

Transcript Details

This is a transcript of an educational program. Details about the program and additional media formats for the program are accessible by visiting: <https://reachmd.com/programs/living-rheum/emerging-therapies-psoriatic-arthritis/70154/>

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Emerging Therapeutic Approaches for Psoriatic Arthritis

Announcer:

Welcome to *Living Rheum* on ReachMD. On this episode, Dr. Philip Mease joins us to talk about emerging therapeutic approaches for psoriatic arthritis. Dr. Mease is the Director of Rheumatology Research at the Providence Swedish Medical Center and a Clinical Professor at the University of Washington School of Medicine in Seattle, Washington. Let's hear from him now.

Dr. Mease:

One area of research that's pretty hot right now is what we call cell therapy. There are a number of cell therapies that are given to patients who have a disease driven by what are called B lymphocytes. Diseases like lupus, some cases of rheumatoid arthritis, scleroderma, and other autoimmune diseases are driven by B cell pathology.

And so what we're now doing is taking the T lymphocytes of patients and genetically engineering them to become therapeutic cells where they go and bind. When reinfused into the person, they go and bind to the B lymphocytes and get rid of the pathogenic B lymphocytes. So we're now able to more fundamentally adjust the patient's immune system so it's no longer producing pathologic lymphocytes and we're cleaning them up by use of these engineered T lymphocytes.

And we're just beginning to do some studies with in vivo CAR T, where we inject RNA-encased lipid nanoparticles, which then internally within the patient will genetically engineer the T lymphocytes so that they become therapeutic cells. We're also seeing a group of molecules called T-cell engagers doing much the same thing, only more simply.

So how does all this apply to psoriatic arthritis and psoriasis, which is predominantly a T cell-driven disease? It turns out that there are certain pathogenic clones of T cells in certain cases of a sister condition called axial spondyloarthritis; it used to be called ankylosing spondylitis. And this disease is driven by T lymphocytes that have TRBV9 on their cell surface. And so if we develop a molecule that can bind to TRBV9 and help get rid of those T lymphocytes, then we can do a similar reset of the immune system, potentially, as what is being shown with standard CAR T-cell therapy for lupus, as an example. So this may apply to patients with psoriatic arthritis who happen to have TRBV9 as part of their pathogenesis, but it's also likely that we will find other T-cell markers in the future that are associated with pathogenic clones that we can then get rid of and reset that patient to a more normal state of immune system function.

Announcer:

That was Dr. Philip Mease discussing potential future therapies for psoriatic arthritis. To access this and other episodes in our series, visit *Living Rheum* on ReachMD.com, where you can Be Part of the Knowledge. Thanks for listening!