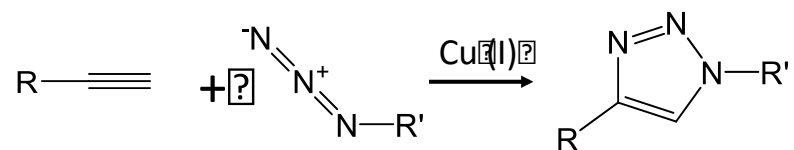
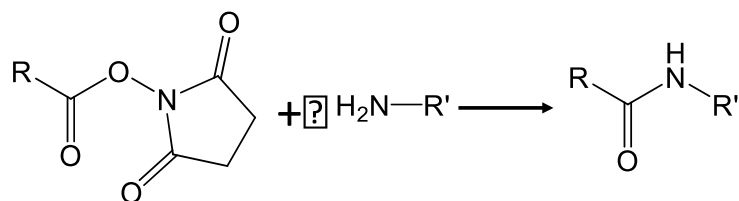


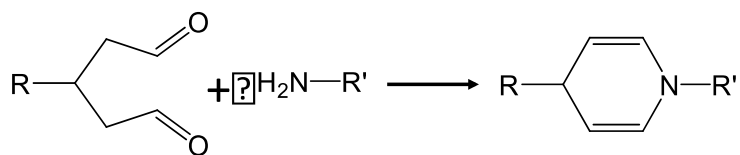
Aydin Reagents: New Amine Conjugation – ‘Click’ chemistry Reagents



Huisgen 3+2 Conjugation with Cu(I)



Activated Acid Conjugation
(for amine conjugation)



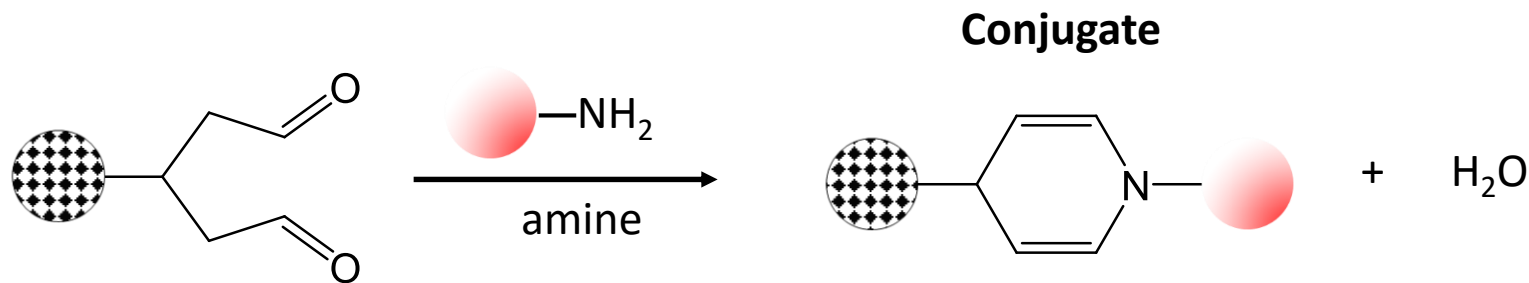
Aydin Reagent

Conjugate

**New Di-Aldehyde Conjugation for Amines
(Aydin Reagents)**

For amines, hydrazines and oxyamine based
conjugation

New 'Click' Chemistry - Conjugation to amine (-NH₂) containing molecules
(Aliphatic Di-Aldehyde System)



Di-aldehyde (Aydin Reagent)

