In partnership with the **RIGHT Foundation** and **ADB** under Korea's **GTH-B** initiative.

Request for Proposals 2025

Training Award

RIGHT Foundation 4F, 68, Ujeongguk-ro, Jongno-gu, Seoul
T +82-2-6337-9400 F +82-2-6337-9400 rightfoundation.kr

Request for Proposals: TA

RIGHT-ADB Training Award for Vaccine Manufacturing

Executive Summary

Global health security and equitable access to essential medical countermeasures remain critical challenges today. A fundamental barrier to achieving health equity is the concentration of vaccine and biomanufacturing capabilities in high-income countries, which leaves low- and middle-income countries (LMICs) dependent on external supply chains for life-saving vaccines and biologics. WHO recently reported that the global vaccine supply depends heavily on only nine manufacturers.[1]

In response, there is growing global momentum to strengthen regionalized vaccine manufacturing through strategic investments in infrastructure, technology transfer, and most critically, human capital development. In 2022, the government of the Republic of Korea and WHO established a global training hub in biomanufacturing (GTH-B), with the goal of training a workforce from LMICs in manufacturing vaccines and biologics. To further advance and operationalize this initiative, the GTH-B Support Foundation was established in 2024

As part of Korea's GTH-B initiative, the RIGHT Foundation and the Asian Development Bank (ADB) are partnering to launch a joint Training Award (TA) focused on vaccine manufacturing capacity building. This collaboration will contribute to strengthening regionalized vaccine manufacturing by drawing on Korea's strengths in biomanufacturing excellence and innovation.

This Training Award will sponsor 40 trainees from LMICs to participate in a 9-week vaccine manufacturing training course to be delivered by the Korea National Institute for Bioprocessing Research and Training (K-NIBRT) in Incheon, Republic of Korea. The course focuses on the foundational principles of vaccine manufacturing across major vaccine platforms, as well as GMP requirements and quality control systems that are essential for sustainable biomanufacturing capacity.

1. Shared Vision

The RIGHT Foundation and ADB signed a Memorandum of Understanding in November 2024 to strengthen research, development and scale up of vaccines, therapeutics and diagnostics in the areas of mutual interests for the two organizations. The RIGHT-ADB Training Award focuses on the shared commitment to building sustainable biomanufacturing capacity that ensures equitable access to essential health technologies for those who need them most. Investing in people is essential to strengthening vaccine and biomanufacturing capabilities across low- and middle-income countries and so bolstering regional vaccine manufacturing sovereignty and global health security.

2. Overview of Training

Key training objectives

- Enhanced knowledge of vaccine and biopharmaceutical manufacturing processes including modern vaccine technologies
- Equip participants with practical, hands-on skills in operating equipment used in vaccine production
- Enhance knowledge in the application of Good Manufacturing Practices and quality control systems
- Enhanced knowledge of regulatory requirements including WHO prequalification procedures
- Enhanced capacity to train others and transfer knowledge in home institutions

Duration of training

Training will take place over 9 weeks both online and on-site in Incheon, Republic of Korea.

Training	Format	Duration	Dates
Didactic	Online	4 weeks	1 May – 29 May, 2026
Practical	In-person	5 weeks	13 July – 14 August, 2026

Training institution

K-NIBRT (Korean National Institute for Bioprocessing Research & Training) is a national initiative jointly led by the Ministry of Health and Welfare, the Ministry of Trade, Industry and Energy, Incheon Metropolitan City, Yonsei University, and Incheon Technopark. The K-NIBRT Education Centre was established to provide specialized training for professionals in the bioprocessing industry.
By adapting Ireland's NIBRT training model to reflect the Republic of Korea's strengths, the Centre offers a unique and comprehensive array of programs designed for job seekers, industry professionals, high school students, and international participants.

Training format and content

- **Didactic learning:** All participants will attend the didactic training online (20 days). The online learning will consist of recorded lectures and assessments with access to weekly written Q&A sessions.

  The didactic portion of the training will provide participants with an understanding of the fundamental principles of manufacturing the following major vaccine types: inactivated vaccines, live attenuated vaccines, protein subunit vaccines, nanoparticle vaccines, vectored vaccines, mRNA vaccines, and DNA vaccines.

