

# Custom Amidites. Lipids. Linkers/Spacers.

Charting out new pathways  
of Drug Development. Fast.



**Sai**

Make it  
better  
together

## Lipids

Sai Life Sciences has experience in synthesizing a single category of lipids called Saccharolipids/lipopolysaccharides. Lipids are a broad group of organic compounds which include fats, fat-soluble vitamins, mono, di-glycerides, and phospholipids. Functions of lipids include storing energy, signalling, and acting as a structural component of cell membranes.

### Highlights

- Phosphorylated glucosamine disaccharide decorated with multiple fatty acids
- Developed low temperature crystallization for low melting lipid intermediates and implemented on multi-100 kg scale
- Implemented liquid-liquid extraction to purge the impurities and enhanced purity of lipid intermediates
- Established analytical method for in-process and intermediates of lipid intermediates using latest CAD technology across the synthesis

### Capabilities

- Dedicated process development team
- Purification techniques
- Multi kg production

### Infrastructure

- Scale up capacity at multi kg scale synthesis
- Downstream equipment

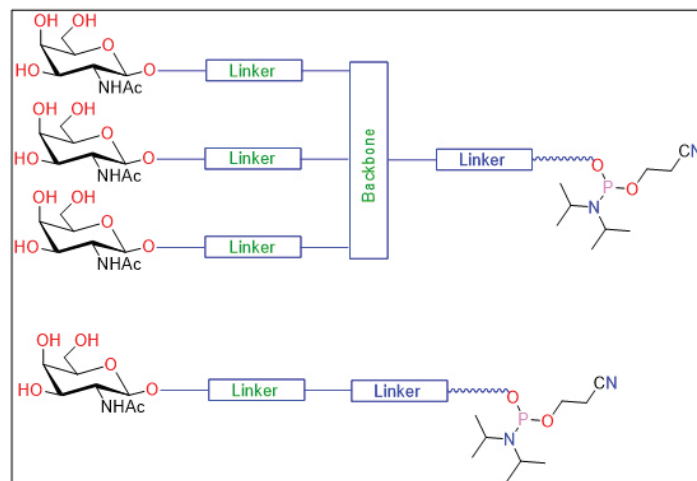
### Talent Pool

Expertized team in handling of various lipid compounds



## Linkers & Spacers

GalNAc conjugation is now one of the leading strategies for delivering experimental oligonucleotide drugs. GalNAc is a carbohydrate moiety that recognize and bind to cell surface protein. Based on the therapeutic needs, it has been decorated with various spacers, linkers, and backbones for the delivery of oligonucleotides. Sai support in R&D followed by large scale manufacturing of structural variants of GalNAc conjugates.



### Highlights

- Expertise in multi-kg scale to support the clients Lab to commercial requirements
- Aza-Michael reaction – Glycosylation – Coupling with linkers
- Peptide bond formation with various coupling reagents like EDC, T3P, pyBOP with complete impurity profiling
- Tri-antennary intermediate synthesis
- Tri-amide bond formation
- Hydrogenolysis of benzyl group and other protection-deprotection strategies with Green Chemistry concepts
- Hands on experience in multi kilogram scale for Fmoc, Cbz, Benzyl, Benzoyl, Boc-protection and deprotections in multikilogram scales
- DMTr protection for various sugar moieties

### Capabilities

- mg to Multi kilograms

### Infrastructure

- All development – pilot and scale up support

### Talent Pool

Multiple teams – various programs