

Immunwork

Founded 2014

Developing T-E pharmaceuticals

to create a class of new drugs

to make many existing drugs better

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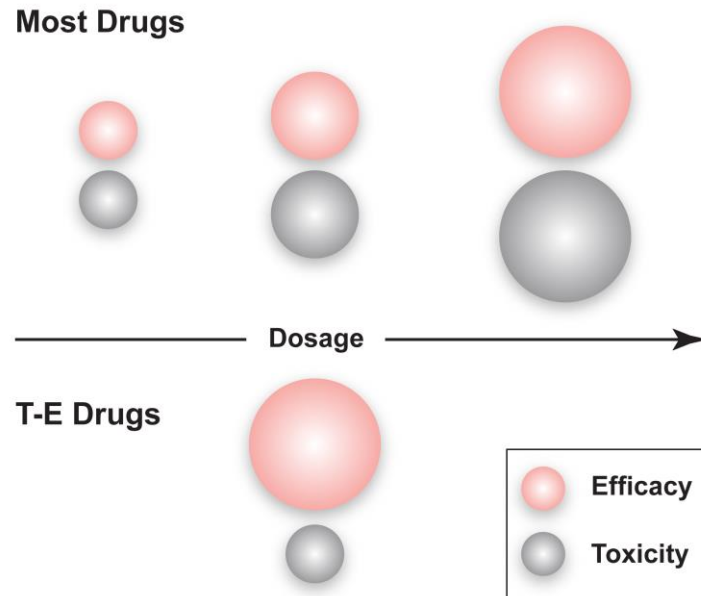
Founder and CEO

Immunwork 免疫功坊

Founder T. W. Chang's experience with Tanox

- Founded Tanox with Nancy Chang in Houston in 1986
- Product line:
 - anti-IgE therapy – talizumab, omalizumab (Xolair), ligezumab, partnered with Novartis and Genentech
 - discovered CεmX on mIgE and invented anti-CεmX approaches
 - anti-CD4, TNX355 (TMB-355), for AIDS (TaiMed)
 - anti-IL13 for atopic dermatitis (Dermira)
 - anti-Factor D for GA/AMD
- IPO in 2000, raised \$280M
- Acquired by Genentech in 2007

