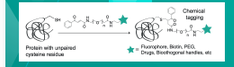
SIMICA

THERAPEUTIC SITE-SELECTIVE PROTEIN-MODIFICATION CHEMISTRIES

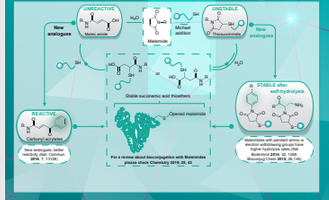
Protein modification



We are engineering reactions for the site-selective modification of proteins and antibodies under mild conditions. Fluorescent probes can be attached to proteins for imaging and tracking; biotin tags may be installed on proteins to provide key biological insights; and toxic agents can be bioconjugated to proteins for cancer therapy.

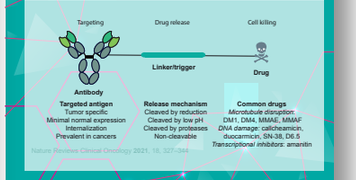
Cysteine Bioconjugation

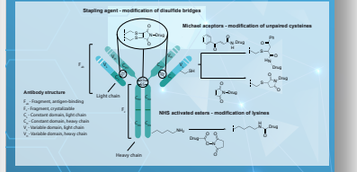
Maleimides have been used for cysteine modification as they react rapidly bit are in certain conditions unstable.



Strategies to prepare stable thiosuccinimide conjugates

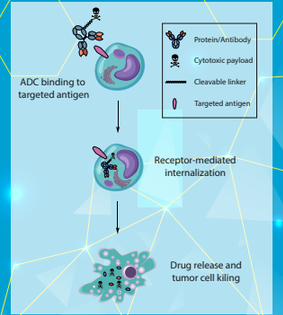
Structure of ADCS



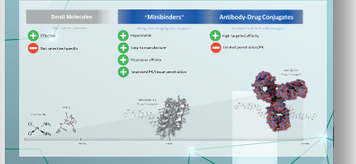


Methods for Antibody Modification

Mode of action ADCs

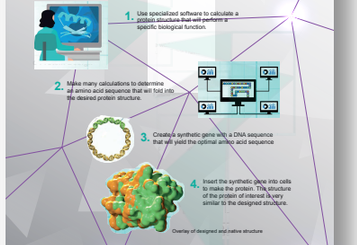


Biological Therapies



De novo Proteins

HOW TO MAKE DE NOVO PROTEINS

De Novo Protein Design

David Baker (Institute of Protein Design) is the world leader in creating new proteins with new functions from scratch. To do this David's Lab...