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CRDMO Platform

for Oligonucleotide and Peptide Therapeutics

Efficient and Flexible Discovery Services

Oligonucleotide Discovery Services

- High througput library synthesis (nmol µmol)
- · Custom synthesis (umol mmol)
- Oligonucleotide conjugate discovery synthesis

Our capacity for oligo screening library is more than 1,000 oligos per week with multiple 192 channel synthesizers. For custom synthesis, we have synthesizers with up to 16-monomer selection that enables highly modified oligo synthesis.

The team has experience on long oligo synthesis for both single-strand and double-strand RNA as well as various challenging modified oligo synthesis projects.

Experience with Modified Oligonucleotide

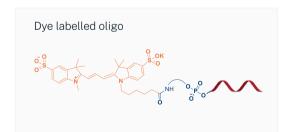
- ASO with all chiral phosphorothioates
- RNA with 3'/5'-GalNAc
- · Custom 3'/5' and Internal GalNAc conjugation
- Custom amidite modification
- Linker synthesis (cleavable and noncleavable)
- Lipidation
- PEGylation (~40 kD), etc.

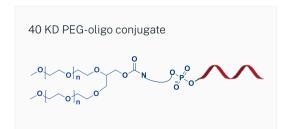


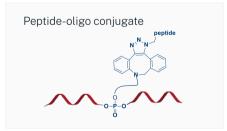
>2,000 oligo per month Endotoxin control (<1EU/mg)

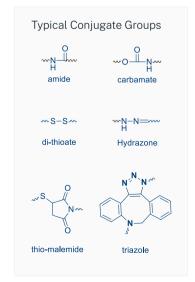
Oligonucleotide Conjugate Discovery Synthesis

Oligo-Small molecule/Toxin/PEG/Peptide/Antibody













Peptide Discovery Services

- · Broad synthetic scale from milligram to kilogram
- · Variety of peptide products, including linear peptide, macrocyclic peptide, modified peptide and peptide based complex conjugates
- · Payload, linker and custom peptide payload-linker complex

We offer a wide range of peptides including linear, macrocyclic and modified forms. We also synthesize payloads, linkers and complex conjugates. Payload synthesis supported by our industry-leading high-potency active pharmaceutical ingredients (HPAPI) capability at the same site.



Our guick turnaround time and greater than 98% success rate ensures that our customers advance their projects quickly and efficiently. Most peptides under 40 amino acids are completed within 2 weeks from order placement with MS and HPLC/UPLC analytics data. Flexible deliverables include on-resin, crude, as well as purified powder at desired purity up to 99%.



Linear Peptide Approaches

- Fmoc solid-phase peptide synthesis (SPPS)
- · Fragment Coupling
- Ligation

Experience with Cyclic Peptide

- · Disulfide peptide (single/double/triple disulfide)
- · Click peptide
- Thioether cyclization
- · RCM cyclization
- · Lactam cyclization
- · Bicyclic peptides
- · Lactone cyclization

Experience with Modified Peptide

- · N-terminal modification
- · C-terminal modification
- Dye and Fluorescent (site specific modification)
- · PTMs (site specific modification)
- · Isotope labeling
- · Glycopeptide

Automatic Synthesis and Purification Platform

Automated solid-phase (Fmoc) synthesis provides efficient and reliable custom sequences up to 160 AA with over 80% purity. Our platform is equipped with a wide range of instruments to fit project requirements with a greater than 95% success rate.

Broad range of instruments:

- · CEM liberty blue
- · Biotage Syro II
- · CSBio automatic synthesizer
- · Gilson Prep-HPLC
- · Agilent UPLC
- · Symphony X



CSBio Automatic Synthesizer









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