MUSC launches first clinical trial involving two powerful drugs for lung cancer

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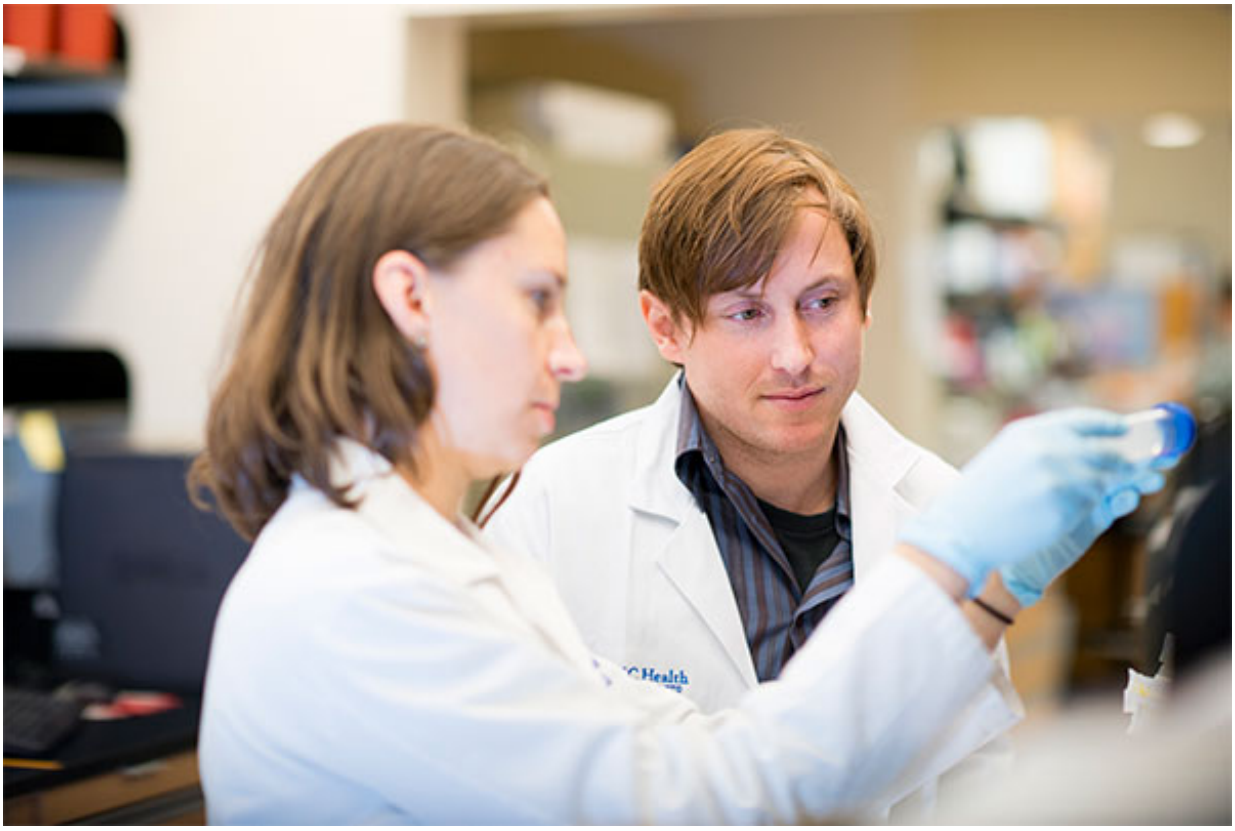

Cancer immunologist Mark Rubinstein (above right) helped design the clinical trial that will test whether a two-drug combination can boost some lung cancer patients' immune response to the disease. Credit: Brennan Wesley

In an international first, people with lung cancer will find out if a new

combination of drugs can kick-start their bodies' ability to fight back against the disease. They'll be part of a clinical trial now enrolling participants at the Medical University of South Carolina.

The trial will focus on people with non-small cell lung cancer, the most common type. Medical oncologist John Wrangle, M.D., will serve as principal investigator on the three-year project. Mark Rubinstein, Ph.D., worked with him to design the trial. Wrangle said improving immunotherapy is the most important clinical research question being asked today for patients with advanced lung cancer. "While recently approved immunotherapies are extremely exciting and better than chemotherapy for second-line therapy, about 80 percent of patients will not respond.

"By combining two kinds of immunotherapy, we feel we have designed a treatment that is very promising to extend the remarkable benefit experienced by some patients to a larger percentage of people with advanced lung cancer," Wrangle said.

Rubinstein said the research will test the effectiveness of using the checkpoint inhibitor nivolumab with the immune stimulation drug ALT-803. He explained how they work, starting with the checkpoint inhibitor.

"Scientists know that for many kinds of cancers, there are immune cells inside tumors," Rubinstein said. The problem is, the tumors come up with ways to keep the immune cells from fighting off the cancer, creating what doctors call checkpoints. That's where checkpoint inhibitors such as the drug nivolumab come in. They block those checkpoints, helping the immune cells fight the cancer. For about 5 percent of the people who get this drug, it's highly effective, getting rid of their tumors.

"While those results are wonderful, many patients don't yet benefit from this therapy," Rubinstein said. "To improve its effectiveness, we're testing the addition of a powerful immune stimulation factor, ALT-803, to the checkpoint blocker."

Rubinstein knows a lot about ALT-803. It's a drug created by Altor Bioscience that's based on a discovery he made as a postdoctoral fellow at the Scripps Research Institute before he joined MUSC as a cancer immunologist. He compared its potential for boosting the power of nivolumab to adding fuel to a sports car.

"Instead of simply cutting the brake cables of the immune cells using only a checkpoint blocker, we are also adding fuel in the form of ALT-803 so the immune cells will have optimal stimulation and ability to kill tumor cells."

The trial's formal name is a Phase IB/II Study of ALT-803 plus nivolumab in patients with pretreated, advanced or metastatic non-small cell lung cancer. To ask about enrolling, call Amanda Gilbert at 843-792-8795.

More information: clinicaltrials.gov/ct2/show/st … NCT02523469#contacts

Provided by Medical University of South Carolina