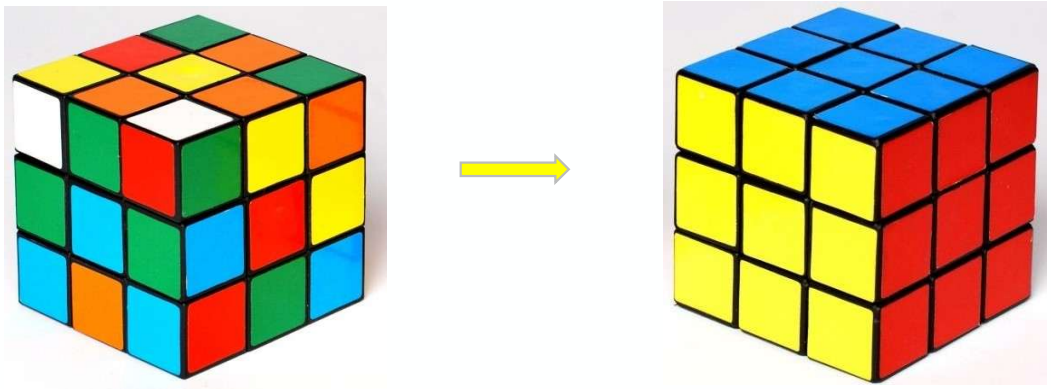
Paras Biopharmaceuticals Finland Oy

Your Domain Antibody CDMO

Helping you solve the protein production puzzle



Your Partner of choice for Microbial Manufacturing

Paras Biopharmaceuticals Finland Oy
August 2026

- ✓IL-fusion proteins
- ✓Long Peptides
- ✓Nanobodies
- ✓Diabodies
- ✓Peptibodies
- ✓Domain antibodies
- ✓scFvs

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ABOUT PARAS BIOPHARMACEUTICALS



Your Partner of choice for Microbial Manufacturing

- Finnish Company located in Oulu, Finland
- Established 2013
- Setup by a group of scientists and technologists who have extensive experience, skills and a successful track record in developing biologics
- Microbial technology-focused company with interests in CDMO services & Bioprocess Enzymes



Your Domain Antibody CDMO

IL-Fusion Proteins

DARTs

scFvs



Diabodies

Nanobodies

DARPins

Our expertise lies in the discovery, development and manufacturing of your next generation biologics

CDMO services and Bioprocess Enzymes

CDMO Services

- ✓ Cell-line Development
- ✓ Upstream and Downstream Process Development
- ✓ Analytical Methods Development and Qualification
- ✓ Technology Transfer
- ✓ Scale up
- ✓ Large-Scale Manufacturing
- ✓ Stability Studies



Bioprocess Enzymes

- ✓ Recombinant TEV Protease (RAPID TEV®)
- ✓ Recombinant Enterokinase (EK)
- ✓ Other custom-made





Capabilities, Knowledge and Experience

Microbial CDMO with strong customer focus

50+ batches in the last few years on different molecules

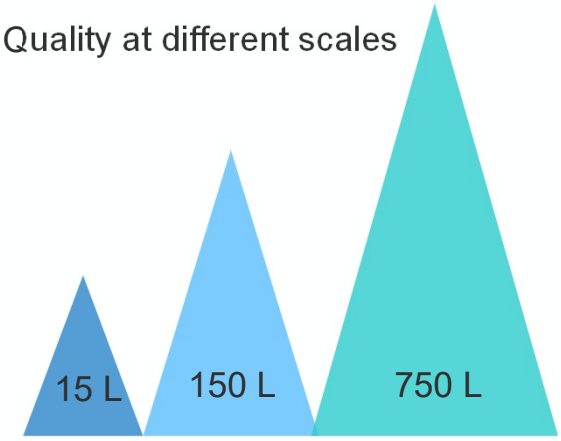
Experience in working with:

- ***E. coli***
- ***S. cerevisiae***
- ***P. pastoris***
- ***B. subtilis*** and other microbial strains

