at the imaging sessions for histological confirmation.

Value of IMI collaboration
The consortium aims to develop imaging biomarkers into tools which drug developers can use with confidence in clinical trials of investigational agents, with a demonstrated track record of translating these imaging biomarkers for regulatory drug development and clinical healthcare.

Impact & take home message
The impact that TRISTAN provides is the unique variety of expertise areas and disciplines’ ability to work in concert for the best intention of the patients.

Finding translational imaging biomarkers that can both be used clinically to assess and follow disease progression, as well as to be used in preclinical models for future drug development and investigations.