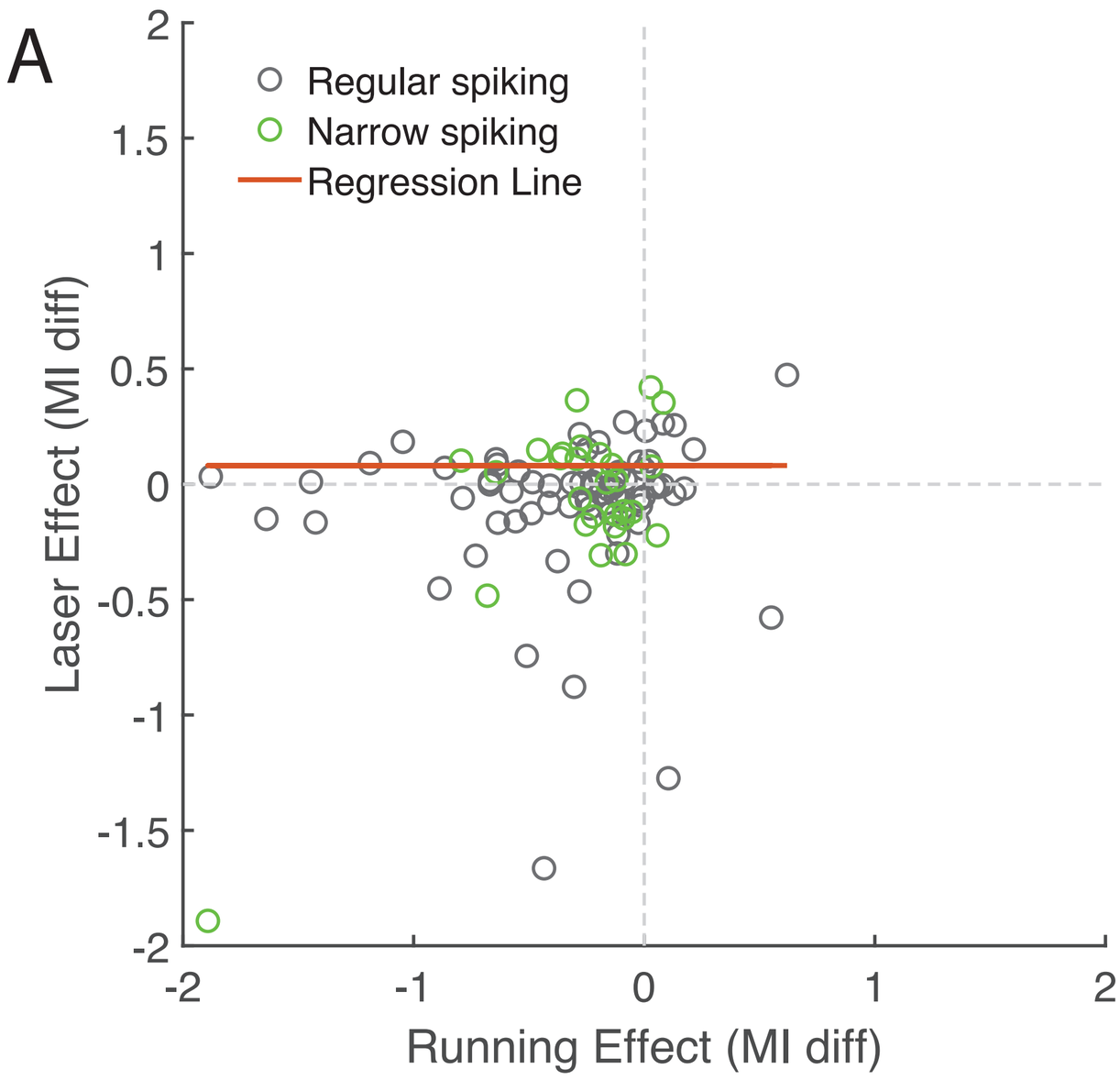

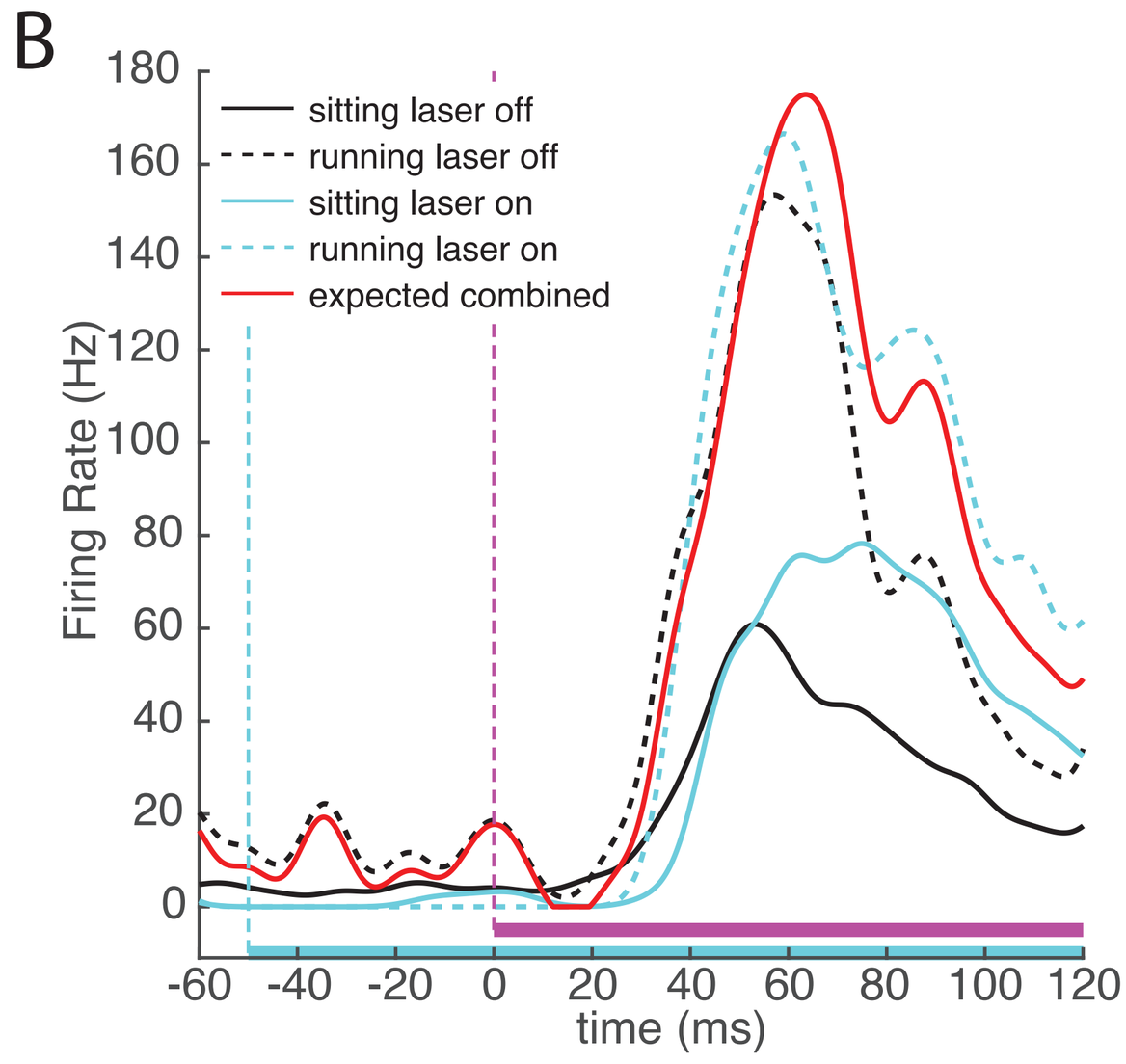

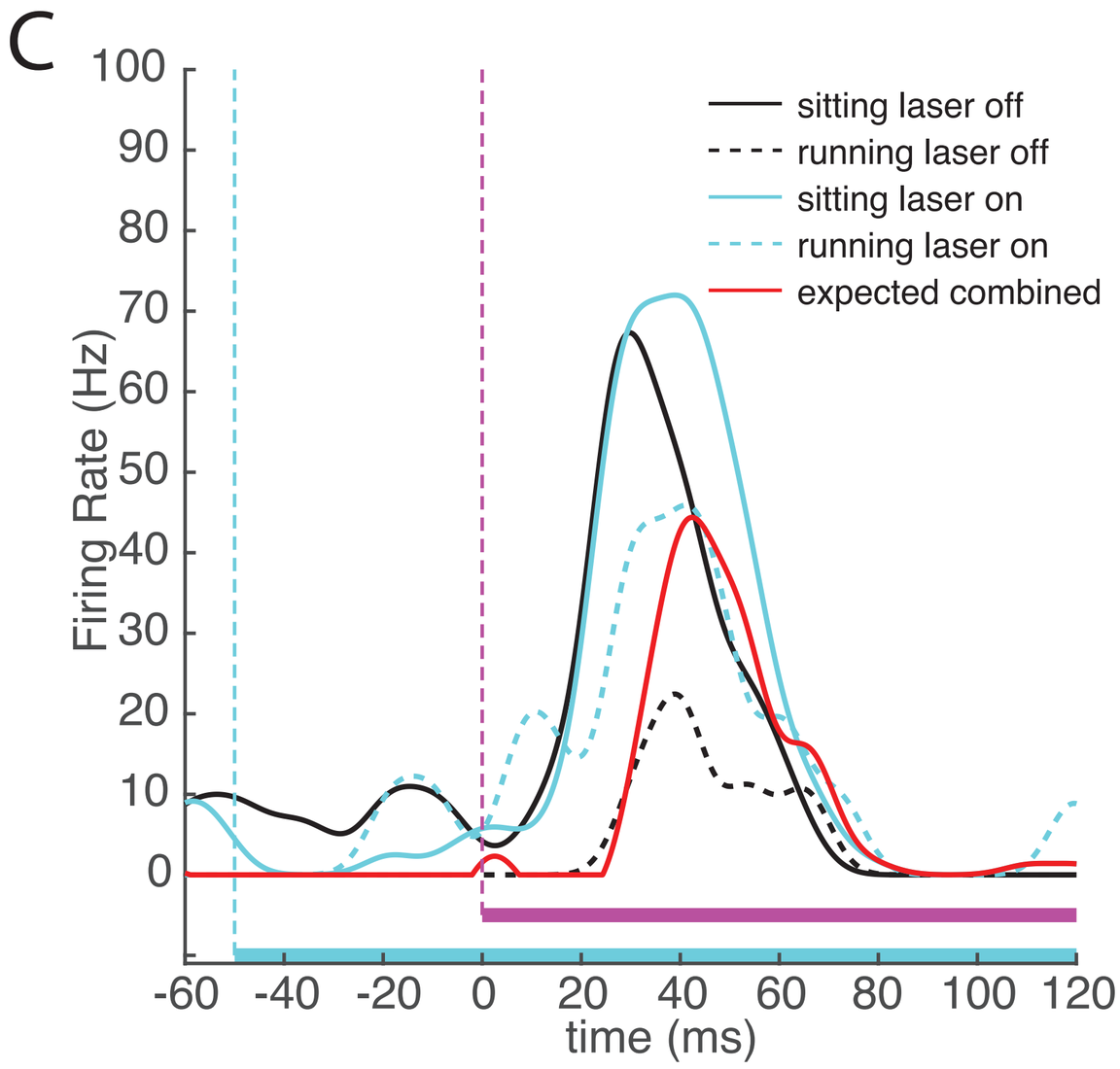

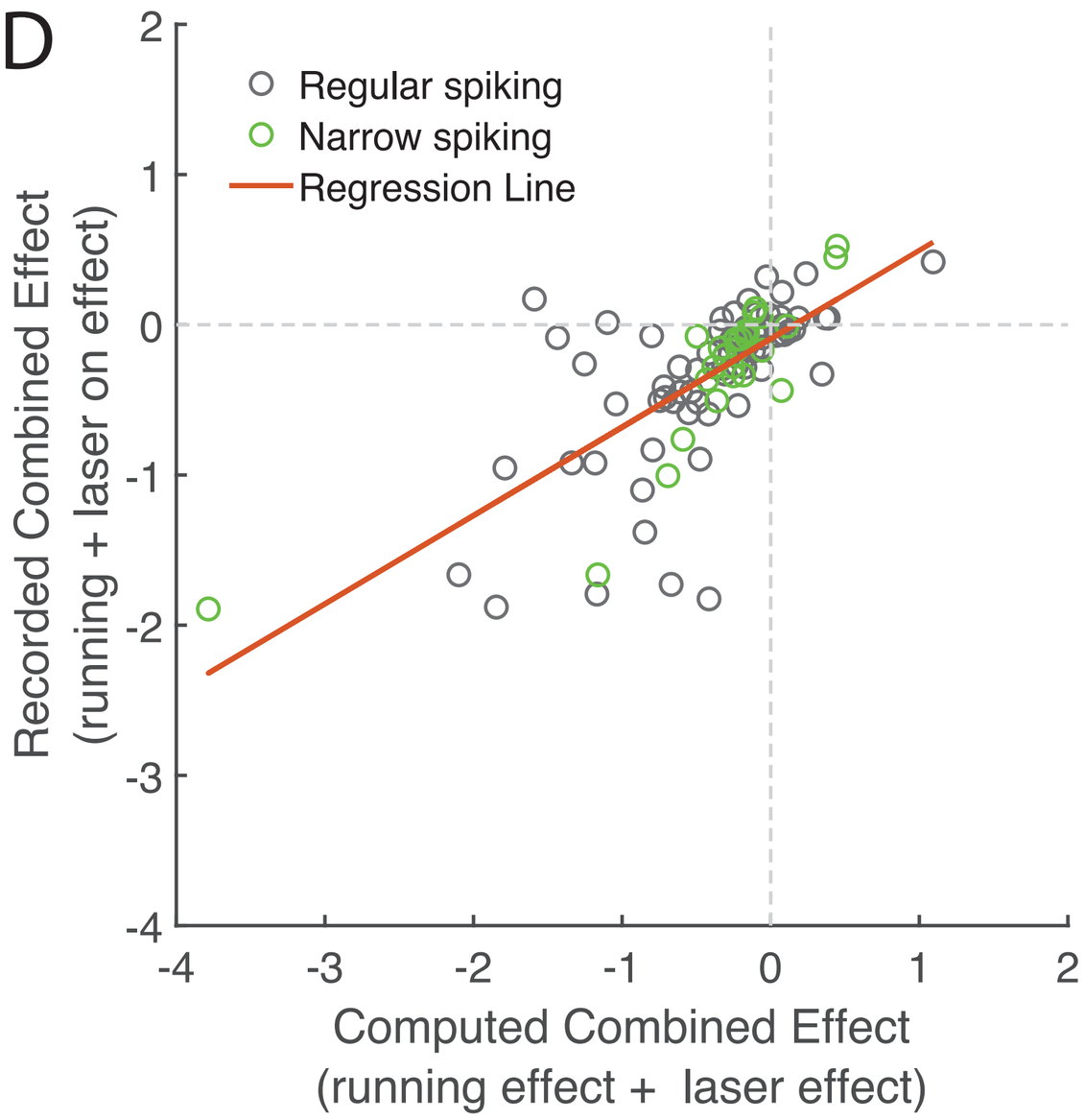

Figure 5. Change in sound modulation index during running laser-on trials is well-predicted by the sum of the running and VIP activation effects computed separately.

A. Running effect on sound modulation index plotted against VIP activation effect on sound modulation index for each neuron. The effect of running and activation VIP neurons were not correlated across the population of recorded cells (rho = 0.11, p = 0.25).

B. Example NS neuron that exhibits an increase in activity during running and during VIP activation. Black traces show responses to WN during laser-off trials, cyan traces show WN responses show responses during laser-on trials. Mean responses during running trials are indicated with dashed lines. Red line indicates expected combined effect of running and VIP activation (response sitting laser-off + change during running + change during VIP activation). Note the close match between the red line and the dashed blue line, indicating that the observed combined response closely matches that predicted by linear summation.

C. Example neuron showing suppression during running and facilitation during VIP activation (NS, depth = 575 μm)

D. Combined change in sound modulation during running and VIP activation plotted against predicted change in sound modulation index computed on running and VIP activation effect separately, showing strong correlation (rho = 0.70, p < 0.001). Observed change in sound modulation during running laser-on trials can be well predicted by summing effects of running and VIP activation alone, suggesting that the effects of VIP activation and running do not interact.