T-E pharmaceuticals for enhanced efficacy and safety



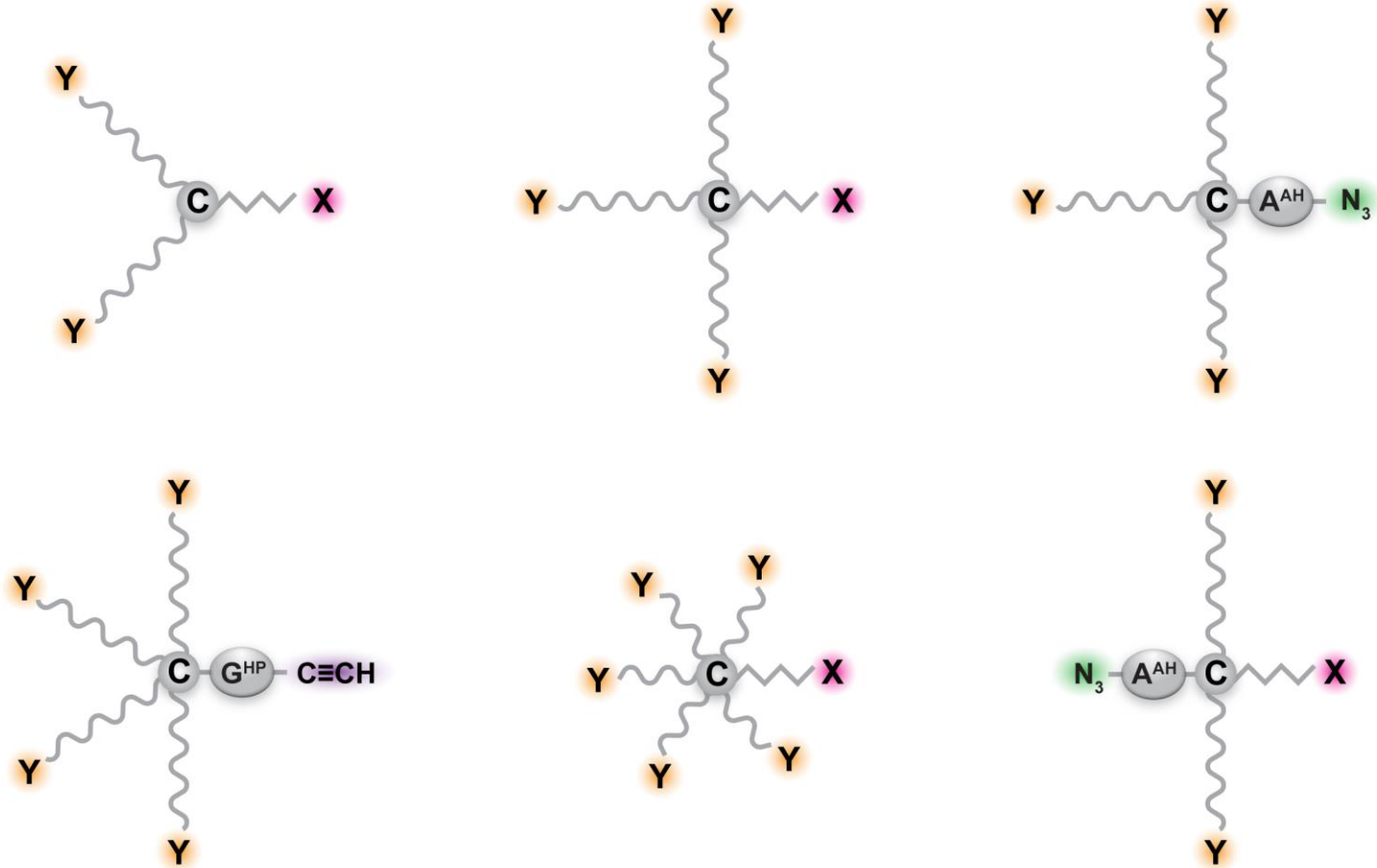
A class of new drugs containing

T = targeting moiety

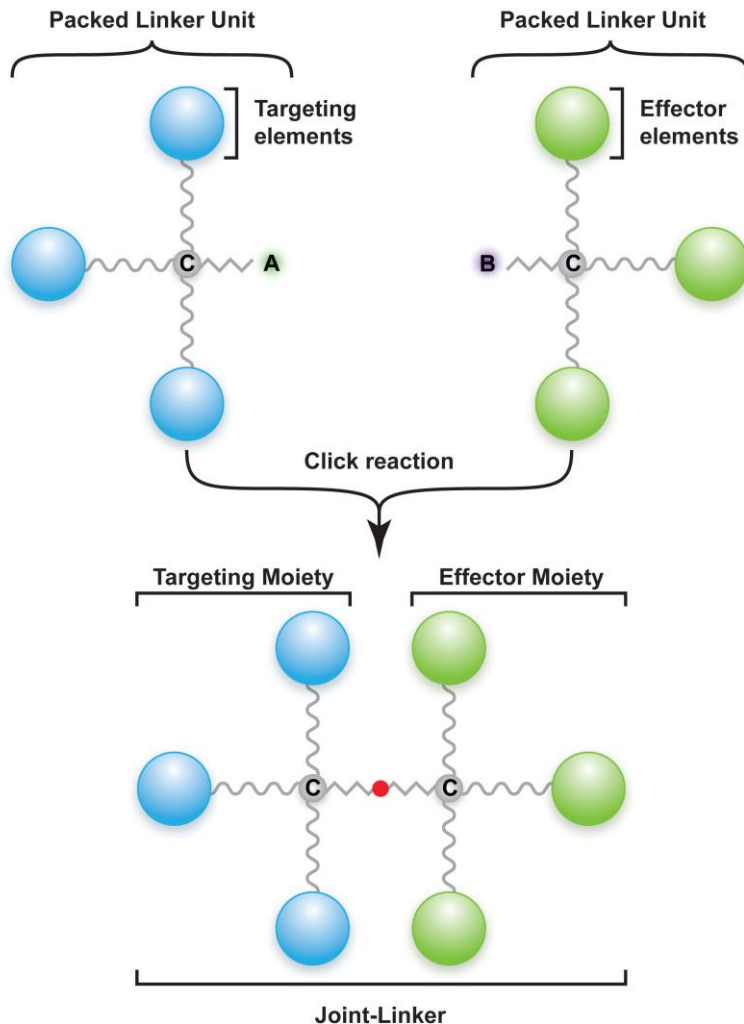
E = effector moiety

to enhance efficacy and safety.

