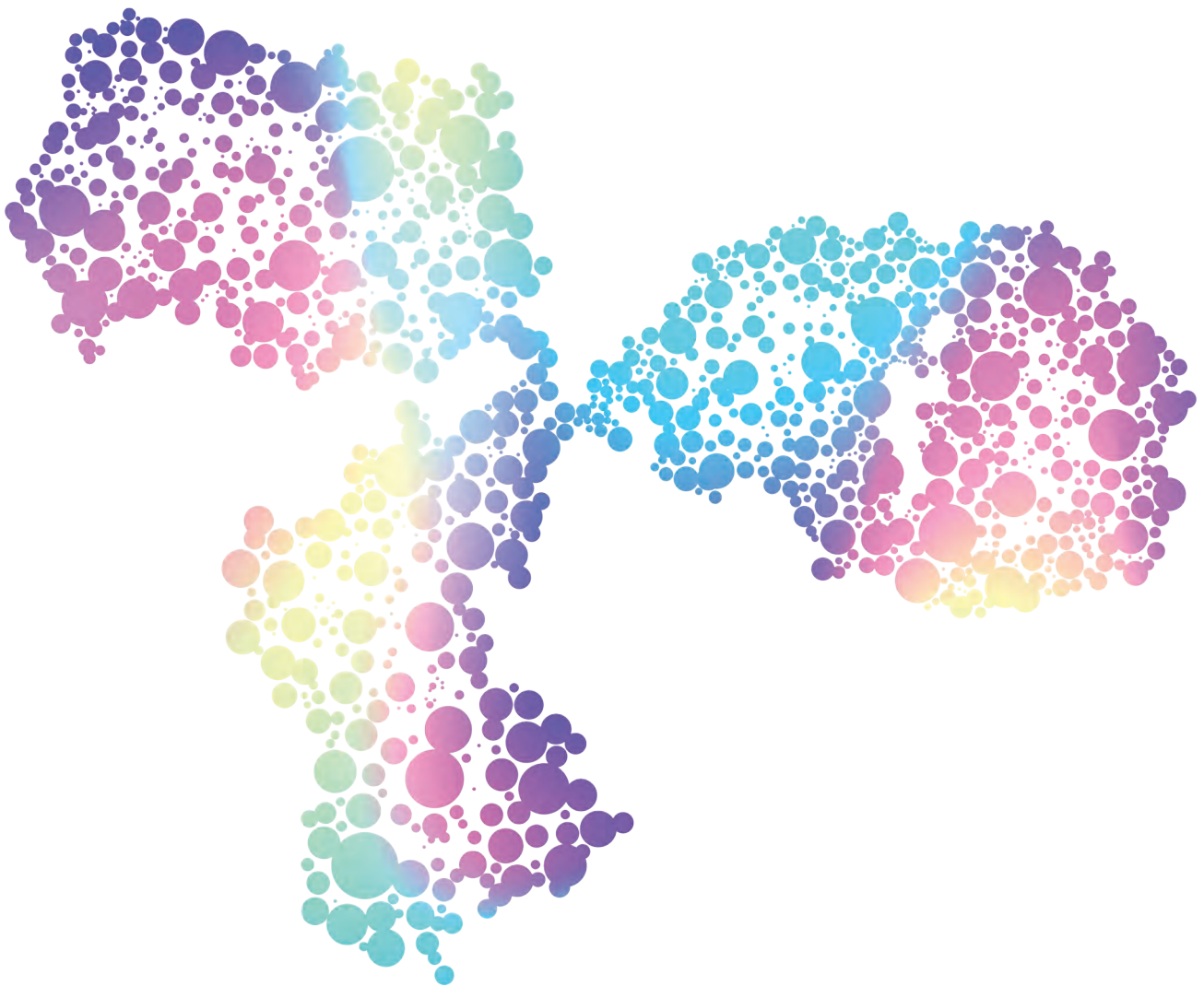


YOUR COMMITTED
CDMO PARTNER





About LOTTE BIOLOGICS

LOTTE BIOLOGICS was established in 2022 and is headquartered in Seoul, South Korea. Utilizing a two-track strategy of acquiring and building, LOTTE BIOLOGICS is solidifying its competitiveness in the CDMO market. Currently, the company has a facility for biopharmaceutical antibody production in the Syracuse region of the United States and is in the process of constructing a 360,000L bio campus in the Songdo area of Incheon, South Korea.

