# Investigation of target proteins of anticancer saponin OSW-1

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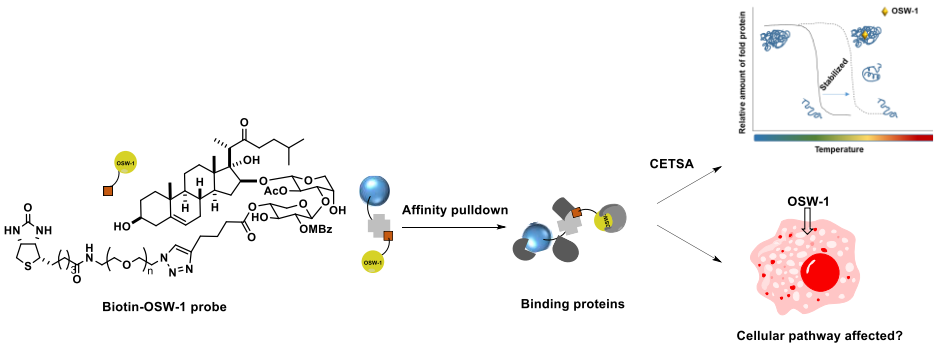
**[**Background and aim**]** OSW-1 is a unique steroidal saponin, which exhibits highly potent and selective cytotoxicity towards a diverse range of cancer cell lines with yet unknown mechanism, making it a promising chemical tool for deciphering new biological pathways.[1)] While OSW-1's cellular targets were proposed to be members of oxysterol-binding protein family OSBP and ORP4,[2,3)] they are yet to be established as anticancer targets. It has been understood that many of natural products display polypharmacology, which often complicates the mechanistic studies. In order to pursue the possibility that OSW-1 may elicit its biological activity through multi-targets, we explored other potential binding partners using chemical probes.

**[**Methods and results**]** We employed biotin-OSW-1 probes, which we previously synthesized for affinity pulldown experiments. The binding interaction between OSW-1 and the candidate proteins was evaluated by cellular thermal shift assay (CETSA) and the possible cellular pathways affected by OSW-1 were analyzed.

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