

cIL-31 Induced Pruritus Model in NHP

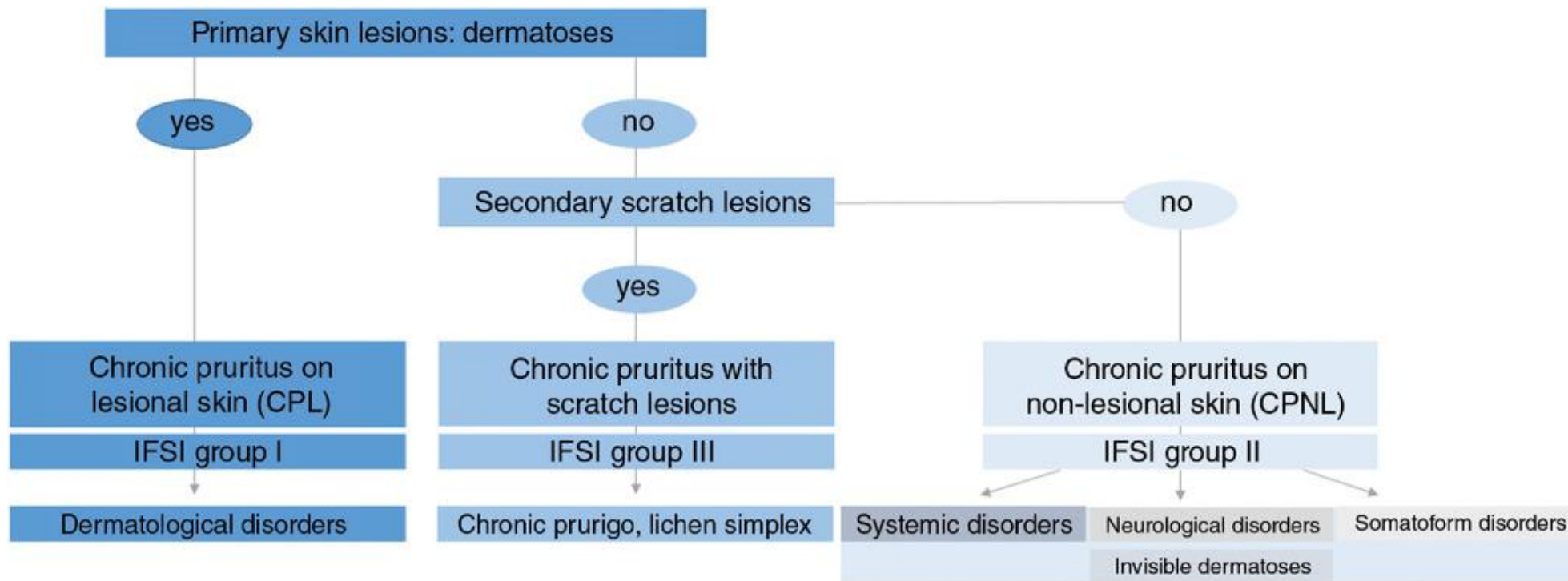


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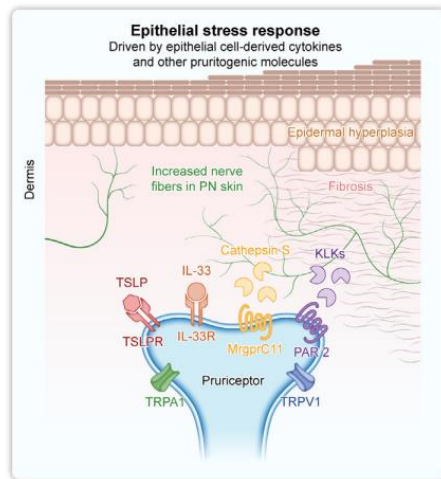
OncoWuXi Newsletter

Introduction of pruritus

- Pruritus is defined as an unpleasant cutaneous sensation that provokes the desire to scratch or rub the skin to obtain relief. It is the history of itching sensations that vary over time and in intensity, often associated with underlying skin or systemic conditions.
- Pruritus can be classified into several categories, including dermatological, neurogenic pruritus, neuropathic, and psychogenic pruritus.



