Parasitic wasps remember better if reward is greater

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Kruidhof HM, Pashalidou FG, Fatouros NE, Figueroa IA, Vet LEM, et al. (2012) Reward Value Determines Memory Consolidation in Parasitic Wasps. Credit: PLoS ONE 7(8): e39615. doi:10.1371/journal.pone.0039615

Two parasitic wasp species show similar memory consolidation patterns in response to rewards of different quality, providing evidence that the reward value affects the type of memory that is consolidated. The full results are reported Aug. 22 in the open access journal *PLOS ONE*.

The researchers, led by Marjolein Kruidhof of the Netherlands Institute of Ecology, tested how wasps store scents associated with situations of low reward (egg-laying into a inferior-quality host species that lays single eggs) versus high reward (egg-laying into a superior-quality host species that lays egg clusters) in their brain.

They found that both wasp species behaved similarly, retaining memory for the scent associated with the high reward scenario to a greater extent compared to the low reward scenario.

They write that this behavior makes sense given the energetic cost of consolidating shorter-lasting memory forms into long-term, consolidated memories, which may only be advantageous if the benefit is sufficiently high.

More information: Kruidhof HM, Pashalidou FG, Fatouros NE, Figueroa IA, Vet LEM, et al. (2012) Reward Value Determines Memory Consolidation in Parasitic Wasps. PLoS ONE 7(8): e39615. doi:10.1371/journal.pone.0039615