

Insights: Publications

# The Dynamic Partnership of Polycomb and Trithorax in Brain Development and Diseases

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Epigenetic mechanisms, including DNA and histone modifications, are pivotal for normal brain development and functions by modulating spatial and temporal gene expression. Dysregulation of the epigenetic machinery can serve as a causal role in numerous brain disorders. Proper mammalian brain development and functions depend on the precise expression of neuronal-specific genes, transcription factors and epigenetic modifications. Antagonistic polycomb and trithorax proteins form multimeric complexes and play important roles in these processes by epigenetically controlling gene repression or activation through various molecular mechanisms. Aberrant expression or disruption of either protein group can contribute to neurodegenerative diseases. This review focus on the current progress of Polycomb and Trithorax complexes in brain development and disease, and provides a future outlook of the field.

## Related People

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