

PARTNER PROFILE | Korea University Anam Hospital (Oncology) & KIST

Two complementary Korean entities seeking to join a forming EU consortium | Call HORIZON-MISS-2026-02-CANCER-01

South Korea is a Horizon Europe Pillar II Associated Country. Both entities are eligible for direct EU funding and work-package co-leadership on equal terms with EU partners.

KOREA UNIVERSITY ANAM HOSPITAL — DIVISION OF ONCOLOGY | SEOUL, REPUBLIC OF KOREA

Principal Investigator: Prof. Kyong Hwa Park, MD, PhD

Korea University Anam Hospital is a leading tertiary cancer center in South Korea. The Division of Oncology brings a unique combination of operational digital twin infrastructure, an annotated clinical cohort, and translational immunology expertise. Key competences:

- **Operational EMR-linked cancer-patient digital twin platform:** a clinical system already in active use, generating per-patient digital twins from real-time EMR data as time-series, with visual mapping of primary and metastatic tumor locations on digital organ phantoms.
- **Early-stage TNBC clinical cohort with serial biopsy:** ~20 patients with triple-negative breast cancer; continuous tissue acquisition at diagnosis and treatment-response time points; clinical data integrated as time-series into the digital twin.
- **Tumor immunology & cancer vaccine expertise:** HSP90 epitope-based vaccine (Phase 1 completed), first-in-human AST-021p trial, immune checkpoint inhibitor indication discovery (KM-06); 3 patents (2019–2023).
- **Multicenter clinical-trial and data-infrastructure leadership:** K-MASTER coordinating center (2017–2021), AACR-GENIE PI (2023–present), Korean ARPA-H NeoVax-K co-PI (2026–2030); 55 SCI(E) publications in 5 years; 2024 AACR–KCR Joint Conference Co-chair.

KIST — KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY | SEOUL, REPUBLIC OF KOREA

Imaging & Simulation Team (Dr. Moon Hyuk-Jun) & Multi-Omics & Molecular Biology Team (Dr. Seo Seung-Bum)

KIST is South Korea's flagship government-funded research institute, internationally recognized for translational science at the intersection of engineering and biomedicine. Two specialist teams contribute to the VHT package:

- **Imaging-based digital organ phantom & simulation (Dr. Moon team):** generation of patient-specific digital organ phantoms from MRI/CT imaging data; physical simulation of primary and metastatic tumor locations; imaging pipeline designed to interface directly with the KU Anam clinical digital twin platform.
- **Multi-omics molecular-level twin (Dr. Seo team):** multi-omics-based characterization of the tumor microenvironment (TME); integration of genomic, transcriptomic and proteomic data into

a molecular-level patient twin; supports treatment-response prediction from the molecular layer upward.

- **End-to-end VHT integration capability:** the two KIST teams are designed to be organically coupled with the KU Anam clinical platform, enabling a unified molecular–imaging–clinical multi-scale patient twin.

WHAT THE PACKAGE OFFERS

Together, the two Korean institutions cover three of the four technical pillars required by HORIZON-MISS-2026-02-CANCER-01: clinical validation and patient cohorts (KU Anam); AI/imaging integration and physical simulation (KIST — imaging team); and multi-omics and molecular integration (KIST — molecular team). The fourth pillar — mechanistic/multiscale modelling — is the primary competence the package seeks from a European consortium anchor. What no standard European academic partner brings is an operational, EMR-linked cancer-patient digital twin platform already generating real-world clinical data: this is the Korean package's unique differentiator. Both entities hold Pillar II eligibility for direct EU funding and are prepared to take on funded, named WP roles within a forming consortium.

CONTACT / EXPRESSION OF INTEREST

Korea Institute of Science and Technology (KIST) Europe:

Dr. Juyong Yoon | [juyong.yoon@kist-europe.de]