**Title options:**

Defining properties regulating pioneer-factor binding and function

Systematic analysis of properties regulating pioneer-factor binding and function

Systematic / comprehensive

Analysis / exploration

Pioneer-factor activity requires stable occupancy of closed chromatin

Stable / high-level / a high degree of

Closed / inaccessible / silent

Diverse properties regulate cell-type specific pioneer factor activity

**Titles of related papers:**

Meissner 2018:

Genetic determinants and epigenetic effects of pioneer-factor occupancy

Cohen 2022:

A test of the pioneer factor hypothesis using ectopic liver gene activation

Zaret 2012:

Facilitators and impediments of the pluripotency reprogramming factors' initial engagement with the genome

Zaret 2023:

Distinct chromatin scanning modes lead to targeting of compacted chromatin by pioneer factors FOXA1 and SOX2

Myles Brown 2008:

FoxA1 Translates Epigenetic Signatures into Enhancer-Driven Lineage-Specific Transcription

Elzo de Wit 2022:

Pioneer activity distinguishes activating from non-activating pluripotency transcription factor binding sites

Iwafuchi 2022:

Pioneer transcription factors coordinate active and repressive gene expression states to regulate cell fate

Giraldez 2022:

The landscape of pioneer factor activity reveals the mechanisms of chromatin reprogramming and genome activation