**Consistent, negative correlation between BSV and RT were also present for all days in the Cycle 2 analysis**

### Methods

#### Participants
- 14 adults participated in the study: 6 in cycle 1 (4 females, mean age = 26), and 8 in cycle 2 (4 females, mean age = 22).

#### Altitude Change Procedure:
- Cycle 1, three testing days: HA1, HA6, and LA2
  - HA1: very high altitude (5050m); HA6: following five days acclimatization at very high altitude (5050m); LA2: upon return to low altitude (520m)
- Cycle 2, four testing days: LA1, HA1, HA6, and LA2
  - Individuals not tested during Cycle 1 exposure participated in Cycle 2 following five days at low altitude.
  - Additional testing day prior to ascent, LA1.

#### Results: BSV

We compared the overlapping data from Cycles 1 and 2, and did not find significant differences between them. Therefore, we report results collapsed over both cycles.

**Cycle 1 & Cycle 2 (n = 14)**
- Days HA1, HA6, and LA2
  - One significant LV (p < 0.001) differentiating HA1 from both HA6 and LA2
  - BSV reliably increased on HA6 and LA2 as compared to HA1.

**Cycle 2 (n = 8)**
- We had an additional testing day, LA1. We therefore examined how BSV changed with initial altitude exposure in this group
  - One significant LV (p < 0.001), differentiating LA1 and LA2 from HA1
  - BSV reliably decreased from LA1 to HA1, and increased again by HA6 and LA2.

### Accuracy approached ceiling (95%), thus only RT data were analyzed:

**Cycle 1 & Cycle 2 (n = 14)**
- Days HA1, HA6, and LA2
  - One significant LV (p < 0.001)
    - Consistent, negative correlation between resting state BSV and RT for the LDT task across all testing days (RT decreased as BSV increased), as displayed below.

### Relating BSV to Behaviour

**Consistent negative correlations between BSV and RT were also present for all days in the Cycle 2 analysis**

### Discussion

- BSV was lower during initial exposure to high altitude on HA1 as compared to HA6 and LA2, suggesting that information processing capacity is initially lower at high altitude, but increases to baseline levels with prolonged exposure.
- Increases in resting state BSV were correlated with faster RT during the LDT task.
- Results suggest that altitude-related changes in resting-state BSV have consequences for information processing capacity, and may have implications for workers at high altitude.

### References