## Open Peer Review on Qeios

## **Ruxolitinib Phosphate Cream**

National Cancer Institute

## Source

National Cancer Institute. <u>Ruxolitinib Phosphate Cream</u>. NCI Thesaurus. Code C126791.

A topical cream formulation containing the phosphate salt form of ruxolitinib, a bioavailable Janus-associated kinase (JAK) inhibitor, with potential immunomodulating activity. Upon topical administration of the ruxolitinib phosphate cream, ruxolitinib specifically binds to and inhibits the protein tyrosine kinases JAK 1 and 2; this inhibits signal transduction pathways of various cytokines and reduces inflammation. The JAK-STAT (signal transducer and activator of transcription) pathway plays a key role in the signaling pathways initiated by many cytokines and growth factors; JAK kinases are upregulated in various inflammatory and autoimmune diseases, including alopecia areata.