



Life Sciences

USD 2708

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Scientific and Laboratory Services

Global expertise... delivered.

professional

reliable

global



Filtration. Separation. Solution.SM

Global expertise... delivered.



Pall Scientific and Laboratory Services global network

Pall Life Sciences provides high quality technical and scientific consulting services that enable speed to market and deliver insights for process efficiency.

Pall Scientific and Laboratory Services (SLS) group is an international authority in the science of fluid management. Pall's SLS was established more than 40 years ago and now employs several hundred scientists, engineers and technicians in state-of-the-art facilities in the Americas, Europe, Australia and Asia.

Pall Scientific and Laboratory Services offers our customers rapid response and reliable, comprehensive results. Our scientists and engineers hold advanced degrees in a broad

variety of disciplines, including: chemistry, microbiology, biochemistry, physics, engineering, and medical technology. Many are internationally recognized experts who investigate and solve complex problems involved with fluid management, such as: chromatographic purification, viral clearance, liquid or air filtration, microbiological process monitoring, tangential flow filtration, depth filtration, and blood processing.

Our integrated network of industry scientists, accomplished application engineers and knowledgeable laboratory staff work together to deliver consistent, high quality, local support to our customers globally.



Field-Based Application Scientists and Engineers

Pall's field-based staff provides you with on-site support for your filtration, chromatography and aseptic processing applications in new process development, process optimization, training, equipment selection, pre-inspection reviews, and troubleshooting.



Instrumentation Services

Pall engineers and technical specialists provide instrumentation qualification (IQ/OQ/PQ), calibration, training, and troubleshooting, making instrument ownership easy for you.

