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SELF-ASSEMBLED BOTTLEBRUSH GLUE DEGRADERS FOR TUMOUR-TARGETED PROTEIN KNOCKDOWN

17.JUNE 2025 – 11 AM – LECTURE HALL

Multiple myeloma (MM) is a complex hematologic malignancy marked by uncontrolled plasma cell proliferation. Despite advances like bi-specific antibodies, ADCs, CAR-T cells, and protein degraders, no curative treatment exists, and clinical responses remain suboptimal. Targeted protein degradation (TPD), including PROTACs and molecular glues (MGs), offers a novel approach by eliminating disease-causing proteins. MGs such as CC-885 and CC-90009 selectively degrade GSPT1, a protein implicated in AML and MM progression, via the ubiquitin-proteasome system. However, poor pharmacokinetics (PK) and off-target toxicity limit their clinical translation.

To address these challenges, we developed MB-276, a novel MG with high predicted affinity for GSPT1. Post-functionalization onto a bottlebrush polymer (BBP@GSPT1) enables selective delivery and in vitro efficacy in MM cell lines. This strategy improves biodistribution and tumor specific uptake while preserving degradation efficiency, offering a promising advance toward translational TPD therapies.

Invited by : Xavier le Guevel

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Allée des Alpes, 38700 La Tronche (tram line B, stop : Grand Sablon)
The seminar is followed by discussions and exchanges with the speaker and a sandwich buffet is offered

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