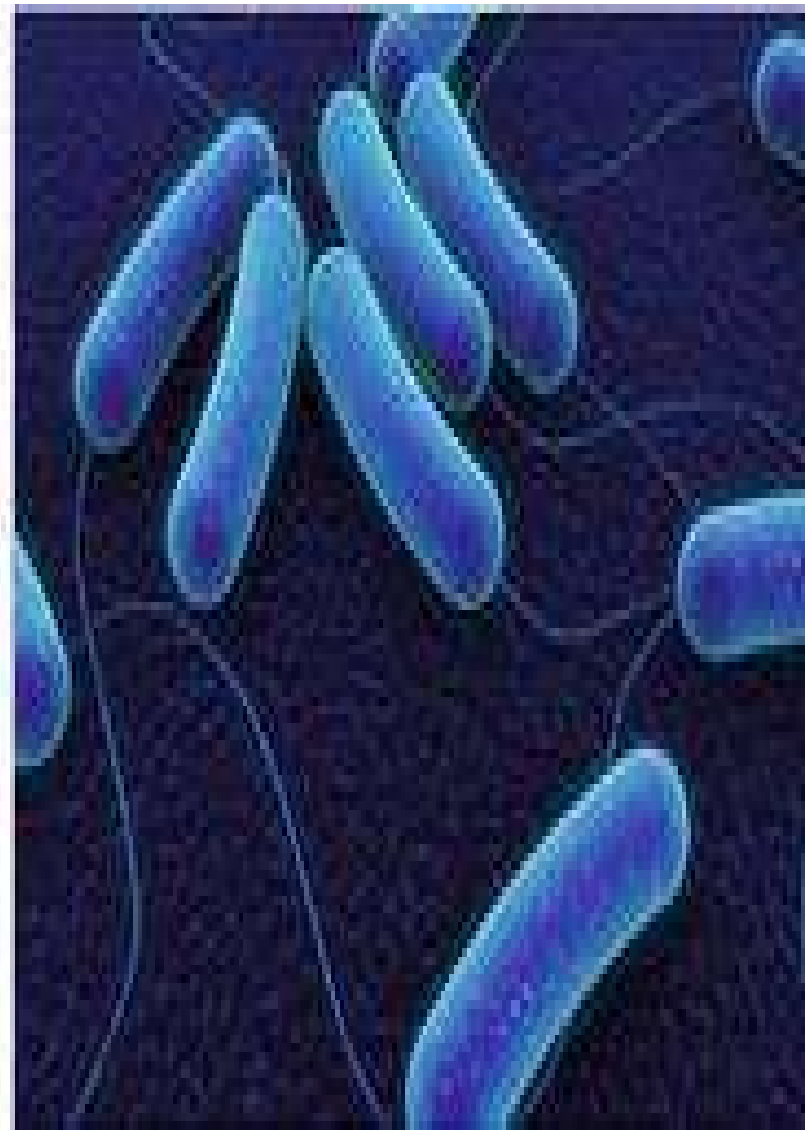
Innovative, cost-saving services with maximum efficiency and Speed

Quality at different scales

DOE Approach with AKTA Avant



MICROBIAL TECHNOLOGIES AND INFRASTRUCTURE



Paras Proprietary Microbial Technologies

DIABRID™ TECHNOLOGY

Optimized protocols and procedures are used along with economical method to facilitate highly efficient refolding of proteins.