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- The diagram illustrates the bidirectional crosstalk between dysfunctional neurons and immune cells. It features two main circular icons: 'ITCH' on the left, showing a brain, and 'SCRATCH' on the right, showing a hand scratching. A large white arrow points from ITCH to SCRATCH. Below the ITCH icon, a purple neuron is shown with a pink arrow pointing towards it, labeled 'Bidirectional crosstalk between dysfunctional neurons and immune cells'. A pink arrow points from the ITCH icon down to the neuron, and a light blue arrow points from the SCRATCH icon down to the neuron.

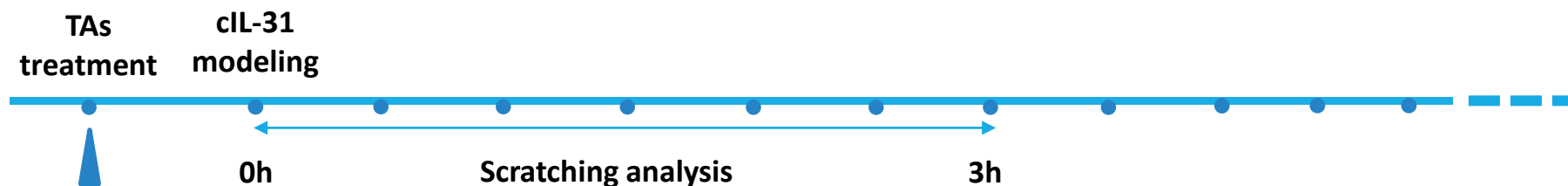


cIL-31 induced pruritus model in NHP

- cIL-31 (cynomolgus IL-31) induced pruritus model in NHP is widely used in research.

Animal species	Modeling method	Modeling time	Group design
Cynomolgus monkey	cIL-31 injection	About 1 week	<ul style="list-style-type: none">● Normal control (N=3, optional)● cIL-31 modeling+ Vehicle● cIL-31 modeling+ positive control● cIL-31 modeling+ test compounds (N=6~8 per group)

■ Timeline

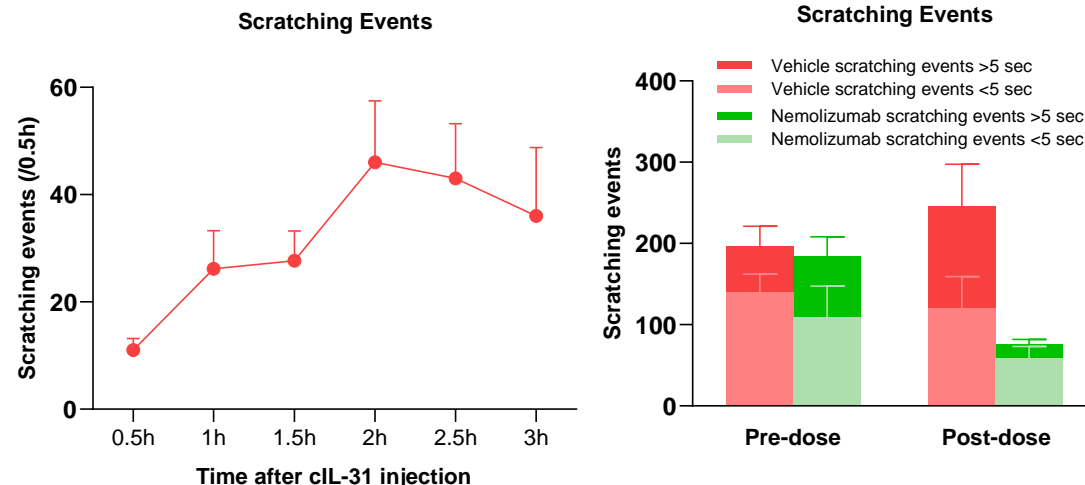


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Readouts of pruritus model in NHP

Readouts	
Scratching events	<ul style="list-style-type: none">● Short scratching events (< 5 sec)● Long scratching events (> 5 sec)
Biomarkers in blood (optional)	<ul style="list-style-type: none">● Cytokines: IL-31, IL-33, etc.
Biomarkers in skin (optional)	<ul style="list-style-type: none">● Cytokines: IL-31, IL-33, etc.
Histopathology (optional)	<ul style="list-style-type: none">● Skin infiltrated mast cells, etc.

Scratching events



- In the pruritus model group, administration of cIL-31 significantly increased the number of scratching events.
- Nemolizumab treatment significantly reduced the number of cIL-31-induced scratching events, particularly those with a duration of more than 5 seconds per event.



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