About LOTTE Group

With initial operations beginning in 1948, LOTTE has grown to become one of the foremost business conglomerates in South Korea. LOTTE has diverse business units, including petro/fine chemicals, food, retail, hotel, construction, and IT. LOTTE has a presence in 30+ global locations, including the US, Europe, and Asia.

CEO Message

At LOTTE BIOLOGICS, we are pioneering a new era of excellence, driven by our unwavering dedication to quality and manufacturing excellence. Our path forward is illuminated by the expansion of new, advanced capabilities, meticulously designed to meet the forward-looking demands of our valued clients. We are invigorated by the opportunities that lie ahead, as we commit to not only meeting, but exceeding the manufacturing standards set before us.

Our journey is characterized by a strategic expansion of our technological, operational, and regional capabilities, reinforcing our agility and adaptability to rapidly evolving industry trends. This expansion is rooted in a deep understanding of our partners' needs, ensuring that every solution we provide is both impactful and sustainable. At the heart of our mission lies a clear and resolute promise: to deliver manufacturing excellence. This pledge is the cornerstone of our identity at LOTTE BIOLOGICS, establishing us as a pillar of reliability and quality in the biopharmaceutical arena.

LOTTE BIOLOGICS, Chief Executive Officer
Richard Wonjik Lee

RICHARD LEE



Leadership Committee



Richard Wonjik Lee

- Executive Chairman
- Chief Executive Officer

Career Highlights:
Samsung Biologics, Bristol Myers Squibb, Chiron



Yooyeol Shin

- Executive Director
- Chief Strategy Officer

Career Highlights:
Nomura Securities, LOTTE Chemical



Michael C. Hausladen, Ph.D.

- General Manager of LOTTE BIOLOGICS USA

Career Highlights:
Bristol Myers Squibb



Brett Budis, Ph.D.

- Head of the Global PMO

Career Highlights:
Bristol Myers Squibb



Hyung-duk Yoo, Ph.D.

- Chief Operating Officer

Career Highlights:
Roche/Genentech, Roche Korea



Kern H. Chang, Ph.D.

- Chief Technology Officer

Career Highlights:
Janssen, GlaxoSmithKline



Kyoung E. Kim, Ph.D.

- Chief Business Officer

Career Highlights:
CHA Biotech, Archigen



Jueon Kang

- Executive Director
- Chief Planning and Information Security Officer

Career Highlights:
Samsung Biologics, Samsung Corning Precision Materials



Richard Schicho, Ph.D.

- Corporate Advisor

Career Highlights:
Takeda Pharmaceutical, Bristol Myers Squibb



Darren Dasburg

- Corporate Advisor

Career Highlights:
GlaxoSmithKline, AstraZeneca

Syracuse Bio Campus Leadership



Ryan Stelick

- Director of Manufacturing
- Working at the Syracuse Bio Campus since 2007



Stephanie Wickham, Ph.D.

- Director of MS&T
- Working at the Syracuse Bio Campus since 2024



Kirk Wolfgang

- Director of Facilities and Engineering
- Working at the Syracuse Bio Campus since 1996



