

20 NOV
2025

Thursday

LECTURE

MEET & EAT *

Light lunch provided
Salle Barbara Mc CLINTOCK

11.00am - 12.00pm

12.00pm - 1.00pm



Decoding tumor-reactive T cells to avoid immune evasion and improve immunotherapies

ABSTRACT

Cancer immune evasion is a fundamental challenge in oncology, enabling malignant cells to escape detection and destruction by the immune system. Tumors exploit various mechanisms to suppress or bypass immune responses, including altering antigen presentation, recruiting immunosuppressive cells, and inducing T-cell dysfunction. Among these, T-cell exhaustion—a state of progressive functional decline in T cells due to chronic antigen exposure—is a key barrier to effective immunotherapy. Exhausted T cells often express inhibitory receptors such as PD-1, TIM-3, and LAG-3, and lose their ability to proliferate or kill cancer cells efficiently.

Understanding and reversing T-cell dysfunction is critical to improving the success of immunotherapies such as checkpoint inhibitors and chimeric antigen receptor (CAR) T-cell therapy. In B-cell malignancies like chronic lymphocytic leukemia (CLL), failure of these treatments is frequently linked to the presence of dysfunctional or exhausted T cells, particularly within the tumor microenvironment. In recent studies, we have used advanced single-cell technologies to map the complex T-cell landscape in CLL, revealing that the lymph node microenvironment harbors highly exhausted and regulatory T-cell populations. These insights have identified new immunosuppressive pathways, such as the Galectin-9/TIM-3 axis, which may serve as therapeutic targets.

Moreover, we have explored combination therapies and observed that CD19-CAR T cells with CD20-targeting bispecific antibodies show promise in reinvigorating both endogenous and engineered T cells, improving tumor cell clearance in patient-derived and murine models, and survival of mice. Together, these findings underscore the importance of dissecting T-cell dysfunction in cancer to design more effective, multi-faceted immunotherapeutic strategies that can overcome immune evasion.



SPEAKER

Dr Martina Seiffert

Group leader at the German Cancer Research Center (DKFZ)

HOST:

Luxembourg Institute of Health

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*Please note that registration for Meet and Eat is mandatory via the following link:

<https://survey.lih.lu/index.php/134234>

Location:

Lecture:

CHL - Centre

Room: Amphitheatre

4, rue Ernest Barblé
L-1210 Luxembourg

JOIN

Event number: 2786 044 5048

Event password: yJApff39iX2