

UbiVac Presents 1st Report of In Vivo Generated T Cell Receptor (TCR) to Dark Genome-Derived Cancer's Dark Matter

UbiVac's DPV-001 induces Development of 1st in-patient generated TCR to Non-Small Cell Lung Cancer's "Dark Matter" – Targets cancer without apparent toxicity

HONOLULU, HI, UNITED STATES, May 5, 2025 /EINPresswire.com/ -- UbiVac, www.ubivac.com, a private, clinical-stage Immuno-oncology & Cancer Target Discovery Company, today announced presentation at the American Association of Immunologists (AAI) Annual Meeting .



Pioneering the World's 1st Dark Matter Cancer Immunotherapy

UbiVac's Commitment to Cancer Treatment



UbiVac is thrilled to announce the first report of a TCR to Dark genome-derived "Dark Matter" that was induced in a patient, recognizes and destroys cancer, and has a solid safety profile."

Bernard A Fox, PhD, Founder & CEO

UbiVac's mission is to develop next-generation immunotherapies like DPV-001 that generate broad, multi-targeted immune responses—including against Dark Genome-derived cancer's "Dark Matter"—to reduce tumor escape and drive durable clinical benefit.

Targeting Cancer's Dark Genome: First Vaccine-Induced TCR Against Dark Matter Antigen

UbiVac's lead clinical-stage immunotherapy, DPV-001, was first evaluated as adjuvant therapy for non-small cell lung cancer in an NCI-funded trial. At AAI 2025, UbiVac

presented a landmark finding from that study:

1. A Dark Matter antigen—derived from the non-coding, or "dark," genome—was identified in the patient's tumor.
2. DPV-001 contained this specific dark matter antigen and induced, in the patient, a tumor-

destructive T cell receptor (TCR) against it.

3. The TCR response occurred without adverse events, suggesting selectivity for cancer cells and sparing of normal tissue.
4. The patient remains alive and disease-free 10 years post-treatment.

UbiVac believes this represents the first documented case of a vaccine-induced TCR targeting a Dark Genome-derived Dark Matter antigen—offering compelling evidence of both cancer specificity and safety.

About Cancer's Dark Matter

Cancer's dark matter represents a spectrum of previously unknown proteins that have recently been identified as antigens expressed on the surface of cancer cells but not on normal cells or the thymus. Some of these dark matter proteins appear to be responsible for cancer's malignant properties, making them valuable targets for an anti-cancer immune response. UbiVac believes DPV-001 is the first cancer immunotherapy to include cancer's dark matter in a form that can induce a destructive anti-cancer immune response and established its therapeutic efficacy in more than a decade' worth of preclinical studies.

About DPV-001

[UbiVac's DRibble Platform Vaccine \(DPV\) technology](#) is a novel first-in-class cancer vaccine immunotherapy that [has tripled response rates](#) in patients with recurrent or metastatic head and neck squamous cell cancer (HNSCC). DPV-001 was developed to be used as combination immunotherapy for most solid cancers, including cancers of the breast, lung, prostate, stomach, colon, pancreas, ovary, brain, and others. DPV-001 contains recently described non-canonical, non-mutated shared alternative neoantigens, also termed cancer's "dark matter", plus more than 300 antigens overexpressed by the average solid cancer. This allows DPV-001 to be available off-the-shelf without having to manufacture a patient specific vaccine. Additionally, DPV-001 can be administered without having to match a patients HLA tissue antigens.

About Lung Cancer

Lung cancer is the leading cause of cancer death in the USA and worldwide, accounting for about 1 in 5 of all cancer deaths annually. The American Cancer Society estimates that each year, more people die of lung cancer than of colon, breast, and prostate cancers combined. UbiVac believes the early data presented here, as well as previous data showing DPV-001 contains several hundred antigens present in the majority of human cancers, including cancers of the lung, prostate, breast, brain, pancreas, stomach, ovaries, bladder, suggests that DPV-001 can provide a trigger to induce cancer destructive immune responses and increase the efficacy of checkpoint blockade or chemotherapy.

About UbiVac

UbiVac is a privately held, Clinical Stage Immunotherapy & Cancer Target Discovery Company, with First-in-Human Combination Immunotherapies that Include Cancer's Dark Matter - the Newly Discovered Non-Mutated Shared Alternative Cancer Neoantigens derived from the dark genome. UbiVac is actively looking for partners to accelerate development of this disruptive technology.

DPV-001 is UbiVac's lead agent and is a first-in-class platform technology that couples an off-the-shelf DC-targeted microvesicle containing cancer's dark matter plus more than 300 cancer antigens for most adenocarcinomas and squamous cell cancers. DPV-001 also contains multiple TLR/NOD agonists and DAMPs that are effective at supporting anti-cancer immune responses. UbiVac believes that DPV-001 is highly complementary to current and developing immunotherapy, adoptive immunotherapy, chemotherapy and small molecule drug portfolios, and preliminary clinical data suggests it may be effective at increasing response rates in patients that have failed to respond to anti-PD-1/anti-PD-L1. UbiVac also has a pipeline of agents under development for the treatment of melanoma and thyroid cancer, and to prevent cancer in patients at high risk of developing disease.

Bernard A Fox

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