

Memory consolidation facilitated by burst-driven late-phase plasticity

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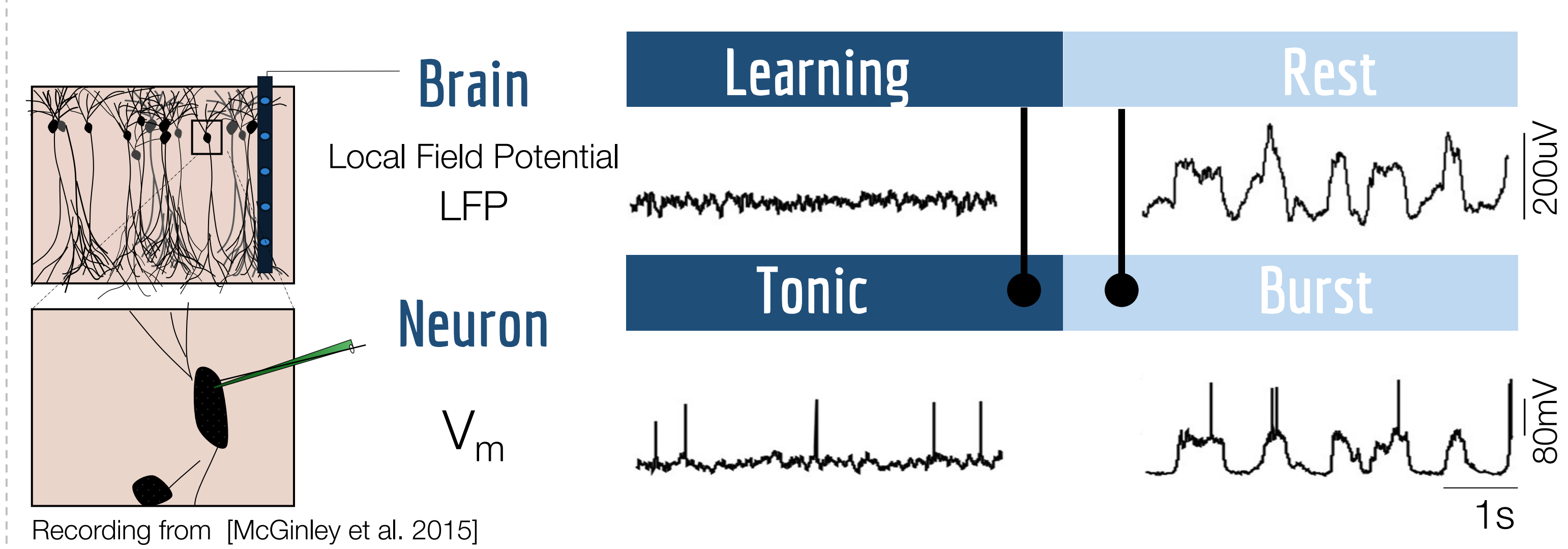
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