

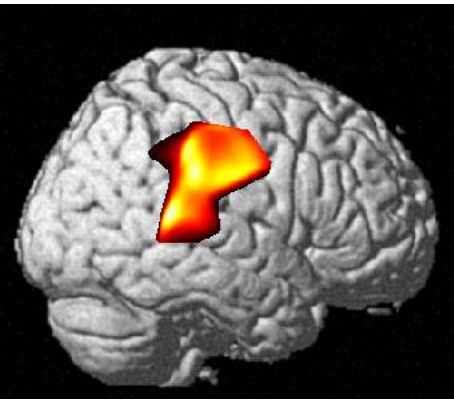
RESEARCH PRESENTATIONS

BEHAVIORAL

Anjana Bhat

Kathleen Brewer-Smyth

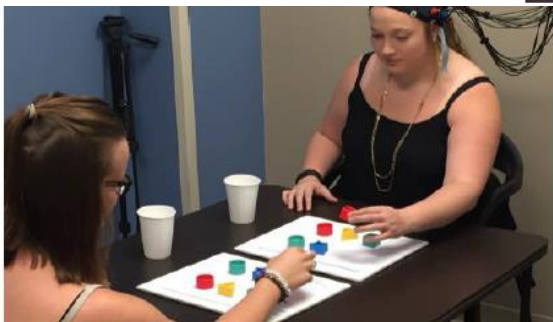
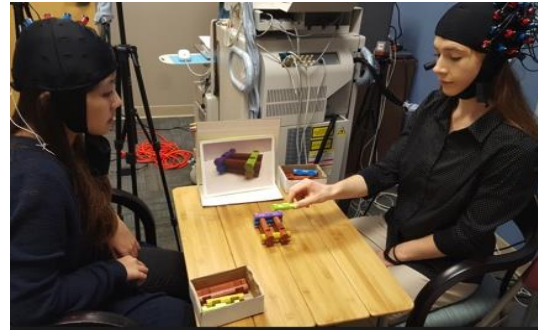
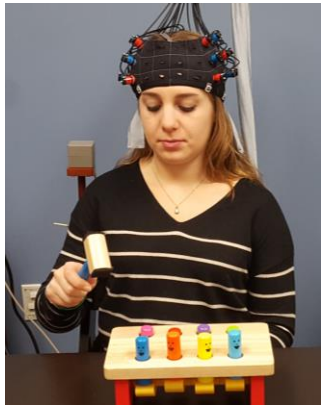
Stuart McCaughey



fNIRS to study cortical activation during movements

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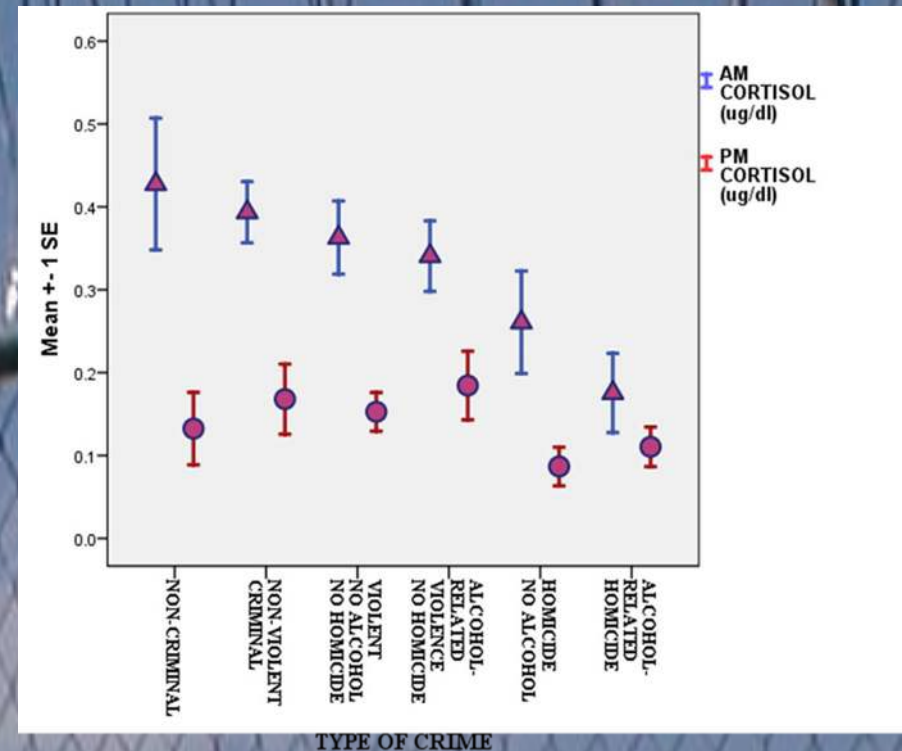
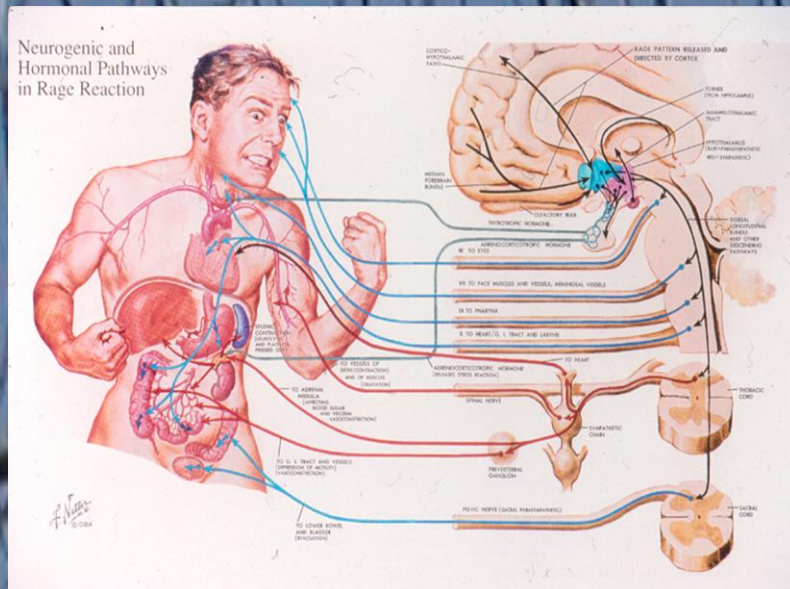


