



# A FLEXIBLE APPROACH TO BIOTHERAPEUTICS AND VACCINES

AT QPS, TRANSLATIONAL MEDICINE BRINGS TOGETHER LEADING-EDGE TECHNOLOGIES and pharmaceutical research and development experience, working efficiently to advance your custom-built drug development program.





## QPS BIOTHERAPEUTIC OVERVIEW

Whether your focus is small molecules, protein biotherapeutics, vaccines, gene therapy or cell therapy, QPS provides a full range of bioanalytical services to support all drug development needs from discovery, through clinical development and regulatory filing. QPS maintains four advanced bioanalytical facilities in the USA, Netherlands, Taiwan, and India, offering strategic solutions to companies with sites or trials in North America and Europe, and/or wishing to complete studies in Asia and/or India.



Pharmacokinetic  
(PK)



Immunogenicity  
Assessment



Pharmacodynamic  
(PD)



Pharmacogenomics  
(PGx)

### QUANTITATION OF BIOLOGICS USING LIGAND BINDING ASSAYS (LBAS)

QPS is at the forefront of a wide range of LBA technology platforms including ELISA using colorimetric, fluorescent and chemiluminescent detection as well as Gyrolab<sup>®</sup>, electrochemiluminescence (ECL) on the MSD<sup>®</sup> platform and Quanterix<sup>®</sup> platform. Our in-depth technical expertise enables us to offer cost-effective services for pharmacokinetics (PK) and immunogenicity – both antidrug antibody (ADA) and neutralizing antibodies (NAb) assessments – in various biological matrices.

### QUANTITATION OF BIOLOGICS USING UPLC-MS/MS

QPS has analyzed polypeptides and proteins using LC-MS/MS since 2000. The direct approach combines sample extraction from the biological matrix, followed by sample clean-up, concentration and UPLC-MS/MS analysis. We also offer a more elegant approach starting with immunoaffinity capture followed by enzymatic digestion and LC-MS/MS. Essentially, this method uses an immunoaffinity column or beads to selectively enrich the target peptide(s) and/or protein(s) prior to analysis, resulting in lower total signal complexity and higher specific peptide(s) signal by LC-MS/MS.





## CELL-BASED ASSAYS

Since 2002, QPS has supported more than 50 cell-based studies for numerous sponsors.

Capabilities include:

- ▶ Endotoxin Stimulation (Cytokine Production)
- ▶ Compound Toxicity on Monocytes (Cytokine Induction)
- ▶ Uptake Study (33P) Using Primary Cells
- ▶ Toxin Neutralizing Assay (Cell Proliferation)
- ▶ Neutralizing Antibody Assay (Cell Viability)
- ▶ Custom Functional Assay

## IMMUNOGENICITY AND NEUTRALIZING ANTIBODIES

Capabilities include:

- ▶ Preparation of antigen-protein conjugates for plate coating
- ▶ Method development and validation using ELISA format
- ▶ Screening for positive responses in study samples
- ▶ Confirmation test for samples displaying positive responses during screening
- ▶ Titering of confirmed positive samples to determine the relative degree of antigenicity
- ▶ Detection and determination of various classes of antibodies
- ▶ Neutralizing antibody assays



## SCIENTIFIC LEADERSHIP AND PROVEN RESULTS



Our dedicated, experienced team ensures that bioanalysis studies meet all timelines and regulatory requirements. QPS provides high quality data along with direct access to our technical staff, regularly scheduled updates in a format that works for you, and prompt and courteous answers to your inquiries at a fair and competitive price.

- ▶ Biotherapeutics
- ▶ Biomarkers
- ▶ Genomics and Cell & Gene Therapy
- ▶ Translational Medicine
- ▶ Mass Spectrometry





## QPS IS A GLOBAL CRO WITH LOCATIONS AROUND THE WORLD



### BENEFIT FROM THE WORLDWIDE RESOURCES THAT A GLOBAL CONTRACT RESEARCH ORGANIZATION BRINGS

Whether your focus is small molecules, protein biotherapeutics, vaccines, gene therapy or cell therapy, QPS provides a full range of bioanalytical services to support drug development needs from discovery, through clinical development and regulatory filing.



CUSTOM-BUILT RESEARCH™

TIME IS OF THE ESSENCE IN DRUG DEVELOPMENT.  
CONTACT THE QPS BUSINESS DEVELOPMENT TEAM TODAY!

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