

Biological Services

Collaborate Locally. Commercialize Globally.

Aspira Scientific provides a comprehensive suite of biological services to meet all your life science needs through our pharma division (Aspira Pharma). Aspira Pharma is a science and technology orientated CRDO based on the union of long-term academic investment and pharmaceutical excellence. Our collaborative scientists spearhead biologics advancement in two sites nearby global centers of biotechnology excellence. Translational upstream work is complemented by downstream PR&D activities; a strong track record has been demonstrated including biosynthetic production campaigns on pre-clinical candidates for robust quality, cost, and time-to-market outcomes. From our numerous years of industrial experience, we routinely handle proteins, gene therapeutics, antibodies (monoclonal and polyclonal), large peptides, drug delivery and viral-based systems.

Aspira Pharma is pleased to provide the below services covering main functional areas to meet all your life science needs:

- Molecular Biology
- Assay Development
- Protein Expression
- Protein Purification
- Protein-Substrate Structural Analysis
- Custom Protein Production

Molecular Biology

DNA/RNA gene cloning, modifications, transfection; site-directed mutagenesis, epigenetic profiling, protein target validation

Assay Development

Compound screening and targeted libraries evaluation, protein and DNA binding assessment, toxicity determination, *in vitro* ADME panel screens

Protein Expression

Broad expression systems' expertise (Yeast, *E. Coli*, Baculovirus, Rice, and Mammalian), protein engineering and process development controls, protein labeling and co-expression, pilot scale for POC studies

Protein Purification

Ion Exchange and Size-Exclusion Chromatography, LC-MS, RP-HPLC, SDS-PAGE, SDS-MS, X-ray analysis, crystallization screens

Protein-Substrate Structural Analysis

Single crystal Rigaku™ protein-ligand and protein-drug lead structural determinations, HTS platform connected for screening and optimizing conditions

Custom Protein Production

Recombinant proteins from Baculovirus or Rice expression platforms, protein purification, process engineering, pilot scale for POC studies, endotoxin clearance validation

Key Benefits

> Gene-to-Protein (DNA, RNA) with cloning, transfection, mutagenesis and analytical services

> Compound screening and targeted libraries for GPCRs, Kinases, Ion Channel, Chemokines, NHRs, SAR and HTS programs, and *in vitro* preclinical support platforms

> Broadest range of expression platforms including Yeast, *E. Coli*, Baculovirus, Rice, and Mammalian

> DOE optimization of protein systems for best quality delivery; analytics include LC/MS, SEC, SDS-PAGE, Endotoxins, DNA analysis, RP-HPLC

> X-Ray crystal screening via Rigaku™ data collection, structural determination, and IP protective services