Jeremy Boyles

- Director of Quality Operations
- Working at the Syracuse Bio Campus since 2005



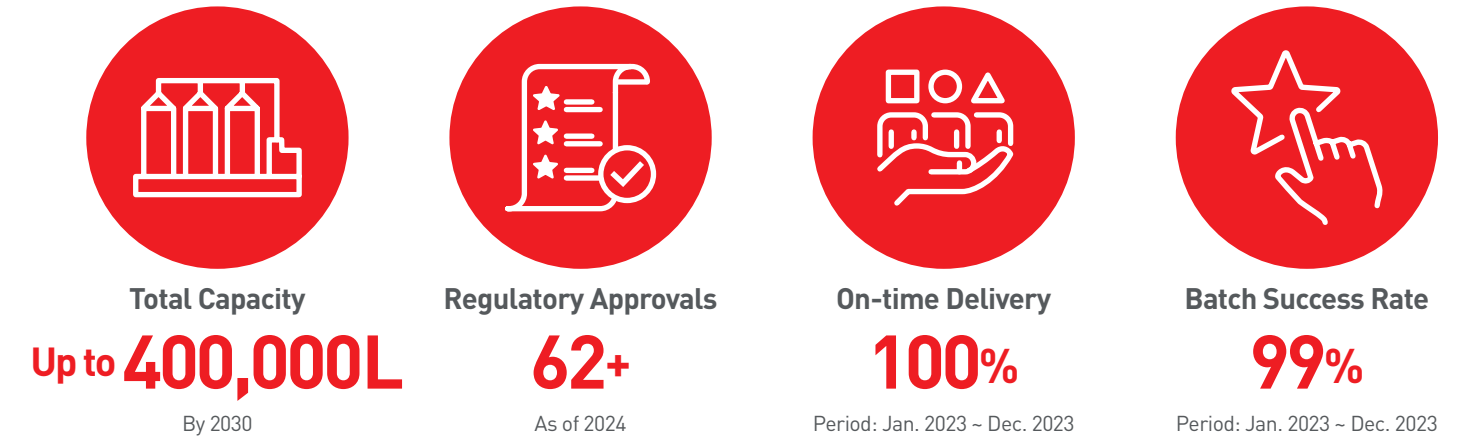
John Frio

- Director of Supply Chain Planning
- Working at the Syracuse Bio Campus since 2004

Business Overview

Delivering Manufacturing Excellence

LOTTE BIOLOGICS, a dedicated CDMO partner, is continuously expanding its capacity and capabilities to fully support its partners' customized needs for biologics development and manufacturing. In order to deliver the highest quality biologics promptly and seamlessly, we provide fully integrated services from early-stage development to clinical and commercial manufacturing at the most appropriate campus.



Songdo Bio Campus

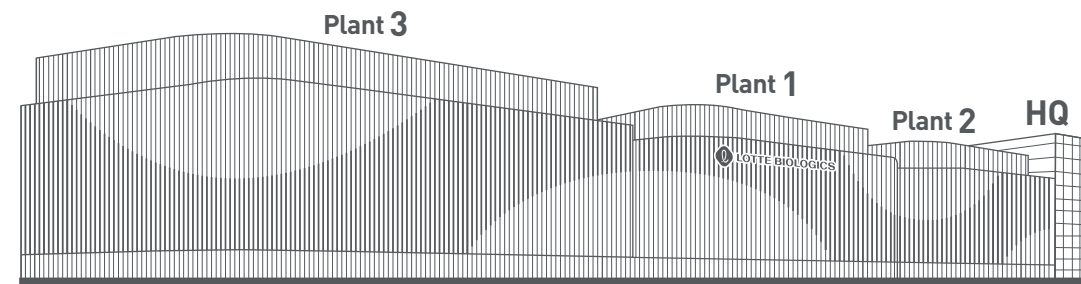
Incheon, South Korea

Headquarters
Seoul, South Korea

Mammalian-cell Culture Production

Total Capacity: Up to 360,000L

- Plant 1: 120,000L (15,000L x 8)
- Plant 2: 120,000L (15,000L x 8)
- Plant 3: 120,000L (15,000L x 8)



Timeline



Sales Office
Tokyo, Japan

Syracuse Bio Campus

New York, United States

Mammalian-cell Culture Production

Total Capacity: 40,000L (5,000L x 8)

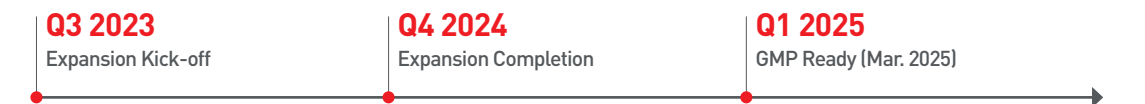


ADC Service

Your One-Stop ADC Service Provider

LOTTE BIOLOGICS will provide end-to-end development and manufacturing services for Antibody Drug Conjugates (ADCs) at a single campus. Removing the need to source your valuable product components from multiple campus, we offer a convenient conjugation service by manufacturing antibodies at the same campus.

