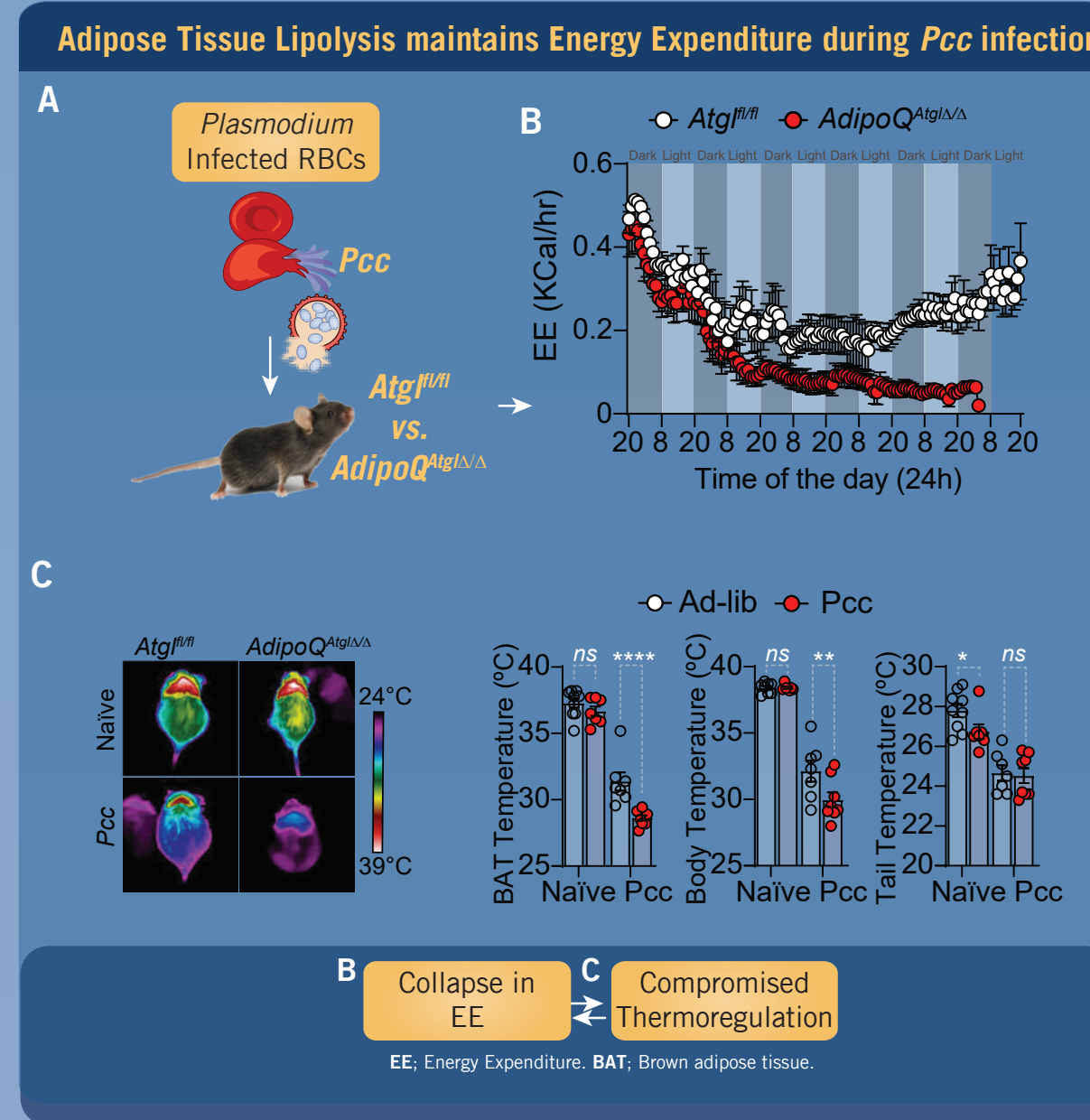
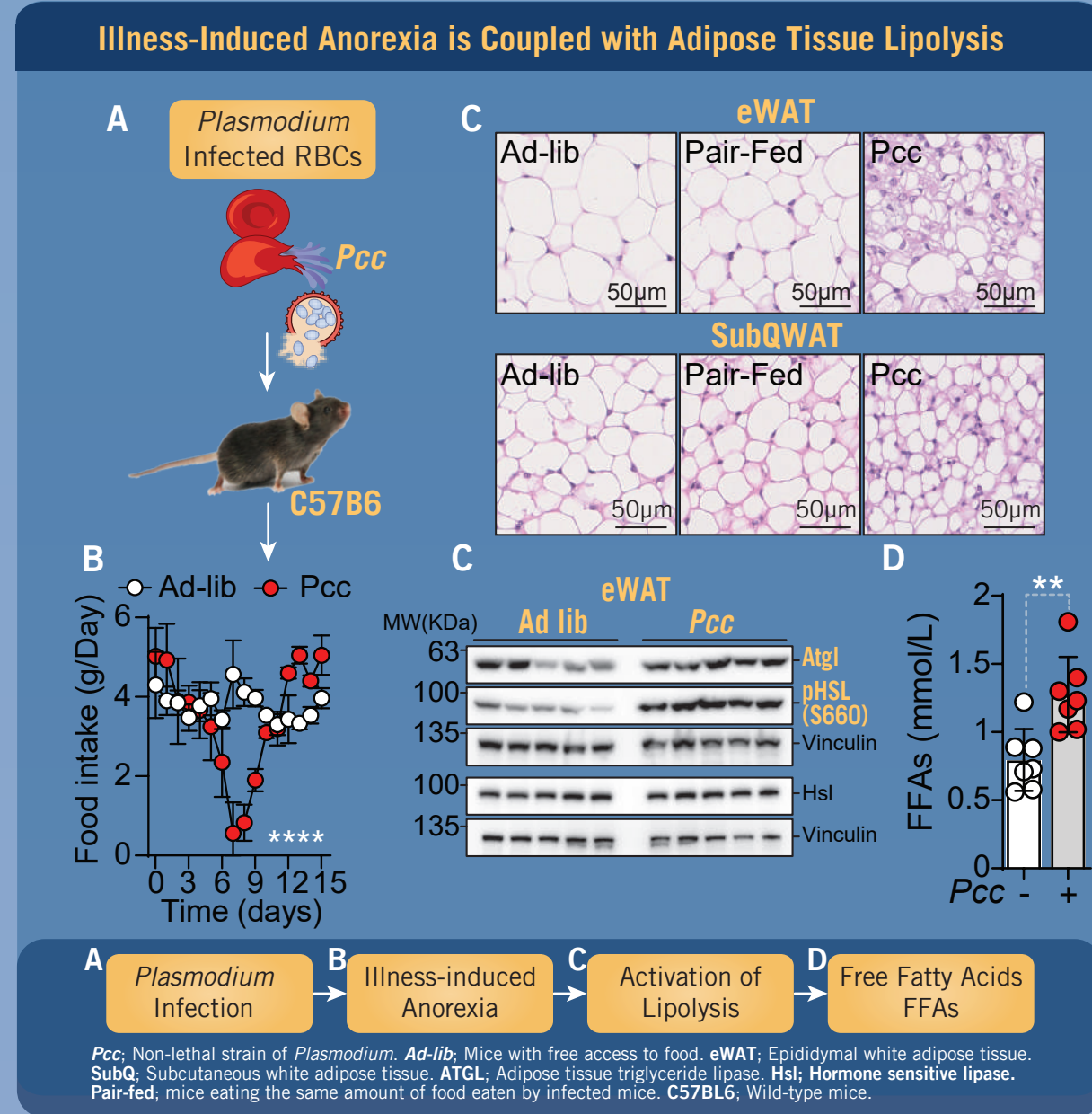


# A Protective Neuro-Adipose Tissue Axis against Malaria

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**Homeostasis** can be simplified as such: that in the event of internal and external perturbations, the host deploys automatic counterregulatory mechanisms that restore the perturbed homeostatic parameters to normal boundaries. This prevents or limits the deleterious impacts of such perturbations. In mammals, the maintenance of all homeostatic parameters require energy. Therefore, they must constantly be supplied with nutrients and absorb metabolites. This feeding behavior primarily serves the purpose of supporting the energy demands of body tissues. Animals are primed to eat, unless influenced by inhibitory signals/behaviours that prevent food intake. Infection is one of those perturbations that prevent food intake. Therefore, to maintain neo-homeostasis, organisms must possess counterregulatory pathways that maintain the constant supply of metabolites during infection. **So, where does 'food' come from during infection?**



### Conclusions

Infection is coupled to a metabolic response which involves the mobilization of stored triglycerides via lipolysis.

Lipolysis is essential to survive malaria.

The Central Nervous System orchestrates a metabolic response via the activation of the sympathetic nervous system to activate lipolysis.

### Open questions

What brain regions activate the sympathetic Nervous system during infection?

What other organ is controlled by the Brain to ensure survival?

