第267回 IBBセミナー

Photocatalytic activation of anticancer metallodrugs

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場所：22号館 1階 第2会議室

講演概要

In the last few years, we have demonstrated that flavins and flavoproteins can function as selective and efficient photocatalysts for the activation of metal-based anticancer drugs [1,2]. In particular, we have shown that flavin catalysts are capable of photoconverting Pt(IV) precursors into clinically approved Pt(II) agents, triggering their cytotoxic effects with minimal light doses [3]. Unconventionally, metal complexes act as substrates instead of catalysts in these reactions, deviating from the customary practice in catalysis.

In my lecture, I will highlight how our group is developing this original chemistry to devise new strategies for the activation and delivery of anticancer metallodrugs [4,5].

[1] S. Alonso-de Castro, *et al*., *Chem. Sci*., **8**, 4619 (2017).

[2] S. Alonso-de Castro, *et al*., *Angew. Chem. Int. Ed*., **57**, 3143 (2018).

[3] J. Gurruchaga-Pereda, *et al*., *ACS Catal*., **10**, 187 (2020).

[4] S. Velasco-Lozano, *et al.*, *Chem Sci*, **13**, 59 (2022).

[5] L. F. Mazzei, *et al*., *Chem. Commun*., **59**, 4754 (2023).

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