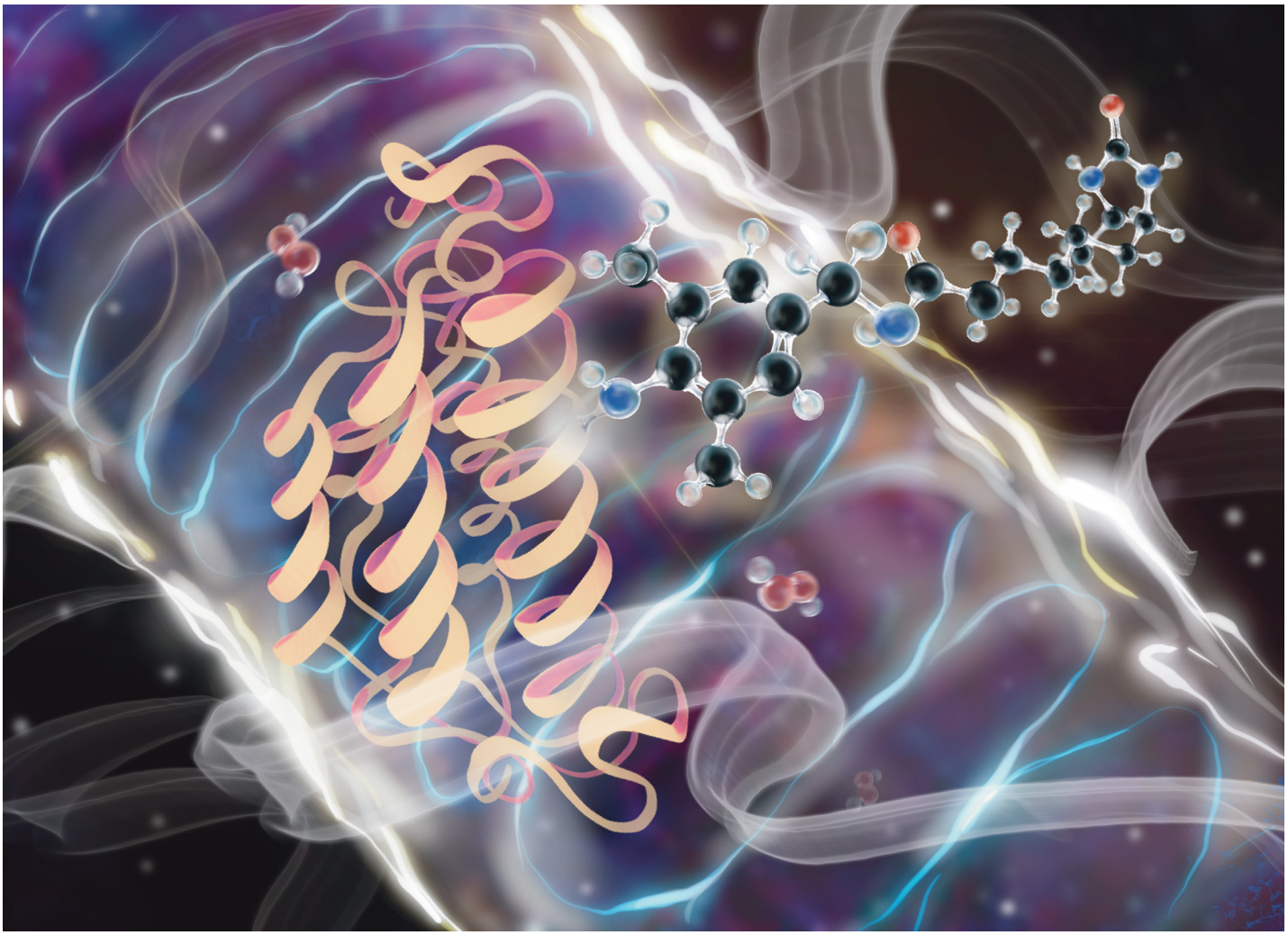

Showcasing research from Professor Chanat Aonbangkhen's laboratory, Department of Chemistry, Faculty of Science, Chulalongkorn University, Bangkok, Thailand.

A disubstituted aniline probe for enhanced peroxidase-based proximal protein labelling

Proteins are essential in cellular signalling and regulation, and their misfolding can lead to diseases. Peroxidase-mediated proximity labelling enables the study of subcellular proteomes, but the conventional biotin-phenol probe has low enrichment efficiency and generates unwanted byproducts, complicating downstream analysis. To overcome these issues, we developed *N*-(4-amino-3,5-dimethylbenzyl)desthiobiotinamide (DBA-Me), which efficiently labels proteins and nucleic acids in cells. DBA-Me exhibited superior APEX2-mediated labelling and protein recovery compared to biotin-phenol, offering an improved tool for studying protein localization and interactions in living cells, with implications for understanding cellular processes and disease mechanisms.

Image reproduced by permission of Chanat Aonbangkhen from *RSC Chem. Biol.*, 2025, **6**, 1861.

As featured in:

See Chanat Aonbangkhen *et al.*, *RSC Chem. Biol.*, 2025, **6**, 1861.

ROYAL SOCIETY OF CHEMISTRY

rsc.li/rsc-chembio

Registered charity number: 207890