

IL-13 is a Dominant Cytokine in the Pathophysiology of AD^{1,2}

IL-13 Enhances **Neuronal Sensitization** to Pruritogens³



H₁ Histamine Receptor^a

Type II Receptor Complex

IL-4Rα

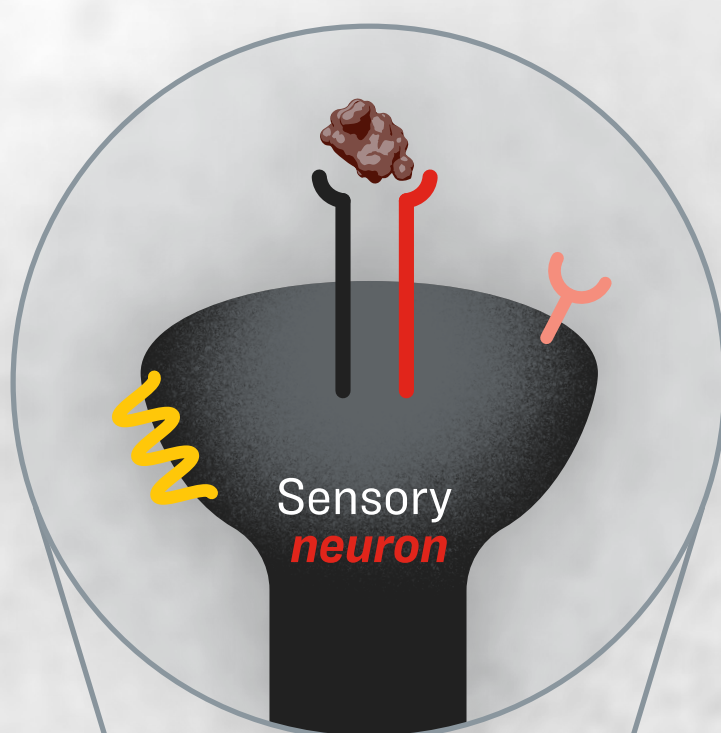
IL-13Rα1



5-HT (Serotonin) Receptor^a



IL-13



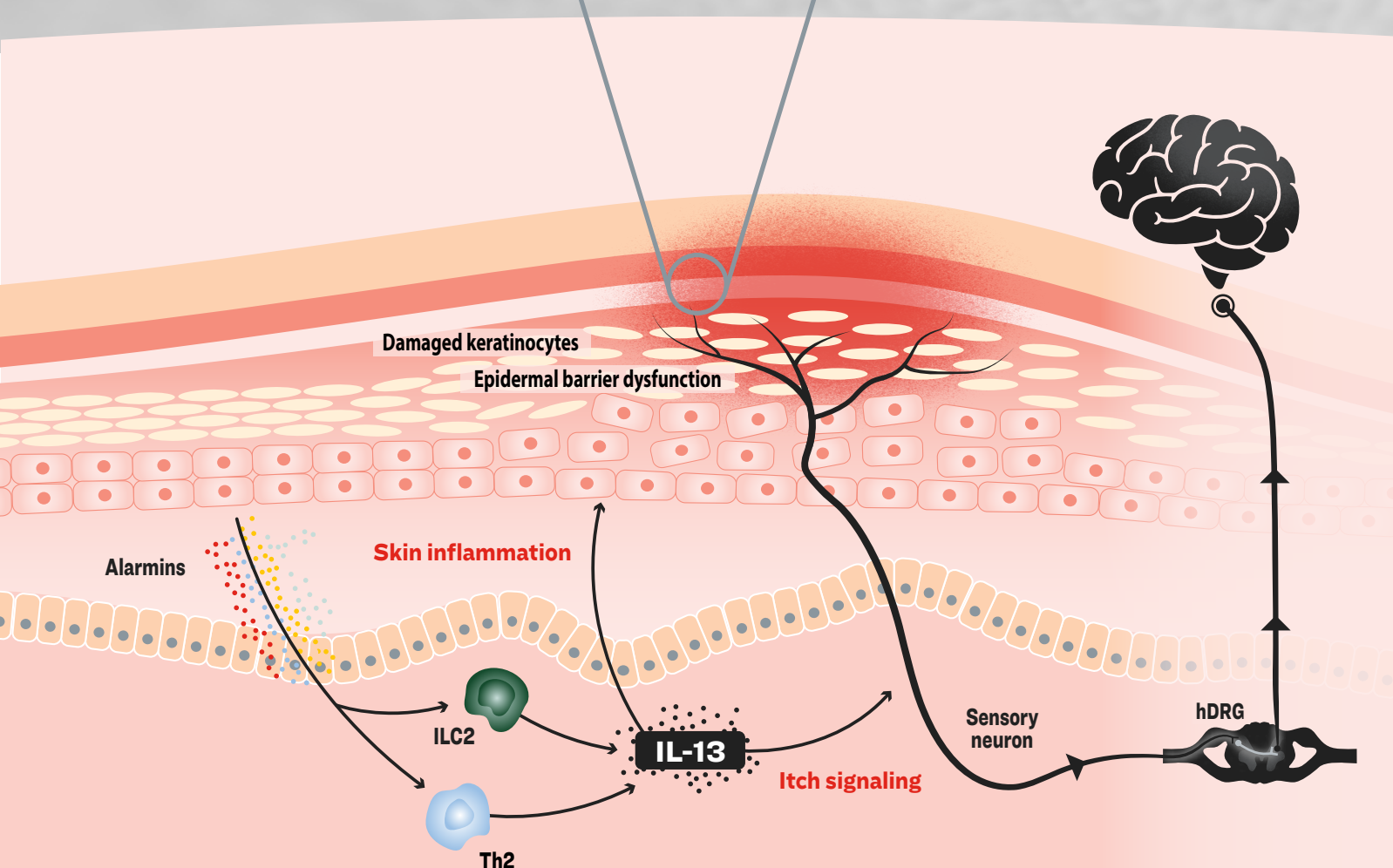
The Role of IL-13 in Itch and Skin³⁻⁸

Drives nerve fiber outgrowth and branching

Increases neuronal excitability, lowering itch threshold

Potentiates neuronal itch

Induces skin inflammation



To learn more about the central role of IL-13 in skin inflammation and itch in AD, click below

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^aHistamine and serotonin are pruritogens in histaminergic and nonhistaminergic itch, respectively.⁹

5-HT=5-Hydroxytryptamine; **AD**=Atopic Dermatitis; **hDRG**=Human Dorsal Root Ganglion; **IL**=Interleukin; **IL-4Rα**=Interleukin-4 Receptor Alpha Subunit; **IL-13Rα1**=Interleukin-13 Receptor Subunit Alpha 1; **ILC2**=Group II Innate Lymphoid Cell; **Th**=T Helper.

1. Tsoi LC, et al. *J Invest Dermatol.* 2019;139(7):1480-1489. **2.** He H, et al. *J Allergy Clin Immunol.* 2021;147(1):199-212. **3.** Miron Y, et al. *J Allergy Clin Immunol.* 2022;150(3):690-700.

4. Jha MK, et al. Poster presented at: *WCI 2023.* **5.** Bieber T. *Allergy.* 2019;75(1):54-62.

6. Langan SM, et al. *Lancet.* 2020;396(10247):345-360. **7.** Tominaga M, Takamori K. *Allergol Int.* 2022;71(3):265-277. **8.** Sutaria N, et al. *J Am Acad Dermatol.* 2022;86(10):17-34.

9. Yosipovitch G, et al. *J Allergy Clin Immunol.* 2018;142(5):1375-1390.