

# Mylonas Group

**Senescence** → impacts immune cells,  
drives kidney and heart fibrosis

Age-related accumulation of **senescent cells (SCs)** is associated with impaired tissue healing and regeneration. SCs are growth arrested yet metabolically active, promoting inflammation and fibrosis via the release of senescence-associated secretory phenotype (SASP) cytokines.

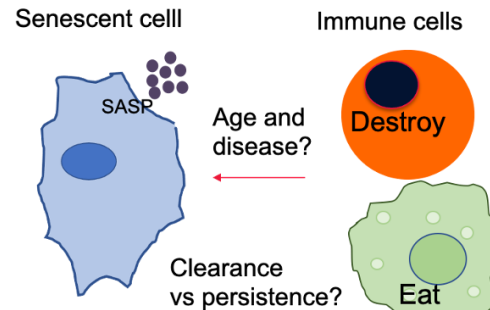
**Ageing and injury reduce the immune clearance of SCs.** We are investigating how age and disease cause SC persistence by effecting immune cell function e.g. in macrophages and NK cells

**Kidney and heart disease are often linked.** We have discovered that kidney disease alone induces remote senescence and fibrosis in the heart. We are investigating this in different species and models and ways to prevent it.

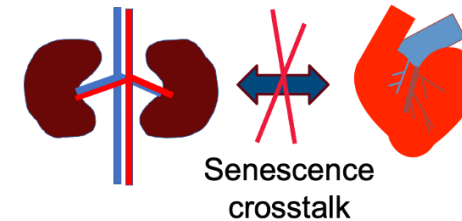
We are working on methods to **non-invasively detect SCs** in vivo.

## LAB AIMS

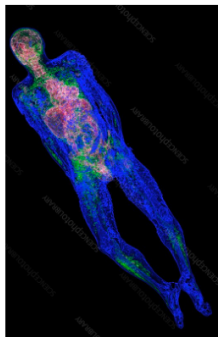
**Target processes that prevent SC clearance**



**Inhibit remote senescence**



**Novel non-invasive detection**



**GOALS:**

**Therapeutics,  
Diagnostics**

→ **Heart and  
Kidney patients**