Core technology: various multi-arm linker units



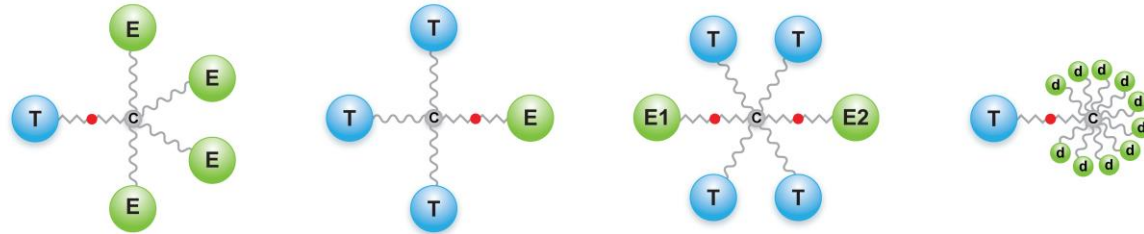
Packed linker units are joined *via* click chemistry



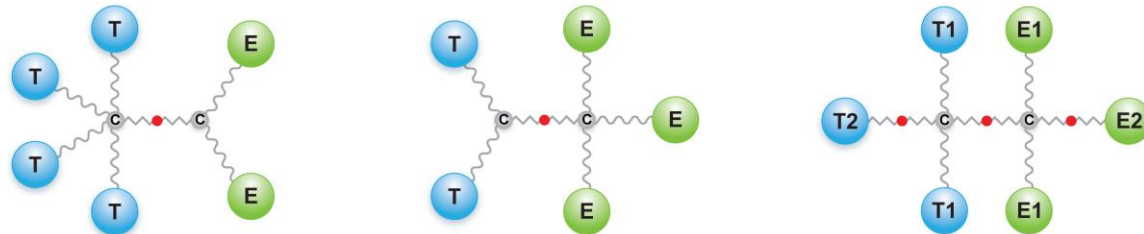
A **B** Paired functional groups for the click reaction
(CuAAC, iEDDA, or SPAAC)