- **Practical training:** Trainees will participate in interactive and hands-on training in groups of 10-12 trainees in the Republic of Korea (25 days of training over 5 weeks). The 5-week course runs from Monday to Friday in Incheon except for a 4-day training module at K-VCAST in Hwasun, 320km from Incheon.

  The hands-on training will focus on developing the practical skills necessary for the production of mRNA vaccines and the manufacturing processes for other major vaccine types.

  * Course details are provided in Appendix 1 below.

Assessment of the trainees

- All participants are expected to attend and actively participate in all training sessions and complete all online course assessments.
- There is no course work assigned beyond the scheduled online lectures and in-person practical sessions. However, depending on the participants' education and experience, self-study may be necessary during the course.
- All trainees who successfully complete the training (based on attendance, quiz performance, and participation) will receive a K-NIBRT certification signed by the President of Yonsei University, RIGHT Foundation Executive Director, and ADB Director of Human and Social Development.

3. Eligibility

Applicants must be individuals from LMICs who currently hold positions directly related to vaccine manufacturing in the private or public sectors.

Eligibility requirements:

Nationality and Residency	Nationals or citizens of LMICs who reside in a World Bank classified LMIC.
Educational Background	Hold either an associate's degree from a two-year college or a bachelor's degree from a university in a field related to the biopharmaceutical industry, such as biology, biological science, biochemistry, chemistry, or an equivalent qualification.
Work Experience	A minimum of five years of work experience in the vaccine and biopharmaceutical industry or equivalent experience in another relevant sector. Intermediate or higher-level experience in vaccine and biomanufacturing processes is considered an asset.

Relevant Position	Currently holds a position relevant to the training program in biomanufacturing or a related field.
Employment	Currently employed by a biomanufacturing company or a related institution registered as a legal entity in an LMIC. Companies with existing or planned manufacturing facilities in the short term will be prioritized.
English Proficiency	Proficiency in spoken and written English sufficient for interactions with English-speaking instructors, colleagues, and training materials As a general reference, applicants are expected to have at least an upper-intermediate level of English (e.g., CEFR B2, IELTS 5.5, TOEFL iBT 72, TOEIC 600 or equivalent) to fully benefit from the program.

4. Application Guidelines

- Applicants must complete all required fields in an online application form and submit the required documents in PDA format via the Grant Management System **by 10:00 AM KST on 01 December 2025.**
- Only successful applicants will be notified via email.

Required Documents (submitted in English)

- **Video cover letter** (max. 2 minutes) as part of application which should include:
  - A brief personal introduction and the purpose for applying for the Training Award delivered in English
- **Curriculum vitae** (CV) that indicates current or most recent position held and other relevant professional experience in vaccine industry relevant to this training program (Max 3 pages, in reverse chronological order)
- **Letter of employment** from the employer to verify the current employment status, including the employment start date, current position title, and the name of the unit/department to which the applicant is affiliated
- **Letter of recommendation** from the applicant's supervisor or another relevant reporting authority, addressing the following points:
  - The applicant's ability to successfully undertake the proposed training and the potential to contribute to the manufacturing capacity at the institution
  - Acknowledgement of the time requirement for the course and a commitment to allow educational leave during the training period for the applicant if selected. (i.e., the applicant's participation in the course will not adversely affect the applicant's employment upon his/her return)
  - The referee's position and relationship to the applicant

5. Evaluation Criteria

- Educational background (relevance, degrees, awards, and recognitions)
- Professional background (position, relevance, duration)

- Potential to enhance the training's impact within the home institute, country, and the region

6. Scope of Support

Training program tuition will be fully covered as well as round-trip economy airfare to the Republic of Korea, visa application fees, course fees, accommodation, and meals for the duration of the course for the 5-week practical training at the K-NIBRT in Incheon. Participants will be accommodated in single rooms at the student dormitory on the Songdo Campus of Yonsei University, in Incheon.

References:

1. Global vaccine market report 2022: a shared understanding for equitable access to vaccines. Geneva: World Health Organization; 2023. Licence: CC BY-NC-SA 3.0 IGO.

