The 2017 Amgen—UCLA Lectureship
with
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“Cysteine Arylation to Engineer Peptides and Proteins”

Abstract. Here we report a robust bioconjugation method using cysteine arylation. This chemistry enables site-specific conjugation at cysteine residues within peptides, proteins, and antibodies. Our two developed approaches use either perfluoroaryl-cysteine SNAr chemistry or organometallic palladium reagents. This work lead to the discovery of a self-labeling four-residue sequence that enables regioselective conjugation at only one cysteine residue within an intact antibody containing natural amino acids. Recently, we discovered a new approach for the native conjugation of complex natural products such as vancomycin onto peptides and proteins without the introduction of linkers or chemical handles.

Thursday, February 2, 2017
5:00 PM
CS24 Young Hall

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