Examples of T-E configurations

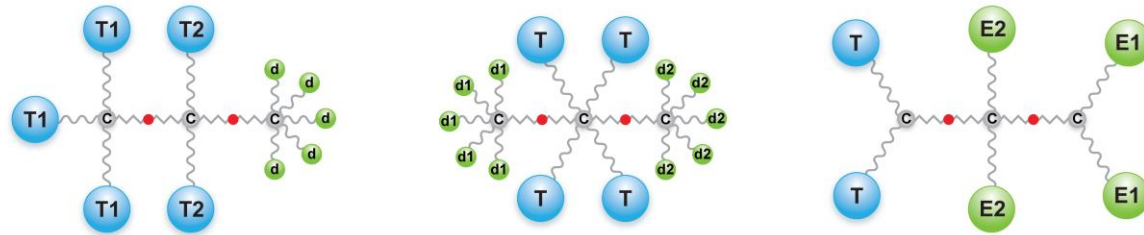
mono-core



dual-core

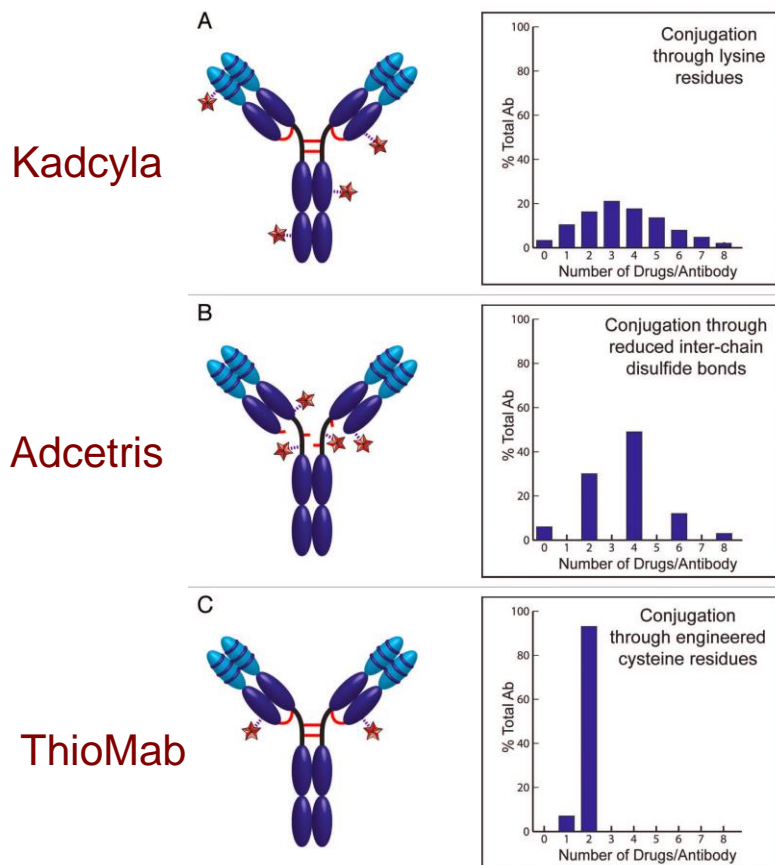


tri-core

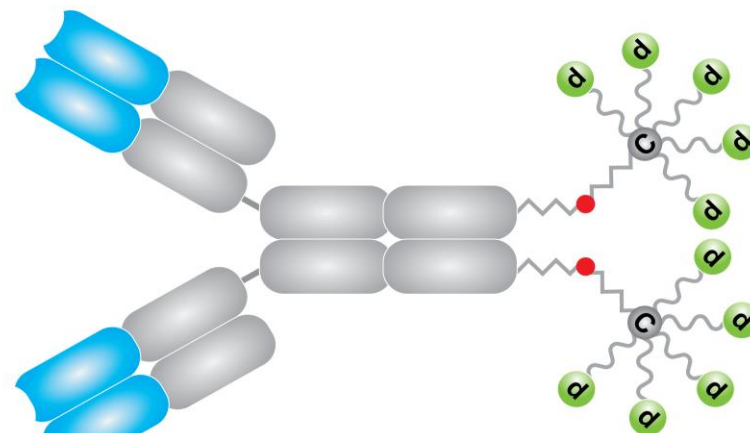


Current vs our technology in ADC preparation

Current ADCs



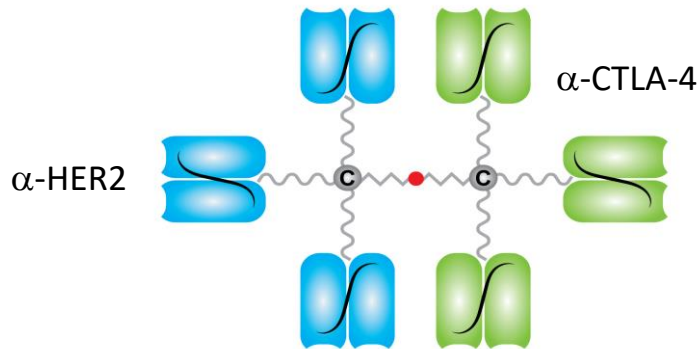
Immunwork ADC



- High DAR (Drug to Antibody Ratio)
- Homogeneity with fixed DAR
- Easy assembly

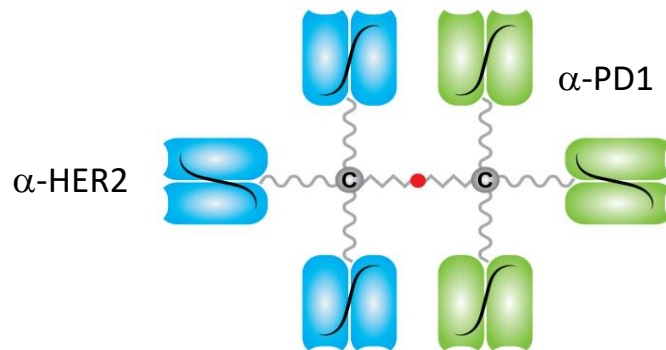
Panowski S *et al.* mAbs 6 (2014)