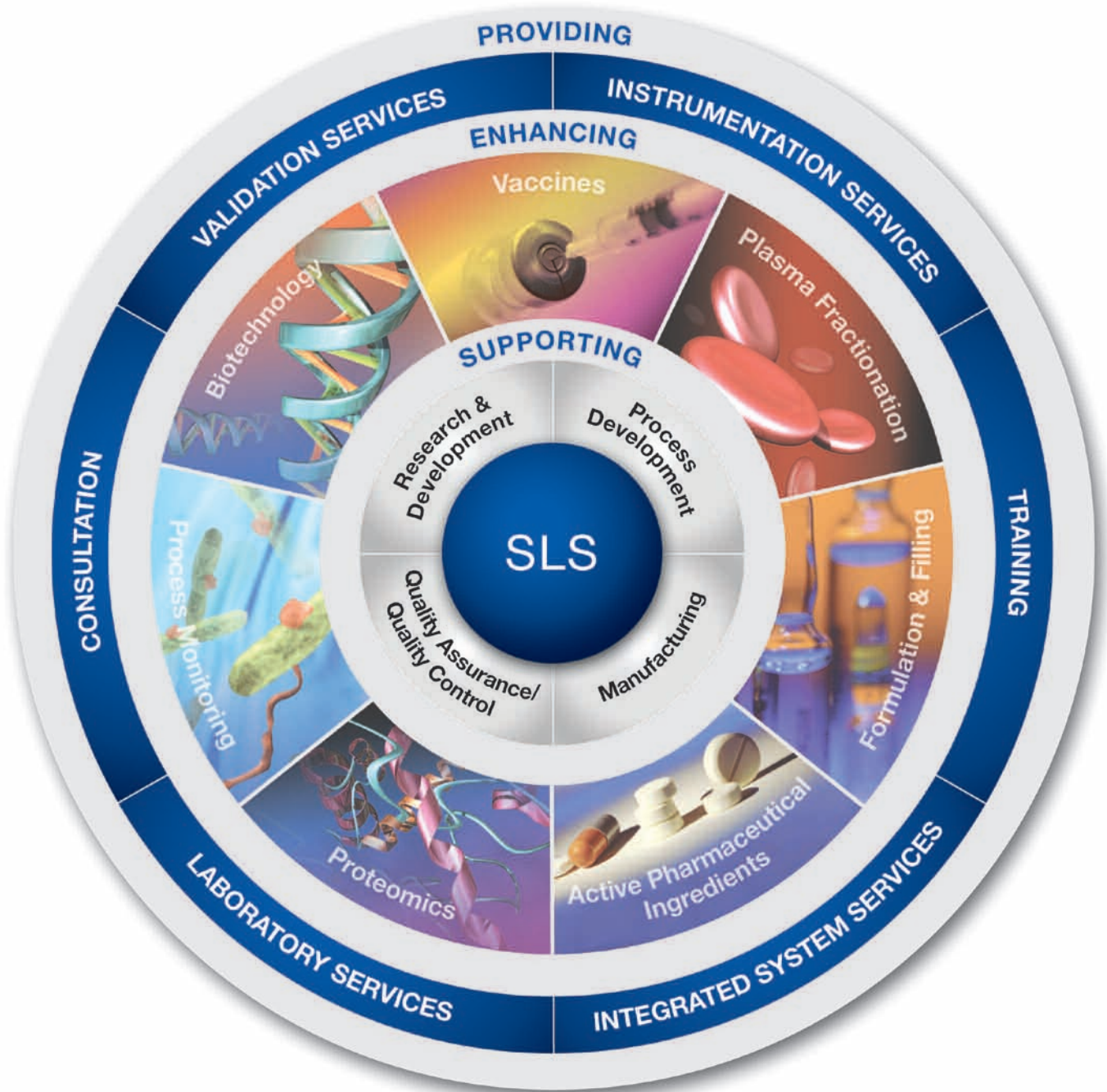
Laboratory Services

Pall has established a worldwide network of laboratories that are staffed with highly trained scientists and engineers. Our leadership in the filtration and bioprocess industry, and more than forty years of experience, enable us to provide valuable scientific insights for challenging applications ranging from complex biopharmaceutical processes to active ingredient purification. Wherever you are located, Pall's laboratory staff is available to provide comprehensive knowledge to examine unique product and process characteristics and to select the correct test methods and conditions to validate your process.

Skill and experience you can depend on.

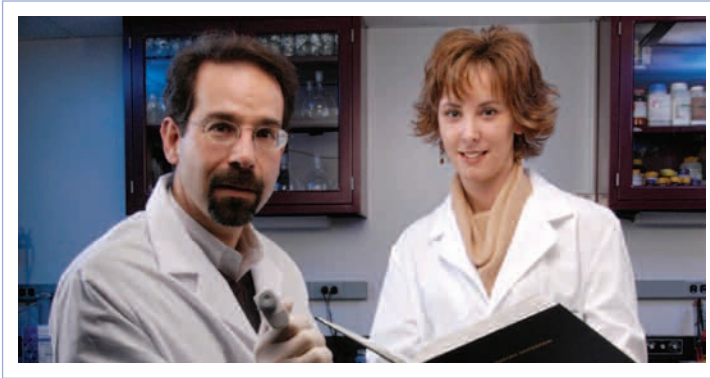
Regardless of where you may be in process development or the manufacturing of your product, or wherever you are in the world, Pall Life Sciences has the scientific and technical resources available to provide you with professional, confidential advice and testing services. All consultative and laboratory services

are fully documented in the form of a technical report prepared to your specific needs. To support the quality and integrity of your scientific data, every member of Pall's team is fully trained in quality system requirements.



When you need support, Pall has the resources that link service to science.

Our Portfolio of Services



Consulting

- ▶ Pre-inspection Process Review
- ▶ New Process Development
- ▶ Process Optimization
- ▶ Equipment Selection
- ▶ New Product Development
- ▶ Research Collaboration
- ▶ Troubleshooting (premature filter or chromatography fouling, contaminant analysis, filter integrity testing, etc.)



Training

- ▶ Courses Designed and Led by Experts
- ▶ Held Locally or at Pall's Specialized Facilities

Topics include but are not limited to:

- ▶ Sterile Filtration
- ▶ Filter Integrity Testing
- ▶ Filter Validation and Regulatory Requirements
- ▶ Chromatography Resin Packing and Handling
- ▶ Tangential Flow Filtration Optimization
- ▶ Single-use Systems Validation



Validation Services

- ▶ Process Specific Filter Validation
- ▶ Filter Compatability Assessment
- ▶ Bacterial Viability / Flush Testing
- ▶ Bacterial or Bacteriophage Retention Studies
- ▶ Microbiological Challenges with Process Isolates
- ▶ Extractables Studies
- ▶ Leachables / Migrants Analyses
- ▶ Endotoxin and Particulate Testing



Instrumentation Services

- ▶ Instrument Qualification Services
- ▶ Repair Services
- ▶ Preventative Maintenance Agreements
- ▶ Calibration Services
- ▶ Instrument Training Courses
- ▶ Technical Support Services
- ▶ Service Contracts
- ▶ Spare Parts
- ▶ Documentation
- ▶ Instrumentation Upgrades

Integrated System Services

Consultative services to support process validation of integrated systems developed for upstream and/or downstream processing:

- ▶ Allegro™ Single-use Systems and Biocontainers
- ▶ Bioprocess Systems

Scientific know-how always ready to support your application needs.



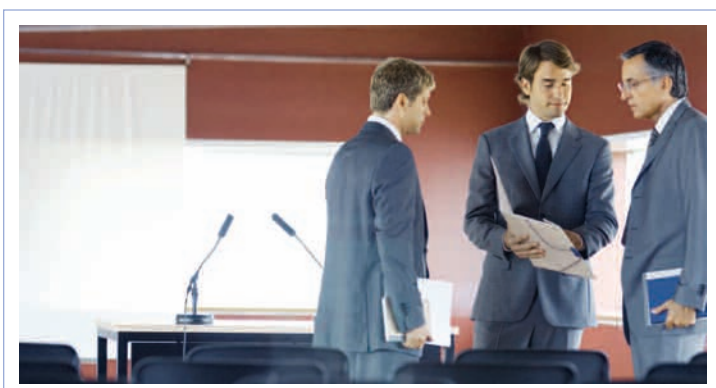
Insights

Pall Life Sciences solves complex contamination, separations, purification, and detection problems for a diverse group of customers around the world. These solutions enable customers to produce high quality innovative products; remove pathogens from blood fractions, water and food; purify biotech drugs; minimize waste; meet regulations; and develop breakthrough technologies. Pall process and product-enabling technologies help make good products better, safer and even possible.



