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THE UNIVERSITY OF TEXAS

**MD Anderson  
Cancer Center**

Making Cancer History®

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## **MD Anderson and SNIPR BIOME collaborate to advance next-generation CRISPR microbiome therapeutics**

Research focused on improving immunotherapy-related side effects for patients with cancer

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HOUSTON and COPENHAGEN, Denmark — [The University of Texas MD Anderson Cancer Center](http://www.mdanderson.org) and [SNIPR BIOME](http://www.sniprbiome.com) today announced a strategic collaboration to advance new CRISPR-based microbiome therapeutics to reduce immune-related adverse events (irAE) in patients being treated with combined [immune checkpoint inhibitors](#). The agreement pairs SNIPR BIOME's innovative CRISPR-based therapeutic entities with the expertise and capabilities of MD Anderson's [Program for Innovative Microbiome and Translational Research](#) (PRIME-TR).

Under the agreement, MD Anderson and SNIPR BIOME will collaborate to validate proprietary microbiome profiles and to develop CRISPR-armed therapeutic entities to modulate the gut microbiota with the goal of reducing toxicity while preserving response to treatment with immune checkpoint inhibitors for cancer. By reducing irAE, the research aims to improve the safety profile of this effective form of therapy, with the potential to expand its use and to increase clinical benefit. The agreement includes pre-clinical research and the potential for a clinical study.

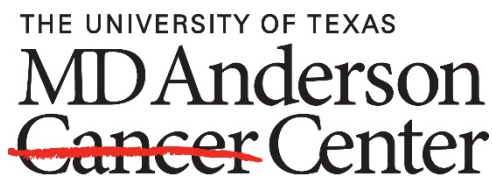
“Treatment with immune checkpoint inhibitors and other forms of immunotherapy has dramatically improved outcomes for patients with cancer, but these therapies can cause significant side effects,” said [Jennifer Wargo, M.D.](#), professor of [Genomic Medicine](#) and [Surgical Oncology](#) and director of PRIME-TR at MD Anderson. “Microbes within the gut of patients have been shown to influence responses to immunotherapy, and we now have evidence that they can impact toxicity as well. We are excited about applying SNIPR BIOME’s unique technologies to manipulate gut microbes and reduce toxicity while preserving response to cancer immunotherapy, with the ultimate goal of improving care for all patients.”

PRIME-TR is a novel institutional platform that aims to transform the landscape of cancer treatment, diagnosis and prevention through studying and targeting the microbiome at multiple different niches. Supported by MD Anderson’s [Moon Shots Program](#)®, PRIME-TR works to advance [microbiome-based applications](#) as a complement to other foundational discoveries and cancer treatments, including immune-based strategies and other therapeutic approaches.

“This agreement is an example of how PRIME-TR enables the translation of research findings with the goal of improving outcomes to cancer therapy through microbiome modulation,” said Nadim Ajami, Ph.D., executive director for scientific research for PRIME-TR at MD Anderson. “We prioritize collaborations with investigators, both at MD Anderson and worldwide, to conduct microbiome profiling studies, research and development efforts, as well as clinical and translational interventional trials.”

Results of a study led by Wargo together with leading microbiome experts, published in [Nature Medicine](#), demonstrated that distinct bacterial species in the gut microbiome are significantly associated with severe irAE in patients with advanced melanoma treated with combined immune checkpoint blockade targeting CTLA-4 and PD-1. Findings from this study provide the rationale to target these via CRISPR-based approaches, with the goal of improving therapeutic benefit and limiting treatment-related toxicity to cancer [immunotherapy](#).

“MD Anderson researchers and clinicians have expertise in immunotherapies of cancers and are pioneers in understanding the complex interplay between the gut microbiome homeostasis and the immune system,” said Christian Grøndahl, Dr. Med., Ph.D., chief executive officer and co-founder of SNIPR BIOME. “We look forward to working closely with the PRIME-TR team to apply our CRISPR technology to this promising field of research and to advance development of our lead CRISPRbiotic® therapy as a potential adjunct treatment in patients with cancer using immune checkpoint inhibitors.”



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#### **About SNIPR BIOME**

SNIPR BIOME is a leading CRISPR and microbiome biotech company incorporated in Copenhagen, Denmark. SNIPR BIOME is engaged in the discovery and development of CRISPR/Cas-based drugs deploying its proprietary and patent-protected CRISPR/Cas platform. The company applies its CRISPR technologies to selectively target microbial pathogens and remodel the microbiome to address important unmet medical needs. SNIPR BIOME is pioneering a novel use of CRISPR/Cas technology to selectively and precisely eradicate target bacteria, while leaving the rest of the patient’s microbial community intact. SNIPR BIOME was recently awarded a grant by CARB-X of up to 10.2m USD for CRISPR-based treatment of hematological cancer patients at risk of neutropenic fever and life-threatening infections that is expected to enter clinical trials early next year. SNIPR BIOME also develops proprietary technologies for *in situ* production of therapeutics in the human microbiome. SNIPR BIOME and Novo Nordisk recently entered into a research agreement on an undisclosed target to evaluate this technology for *in situ* production of therapeutics in the human microbiome. SNIPR BIOME holds an extensive portfolio of granted patents protecting CRISPR modification of microbiota as an adjunct to cancer therapy, vaccine therapy and other immunotherapies. In March 2019, SNIPR BIOME closed a \$50 million Series A financing by Lundbeckfonden Emerge (Copenhagen), Life Sciences Partners (Amsterdam), North-East Family Office (Copenhagen) and Wellington Partners (Munich).

For more details, please visit: [www.sniprbiome.com](http://www.sniprbiome.com)

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**About MD Anderson**

[The University of Texas MD Anderson Cancer Center](#) in Houston ranks as one of the world's most respected centers focused on cancer patient care, research, education and prevention. The institution's sole mission is to end cancer for patients and their families around the world. MD Anderson is one of only 51 comprehensive cancer centers designated by the National Cancer Institute (NCI). MD Anderson is No.1 for cancer in U.S. News & World Report's "Best Hospitals" rankings. It has been named one of the nation's top two hospitals for cancer since the rankings began in 1990 and has ranked first 16 times in the last 19 years. MD Anderson receives a cancer center support grant from the NCI of the National Institutes of Health (P30 CA016672).