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Research Keywords

Chemical probes, Fluorescent dyes, Proteomics, Bioactive peptides, Cancer cell signaling

Academic Career

[2011] B.Sc. (Chemistry, 1st Honors), Kasetsart University, Bangkok, Thailand (Advisor: Prof.Pitak Chuawong)

[2017] Ph.D. (Organic Chemistry and Chemical Biology), University of Pennsylvania, Philadelphia, PA, USA (Advisor: Prof.David Chenoweth)

[2018 - 2020] Postdoctoral Fellow, Department of Chemistry and Chemical Biology, Harvard University, Cambridge, MA, USA (Prof.Christina Woo)

[2020 - present] Lecturer, Department of Chemistry, Faculty of Science, Chulalongkorn University, Thailand

Selected Publications

Reversible control of protein localization in living cells using a photocaged-photocleavable chemical dimerizer. Aonbangkhen, C. et al. *JACS*. 140, 38, 11926-11930 (2018)

Optogenetic control of kinetochore function. Zhang H., Aonbangkhen C., *Nature Chemical Biology* 13, 10, 1096-1101, (2017)

Localized light-induced protein dimerization in living cells using a photocaged dimerizer. Ballister, E., Aonbangkhen, C., et al. *Nature communications* 5,1,5475 (2014)

Engineering a proximity-directed O-GlcNAc transferase for selective protein O-GlcNAcylation in cells. Ramirez, D., Aonbangkhen, C., et al., *ACS chemical biology* 15,4,1059-1066 (2020)

Design, Synthesis, and Characterization of Novel Styryl Dyes as Fluorescent Probes for Tau Aggregate Detection in Vitro and in Cells. Sangsuwan, W., Aonbangkhen, C., et al. *Chemistry—An Asian Journal* 19,6, e202301081 (2024)

A disubstituted aniline probe for enhanced peroxidase-based proximal protein labelling. Kaewsapsak, P., Aonbangkhen, C., et al. *RSC Chemical Biology*. In Press. (2025)

Exploring the in vitro hypolipidemic benefits of bamboo mushrooms: A study on their impact on lipid droplets and adipocytokine levels through metabolome and lipidome profiling. Krobthong, S., Aonbangkhen, C., *NFS Journal* 38, 100211 (2025)

Why My Lab?

My lab can offer...

Expertise in chemically-induced dimerization of proteins for studying cell signaling pathways using various biochemistry and chemical biology techniques. Studying mechanisms of action of drugs and bioactive compounds in mammalian cells.