NOBLECLEAV™ TECHNOLOGY

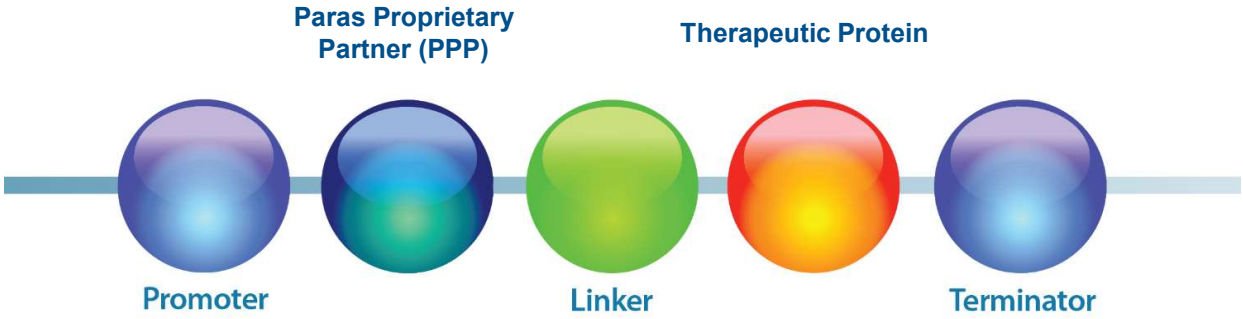
Incorporates gene construct with Paras Proprietary Partner and Spacers, enabling high expression yields for difficult and challenging proteins

BIOMULTIFOLD™ TECHNOLOGY

Enables achievement of multigram of proteins per liter of fermentation

CYTOFOLD STRUCTQUANT™ TECHNOLOGY

Expression of recombinant proteins / peptides in the cytoplasm of an *E. coli* as fully active proteins



Major USP & DSP Equipment

Upstream

- 2 x 10L, 2 x 20L, 1 x 150L and 1 x 750L scales SS bioreactors (B. Braun/Sartorius)
- Homogenizers, Centrifuges (continuous and batch)



Downstream

- Chromatographic separations (IEX, affinity, HIC, SEC, RP-HPLC)
- 2 Tangential Flow Filtration Units (Sartorius), from 0.1 to 6 m^2
- 3 ÄKTA Systems (Avant, Explorer 10, 100) & 16 Axichrom columns – Axichrom 50, Axichrom 140, Axichrom 30P and Chromatographic units (GE-Healthcare)
- Protein crystallizer (Custom made)
- Lyophilization unit (Telstar)
- Decontamination and sterilization autoclaves
- Chromatographic separation: ion exchange, affinity, hydrophobic interaction, SEC, RP-HPLC
- Filtration: microfiltration, ultrafiltration, diafiltration, membrane adsorption

Analytical Laboratory and Instrumentation

- High Pressure Liquid Chromatography (Agilent 1260/1290)
- Gas Chromatograph – Mass Spectrometer (Agilent 9000, 5977B)
- LCMS QTOF (Agilent1260/6530)
- Capillary Electrophoresis (Hewlett Packard 3D CE)
- Toledo titrators DL53 and DL38 (KF); Mettler Toledo refractometer RE40D
- FT-IR Spectrometer (PerkinElmer Spectrum One)
- SDS-Polarimeter (Jasco P-1020); TOC Analyzer (Shimadzu TOC-5000A)
- UV / Vis Spectrophotometer (Shimadzu UV-2401 PC)
- Microplate / ELISA Reader (Labsystems iEMS Reader MF)
- Melting point apparatus (Buchi B-545); SDS-PAGE, Scales, pH-meters, TLC
- Chromeleon (Version 7.0) – connected data analysis and reporting



Analytical Capabilities and Documentation

1 Purity	2 Aggregation / Degradation	3 Identity	4 Potency
Key Elements	**Key Elements**	**Key Elements**	**Key Elements**
Residual DNA	SDS-PAGE	Disulfide linkage analysis	Bioassay Testing
Residual protein A	CE-SDS	Peptide mapping	Inhouse capabilities to develop new Bioassays
HCP	HP-SEC	Extinction Coefficient	
	CEX-HPLC		
	cIEF		

Production Facility Overview

- Total floor area 25,000 ft^2
- Classified cleanroom 4,300 ft^2
- Media and buffer preparation
- Live area (fermentation and harvest & extraction)
- Purification suite (three separate rooms, including +4°C cold room)
- Final filtration and freeze-drying
- Facility in Operation since 2003
- Fully equipped with modern analytical lab facilities and utilities, HVAC system and SCADA controls
- Team comprises a group of experienced scientists, technologists and process engineers



