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Development of a novel and facile rebridging chemistry to construct novel anti-PDL1 BsAbs with *in vitro* applications

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Over the past few decades, bispecific antibodies (bsAbs) and Immune Checkpoint Inhibitors (ICI) have become the frontline therapeutics in the oncology field. In this regard, a multitude of clinically approved therapeutics along with thousands of clinical trials evaluating various candidates for different types of malignancies. Given that cancerous tissue is heterogeneous, hence, treatment strategies should be likewise varied and target various oncogenic factors simultaneously.

Herein, we tend to develop and appraise novel bispecific conjugates combining both approaches bsAbs and ICI for the treatment of many subtypes of melanoma, non-small lung cancer, and colon cancer. In this work, we set out to develop and implement a facile rebridging approach to construct novel anti-tumor-associated antigen/PDL1 bsAbs.

The novel BsAb constructs were developed in good yields reaching up to 60% and fully characterized using appropriate techniques. Next, pharmacological activity is underway

at both *in vitro* and *in vivo* levels. This work will spotlight an applicable and versatile rebridging approach for facile the construction of novel bsAbs.

References

1. SUURS F. MOLECU OF IMMU BIODIST AND THE IMMUNE. Pharmacol Ther. 2019;201:103-19.

Biography

The head of the department of pharmaceutical medicinal chemistry and pharmacognosy at the faculty of pharmacy and medical sciences, University of Petra. Principal investigator currently establishing medicinal chemistry research group and supervising master students. Core member of the board committee of the Petra Pharmaceutical Centre. University of Bath medicinal chemistry Ph.D. holder (2019) with multidisciplinary research experience that has been built in the fields of bioconjugation chemistry, synthetic medicinal chemistry, and chemical biology. Have developed conjugation approaches utilizing reactive rebridging linkers to construct the ground-breaking immunoconjugates, such as bispecific antibodies and ADCs.

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