Transcript Details
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Targeting Pseudomonas aeruginosa in Bronchiectasis: Phase 2a Findings

Announcer:
Welcome to *Clinician's Roundtable* on ReachMD. On this episode, we'll hear from Dr. Colm Leonard. He's a consultant respiratory physician at Manchester University NHS Foundation Trust, Honorary Professor of Respiratory Medicine at the Manchester Academic Health Sciences Centre, and the Chief Clinical Officer and Executive Director at Infex Therapeutics. He'll be sharing key findings on an investigational approach targeting *Pseudomonas aeruginosa* in patients with non-cystic fibrosis bronchiectasis, which he presented at the 2026 European Respiratory Society Congress. Here's Dr. Leonard now.

Dr. Leonard:
So RESP-X is a protein called a monoclonal antibody, and this monoclonal antibody targets an organism called *Pseudomonas aeruginosa*, which is a very important pathogen in people with non-cystic fibrosis bronchiectasis. And we know patients with bronchiectasis colonized with *Pseudomonas* are at higher risk of not just hospitalization, but also mortality, declining lung function, and very poor quality of life.

So *Pseudomonas* has a number of mechanisms by which it can damage the host tissues and avoid or evade the immune system, and RESP-X targets a key mechanism called the type III secretion system, which is a type of needle, as it were, that injects toxins into host cells and damages the host. Those toxins also disable neutrophil killing function against Pseudomonas. So RESP-X binds to the tip of this needle structure of this type III secretion system in the Pseudomonas, and it blocks the toxins from getting released and therefore reduces the potential for Pseudomonas to cause tissue damage. It also reduces the ability of Pseudomonas to evade the immune system.

The phase 2a study used 9 patients with quite severe bronchiectasis, as evidenced by very high scores on the bronchiectasis severity index or BSI. So those 9 patients either received a single intravenous dose of RESP-X or a placebo injection. And after that single intravenous dose, we had multiple blood tests. We collected sputum samples; at 48 hours after the intravenous dose, we put all of the patients through a bronchoscopy, and we took samples from those airways so that we could prove that the agent got into the lung tissue itself and the lung compartment so that we would know it was at the point at which we needed it to be active.

And so those various analytical methods were used to look at the pharmacokinetics to see what the half-life and duration of action of RESP-X was. Of course, we're also looking at safety, and we're looking at burden of the *Pseudomonas* infection in the sputum and the lungs. And of course, we're also looking at markers for inflammation, particularly markers that have been validated in bronchiectasis and Pseudomonas infection within bronchiectasis.

Obviously from data previously presented, we knew that RESP-X was very safe and well tolerated and had a long half-life. But the key findings that were presented more recently at the European Respiratory Society emphasized that we have, even from this small study, evidence that RESP-X reduces the burden of Pseudomonas infection in these patients. After a single dose, it reduces markers of inflammation that are validated as predictors of exacerbation. And we know that there were some signals around benefits to quality of life with patients. We also better understand the lung deposition, which equates very well to the lung deposition that we're seeing in animal models and was effective at blocking the action and toxicity of *Pseudomonas* in animal models.

It's very exciting that we have a platform from this data to support the next phase trial and to further confirm the ability of this agent to

downgrade the action of *Pseudomonas* and reduce exacerbations in these patients with bronchiectasis who are colonized with *Pseudomonas*.

Announcer:
That was Dr. Colm Leonard sharing phase 2a evidence on an investigational approach targeting *Pseudomonas aeruginosa* in patients with non-cystic fibrosis bronchiectasis. To access this and other episodes in our series, visit *Clinician's Roundtable* on ReachMD.com, where you can Be Part of the Knowledge. Thanks for listening!