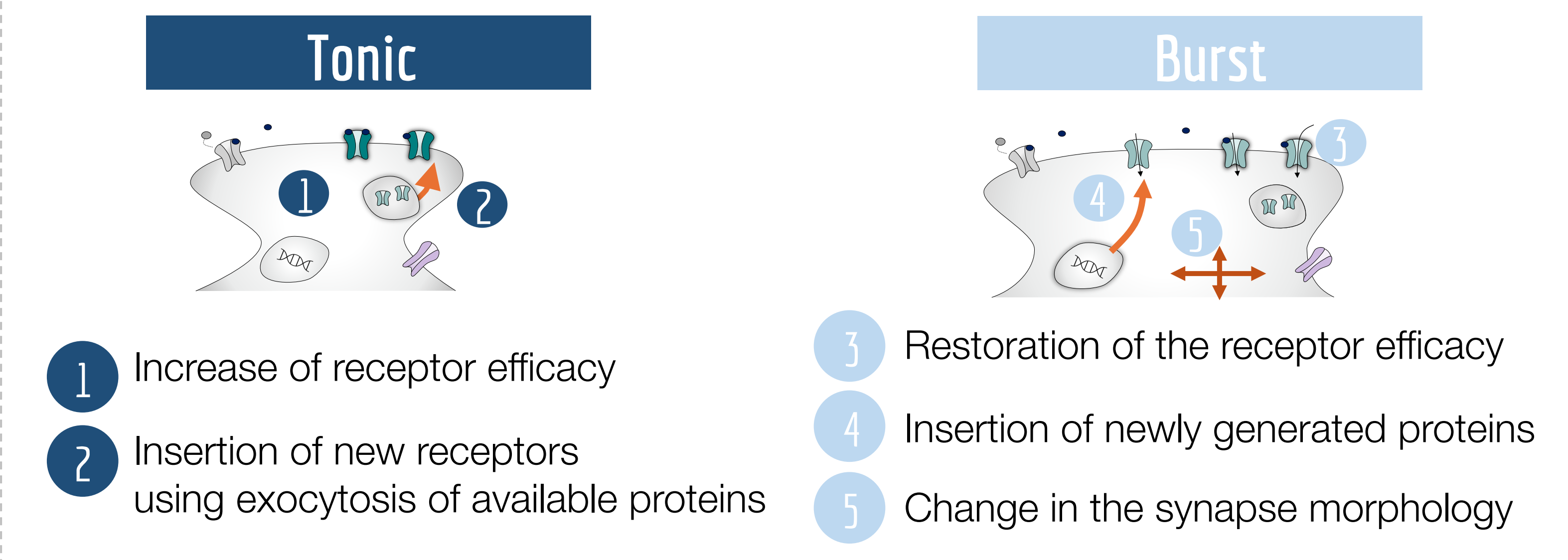
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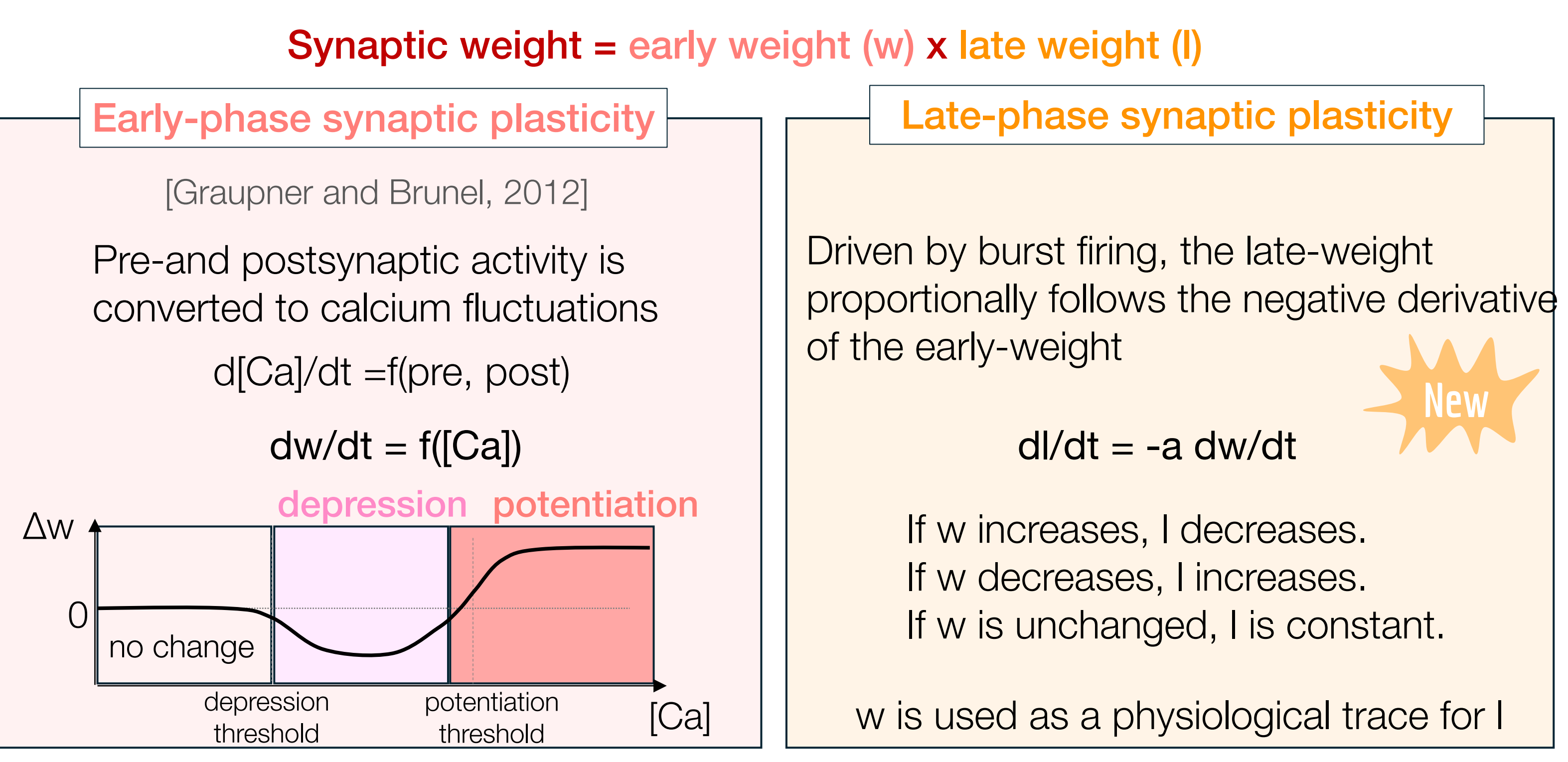
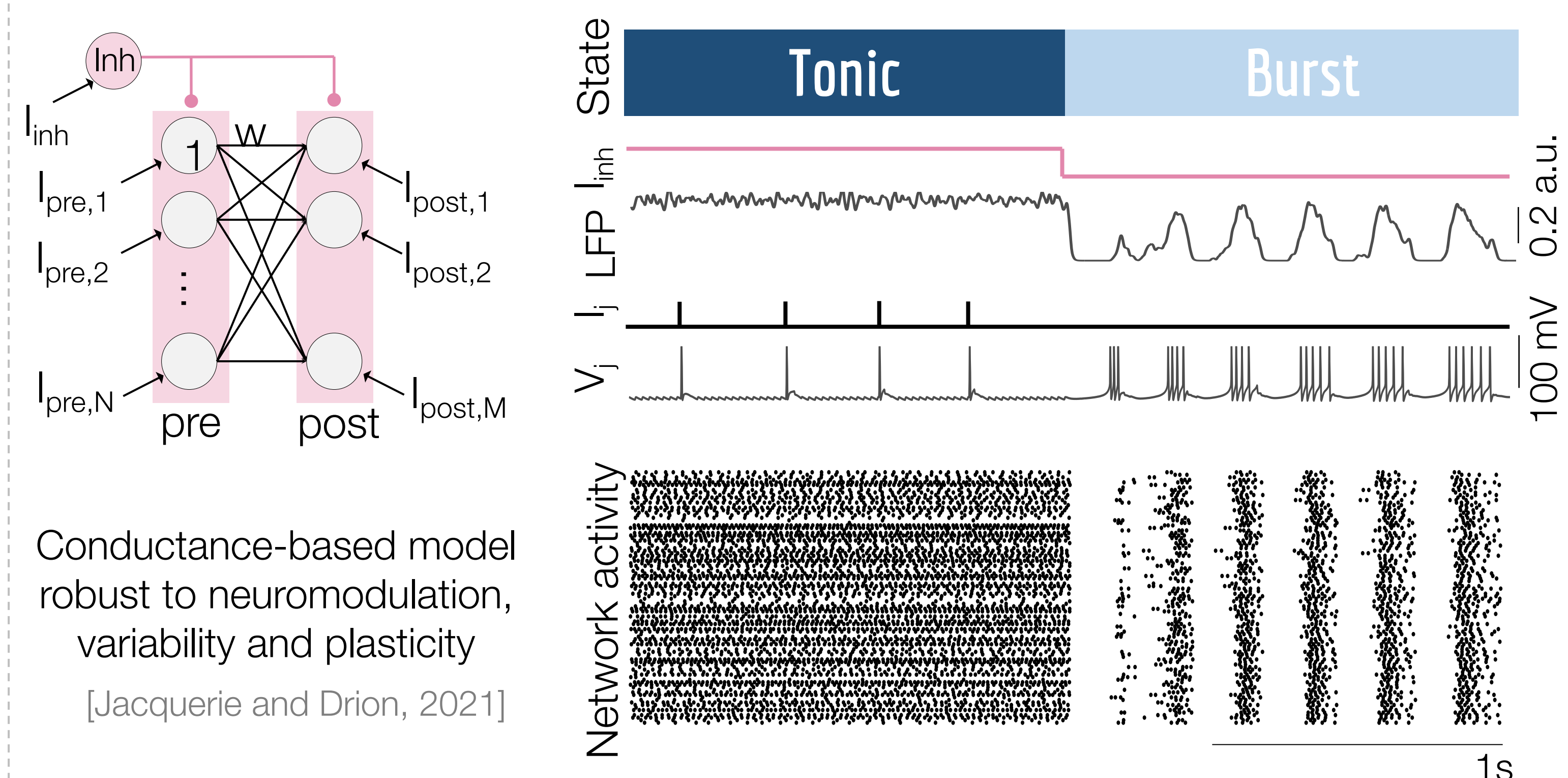
Rhythms | Neural activity during learning and rest periods



