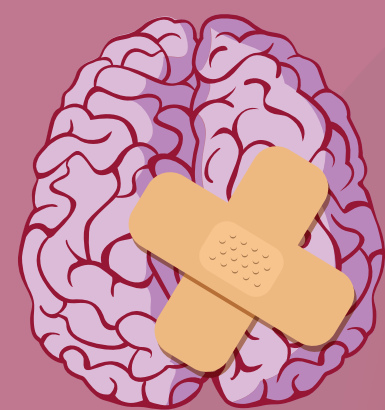
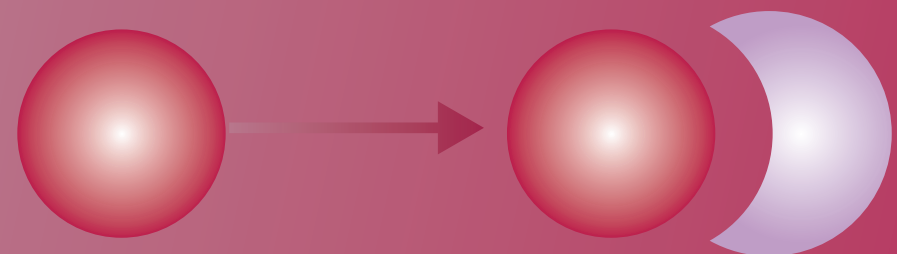


A Noninvasive Approach to Reducing Neuronal Loss after Traumatic Brain Injury

In traumatic brain injury (TBI)...



...proneurotrophin-p75NTR* signaling leads to...



...progressive neuronal loss secondary to initial trauma...

...ultimately causing cognitive decline

*p75 neurotrophin receptor

Can blocking p75NTR induction or proneurotrophin ligand function reduce post-TBI neuronal death



A noninvasive method to prevent neuronal loss

Male mice (10-12 weeks old)



