

ARQ-252 and ARQ-255

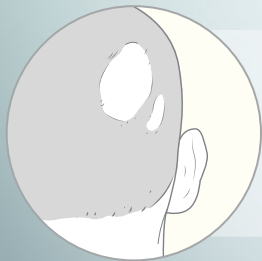
Targeting JAK1 in inflammatory dermatologic diseases

The JAK-STAT pathway, specifically JAK1, is associated with type 1 and type 2 cytokines in inflammatory dermatoses, including chronic hand eczema, alopecia areata, and vitiligo^{1,2,7,8}



Chronic pruritus and inflammation are hallmarks of **eczema**.⁹

Key cytokines:
IL-4, IL-13, IL-31¹



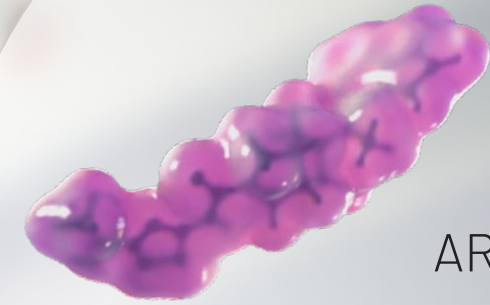
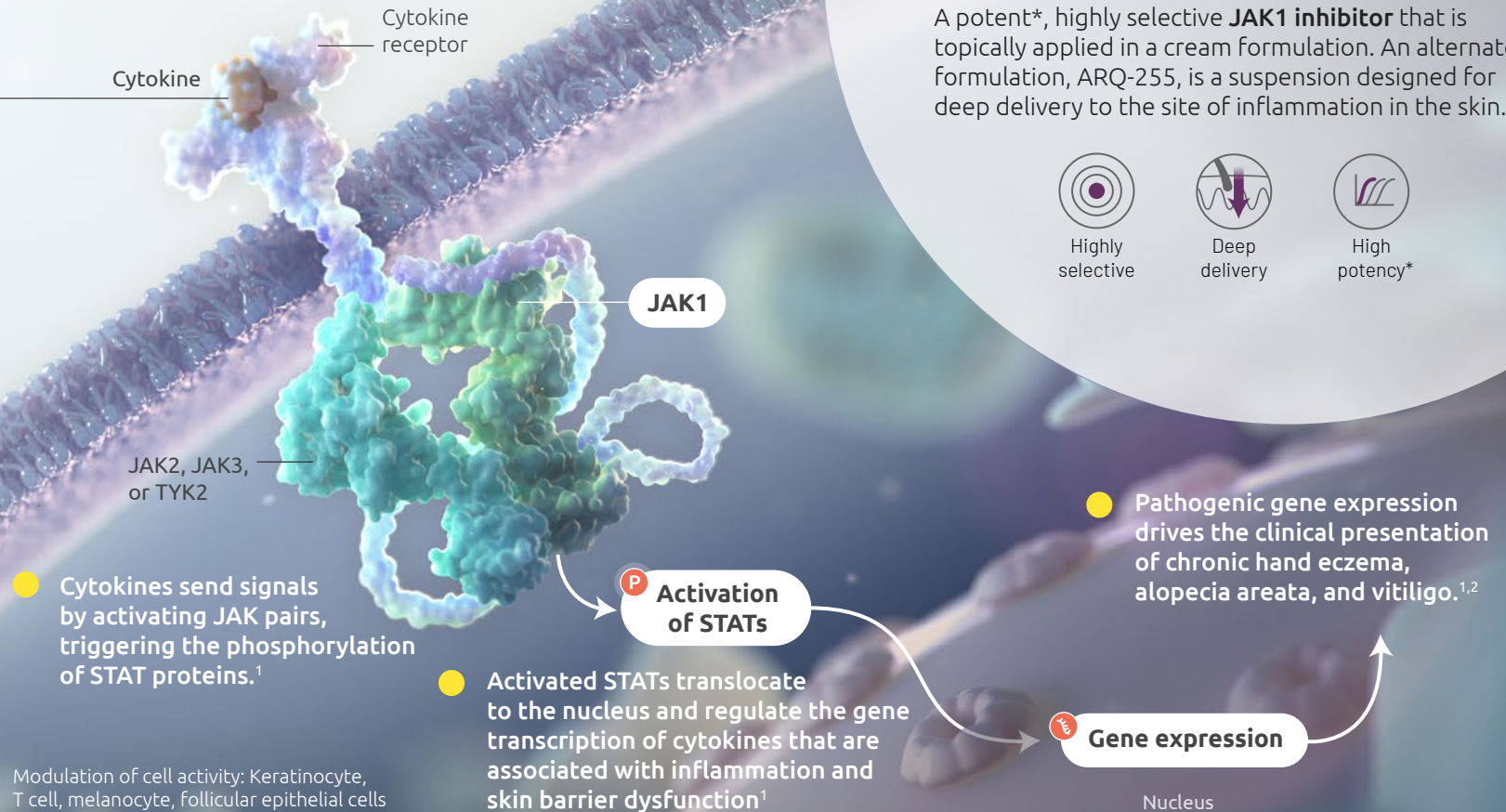
An autoimmune disease, **alopecia areata** results in patchy hair loss.

Key cytokines:
IFN γ , IL-15^{2,3}



Vitiligo causes patches of skin to lose their color.

Key cytokines:
IFN γ , TNF- α , IL-6, IL-1^{2,4,5}



ARQ-252

A potent*, highly selective **JAK1 inhibitor** that is topically applied in a cream formulation. An alternate formulation, ARQ-255, is a suspension designed for deep delivery to the site of inflammation in the skin.⁶



Highly selective



Deep delivery



High potency*

References. 1. Chapman, S et al. *J Am Acad Dermatol.* 2021;doi:10.1016/j.jaad.2021.07.002. 2. Chapman, S et al. *J Am Acad Dermatol.* 2021;doi:10.1016/j.jaad.2021.06.873. 3. Gihar, A et al. *Autoimmune Rev.* 2016;15:726-735. 4. Sushama, S et al. *J Cosmet Dermatol.* 2019;18:337-341. 5. Rashigi, M et al. *Sci Transl Med.* 2014;6;doi:10.1126/scitranslmed.3007811. 6. Data on File. Arcutis Biotherapeutics, Inc. 7. Banerjee, S et al. *Drugs.* 2017;77:521-546. 8. Clarke, B et al. *Rheumatology.* 2021;60:ii24-ii30. 9. Kader, HA et al. *Cells.* 2021;10(1392)1-27.

**In vitro* data. Safety and efficacy cannot be derived from these data.
IFN: interferon; IL: Interleukin; JAK-STAT: Janus kinase-signal transducer and activator of transcription; TNF: tumor necrosis factor; Tyk: tyrosine kinase.