Transcript Details
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Sleep Disturbances and Psychological Burden of Prurigo Nodularis

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IL-31 for years was a cytokine without a clear function. Then we learned all about how IL-31 was an important driver of pruritus in a variety of different states. IL-31 is what we call a direct pruritogen, meaning that its introduction at the neuronal terminal can drive itch stimuli all on its own.

People started calling IL-31 the itchy cytokine, but it probably doesn't completely capture the role IL-31 has in neuroinflammatory disease. And prurigo nodularis is a great example of this. We know that IL-31 is a primary driver in this disease state as it causes further neuronal sensitization and neuronal activation, but IL-31 actually has a role independent of neurons. We know IL-31 has the capacity to bind to a variety of different cellular types, both in the skin and the immune system, and it's this way that we believe a lot of the inflammatory components of this disease are manifested.

Furthermore, fibroblasts are an important part of prurigo nodularis. It's where the nodule comes from. Inflammation at a much deeper layer of the skin in the dermis and below results in fibroblast activation and proliferation, forming deep, heavily lichenified nodules. It's believed that IL-31 is driving a lot of this fibroblast activation too. So, you could imagine that from a therapeutic strategy, if one was to block IL-31, you would not only be targeting the itch that we think about in a disease like prurigo nodularis, but the inflammation and fibroblast proliferation as well.