subjected to controlled cortical impact

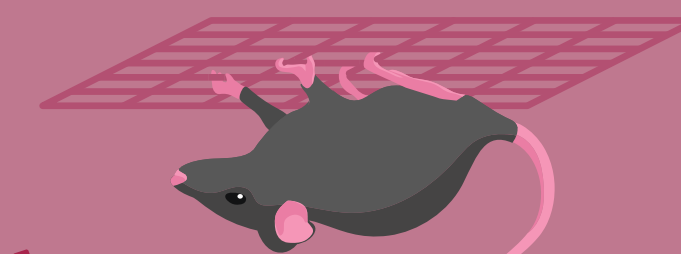
Intranasal infusion



✓ p75NTR siRNA
✓ Ligand function-blocking antibodies

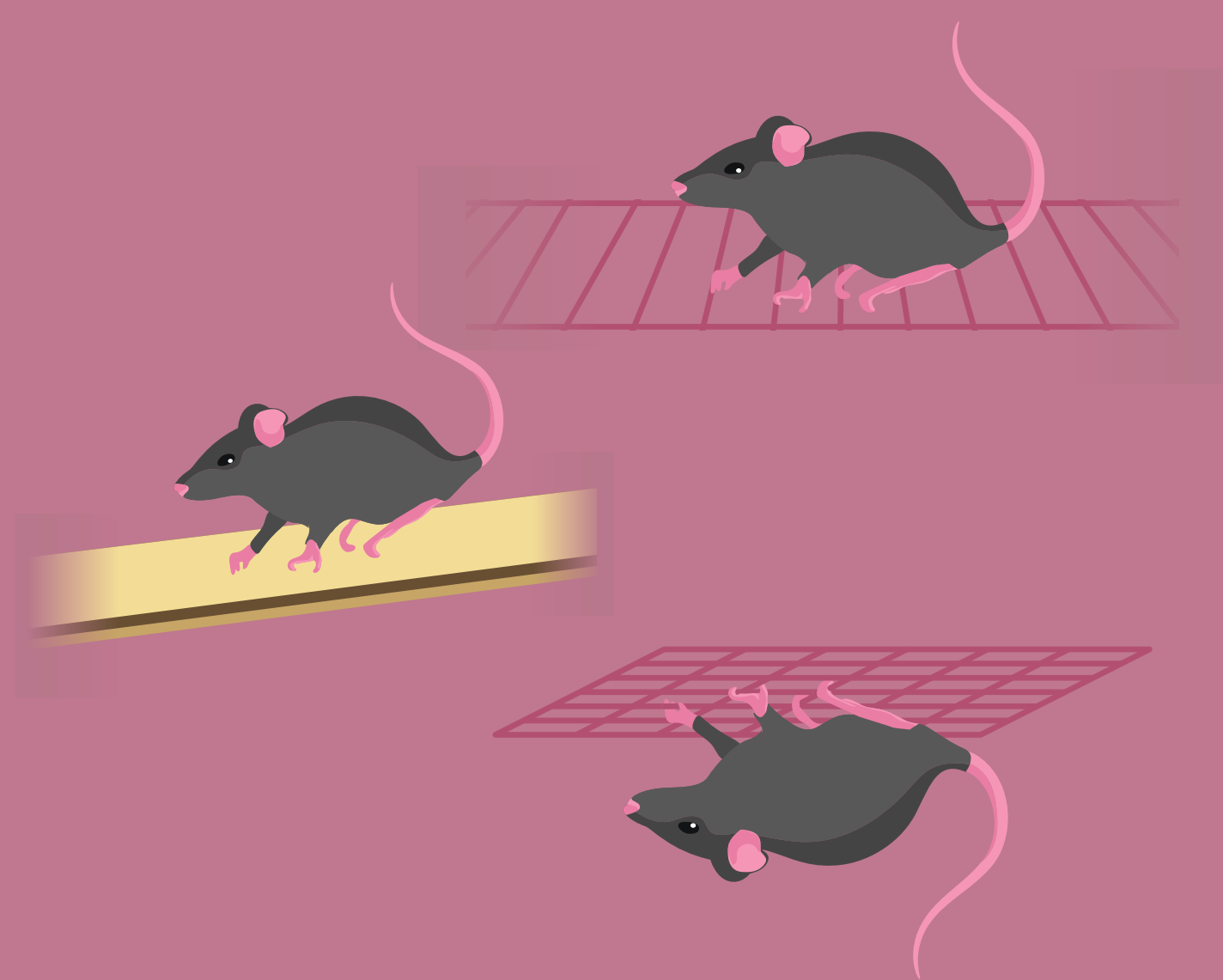
2-3 days

Behavioral tests



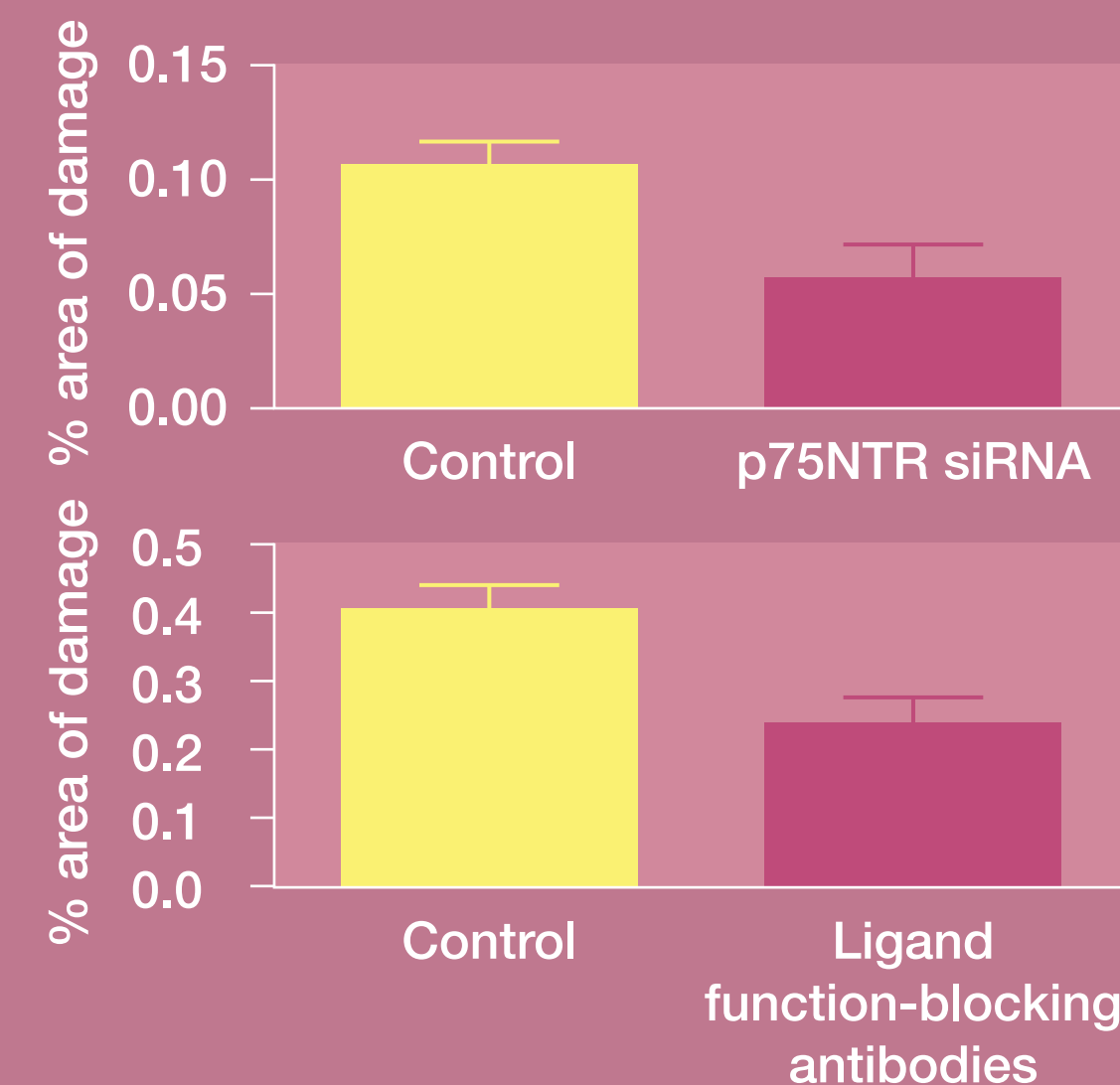
Histopathological analysis

Both preventing p75NTR induction and blocking proneurotrophin ligands led to...



✓ Preserved sensorimotor function

✓ Reduced neuronal damage



This approach is an effective, noninvasive method to prevent post-TBI neuronal death