Appendix 1. Tentative Course Agenda

Didactic Training (4 Modules over 4 weeks): 1 May – 29 May 2026

Module 1	**Basics for Biopharmaceutical and Bioprocess**
Week 1	• Introduction to Biopharma Industry • Biologics Regulation • Cell and Enzyme • Production of Recombinant Proteins in Eukaryotic Cells • Cell Growth • CMC (Chemistry, Manufacturing and Control)
Module 2	**Vaccine Manufacturing Process 1**
Week 2	• How Vaccines Work • Vaccine Registration and International Cooperation • Recent Trends in Vaccine Research and Development • mRNA Medicines & LNP • Bioprocessing Basics & Aseptic Processing • Performance Qualification and Process Validation for Vaccine
Module 3	**Vaccine Manufacturing Process 2**
Week 3	• Upstream Processing • Vaccine Manufacturing Process: DNA and mRNA • Downstream Processing • Formulation (Stability and Quality Control, Quality Issues for Advanced Products) • Lyophilization (Freeze-drying, unit operation, cycle development, understanding and monitoring process) • Performance Qualification and Process Validation for Vaccine
Module 4	**Regulation of Biopharmaceuticals**
Week 4	• Regulatory Affairs (RA) of Pharmaceutical in Korea • ICH Guidelines • WHO Pre-qualification • Pharmacopeial and International Collaboration • Accelerated approval of COVID-19 vaccine during the pandemic • Clinical Research Industry Trends and International Standards

Practical Training (5 Modules over 5 weeks): 13 July – 14 August 2026

Module 1	**Fermentation**

	• Introduction to Gene Transformation (Chemical-transformation, Electro-transformation) • Microbial Subculture (Liquid, Solid Media) Transformation (E.coli + Plasmid) Stock - Media Preparation • Equipment Preparation (Reactor Assembly, Sensor Calibration) • Microbiome Assessment • Equipment Preparation • Pilot-scale Bioreactor Operation (50L) • Centrifuge (Lab-scale Centrifuge, Pilot-scale Centrifuge)
Module 2	**Purification**
	• Technical Background and Basic Protocols for pDNA Purification & In Vitro Transcription • Filter Integrity Test • Normal flow filtration (NFF) • Tangential flow filtration (TFF) • Chromatography System • Chromatography Column Packing and evaluation
Module 3	**Finalization**
	• Clean room gowning • Aseptic simulation • LNP (Lipid Nano Particle) Manufacturing Process • LNP Characterization - Encapsulation Efficacy • Environment monitoring • mRNA intactness • Lipid content
Module 4	**Bio-Analysis & QA**
	• Process related impurities • Microbial Test • Microbial Identification • ICH Q7A GMPs for Active Pharmaceutical Ingredients Training Course • ICH Q9 Quality Risk Management • Utility and Site tour (Bioprocessing technology training center & Bio & Pharmaceutical commercialization center)
Module 5	**QC & Release**
	• Role of a regulatory agency • Understanding of Pharmaceutical affairs law • Theory of vaccine quality testing • Training of Vaccine quality test - pH, Insoluble particle test etc.) - Endotoxin test • Practices of RNA extraction • Digital PCR • Theory of mico-plasma test • Site tour: Vaccine Center for Assisting Society & Technology (K-VCAST), Songdo manufacturing site

LOCATION

(03145) 4F Dongduk Building, 68, Ujeongguk-ro, Jongno-gu, Seoul, Republic of Korea

EMAIL

RFP@rightfoundation.kr

WEBSITE

https://rightfoundation.kr/en/

CONTACT US

+82-2-6337-9400

ADB KOREA e-Asia Fund Research Investment for the Global Health Technologies RIGHT Foundation GTHBSF Global Training Hub for Biomanufacturing Support Foundation 글로벌바이오인력양성허브 지원재단

RIGHT Foundation 4F, 68, Ujeongguk-ro, Jongno-gu, Seoul
T +82-2-6337-9400 · F +82-2-6337-9400 rightfoundation.kr

In partnership with the **RIGHT Foundation** and **ADB** under Korea's **GTH-B** initiative.