ADC Timeline



Sales Office
Boston, United States

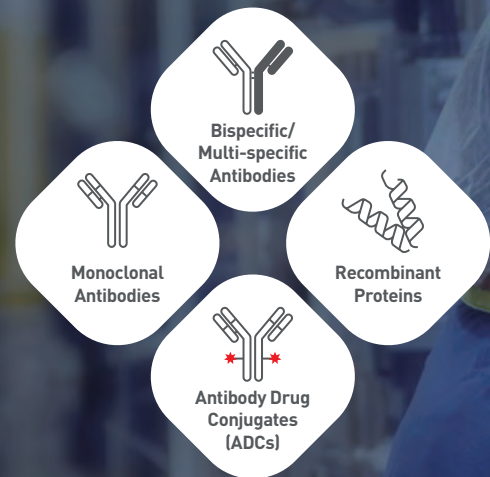
Our Offerings

End-to-End CDMO Solutions

Our Service

From Clinical Trials to Commercial Success

Modalities



Services

- [Mammalian]**
- Cell Line Development*
 - Cell Banking and Characterization
 - Process Development (Upstream/Downstream/Analytical Method)
 - Formulation Development*
 - Process Characterization/Optimization
 - Process Validation
 - GLP Tox Batch Manufacturing
 - cGMP Manufacturing
 - Release Testing
 - Stability Study
 - Regulatory Filing Support (IND/BLA/sBLA)

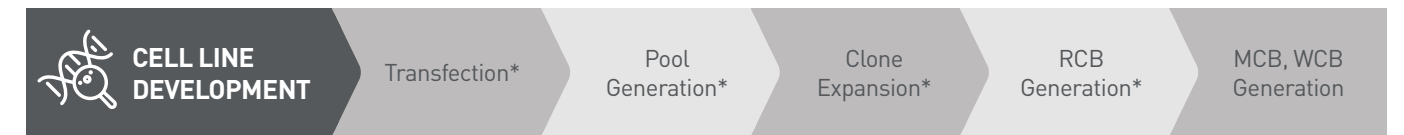
- [Bioconjugation]**
- Linker and Payload Synthesis*
 - cGMP Linker and Payload Manufacture*
 - Bioconjugation Process Development
 - Analytical Development
 - cGMP Bioconjugation Manufacture

* Strategic Partnership

Business Scope

One-Stop CDMO Services

A comprehensive service encompassing Cell Line Development, Drug Substance Manufacturing and Aseptic Fill & Finish.



* Strategic Partners: ExcellGene, +2 (undisclosed)



Process Development, Optimization & Characterization can be performed upon client's request.



** Strategic Partners: Global DP Supplier (undisclosed)

Facilities

Global Presence

Bio Campus	Syracuse	Songdo		
		Plan 1	Plant 2	Plant 3
Location	Syracuse, NY, US	Songdo, Incheon, South Korea		
Image				
Capacity	Stainless Steel	5,000L X 8	15,000L X 8	15,000L X 8
	Single Use*	Multiple 2,000L	Multiple 2,000L	Multiple 2,000L
Modalities	<ul style="list-style-type: none"> • Monoclonal Antibodies • Bispecific/Multi-specific Antibodies • Recombinant Proteins • Antibody Drug Conjugates (ADCs)** 	<ul style="list-style-type: none"> • Monoclonal Antibodies • Bispecific/Multi-specific Antibodies • Recombinant Proteins 		
cGMP Ready	In operation	Q4 2026	Q4 2028	Q4 2030

*Under Review
**Ready By 1Q 2025

MS&T

Swift Tech Transfer, Expert Support

LOTTE BIOLOGICS Manufacturing Science & Technology department has experience successfully **transferring 12+ molecules** over the past 15 years, with **5 being commercially approved and 6 processes being developed** from the Syracuse Bio Campus. We aim to effectively implement this and continue to utilize our experience at the Songdo Bio Campus.