Production Facility Overview

- Utilities to cleanroom through panels, piping mainly in technical fingers
- As little piping inside the cleanroom as possible
- Unknown processes => design based on series of concept processes
- Features of containment level BL3
- Production area in A/B, C and D classes
- Operator rooms in key areas with electronic card access
- Workshop and stores
- Facility upgradation ongoing for new Quality Systems Management (QMS)
- Successful track record in offering innovative, cost-saving *E. coli* / microbial technologies



VALUE ADDITION TO OUR CLIENTS



Feasibility Studies

- Paras Biopharma believes in creating win-win opportunities
- Paras Biopharma is a client-focused company
- Feasibility studies: share risks and rewards
- Carry out initial feasibility studies to check the expression of your proteins by our technologies
- Modestly priced
- 3-5 months on an average to ship few mg of proteins for testing



Technology Transfer – Support Systems

- Understanding customer technology
- Designing Process for Technology Transfer
- Custom solutions
- Cost efficient solutions
- Timeline based approach
- Regular updates
- State of the art facility



Project Management – With Our Clients, Always



Customer-Focused Culture

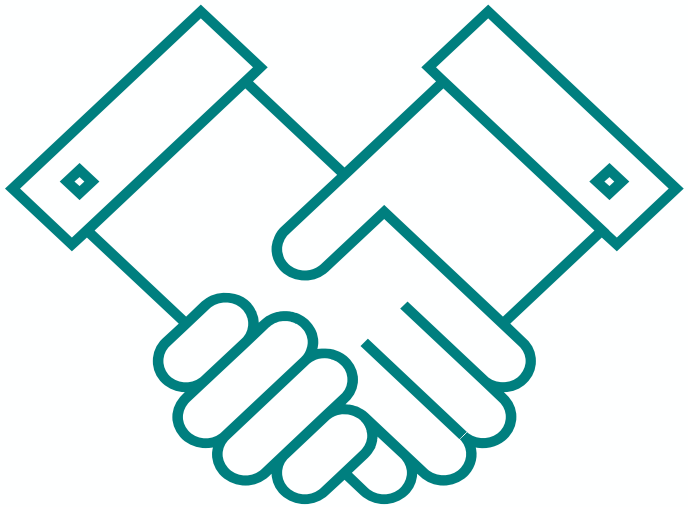


- ✓ Expertise – providing solutions
- ✓ Partnership philosophy
- ✓ Flexible and scalable capacity aligned to customer needs
- ✓ 100% commitment to every project – small or big
- ✓ Professionalism, transparency and ease of doing business with us

Our Clients in the USA & European Union

A few examples of our clientele include:

- A large (multibillion dollar) business conglomerate in the USA
- One of the top 10 global pharmaceutical companies from Europe
- Small Biopharma companies in Europe and the USA



“It has been great working with your team on our projects” VP, CMC of a US biopharma company