Solutions

Pall scientists and engineers can help our customers to substantially reduce process-development time by providing project management support that makes purification faster, easier, and more cost effective. Work processes are highly refined and deliver submission-ready documentation that targets first-time regulatory approval.



Competence

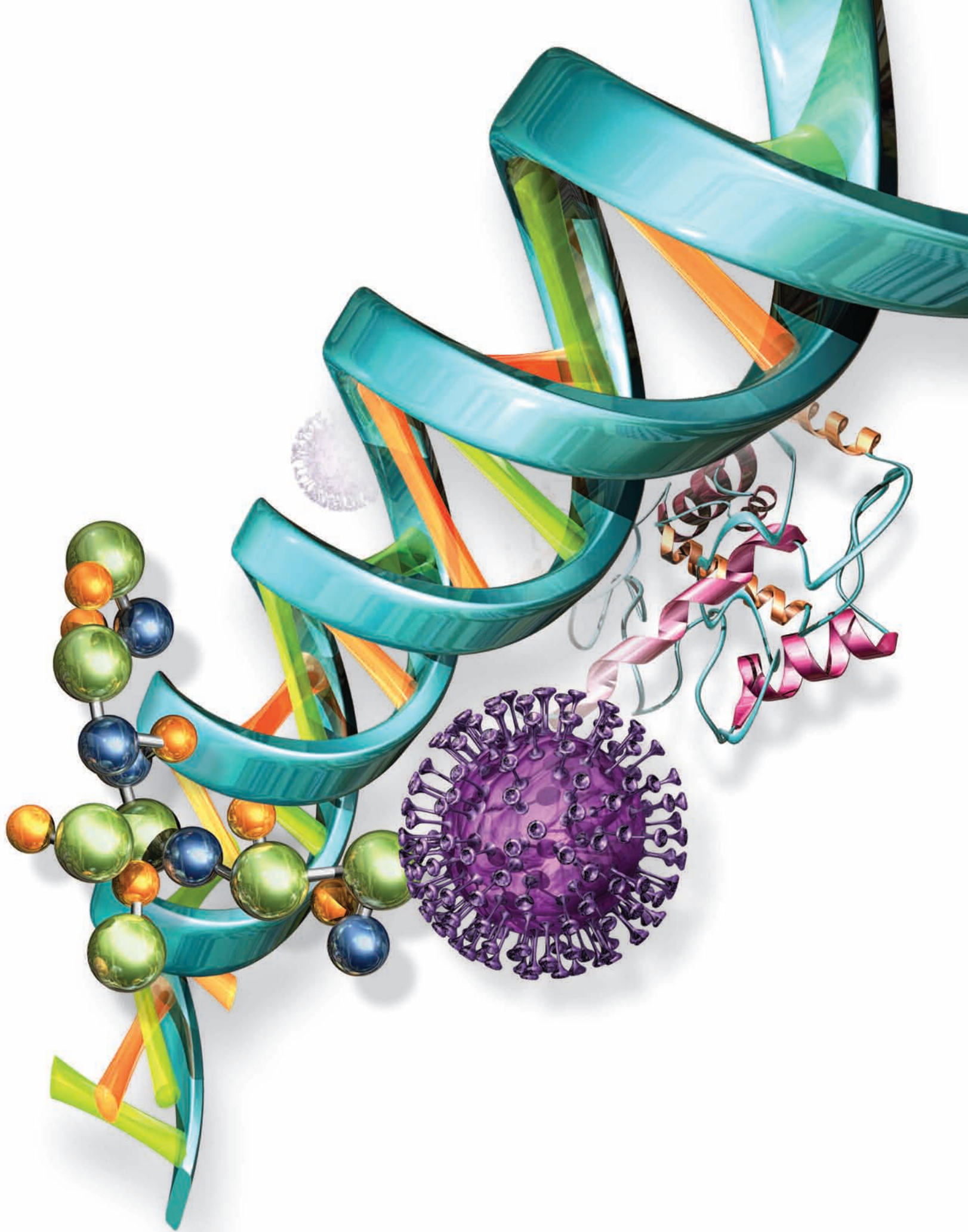
Members of the Pall Scientific and Laboratory Services (SLS) team are recognized globally by government and industry because of their active roles in scientific and technical societies, presentations at major conferences, and publications in peer-reviewed international journals.



Speed

The Pall global network of scientific and technical laboratory support staff works collaboratively to assure rapid response. Field technical support specialists can quickly access dedicated Pall technologists, equipment, and laboratories for services ranging from simple advice to pilot investigations or fully detailed research proposals.

SLS is the cornerstone of Pall's service to customers.





Life Sciences

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