Technology Transfer

- Develop and support the execution of scale-up studies from laboratory-scale to manufacturing scale
- Rapid technology transfer enabling swift commercialization, and ensuring uninterrupted supply of product



Lifecycle Management

- Technical support and life-cycle management from development through commercial products



Technical Support

- 24/7 day-to-day technical strategic leadership, troubleshooting and scientific expertise
- Provide resolution of process deviations/investigations and implementation of Corrective Action/Preventative Action (CAPA)



CMC Strategy and Authorship

- CMC strategy and authorship experience developing and transferring processes and methods in-house and to CMOs

QUALITY

Ensuring Quality Excellence

LOTTE BIOLOGICS ensures quality excellence by maintaining the same outstanding levels of quality, efficiency, and transparency long associated with the Syracuse Bio Campus. The company has successfully converted the existing quality system to fully support its CDMO operations, which will subsequently be integrated into the Songdo Bio Campus through cross-functional teams and project management units.



Quality Excellence

- Mature Quality Culture
- Experienced Operators and Analysts
- Highest Quality Standards



Efficiency

- Electronic Quality Systems (i.e., EDMS, EQMS, Learning Management System)
- Data Analytics and Process Automation (i.e., PAT)
- Machine Learning and Artificial Intelligence



Transparency

- Engineered Transparency for CDMO Partnership (Trust, Relationship Building)
- Client Engagement and Satisfaction

ESG

Sustainable Futures

LOTTE BIOLOGICS commits to actively addressing Environmental, Social, and Governance (ESG) aspects in our business by embodying core values through specific actions and demonstrating our commitment by obtaining relevant certifications for our global campus, in line with our company mission.

IN PROGRESS: PSCI, ISO(ISO 14001, ISO 45001), CDP, UNGC

BUSINESS CONTINUITY PLAN

Seamless Continuity, Uninterrupted Service

The Syracuse Bio Campus and Songdo Bio Campus function as respective contingency campus

- A dedicated and highly experienced team of individuals at the Syracuse Bio Campus has accumulated expertise through over 20 years of manufacturing biologics.
- The Songdo Bio Campus will begin the seamless manufacture of biologics by fully leveraging the experience and know-how of the Syracuse Bio Campus.
- Situated at geographically different locations, we ensure the provision of continuous and reliable supply along with the implementation of diverse manufacturing strategies.



Syracuse Bio Campus

U.S.-based Biologics Manufacturing Excellence

470+	99%	10+ years	62+	100%	40 days	99%
No. of Employees*	Employee Retention Post-Acquisition	Average Employee Tenure*	Global Product Approvals*	On Time Delivery**	Average Batch Release Cycle**	Batch Success Rates**

* As of 2024
** Period: Jan. 2023 ~ Dec. 2023

BUILDING 28

Raw Material Warehouse and Dispensary

BUILDING 58

Manufacturing Science and Technology Laboratory
Quality Control Laboratory
Biologics Manufacturing Facility

BUILDING 32

ADC Facility
Storage and Warehousing

BUILDING 73A

Cryogenic Drug Storage Facility

BUILDING 83

Security and Office Space

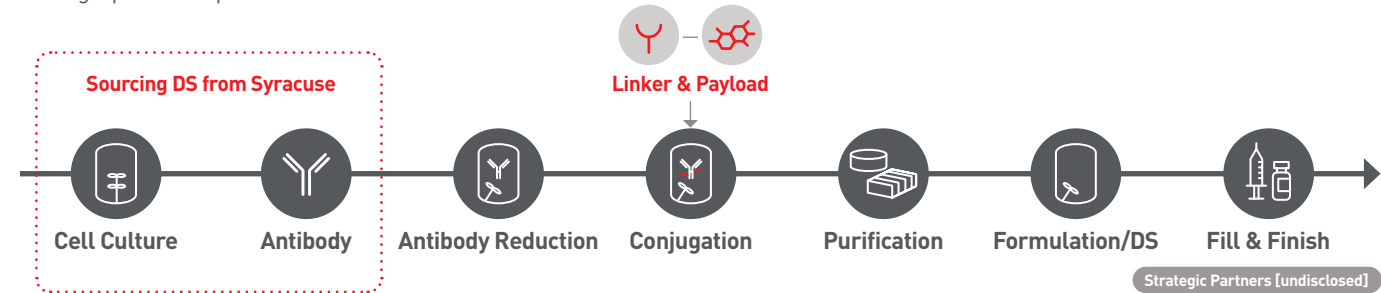
Capabilities Overview

<p>UPSTREAM & DOWNSTREAM</p> <ul style="list-style-type: none"> Inoculum 3 Inoculation Suites (Each capable of serving separate products) Cell Culture Seed Culture: 140L x 4 (N-2) 1,100L x 4 (N-1) Main Culture: 5,000L x 8 (N) } Stainless Steel Product Harvest 2 Centrifuge Suites Purification 2 Purification Suites with separate column packing areas 	<p>STORAGE</p> <ul style="list-style-type: none"> Cell Banking ~36,500 vials at -190°C Cryogenic Storage 60,000L (2 to 8°C, -20°C, -40°C, -60°C, and -70°C) 	<p>LABORATORIES</p> <ul style="list-style-type: none"> Quality Control Manufacturing Science & Technology
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ADC Service

