

Project title: Unraveling novel molecular pathways in healthy and pathological skin conditions: a crosstalk between proliferation, inflammation, cell death and autophagy.

Partners:

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Description:

The skin is the first defense barrier against many different environmental insults. Autophagy is a fundamental pathway for the preservation of skin homeostasis. Our studies are centered on pathways affected by the proautophagic AMBRA1 and its protein binding partners, possibly deregulated in psoriasis and/or in cutaneous squamous cell carcinoma (cSCC). We are especially focusing on interactions between AMBRA1 and RNA binding proteins. Our intent is to add knowledge to the field of molecular pathways related to cell survival in healthy and pathological skin conditions.

Aims:

We plan to investigate cellular processes related to proliferation/differentiation, inflammation, cell death and autophagy in healthy, psoriatic and cancer skin conditions. To this end we focus on protein/protein as well as protein/RNA interactions to unravel novel molecular therapeutic targets for skin diseases.

Expected results:

We aim to identify distinct and common molecular features between psoriatic and cutaneous squamous cell carcinoma (cSCC) skin conditions. Our experimental results could allow a needed advancement in the field of molecular/precision medicine applied to these pathologies.

*Prof Gian Maria Fimia (Sapienza University) has made a significant scientific contribution to the project

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