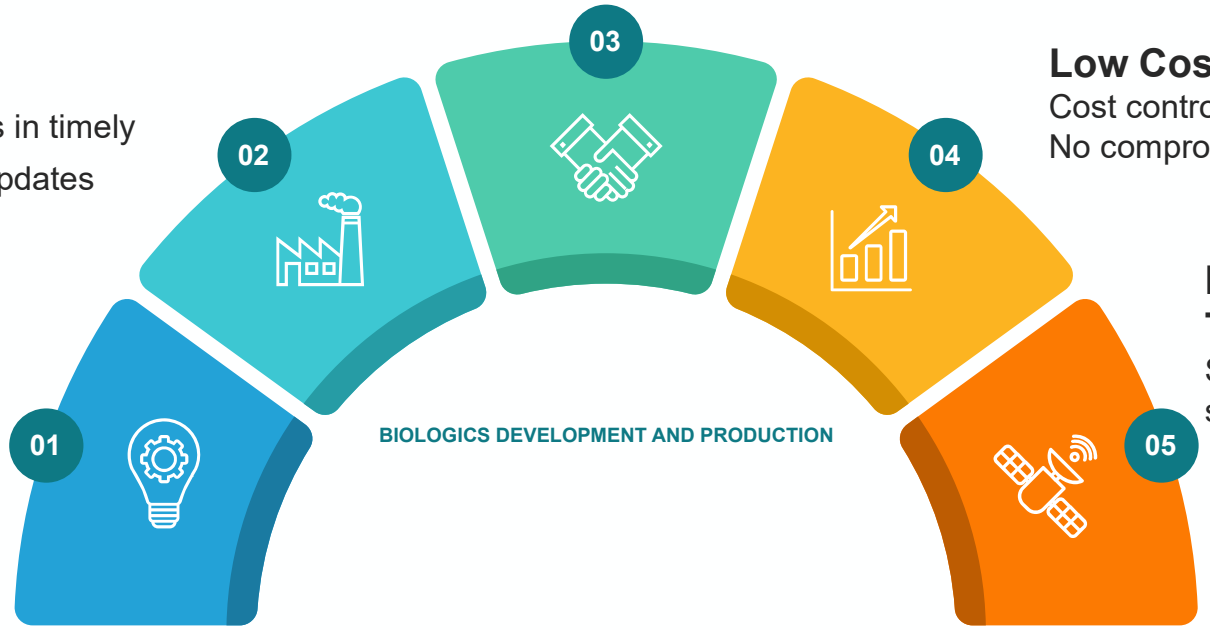
“ We have been impressed working with ParasBio & are confident that the *project name – confidential* run will be successful” CEO of a European pharmaceutical Company.

Creating Excellence in Biologics Dev. & Production

Unique Solutions
Understanding customer technologies

Excellent Services
Providing custom solutions in timely manner and with regular updates

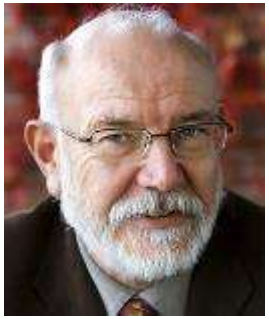
Low Cost
Cost controls at every level
No compromise on quality



High Quality
Stringent quality measures
Assurance systems

Infrastructure & Technologies
State-of-art facilities to support customer projects

Business Leadership



Dr Hans Söderlund

Director - Global Strategic Alliance

- Responsible for global alliance & strategic growth



Dr Ashesh Kumar

CEO & Director – Biologics & Licensing

- Responsible for Paras' biologics development program



Dr John Coates

Mentor – Business Collaborations

- International collaboration and future business prospecting



Dr Mark Jackson

Company Administration Lead



Martti Särkelä

Business Advisor

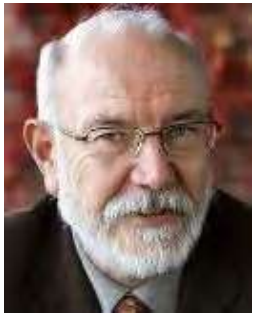
Company Advisory Board



Prof. Dr Taina Pihlajaniemi

Advisory Board

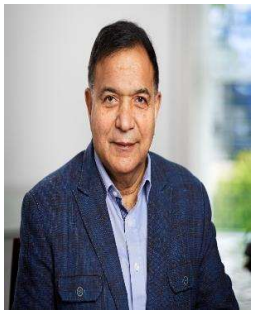
- Professor of molecular medicine and vice rector research, University of Oulu, Finland



Dr Hans Söderlund

Chairman – Advisory Board

- Chairman of Board of Director at the University of Oulu and Chairman of SAB



Mr Anil Sharma

Advisory Board

- Director & investor for several international companies with diverse business segments.