Aydin 'Click' Chemistry

Stable

Fast

Efficient

Aqueous Conditions

Physiological Conditions

Irreversible

No Side Products



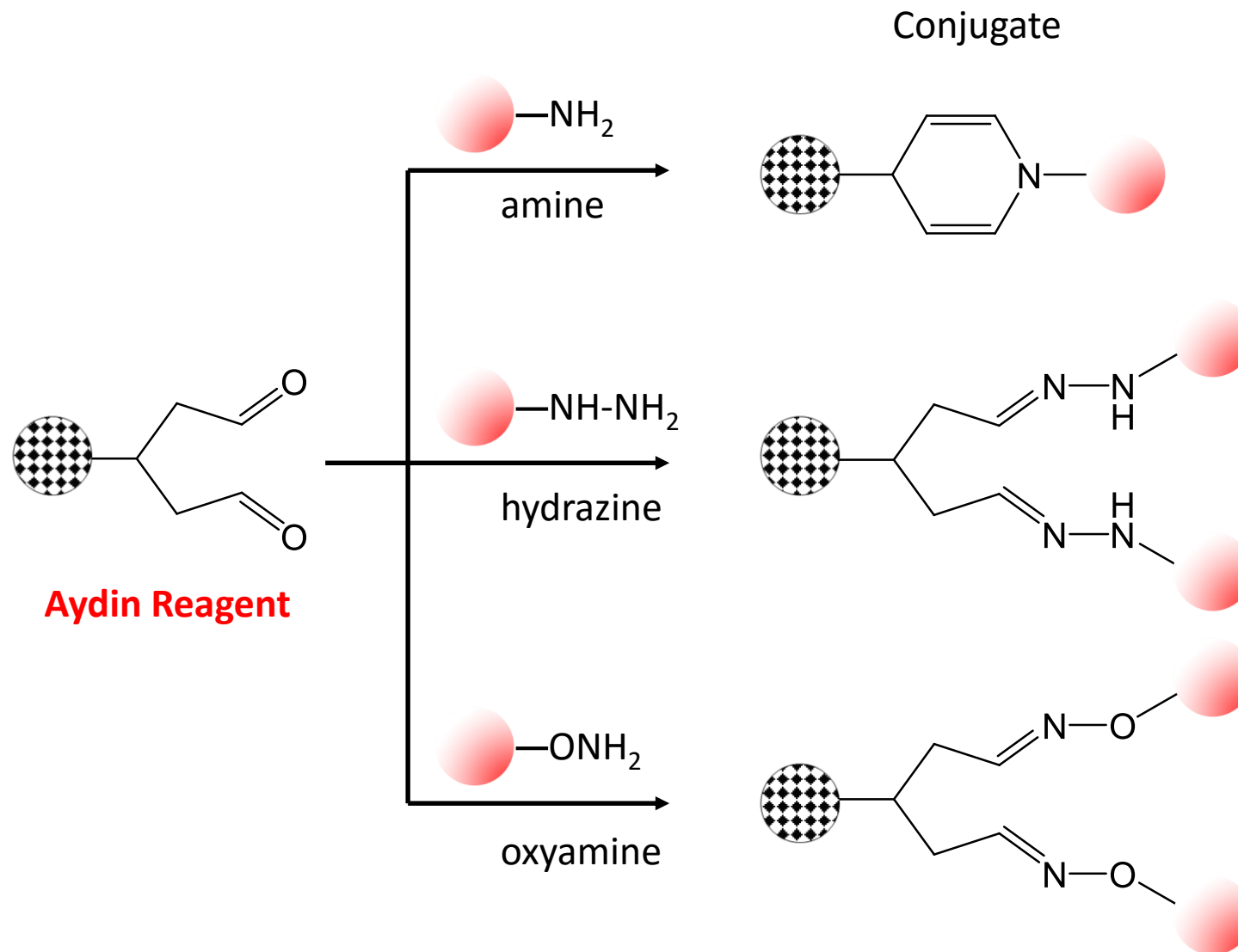
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Fluorophore, Ligand, Drug, Small molecule, Protein, Antibody, Lipid
Carbohydrate, Nucleic Acids, Peptide, Antibody, Dye, Radiolabel, Spin label,
Redox molecule, Isotope label, PET label, Nanoparticle, Polymer, Macrocyclic,
Metal-complex, MOF, etc...



'Click' Chemistry Conjugation

Aydin Reagents are versatile - can react with 3 different groups (amine, hydrazine and oxyamine)



New 'Click' Chemistry (Summary)

1. Fast - within seconds to minutes in aqueous conditions
2. Stable - conjugation product is stable, irreversible
3. H₂O is the side product – easy purification, no activation or leaving group
4. Does not require a catalyst
5. Superior to Huisgen 3 +2 click chemistry, which requires Cu(I) catalyst
6. Di-aldehyde coupling can be performed at room temperature in aqueous or organic solvent
7. New IP for di-aldehyde conjugation
8. Di-aldehyde can react with amine, hydrazine and oxyamine groups. one conjugation group that can react with 3 different chemistries.
Easy to incorporate with existing bioconjugation molecules that contain amine, hydrazine or oxyamine groups.
9. Similar to NHS ester conjugation (succinimidyl activation of acids) to react with amines. However di-aldehyde does not require activation and does not have a side product requiring further purification.
10. Di-aldehyde fluorophores and Di-aldehyde reagents would be new suite of bio-conjugation tools. The di-aldehyde can also be used for non-biological applications (polymers, nanoparticles, etc..)