

Specialized Vaccine Development Capabilities

Our team works with you to speed the introduction of life-changing vaccines.

PPD® LABORATORIES

PPD® Laboratories Vaccine Sciences Lab builds upon **three decades** of pharmaceutical development expertise to support your vaccine programs at any development stage from **pre-clinical through post-approval**.

Our extensive capabilities ensure development of innovative analytical methods and accurate, high-quality test results. PPD helps you achieve the highest scientific standards for your programs while focusing on efficiencies.



25 years of experience providing a full range of vaccine services



High-throughput, automated and/or multiplex assays



450+ scientists and 90,000+ sq. ft. of vaccine lab space globally



Development, qualification and validation

Our suite of services

- Antigen detection/quantitative RT-PCR/sequencing
- Traditional and multiplex immunoassays
- Neutralization assays
- Cell-mediated immunity methods
- Viral and bacterial functional assays
- Statistical support services
 - 15+ years' experience
 - Routinely provide reports for assay qualification, validations, transfers, optimization, reagent qualification, stability studies, relative-potency rate
 - Recommend assay acceptance criteria
 - Design of experiments (DOE)
 - Support for regulatory responses
 - Reference standard calibration

Diverse experience with multiple assay formats

- Molecular assays
 - PCR
 - Sequencing
 - Nucleic acid purification
- Immunology assays
 - ELISA/EIA
 - MSD electrochemiluminescence
 - Luminex multiplexed
 - Flow cytometry
 - Opsonophagocytic assays (OPA/OPK/MOPA)
 - Enzyme-linked immunospot (ELISPOT)
 - Serum bactericidal assay (SBA)

PPD Laboratories partners closely with customers to drive development with well-defined assays backed by our extensive experience consisting of 13 FDA-approved vaccines and three COVID vaccines that have received EUA or international approval.

Broad therapeutic and research experience

- Bacterial agents
 - Clostridium difficile (C. diff)
 - Diphtheria, tetanus and pertussis (DTP)
 - Escherichia coli (E. coli)
 - Group B streptococcus
 - Haemophilus influenzae type b (Hib)
 - Neisseria meningitides (meningococcal)
 - Staphylococcus aureus (Staph. aureus)
 - Streptococcus pneumoniae (pneumococcal vaccine)
- Viral agents
 - Coronavirus (SARS-COV-2)
 - Cytomegalovirus (CMV)
 - Dengue virus
 - Epstein-barr virus
 - Human immunodeficiency virus (HIV)
 - Human metapneumovirus
 - Human papillomavirus (HPV)
 - Influenza virus
 - Lymphocytic choriomeningitis (LCMV)
 - Measles, mumps, rubella (MMR)
 - Norovirus
 - Respiratory syncytial virus (RSV)
 - Varicella-zoster virus (VZV/chickenpox and shingles)

The global presence you need

Our two strategic locations in **Richmond, Virginia, U.S.** and **Suzhou, China**, allow PPD to **support customers' global vaccine programs** across all phases of pharmaceutical development. Building upon our **two decades of vaccines experience** in Richmond, the recently opened Suzhou laboratory (6,000 sq. ft. of dedicated lab space) significantly enhances our **vaccines capabilities in the Asia-Pacific region**. The new China facility **expands upon the suite of services** offered in Richmond, including high-throughput, automated and/or multiplexed assays, leading-edge technology platforms and regulatory expertise.

PPD Laboratories

PPD Laboratories provides high-quality scientific expertise with industry-leading technologies supported by a commitment to exceptional quality. Our customers benefit from comprehensive lab services spanning bioanalytical, GMP, central lab testing, vaccine sciences and biomarkers. Our laboratory services accelerate pharmaceutical development for small molecules, biologics, vaccines, and cell and gene therapies allowing customers to make faster decisions about their compounds.