Prof. Dr Heikki Ojamo

Advisory Board

- Professor of Protein Science & Biochemistry at Aalto University, Finland


Paras Biopharmaceuticals
Finland Oy
A Glimpse Into Our Facility
novasep



Fermentation / Bioreactors
10L, 20L, 150L, 750L



150L with MSDS controls



Commercial Full-Scale Chromatography Columns



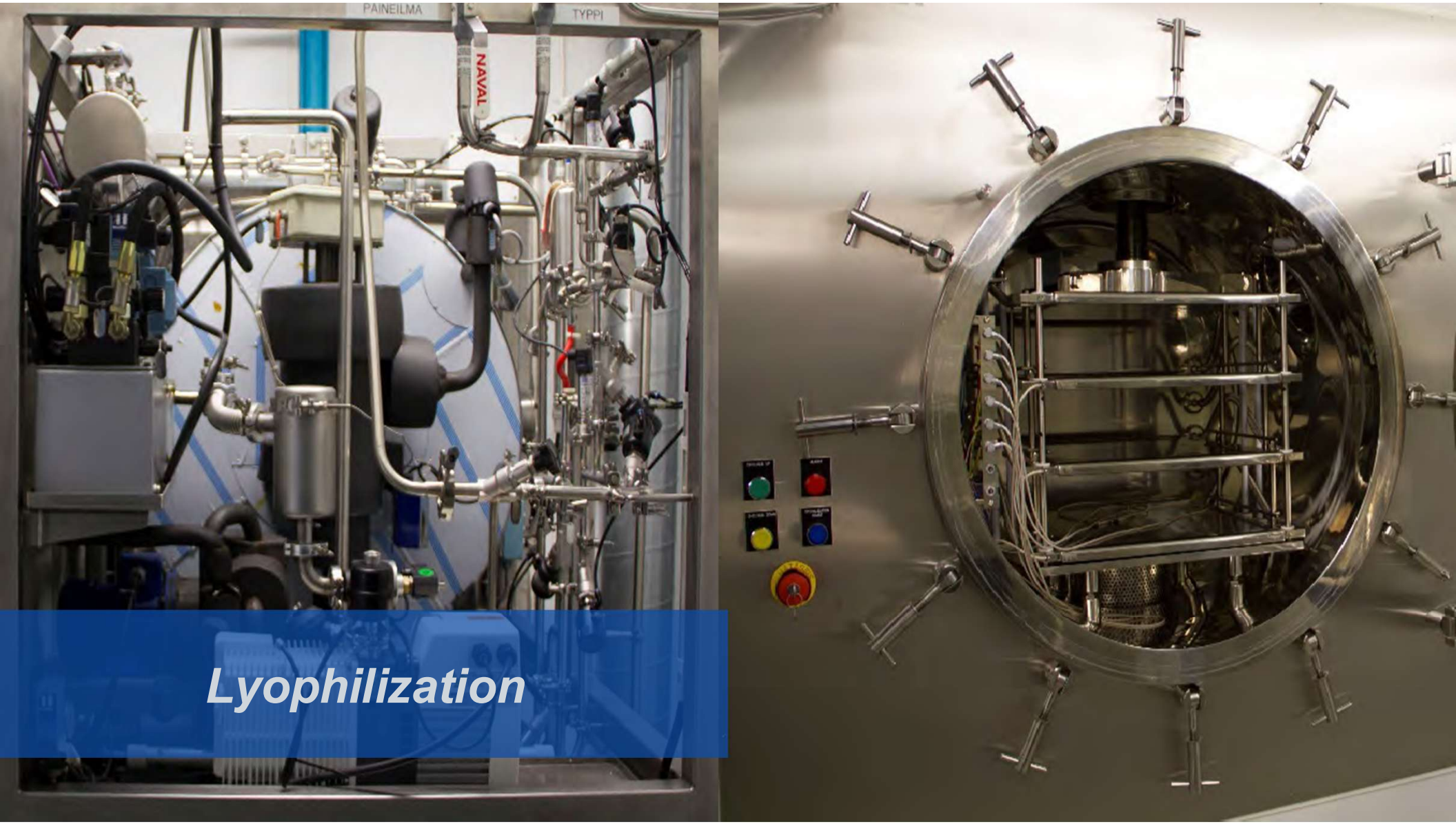
Large scale HPLC & Commercial Novasep 150 column