One Stop ADC Service

LOTTE BIOLOGICS plans to establish a one-stop ADC service through multiple modes of expertise; accumulated know-how of antibody production from LOTTE BIOLOGICS, cutting-edge ADC development/analytical services and platform technology achieved through strategic partnerships.



Strategic Partnerships

Linker-payload service With **NJ*BIO**

- Linker-payload synthesis**
 - Synthetic process development and scale-up
- Analytical testing**
 - Linker and payload testing
 - Analytical characterization of ADC

Platform technology With **KANAPH**

- Solubility Enhanced Linkers**
 - Hydrophilic linkers at liquid formation
 - Highly stable ADCs
- Novel Payload**
 - Wide therapeutic windows with increased safety
 - Optimal for linker-payload combination

Songdo Bio Campus

Flexibility Designed To Meet Industry Needs

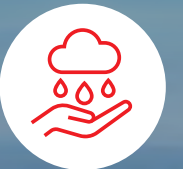
Up to **360,000L**



SOLAR PANELS
1.75 MW of Power Generation



HEAT RECYCLING
Utilization rate: GMP
CNC (Controlled/Clean Room): 50%,
NC (Not Controlled) Areas: 100%



RAINWATER HARVESTING
Minimized Water Footprint

Timeline



Talent Management

CURRENT TALENT

Songdo Bio Campus Leadership Profile

- Experts with related field experience
- An average of 17 years of experience in the biopharmaceutical industry
- Specialty in Engineering, Validation, Manufacturing, MSAT and Quality Control / Quality Assurance

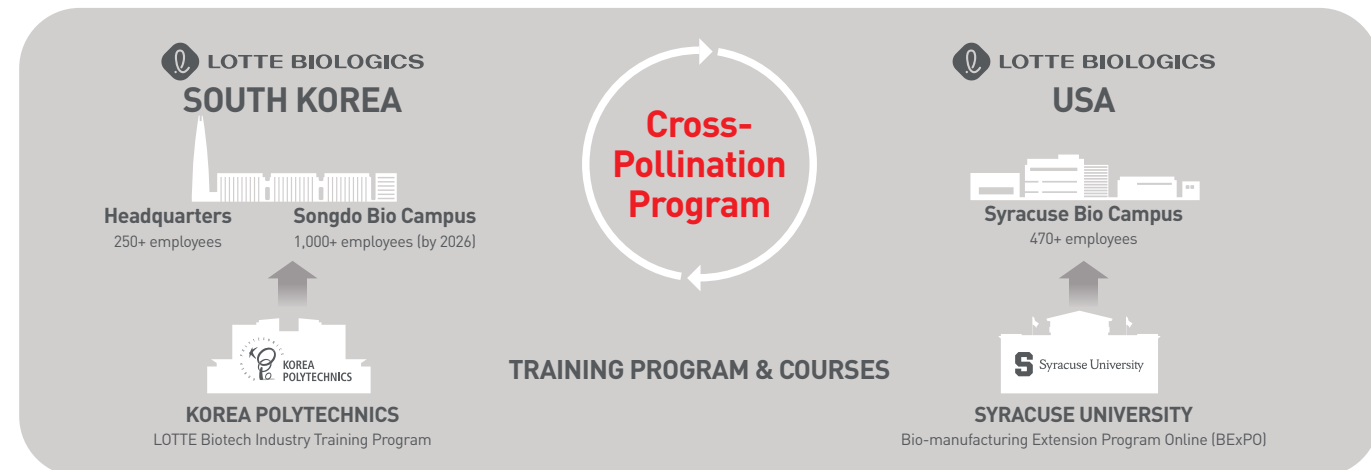
TALENT ACQUISITION

CROSS POLLINATION PROGRAM

- Between South Korea (Headquarters, Songdo Bio Campus) and USA (Syracuse Bio Campus)

