

Project title: IL4 induced gene 1 and tumor escape in melanoma: An emerging biomarker for prognosis and resistance to immunotherapy

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PROJET/RESEARCH PROJECT

Enzymes catabolizing essential or semi-essential amino acid play a crucial role in immunosuppression at the tumor site. Among those, **IL4-induced gene 1** (IL4I1), a phenylalanine oxidase expressed in the TME of most solid cancer types, inhibits T lymphocytes. We have evidenced its role in tumor escape in **experimental murine models of melanoma**. We have also detected IL4I1 expression *in situ* in most of **human primary cutaneous melanoma** that may be relevant to predict prognosis. Interestingly, the proportion of IL4I1⁺ cells correlates negatively with the presence of cytotoxic CD8⁺ T cells and positively with the presence of regulatory T cells. Collectively, our findings strengthen the rationale for therapeutic targeting of IL4I1 as a key immune regulator.

The project aims at elucidating the IL4I1-dependent-protumoral mechanisms using melanoma samples from patients treated or not with anti-PD1 and various mouse models we set-up and. This project relies on multiple up-to-date technical approaches such as ***in situ* tissue analysis**, **laser microdissection** and **scRNA-seq analyses**, combined with ***in vivo* monitoring of melanoma development** after IL4I1 targeting.

We invite applications from highly motivated junior candidates (i.e. <2 years of post-doctoral experience). The candidate should have a strong background in **Immunology & cancer biology**. Prior experience in imaging and cytometry is required. Excellent time management, organisational abilities and proficient communication skills are essential.

STRUCTURE D'ACCUEIL/LOCATION

Group "IL4i1 and Melanoma" in the Team « Dendritic cells and B cells in their microenvironment during viral infections and cancer » is part of the « Infection, Immunity and Inflammation » department of the Institut Cochin located in the center of Paris, 22 rue Méchain – 75014 Paris, France.

Institut Cochin is one of the biggest biomedical French Research Center located in the center of Paris that provides a multidisciplinary scientific environment and very efficient core-facilities.

Visit our website: www.institutcochin.fr

Group website: <https://institutcochin.fr/la-recherche/3i/equipe-hosmalin/groupe-armelle-prevost-blondel>

CONTRAT/FINANCIAL SUPPORT

Type: CDD

Funding: INCA

Début/Beginning: expected October 2021

Durée du contrat/Length of contract: 10 months (possibility of extension)

Structure employeur/organization

INSERM

CNRS

UNIVERSITE

Applicants should send their CV, letter of motivation and name of 2 references.

Envoyez votre CV, lettre de motivation et deux contacts de recommandations à :

- Armelle Prévost-Blondel
- Email : armelle.blondel@inserm.fr