

RiboBio Your RNA research and cGMP oligonucleotide manufacturing partner

Ribo Biotechnology Co., Ltd. (RiboBio), founded in 2004, is the leading nucleic acids-based biotech company in China with over 250 employees and currently 6,500 sq meters laboratory and production space, performing cutting-edge science. RiboBio's leadership includes a Nobel Laureate, Dr. Craig Mello, as well as distinguished experts in nucleic acid technologies. It develops and supplies custom-oligonucleotides, siRNA, miRNA, mRNA, and IncRNA products, as well as provides oligonucleotide synthesis services for drug discovery, development and clinical applications.

In 2014, RiboBio built China's first GMP oligonucleotide manufacturing facility, and was issued China's first ever Oligonucleotide API Drug Manufacturing Permit by the CFDA in June, 2016. RiboBio has since established its oligonucleotide manufacturing capabilities supporting

low to high throughput from milligram to kilogram scales for both non-GMP and GMP applications. RiboBio's current GMP facility has two synthesis suites equipped with ÄKTA OligoPilot 100s and ÄKTA OligoPilot 400 synthesizers as well multiple small-scale instruments. RiboBio's current facility also hosts three purification suites equipped with ÄKTApurifier 100s, ÄKTA Avants, ÄKTA Pilots and ÄKTA Bioprocess instruments. Our current lyophyllization capabilities process up to 1Kg of oligo per batch. RiboBio has expertise with a variety of chemical modifications and conjugations, including but not limited to; backbone (e.g. phosphorothioate), Sugar (2'-O-Me, 2'-F, 2'-O-MOE, LNA, PNA, plus others), base (5-Me-C, inverted T, pseudo-U, I, other), and 3' and 5' modifications (GalNAc, fluorescent labels, quenchers, cholesterol, amine, thiol, peptides, biotin, DNP, PEG, plus others).



cGMP Manufacturing



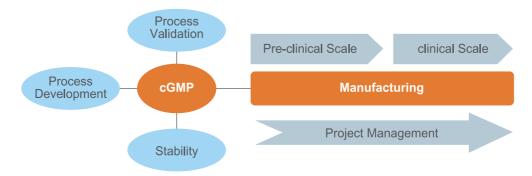
CFDA Certification



But, we are not stopping there! RiboBio, in partnership with GE Healthcare, is expanding! We are building Asia's largest GMP manufacturing facility to provide capacity to meet the increasing needs for late-stage and marketed product manufacturing utilizing the GE's latest technologies, the Oligoprocess max. 1800 mmol synthesizer, for production as well as the latest technologies for downstream processing. This plant is expected to fully operational by the end of 2019. RiboBio's oligonucleotides are all produced using the highest standards for quality, meeting or exceeding the requirements from the CFDA, ICH, USFDA, ISO as well as other regulatory agencies, assuring quality



results for biomedical research, diagnostic and pharmaceutical applications. RiboBio supports its oligonucleotide manufacturing capabilities with comprehensive CMC services, including process and analytical method development and validation, reference standard characterization, stability study, regulatory filling, plus others. RiboBio's analytical laboratory capabilities include; UPLC, HPLC, GC, LC-MS, LC-qTOF-MS, UPLC-MS/MS, ICP-MS, GC-MS, DNA/RNA Sequencers, PCR, RT-PCR, plus many others.



RiboBio and GE Healthcare Lifesciences (GE) built a strategic partnership with the goal of building Asia's largest oligonucleotide drug development and manufacturing facility in China. But, the ultimate goal of this partnership is to provide a total solution for oligonucleotide drug development companies worldwide to use; thus, freeing themselves up to focus on what matters most, saving lives! Oligonucleotide-based drugs are being developed that target disease-specific genes providing new paths for the treatment of life-threatening diseases including cancers, infectious and genetic diseases plus many others with novel, oligonucleotide-based therapeutics being approved daily. With RiboBio's "never stop innovating" strategy, constant improvement, and commitment to the highest levels of quality we hope to be helping developers worldwide get their treatments to market faster, with greater efficiency, at the lowest cost possible, for many years to come.



GUANGZHOU RIBO BIOTECHNOLOGY CO., LTD.