Training Programs and Courses

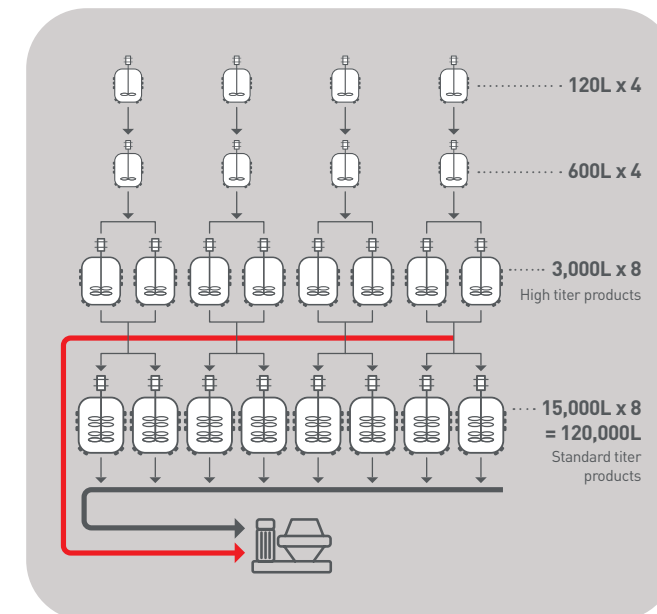
- KOREA POLYTECHNICS (LOTTE Biotech Industry Program)**
 - Training courses for industry-related skillsets
- SYRACUSE UNIVERSITY (Bio-manufacturing Extension Program Online (BExPO))**
 - Establish GMP training programs for future employees of LOTTE BIOLOGICS



Plant 1 Bioreactor Configuration

TiterFlex Quad™ System

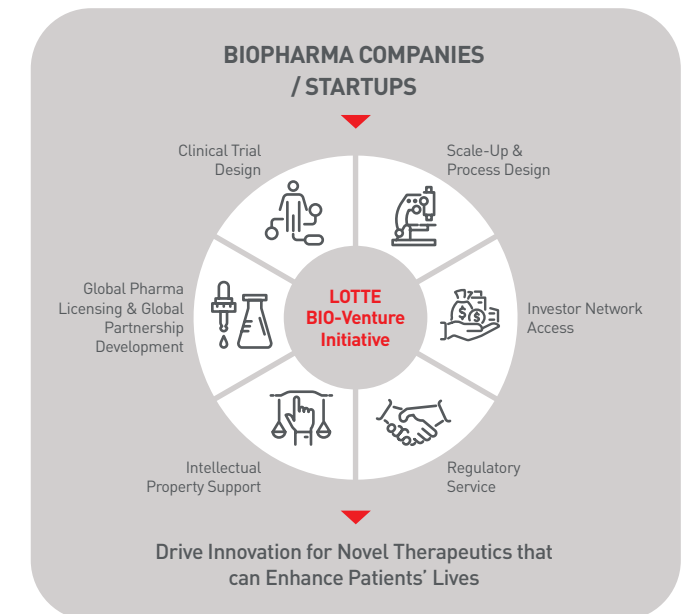
To meet the multifaceted demands of our clients, LOTTE BIOLOGICS plans to implement the TiterFlex Quad™ System, which can facilitate both high-titer as well as standard titer production by switching N-1 bioreactors as our main culture system responsive to clients' needs.



BIO-Venture Initiative

DRIVING INNOVATION

At LOTTE BIOLOGICS, we plan to establish a Bio-Venture Initiative to foster the growth of biotech companies and drive innovation by providing CMC technical service, networks of investors and legal service providers.



Printed with eco-friendly soybean oil



Meet Us

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Tel +82-2-3213-8250 | Email businessdevelopment@lotte.net

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LOTTE BIOLOGICS, Syracuse Bio Campus

6000 Thompson Rd, East Syracuse, NY 13057, United States

LOTTE BIOLOGICS, Boston Office

11F, 1 Broadway, Cambridge, MA 02142, United States



www.lottebiologics.com