

TD2 to Present Precision Preclinical Applications for Glioblastoma and Non-Small Cell Lung Cancer at AACR Annual Meeting

Three Poster Presentations Highlight Novel Data

SCOTTSDALE, ARIZONA, UNITED STATES, April 3, 2024 /EINPresswire.com/ -- Translational Drug Development (TD2), a precision oncology contract research organization (CRO), announces the presentation of their preclinical results of three novel studies targeting non-small cell lung cancer and glioblastoma at the American Association for Cancer Research (AACR) Annual Meeting in San Diego, CA., to be held April 8-11, 2024.

The first presentation focuses on the therapeutic opportunity for isoform restricted HDAC inhibitors in combating KRAS/LKB1 mutant NSCLC that clinically shows resistance to conventional therapy. Previous studies have demonstrated that metabolic alterations associated with these mutations can create vulnerabilities that can be exploited therapeutically. Specifically, inhibition of either HDAC3 or HDAC6 has shown promising results in preclinical models of KRAS/LKB1 mutant NSCLC that are not observed in KRAS/p53 mutant NSCLC.

The studies evaluated two novel HDAC inhibitors: GB-1101, that inhibits HDAC3 and HDAC6, and GB-3103, that inhibits HDAC1, 3, 6, and 10. Using both in vitro and in vivo models, TD2 determined the therapeutic benefit of these inhibitors alone and in combination with the MEK inhibitor trametinib. This data demonstrates unique activity in KRAS/LKB1 mutant human NSCLC compared to human NSCLC harboring KRAS/p53 mutations.

The second presentation underscores the multifaceted utility of [flow cytometry](#) in assessing cell cycle arrest, offering a comprehensive view of drug effects on cancer cell lines and in the complex tumor microenvironment in vivo. Integrating flow cytometry into early biomarker monitoring of tumor cell cycle changes holds immense promise for guiding the development of novel therapeutic strategies and optimizing treatment regimens.

"We are thrilled to unveil the therapeutic opportunity for two novel isoform restricted HDAC inhibitors that show promise for preventing acquired resistance or restoring trametinib sensitivity in lung cancers with a specific mutational context," said Paul Gonzales, Vice President of Preclinical Development at TD2. "Additionally, our second presentation elucidates the utility of flow cytometry to assess cell cycle checkpoints utilizing in vitro and ex vivo samples, we aim to pave the way for biomarker analysis of strategic combination therapies and ultimately improve

the power of preclinical studies."

The third presentation highlights the benefits of utilizing Patient Derived Xenograft (PDX) models for studying glioblastoma. TD2 offers access to over 100 meticulously annotated GBM PDX models, supplemented with comprehensive patient diagnosis and treatment history. Of these, 68 models feature whole exome sequencing (WES) data, facilitating precise model selection to align with therapeutic development strategies.

These advancements signify a paradigm shift in preclinical research, offering a more streamlined approach to testing novel therapeutic agents. By closely resembling the clinical development path, PDX models hold the potential to expedite the translation of promising treatments for glioblastoma.

TD2 will be onsite at AACR to discuss these important results as well as host an exhibitor booth, #3557.

[Abstract 510](#): Flow cytometry evaluation of cell cycle arrest in A549 human non-small cell lung cancer cells and tumors following treatment with cell cycle inhibitors: A multifaceted approach to targeting cancer (Sunday, Apr 7, 1:30 - 5:00 PM) Session: Cell Cycle, Transcription Regulation, and Anticancer Drug Action, Poster Section 21 Poster Board Number 7

Abstract 6491: Epigenetic-based combinatorial therapy is synergistic in KRAS/LKB1 mutant non-small cell lung cancers (Tuesday, Apr 9, 1:30 - 5:00 PM) Session: Targeting Kinase and ERK Pathways, Poster Section 46 Poster Board Number 8

Abstract 6908: Integrating PDX GBM in vivo models with patient history and whole exome sequencing: Advancing relevance and precision in preclinical studies (Wednesday, Apr 10, 9:00 - 12:30 PM) Session: Preclinical Studies of Cancer, Poster Section 10 Poster Board Number 19

[About TD2](#)

TD2 is a leader in precision oncology, providing innovative services for improved drug development. Using a dedicated, expert team with broad experience and understanding in cancer medicine, TD2 is uniquely positioned to support accelerated development of novel therapeutics. Rigorous and high-throughput translational preclinical development services, combined with regulatory affairs expertise, enables customized clinical trial design and execution. Our unique Oncology Ecosystem encourages the timely selection of patient populations who are most likely to benefit from a new agent, and the rapid identification of clinically significant endpoints. TD2 is committed to reducing the risks and uncertainty inherent in the drug development process with the ultimate goal of accelerating patient access to promising treatments. For more information, visit www.TD2inc.com.

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