

Reading questions for Sen et al., 2017:

- What is PERK-K618A, and why was it important to use PERK-K618A in addition to GSK2656157?
- A central claim of Sen et al. is that blocking PERK activation prevents spine loss and improves memory. Which figure provides evidence for this claim?
- What behavioral test was used to assess learning and memory? Briefly describe the test.
- In Fig. 5G, PSD95 puncta are counted. Where on the cell are PSD95 puncta generally located (e.g. the cell body, axon, dendritic shaft, and/or dendritic spines), i.e. what part of the cell do you expect the PSD95 puncta in Fig. 5G to represent?

Reading questions for Ko et al., 2018:

- What is the central claim(s) of the paper? Please describe the main figures supporting the claim(s)?
- In Fig. 1, 11 synaptic proteins were upregulated during nerve injury in the ACC. Are you surprised with the list? Is there a protein of particular interest to you that you would prefer to follow? Do you agree using the hippocampus as the baseline region?
- The authors claim that ongoing protein synthesis is necessary to enhance synaptic strength. Is this claim well supported? How do you interpret this data in the context of nerve injury? Could we hope for a fast recovery? Does recovery stop without ongoing protein synthesis?
- Why do you think NCAM1 is only upregulated during the early stage of nerve injury (Fig. 6 & 7)? Are authors correct to suggest that “NCAM1 regulates synaptic reorganization”? Based on the evidence here, how would you explain the role of NCAM1 in peripheral nerve injury?

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