Äkta Pilot & large Axichrom columns for development & production



Scale-up HPLC and kromasil columns



Lyophilization



Production Facility & Upcoming Building Expansions

To Summarize

- Paras Biopharma is your partner of choice for microbial Manufacturing.
- We are a microbial technology-focused company with interests in CDMO services & Bioprocess Enzymes.
- We have experience in working with: ***E. coli, S. cerevisiae, P. pastoris, B. subtilis*** and other microbial strains.
- We provide microbial CDMO services from scratch to batch and have state-of-art infrastructure for development and production of recombinant biologics.
- We have a strong project management team in place to look into client needs and our focus is always keeping our clients at the centre.
- Our clientele includes large and small companies spread across the USA, EU and other regions.
- We have an experienced team always ready to take up challenging projects and helping our clients in their product development endeavours.

Paras Biopharma Vision, Mission & Value Creation

Our Vision

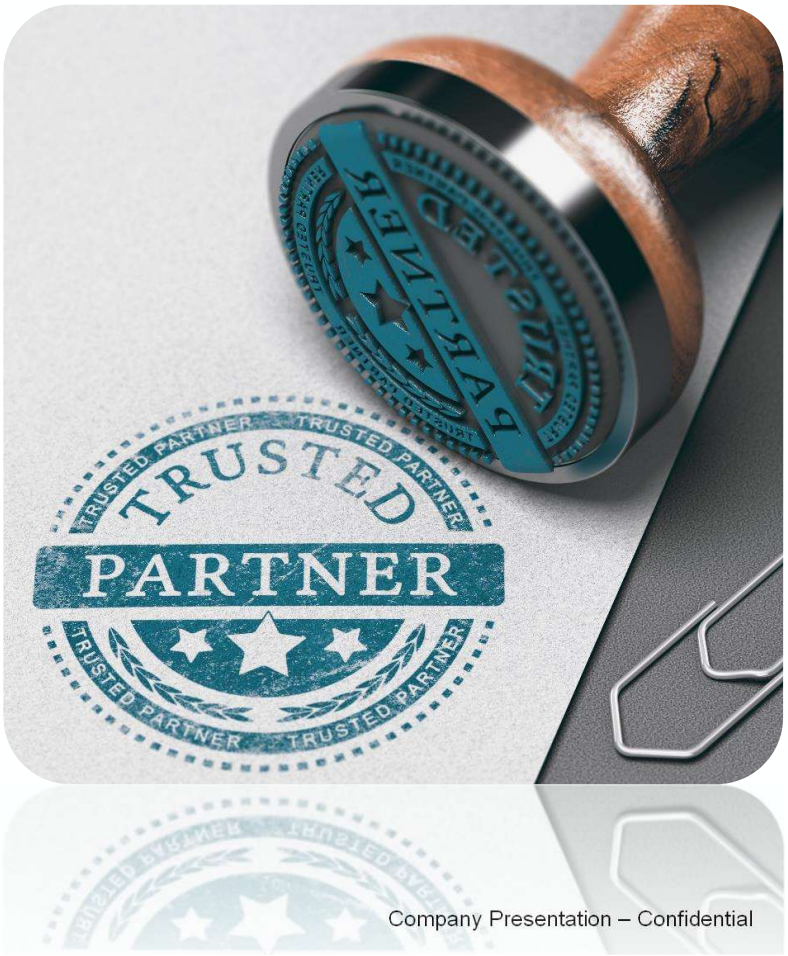
"Quality and Improved Healthcare for all by Providing Specialized Skills and Technology Platforms" for Enhanced Biologics production.

Our Mission

To “strive to create” biologic solutions through manufacturing innovations and bioprocessing tools for producing & enabling difficult-to-produce Biologics.

Our Value Creation

Our Collaborative approach and freedom to operate in full trust and confidentiality allows us to deliver an unparalleled approach to introduce new and innovative technologies for our clients.



Key Biologics CDMO Industry Drivers in 2021 and Beyond

Increasing research in antibody fragments space

Need for securing supply chain

Increasing share of microbial platforms

Need for flexible customized solutions







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