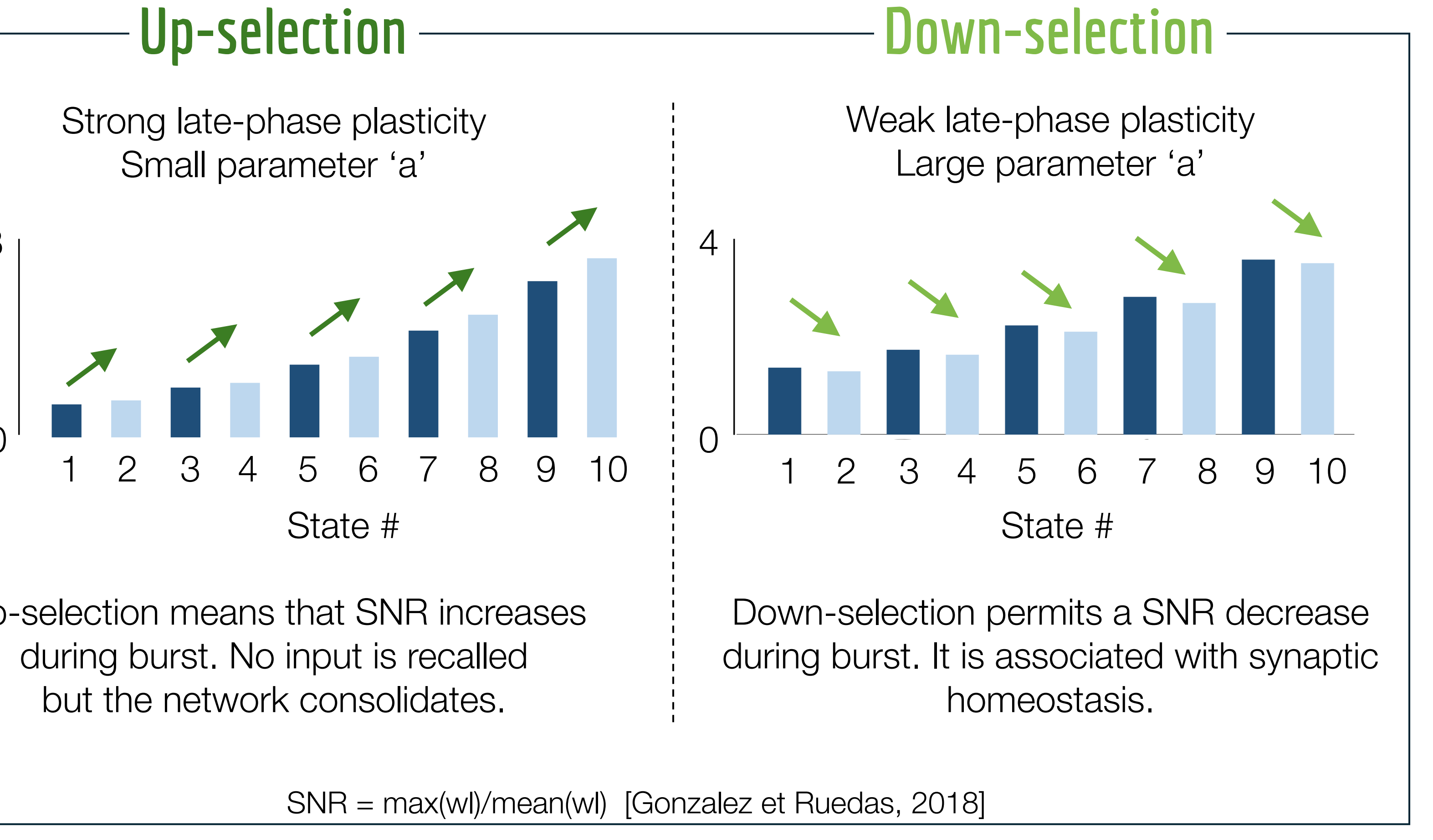
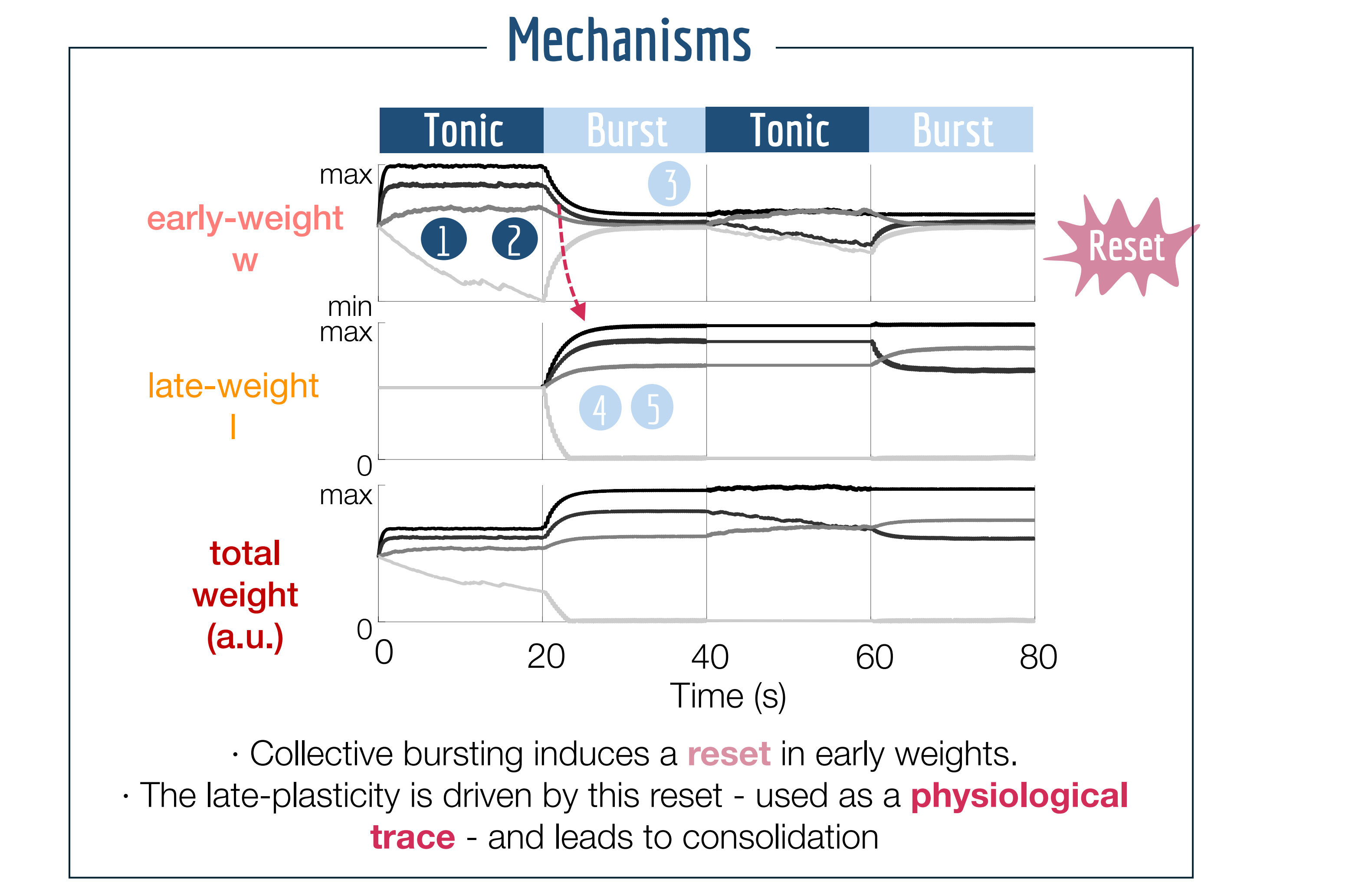
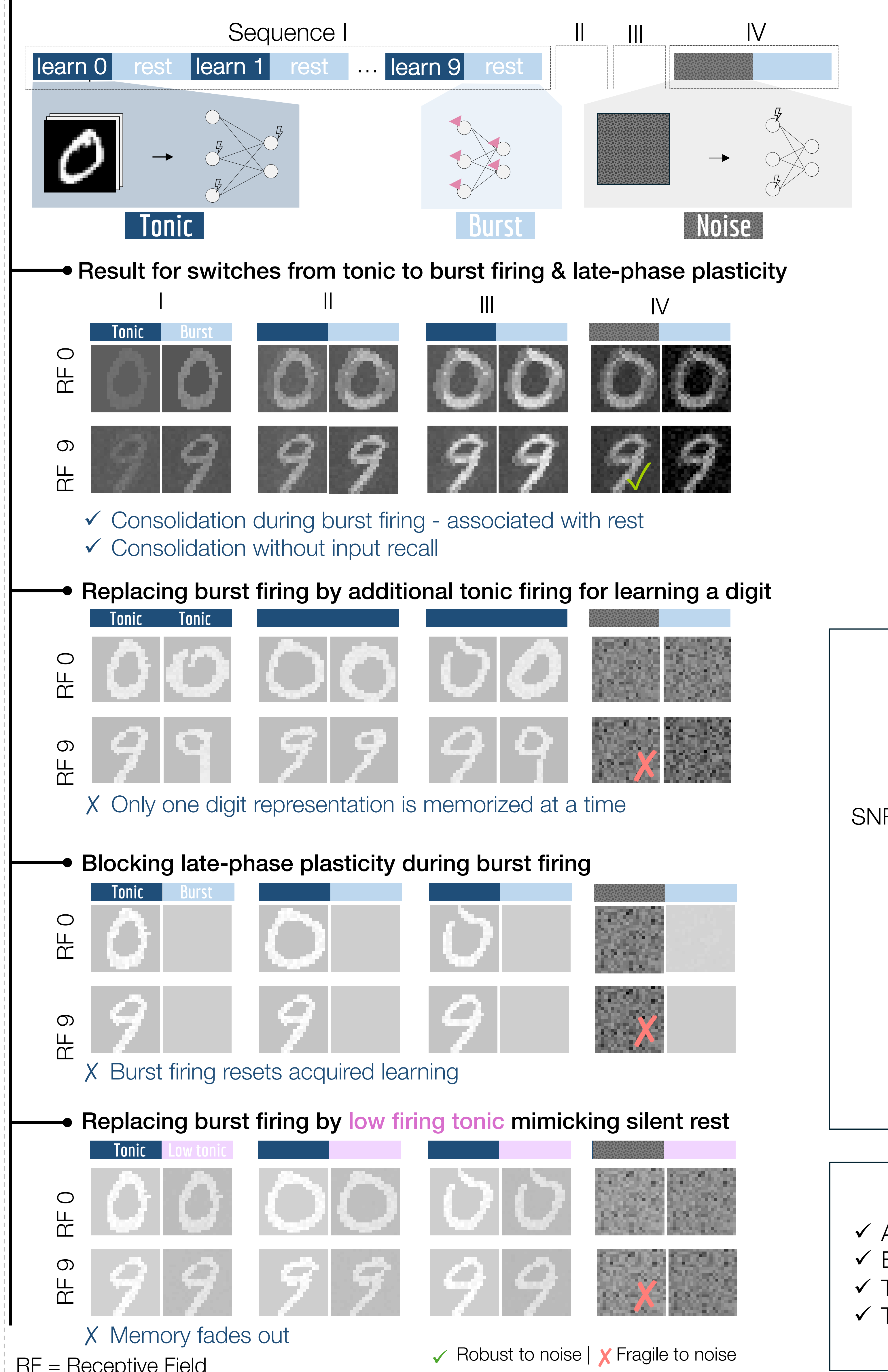
Plasticity | Early- and late-phase of synaptic plasticity



Model | Combining a biophysical neuron model able to switch from tonic to burst firing with early-phase and late-phase synaptic plasticity



Results | The synergistic role of collective burst firing and late-phase plasticity facilitates memory consolidation



Take-home messages

- ✓ Alternance between tonic and burst firing combined with synaptic plasticity is understudied.
- ✓ Burst firing induces a **reset** in early-weights necessary to drive the late-phase plasticity.
- ✓ This burst-driven late phase plasticity supports biological signaling mechanisms.
- ✓ This rule offers the possibility of up- or down-selecting the previous acquired learning.