

## Special Issue

# Perineuronal Nets and Fear Memories Erasure: State of the Art and Future Directions

### Message from the Guest Editor

Perineuronal nets (PNNs) are specialized extracellular matrix structures that enwrap certain neurons, especially parvalbumin-positive interneurons, and regulate synaptic plasticity. Recent findings link PNNs to fear memory retention, showing that their degradation can reopen critical periods of plasticity and allow modification of traumatic memories. This has opened new avenues for treating anxiety disorders such as PTSD. Despite progress, questions remain regarding the specificity, timing, and reversibility of PNN modulation. There is growing interest in identifying molecular targets within PNNs that allow selective therapeutic interventions with minimal off-target effects. This Special Issue invites original research and reviews on the molecular composition and regulation of PNNs in fear memory and extinction, experimental models, and clinical applications aimed at developing novel treatments for fear-based psychopathologies.

### Guest Editor

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