Examples of application in oncology

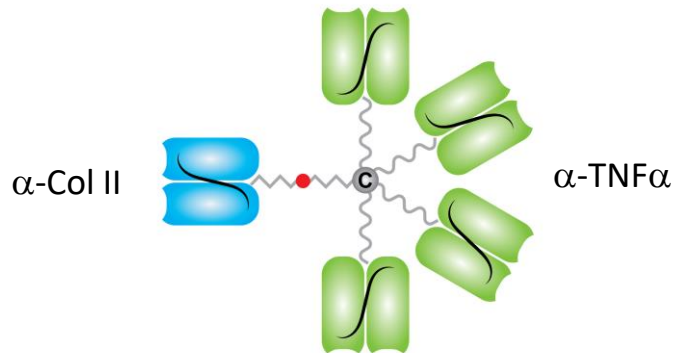


Human epidermal growth factor receptors 1 and 2 (HER1 and HER2) are expressed in several types of cancer.

CTLA-4 and PD-1 function as an immune checkpoint, which mediates inhibitory effects on T cell over-activation.

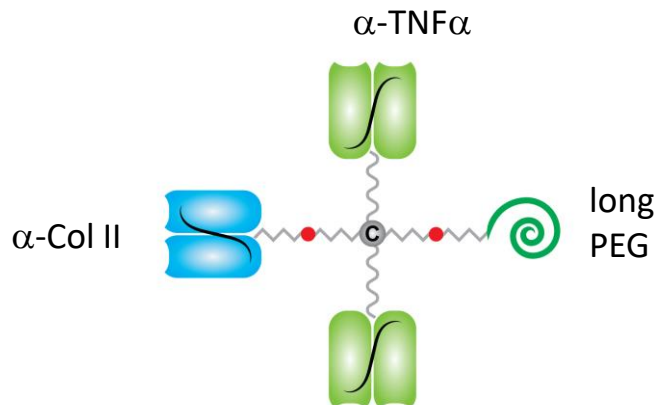


Examples of application in autoimmune Diseases



TNF α is a major inflammatory cytokine.

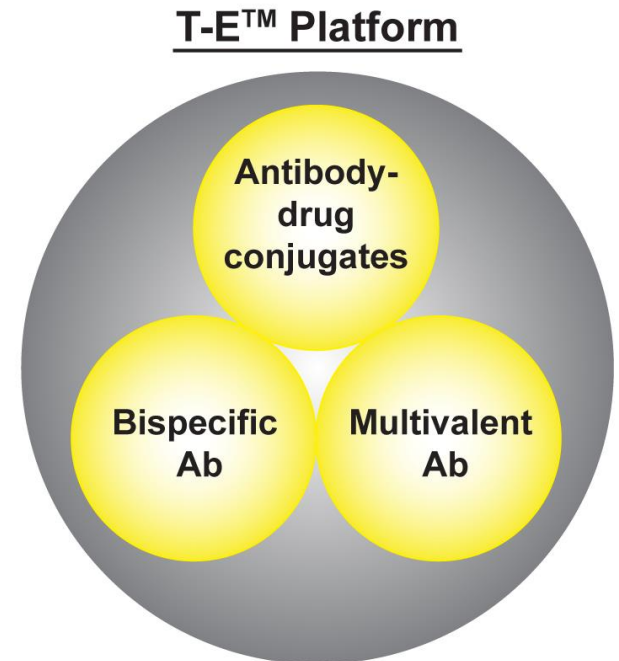
Collagen type II (Col II) is a major component of cartilage in the joints.



Long PEG of 30-50 kDa is used to increase the half-life in the circulation.

T-E technology platform: summary

- Applicable for preparing ADCs, bi-specific Abs, and products in other configurations.
- Applicable for oncology and for autoimmune, CNS diseases, pathological clots, etc.
- Many constructs use existing drugs and yet are new drugs.
- Suitable for precision medicine
- More than 20 products designed



T-E technology suitable for licensing/collaboration

Examples:

- Drug bundle technology for a licensee's antibody
- Specific products, e.g. anti-HER2 scFv + DM1-drug bundles
- Groups of related products, e.g. anti-TfR scFv + anti-amyloid β scFv
- Products in a defined field, e.g. the field of clot management

Thank you for your attention !



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