KYAN Technologies to Present New Data on Optim.AI™ Immunotherapy and Real-World Pan-Cancer Utility at AACR 2025

Data shows validation of FPM platform in breast cancer immunotherapy and 85% clinical concordance across over 20 solid cancers and hematologic malignancies.

SINGAPORE, SINGAPORE, SINGAPORE, April 19, 2025 /EINPresswire.com/ -- KYAN Technologies Pte. Ltd. (“KYAN”) today announced that two abstracts will be presented on its Optim.AI™ functional precision medicine platform at the American Association for Cancer Research (AACR) Annual Meeting 2025, taking place April 25 – 30, in Chicago, Illinois.

The two studies highlight the clinical utility and translational potential of Optim.AI™, a platform that rapidly identifies effective treatment combinations through ex vivo functional screening and combinatorial analytics, supporting both personalized patient care and oncology drug development.

BREAST CANCER IMMUNOTHERAPY: FUNCTIONAL COMBINATORIAL EVALUATION

In this study, KYAN researchers applied an experimental adaptation of the Optim.AI™ platform to evaluate immunotherapy combinations in breast cancer. The approach integrated high-content imaging, short-term 3D tumor-immune co-culture, and combinatorial analysis to rank the effectiveness of immunotherapy combinations in HER2-positive and triple-negative breast cancer spheroids co-cultured with peripheral blood mononuclear cells (PBMCs). The platform enabled real-time assessment of immune cell infiltration and tumor-specific killing, allowing for the phenotypic ranking of all possible combinations of from12 FDA-approved therapies, including ADCC/CDC antibodies and antibody-drug conjugates (ADCs).

“This study bridges a key gap in immunotherapy testing,” said Sharon Pei Yi Chan, Scientist at KYAN Technologies. “By integrating multi-cellular, high-content screening with the Optim.AI™ platform, we’re able to evaluate immunotherapy-based combinations in clinically relevant tumor models, using limited material and within a rapid timeframe. This creates a new path for functional, patient-specific immuno-oncology strategies.”

REAL-WORLD CONCORDANCE: MULTI-CANCER CLINICAL VALIDATION

A second study evaluated 75 retrospective and prospective clinical cases across more than 20

cancer types to assess the real-world concordance of Optim.AI™ with patient treatment outcomes. The platform demonstrated 85.4% concordance with actual clinical responses, accurately identifying both effective and resistant regimens. Cancer types included non-Hodgkin lymphoma, acute myeloid leukemia, sarcoma, breast, colorectal and ovarian cancers, amongst others, with sample sources such as bone marrow, peripheral blood, tissue biopsies, and pleural effusions. These results reinforce the platform's ability to distinguish treatments associated with clinical benefit from those unlikely to be effective, underscoring its clinical application across a diverse set of patient cases.

"These results validate the ability of Optim.AI™ to support therapeutic decision-making by accurately predicting both response and resistance," said Dr. Edward Kai-Hua Chow, Chief Scientific Officer at KYAN Technologies. "By functionally interrogating hundreds of treatment permutations using patient-derived samples, we can deliver clinically meaningful insights within days, helping clinicians make more informed and timely therapy choices."

"We're bridging the cancer care gap by advancing revolutionary technologies that are clinically validated and built for real-world use," said Hugo Saavedra, CEO of KYAN Technologies. "Optim.AI™ is uniquely positioned to transform drug development and how treatment decisions are made by combining speed, precision, and wide applicability in a way traditional approaches simply can't. These new studies show how Optim.AI™ can help drug developers and clinicians uncover new and effective treatment options, whether through cutting-edge immunotherapy testing or pan-cancer functional precision medicine."

Details on presentations are below:

Abstract Control Number: 4450
Title: Real-world concordance analysis of a combinatorial functional precision medicine platform, Optim.AI™, in both solid and hematological cancers
Session Title: Targeted Therapies and Combinations 4
Session Start Time: 4/30/2025 9:00:00 AM
Session End Time: 4/30/2025 12:00:00 PM
Location: Poster Section 35
Poster Board Number: 20
Presentation Number: 7214

Abstract Control Number: 4534
Title: Application of Optim.AI™ platform for predictive evaluation of immunotherapy combinations in breast cancer
Session Title: Drug Discovery Assay Technologies
Session Start Time: 4/29/2025 2:00:00 PM
Session End Time: 4/29/2025 5:00:00 PM
Location: Poster Section 16
Poster Board Number: 20

Presentation Number: 5492

ABOUT KYAN TECHNOLOGIES

KYAN Technologies is a functional precision medicine company advancing a platform for rapid, combination-focused cancer treatment insights. Its proprietary platform, Optim.AI™, uses experimentally derived data from patient tumor samples or preclinical models to identify effective drug combinations across a broad therapeutic search space.

KYAN's early work in combination therapy optimization revealed insights that led to the development of a scalable phenotypic screening approach designed to assess actual treatment response. Built on a clinically validated, evidence-based foundation, Optim.AI™ has demonstrated predictive accuracy across diverse cancer types and now informs both personalized oncology care and translational research, bringing clinically grounded understanding earlier into the drug development process.

KYAN is headquartered in Singapore and is expanding U.S. operations through a collaboration with Mayo Clinic Laboratories to support CLIA validation and scale drug development partnerships. The company will also participate in the AACR Oncology Industry Partnering Event to advance strategic collaborations with pharma and biotech innovators.

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