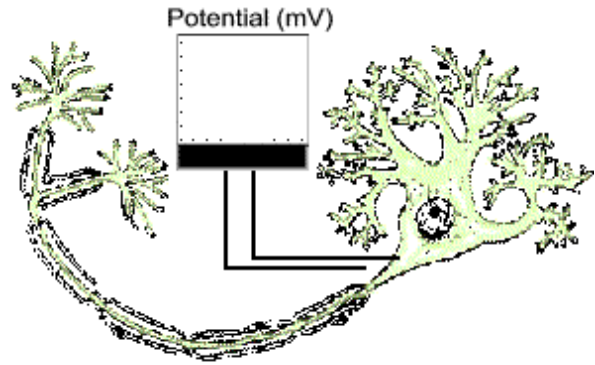
Neurobiology of Childhood Trauma in Adult Women

Kathy Brewer-Smyth, PhD, CRRN, FAAN

Associate Professor

- Community Engaged
- TBI
- Epigenetics

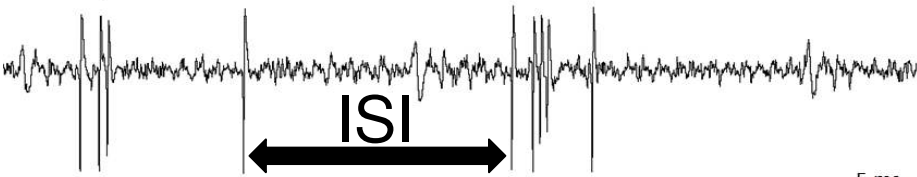




Neurons that burst (double-fire) are especially effective at driving their targets

In the mouse NST (gustatory relay), some cells burst

Bursting cell



spontaneous firing rate = 5.9 spikes/sec, 36% of ISIs were < 5 ms

5 ms

Non-bursting cell **and some cells do not**

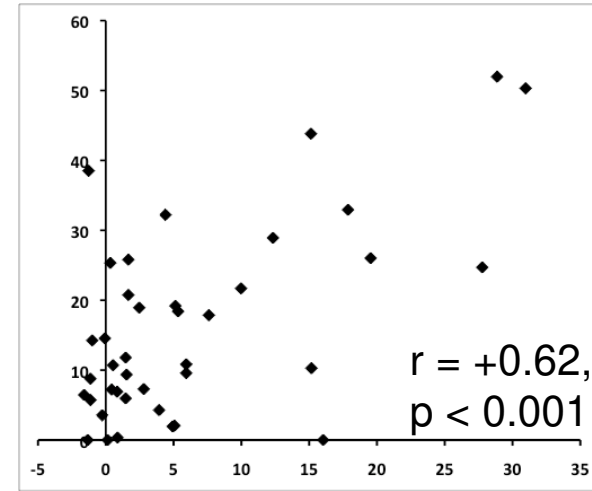


spontaneous firing rate = 6.5 spikes/sec, 0% of ISIs were < 5 ms

5 ms

Which neurons tend to burst the most?

% of ISIs < 5 ms



Sucrose response size

In 129 mice, bursting occurs in those neurons that are most-sucrose-responsive

This relationship is found in 129 and 129/129 mice (low-affinity sugar receptor), but not in B6 or B6/129 mice (high-affinity sugar receptor)

Conclusion: bursting is directed to certain NST cells, based on sugar receptor genotype, and may “boost” a weak incoming neural signal to sugars

Stuart McCaughey

